COMMONWEALTH
OF
PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

ADJUDICATIONS
VOLUME I

1984

MEMBERS

OF THE

ENVIRONMENTAL HEARING BOARD

DURING THE PERIOD OF THE
ADJUDICATIONS

1984

Member.....ANTHONY J. MAZULLO, JR.

Member.....EDWARD GERJUOY

Cite by Volume and Page of the
Environmental Hearing Board Reporter

Thus: 1984 EHB 1

FORWARD

In this volume are contained all of the final adjudications of the Environmental Hearing Board issued during the calendar year 1984.

This Environmental Hearing Board was created by the Act of December 3, 1970, P.L. 834, which amended the Administrative Code of 1929, Act of April 7, 1929, P.L. 177, *as amended*. The Act of December 3, 1970, commonly known as "Act 275", was the Act that created the Department of Environmental Resources. Section 21 of that Act, §1920-A of the Administrative Code, provides as follows:

> "§1921-A Environmental Hearing Board
>
> (a) The Environmental Hearing Board shall have the power and its duties shall be to hold hearings and issue adjudications under the provisions of the act of June 4, 1945 (P.L. 1388), known as the "Administrative Agency Law," or any order, permit, license or decision of the Department of Environmental Resources.
>
> (b) The Environmental Hearing Board shall continue to exercise any power to hold hearings and issue adjudications heretofore vested in the several persons, departments, boards and commissions set forth in section 1901-A of this act.
>
> (c) Anything in any law to the contrary notwithstanding, any action of the Department of Environmental Resources may be taken initially without regard to the Administrative Agency Law, but no such action of the department adversely affecting any person shall be final as to such person until such person has had the opportunity to appeal such action to the Environmental Hearing Board; provided, however, that any such action shall be final as to any person who has not perfected his appeal in the manner hereinafter specified.
>
> (d) An appeal taken to the Environmental Hearing Board from a decision of the Department of Environmental Resources shall not act as a supersedeas, but, upon cause shown and where the circumstances require it, the department and/or the board shall have the power to grant a supersedeas.

(e) Hearings of the Environmental Hearing Board shall be conducted in accordance with rules and regulations adopted by the Environmental Quality Board and such rules and regulations shall include time limits for taking of appeals, procedures for the taking of appeals, location at which hearings shall be held and such other rules and regulations as may be determined advisable by the Environmental Quality Board.

(f) The board may employ, with the concurrence of the Secretary of Environmental Resources, hearing examiners and such other personnel as are necessary in the exercise of its functions.

(g) The Board shall have the power to subpoena witnesses, records and papers and upon certification to it of failure to obey any such subpoena, the Commonwealth Court is empowered after hearing to enter, when proper, an adjudication of contempt and such order as the circumstances require."

In addition, the Board hears civil penalties cases pursuant to The Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §691.1, *et seq*. and the Air Pollution Control Act, Act of January 8, 1960, P.L. 2119, *as amended*, 35 P.S. §4001 *et seq*. and reviews the Department's assessments of civil penalties under Section 605 of the Solid Waste Management Act, Act of July 7, 1980, P.L. 380, 35 P.S. 6018.605 and under Section 13 of the Surface Mining Conservation and Reclamation Act, Act of May 31, 1945, *as amended*, November 30, 1971, 52 P.S. 1396.22.

Although the Board is made, by §62 of the Administrative Code, 71 P.S. 62 an administrative board within the Department of Environmental Resources, it is functionally and legally separate and independent. Its Chairman and two members are appointed directly by the Governor, with the consent of the Senate[1] and their salaries are set by statute.[2] Its

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1. Administrative Code, §472.71 P.S. §180-2.

2. Act of September 2, 1961 (P.L. 1177, No. 525) *as amended* November 8, 1971 (P.L. 535, No. 138).

secretary[3] is appointed by the Board with the approval of the Governor.

The department is a party before the Board in most cases.[4] Other parties include recipients of DER orders, penalties assessments, permit denials and modifications and other DER actions. Third party appeals from permit issuances are also common in which cases the permittees are also parties.

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3. The current Secretary of the Board is M. Diane Smith, who was appointed on April 1, 1976.

4. The one exception has been appeals from decisions of municipalities and county health departments under the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, *as amended*, 35 P.S. §750.1, *et seq*. That exception was eliminated for the future by amendments to the Pennsylvania Sewage Facilities Act enacted July 22, 1974, (Act 208).

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COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

221 NORTH SECOND STREET
THIRD FLOOR
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TOWNSHIP OF INDIANA	:	
and	:	
CONCERNED CITIZENS OF RURAL RIDGE, Rae Ann Tabis, Secretary, Trustee ad Litem	:	Docket Nos. 82-099-G 82-100-G
v.	:	Solid Waste Management Act Fly Ash Disposal Site
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES and DUQUESNE LIGHT COMPANY, Permittee		

A D J U D I C A T I O N

By: Edward Gerjuoy, Member, January 3, 1984

These appeals are before the Board under the following circumstances. On March 25, 1982, under the authority of the Solid Waste Management Act ("SWMA"), 35 P.S. §§6018.101 et seq., the Department of Environmental Resources ("DER") granted the Duquesne Light Company ("Duquesne") permit No. 300720 (the "permit") for operation of a "fly ash, bottom ash and pyritic material" disposal facility. The site of the facility, whose construction remains to be completed, is a 165 acre tract in Rural Ridge, a small community located in Indiana Township (the "Township"), Allegheny County, on the outskirts of Pittsburgh.

The permit issuance was appealed by the Township and by a citizens' association, the Concerned Citizens of Rural Ridge (the "Citizens"). After a

number of pre-hearing motions and preliminary objections, including preliminary objections by Duquesne that the appellants lacked standing to appeal (which preliminary objections were denied by the Board[1]), a consolidated hearing on the merits of these two appeals began on January 3, 1983. After twelve full days of testimony, interrupted by several continuances, the hearing was closed on March 16, 1983. Consistent with the Board's rules, 25 Pa. Code §21.116, all parties were given the opportunity to file post-hearing briefs, including suggested findings of fact and conclusions of law; all parties other than DER did file such briefs.

In its brief, and during the hearings, the Township largely focused only on the traffic and road maintenance problems which allegedly would be imposed on the Township by truck traffic to the facility. In the main, the more conventional possible environmental consequences of the facility, e.g., groundwater pollution, have not been addressed by the Township; however, the Citizens have focused very heavily on these possible environmental consequences. These differences of stress between the two appeals which are the subject of this adjudication are reflected in our subsequent discussion, notably in the fact that under a single subheading below we frequently examine the contentions of but a single appellant.

Our adjudication, based on the evidence presented and after due consideration of the aforementioned briefs, follows. Because Duquesne now has abandoned[2] its contention that the appellants lacked standing, the issue of appellants' standing is not addressed below.

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1. See our Opinions and Orders of September 15, 1982 at Docket Nos. 82-099-G and 82-100-G, and of November 22, 1982 at 82-100-G.

2. Duquesne post-hearing brief ("p.h.b."), p. 54.

FINDINGS OF FACT

1. Appellant Township of Indiana ("Township") is a municipality within Allegheny County with a population of about 6,071 (1980 census).

2. Appellant Concerned Citizens of Rural Ridge ("Concerned Citizens") is an unincorporated association comprised of individuals who live in or near the village of Rural Ridge in the Township.

3. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources, which has the duty and responsibility of administering the Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. §§6018.101 et seq., and the regulations duly promulgated thereunder.

4. Permittee Duquesne Light Company is a public utility engaged in the production, transmission, distribution and sale of electric energy in Allegheny and Beaver Counties, Pennsylvania, including portions of the Township, pursuant to a Certificate of Public Convenience granted by the Pennsylvania Public Utility Commission.

5. In providing electricity to the public, Duquesne owns and operates various facilities including the Cheswick Power Station ("Cheswick Station") located in Springdale Township.

6. On March 25, 1982, DER granted Duquesne permit No. 300720 for operation of a "fly ash, bottom ash and pyritic material" disposal facility, to be located on a 165 acre property (the "Micale property") on Lefeever Road in Rural Ridge.

7. Under the permit, 82 acres of the Micale property could be encompassed within the facility.

8. Under the permit's present terms, the facility can be used solely for disposal of fly ash, bottom ash and pyritic materials produced at Cheswick Station; no other waste may be stored at the facility unless allowed by specific prior written amendment of the permit.

9. The Micale property is located approximately four miles north of the Cheswick Station.

10. The Cheswick Station has a rated electric capacity of 592 megawatts and is Duquesne's largest fossil fuel station.

11. On the average, the Cheswick Station burns approximately 5,000 tons of pulverized coal per day; the fly ash is that portion of the incombustible residue which is collected by electrostatic precipitators before being emitted from the top of the stack.

12. The Cheswick Station has an estimated remaining life of approximately 30 years.

13. The facility will be constructed on and within two presently undeveloped natural valleys on the Micale property, known as the north and south valleys.

14. The village of Rural Ridge, wherein many of the Citizens reside, has a population of about 1,000.

15. The village of Rural Ridge is located on a hillside which overlooks the Micale property to the west.

16. The distance between the village of Rural Ridge's Municipal Building and the Micale property is about two miles as the crow flies, but is about four miles by existing roads.

17. The valleys (see Finding of Fact 13) where the facility will be constructed are visible from many locations in the village of Rural Ridge.

18. The valleys where the facility will be constructed include verdant areas, springs and even a small waterfall, all of considerable scenic beauty.

19. The waterfall and other scenically beautiful areas mentioned in Finding of Fact 18 are not discernible from the village of Rural Ridge, but must be viewed from nearby locations on the Micale property.

20. In recent years, in reaction to the Citizens' attempt to prevent operation of the proposed facility on the Micale property, Mr. Nick Micale--the owner of the property--has been refusing the villagers of Rural Ridge permission to enter onto the property.

21. The Micale property is separated from the village of Rural Ridge by a double track railroad on which diesel locomotives travel, emitting diesel fumes.

22. Evidence was completely lacking concerning the concentrations of diesel exhaust emissions in the air in the village of Rural Ridge, or on the property of any Citizen appellant, resulting from the diesel locomotive traffic mentioned in Finding of Fact 21.

23. There was no evidence that issuance of the permit would be in violation of any applicable regulations.

24. The Citizens offered no direct evidence that operation of the proposed facility will produce a significant risk of groundwater pollution.

25. The Citizens' expert witness Dr. Martha Connamacher testified that papers in the scientific literature (Citizens' Exhibits 14-16) indicated that undesirably high concentrations of trace metals can find their way into the groundwater from fly ash disposal sites.

26. There was no evidence to show that experience at the fly ash disposal sites which had been studied in Citizens' Exhibits 14-16 would be useful

in predicting ground water pollution from the proposed Micale site.

27. Dr. Martha Connamacher admitted that she had not come across any field studies concerning the leaching of metals or of any materials from a fly ash site designed comparably to the proposed Micale fly ash site.

28. Dr. Martha Connamacher admitted that she was not concerned about leachate from the proposed site getting into the environment if the proposed drain system and liners work as designed.

29. Dr. Martha Connamacher analyzed monitoring data contained in Appendix B of Permittee's Exhibit 16, concerning operations at Duquesne's Elrama power station disposal site.

30. The Elrama disposal site was built in a "somewhat similar" fashion to the proposed Micale site, in "somewhat similar" geology.

31. The Elrama data analyzed by Dr. Martha Connamacher came from DER's own records, and involved going back to the original data sheets DER received.

32. Duquesne's expert witness James Niece testified that this Elrama monitoring data (Findings of Fact 29 and 31) showed that operation of the Elrama disposal site did not adversely affect the groundwater.

33. Martha Connamacher testified that her analysis of this same Elrama monitoring data showed very high manganese concentrations, thereby indicating that operation of the Elrama site had adversely affected the groundwater.

34. The Elrama disposal site, which was designed many years earlier than the Micale site, does not have as many drains or as close a drain spacing as the Micale site design.

35. Martha Connamacher did not know what the background manganese levels at monitoring wells surrounding the Elrama site would be in the absence of fly ash disposal at the Elrama site (N.T. 1751-1752).

36. Martha Connamacher conceded that drainage from a former strip mine could not be ruled out as a source of the fluctuating manganese levels recorded at Elrama (N.T. 1762).

37. Of the wells monitored at the Elrama site, monitoring point No. 1 was upgradient from the area where fly ash had been deposited, and monitoring point No. 6 was downgradient (N.T. 1758-1759, Citizens' Exhibit 22).

38. Martha Connamacher was unable to satisfactorily explain why--if fly ash disposal was responsible for the observed manganese levels at Elrama--monitoring points Nos. 1 and 6 manifested similarly fluctuating manganese concentrations (N.T. 1752-1756).

39. Counsel for the Citizens conceded that the design of the Micale facility is "state of the art" (N.T. 1399), as Duquesne's expert James Niece testified (N.T. 1472).

40. The appellants disputed Duquesne's use of a "water leachate" analysis of fly ash leachate, claiming that an "acid leachate" analysis was preferable.

41. Fly ash contains respirable particles, which can lodge in human lungs.

42. When collected by an electrostatic precipitator, fly ash is not mutagenic.

43. Fly ash which has been collected from stack streams, rather than by an electrostatic precipitator, can be mutagenic.

44. It is possible that the mutagenicity of fly ash collected from stack streams results from adsorption of organic chemical mutagens or carcinogens onto the fly ash particles' surfaces from the ambient stack stream.

45. Such organic chemical carcinogens are found in diesel fumes.

46. Mutagenic compounds need not be carcinogens.

47. The appellants' theory that fly ash particles blown through the air from the Micale site will be a carcinogenic health hazard to the Citizens was based entirely on testimony by their expert witness, Dr. Robert Connamacher.

48. Dr. Robert Connamacher's assertions about the health hazards of the fly ash which will be deposited at the Micale site were strongly challenged by Dr. Anthony V. Colucci, Duquesne's expert witness (N.T. 741).

49. Dr. Colucci's personal direct experience with fly ash mutagenicity or carcinogenicity studies has been considerably greater than Dr. Robert Connamacher's.

50. Appellants' theory about the carcinogenic health hazard of the Micale site fly ash (see Finding of Fact 47) was based on a highly speculative chain of assumptions about fly ash particle concentrations in the ambient air, diesel fume concentrations, adsorption rates on the fly ash particle surfaces, etc.

51. Robert Connamacher made no estimates of the concentrations of carcinogenic materials on fly ash which Rural Ridge residents might expect from operation of the site, as compared to the concentrations of carcinogens which Rural Ridge residents otherwise would be exposed to through the air they breathe.

52. Robert Connamacher has found no articles or other research reports, published or unpublished, linking adverse health effects with the proximity of a fly ash disposal area.

53. Fly ash is not a hazardous waste under present regulations.

54. The expected life of the Micale site before it becomes filled is 45 to 60 years (N.T. 953).

55. There is evidence of past sliding in the area containing and surrounding the Micale site.

56. The Citizens' expert witness Dr. Norman Flint testified that landslides probably would be encountered during construction of the disposal facility and possibly after.

57. Dr. Flint associated the risk of subsidence at the proposed site with the fact that the Micale site has been undermined.

58. The bulk of the area underneath the Micale property has been totally undermined, and coal has been totally removed (N.T. 1527).

59. Duquesne's expert witness Thomas D. Donovan unqualifiedly asserted that the proposed design was stable against landslides.

60. Mr. Donovan reaffirmed the conclusions--to the effect that the site would be stable if certain stabilization features were incorporated into the design--embodied in the February 1979 Geotechnical Investigation report for the proposed site, prepared by GAI Consultants, Inc. ("GAI Report").

61. The GAI Report's conclusions were based on calculations pertaining to several different potential stability failures of the facility as designed.

62. The GAI Report took into consideration slide-prone areas and the possible effects of subsidence.

63. The proposed site design is "state of the art" insofar as stability considerations are concerned.

64. The proposed site design comports with DER regulations with respect to the stability of fly ash embankments.

65. Dr. Flint is not an engineer, though he has specialized in "landslide hazard mapping" of geologic formations.

66. There was no evidence that Dr. Flint had made calculations--or was competent to make calculations--concerning the stability of the proposed site design.

67. Dr. Flint had reviewed the GAI Report, and had found no significant errors in it.

68. Mr. Leon Baskin, of DER's Division of Mine Safety, made an independent review of the GAI Stability Report.

69. Mr. Baskin's original review of the GAI Report left him with reservations about the stability of the proposed site.

70. Mr. Baskin now has no reservations about the stability of the site, provided it is constructed according to design specifications (Board Exhibits 5 and 6).

71. It is possible that landslides at the site will damage the leachate collection sufficiently to permit entry of leachate into the groundwater.

72. Martha Connamacher believed that high peaks in the manganese levels observed in monitoring wells at the Elrama site (see Finding of Fact 33) were associated with slides at Elrama.

73. A slide did occur at the Elrama site, on December 18, 1974.

74. The December 18, 1974 slide at Elrama involved only soil, did not involve fly ash, and did not affect the leachate collection system.

75. On another occasion (not December 18, 1974) a "mud-like flow" of fly ash, associated with erosion of one of the site slopes, occurred at Elrama.

76. There was no evidence tending to show that demonstrated threats (if any) to the Elrama groundwater from fly ash slides would imply corresponding threats from slides to the groundwater at the Micale site.

77. The Micale site has been highly overdesigned, in an attempt to ensure that the groundwater would be protected.

78. The Micale site design will carry away leachate, without permitting pollution of the groundwater, even if significant parts of the site's collection system failed.

79. Because of the site geology, failure of the leachate collection system probably will not cause pollution of any existing residential wells.

80. Failures of the leachate collection system which permit leachate to enter the groundwater can be repaired.

81. The permit requires Duquesne to monitor various groundwater parameters in the vicinity of the disposal site, including manganese and pH.

82. The permit obligates Duquesne to provide a replacement water supply —of equal quality and quantity to the previous water supply—to any person whose water supply has been adversely affected by Duquesne's operation of the Micale site.

83. The aforementioned monitoring requirement (Finding of Fact 81) on Duquesne endures for ten years after use of the site ceases.

84. The aforementioned requirement (Finding of Fact 82) that Duquesne provide a replacement for any adversely affected water supply will endure as long as necessary, more than ten years after termination of the site's disposal activities if need be.

85. The permit explicitly states that it does not supersede applicable local laws, ordinances or regulations (Permittee Exhibit 3, paragraph 14).

86. Before obtaining its permit, Duquesne had to submit a completed Module 9 questionnaire, titled "General Environmental, Social and Economic Information."

87. DER used this Module 9 questionnaire to determine whether the proposed facility would comport with the requirements of Article I, Section 27 of the Pennsylvania Constitution.

88. The Module 9 questions asked, e.g., the location of the site relative to historic property, to State forest or game land, and to wetlands.

89. From the completed Module 9 form Duquesne submitted, DER concluded that the proposed facility had no potential for significant environmental harm.

90. The appellants' briefs do not deal with the aforesaid Module 9 questionnaire in any explicit way.

91. The appellants have not explained why "laying waste to a scenic glen area" (wording of Citizens' post hearing brief) should imply violation of Article I, Section 27 without any consideration of Duquesne's responses to the Module 9 questionnaire.

92. Duquesne gave serious consideration to ten possible alternatives to the Micale site.

93. The various sites were evaluated on the basis of a formula which included as selection criteria the size and disposal capacity of the site, the distance of the site from the Cheswick Station, and the number of landowners whose agreement would be required before Duquesne could obtain rights to the sites (N.T. 905-906).

94. The formula mentioned in Finding of Fact 93 was arbitrary in the sense that other formulas could have been suggested.

95. The aforesaid formula was not irrational.

96. On the basis of the aforesaid formula, the Micale site had the next to the highest score of all sites examined.

97. Duquesne's witness William Held testified that the sole owner of the highest scoring site would not sell the site to Duquesne.

98. The testimony left it uncertain whether Duquesne had made a good faith effort, within reason, to meet whatever might have been the asking price for for the highest scoring site mentioned in Finding of Fact 97.

99. There was no evidence that any of the ten alternatives to the Micale site, including the highest scoring site, were potentially less harmful to the environment than the Micale site.

100. The Citizens did not seriously examine the environmental consequences of locating the fly ash disposal facility at any site other than the Micale site.

101. The final design of the site includes modifications of earlier designs, so as to ensure stability.

102. Various special conditions in the permit were added by DER to take into account concerns raised by the appellants and others.

103. Presently, Duquesne is disposing of fly ash from the Cheswick Station by mixing the ash with water and pumping the resultant slurry via a borehole into an abandoned deep mine, the Harwick Mine.

104. In 1976, the borehole to the Harwick Mine plugged, preventing disposal of further fly ash slurry and necessitating use of an emergency fly ash pond at the Cheswick Station for temporary disposal (N.T. 1154, 1217-1219).

105. A new borehole into the Harwick mine has been drilled and has been in use since 1976 (N.T. 1154-1156).

106. This new borehole also has had some plugging problems (N.T. 1156).

107. Duquesne is unable to estimate the remaining capacity of the Harwick mine for fly ash (N.T. 1161-1162).

108. Duquesne has investigated the availability, for fly ash disposal, of other (than Harwick) underground mines in the vicinity of Cheswick, and has concluded there are none.

109. Duquesne has investigated alternatives (e.g., incorporation into building blocks) to disposal of fly ash as a waste material (Board Exhibit 4; N.T. 989, 1131).

110. The emergency ash pond at Cheswick Station has approximately ten months storage capacity for the fly ash the plant generates (N.T. 1219-1220).

111. Duquesne cannot legally operate its Cheswick plant without the electrostatic precipitators which collect the fly ash.

112. The Cheswick plant produces about 600 tons of fly ash per day (N.T. 897-898).

113. The fly ash will be transported from the Cheswick plant to the proposed site in about 30 truckloads a day, each load 20 tons.

114. DER did give consideration to traffic safety problems generated by the truck traffic.

115. Question 18 on Module 9 questionnaire (see Finding of Fact 86) required Duquesne to furnish detailed information on the traffic effects to be expected from the trucks transporting the fly ash to the site.

116. Duquesne furnished the information required by Question 18 on Module 9.

117. DER sent this information to PennDOT for review.

118. PennDOT was specifically asked to comment on the amount of truck traffic with respect to the road conditions and existing traffic patterns.

119. On December 22, 1980, PennDOT informed DER by letter that it had reviewed the permit application and had decided there should be no resultant traffic safety problems.

120. DER relied on this December 22, 1980 PennDOT letter in deciding that the traffic safety problems engendered by the truck transport of fly ash to the site were insufficient to warrant denial of Duquesne's permit.

121. The Township presently employs six police officers, including the Chief whose duties mainly are administrative (N.T. 14-15).

122. The Township's evidence in support of its claim that the increased truck traffic would overwhelm its present police and other services was unconvincing.

123. Duquesne's trucks hauling fly ash will use Little Deer Creek Valley Road and Lefeever Road.

124. Both these roads are State roads, for whose maintenance the Commonwealth--not the Township--has primary responsibility.

125. Duquesne is responsible for prompt cleanup of any fly ash spillage on the haul roads.

DISCUSSION

Our analysis of these appeals is guided by our recent adjudication in Coolspring Township, et al. v. DER, Docket No. 81-134-G (August 8, 1983), which also involved appeals of a permit for waste disposal (sewage sludge, in Coolspring) under the authority of the SWMA. Our scope of review is to determine whether DER committed an abuse of discretion or an arbitrary exercise of its duties or functions.[3] Warren Sand and Gravel Company, Inc. v. DER, 20 Pa. Cmwlth. 186, 341 A.2d 556 (1975); Coolspring, supra at 16.[4] The burden of showing that there has been an abuse of discretion falls on the appellants. 25 Pa. Code §21.101(c)(3); Coolspring, supra at 16, and citations therein.

We proceed to examine the appellants' contentions in the light of the above considerations.

A. Does The Proposed Facility, Operating As Designed, Threaten Groundwater Pollution?

At the outset of the hearing, the Citizens' counsel maintained that issuance of the permit had been in violation of DER regulations, notably

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3. In the interests of brevity the phrase "abuse of discretion" will be employed to denote our complete scope of review, recognizing that in the context of the instant appeals "an arbitrary exercise by DER of its duties or functions" would be an abuse of discretion as well.

4. Citation to p. 16 of the Coolspring Adjudication, in its issued typed form.

25 Pa. Code §75.37 (N.T. 110-111). After the Citizens had completed their presentation of their case-in-chief, however, their counsel conceded that violations of 25 Pa. Code §75.37 had not been shown (N.T. 689). The Board believes this concession was well founded, even after taking into account the points brought out by the appellants in their rebuttal testimony and in their cross examinations of the other parties' witnesses. Nor did the appellants show issuance of the permit would violate any other of the very many pertinent regulations to be found in Title 25 of the Pennsylvania Code.

Nevertheless, the Citizens, pointing primarily to the testimony of their expert witness Dr. Martha Connamacher, contend that operation of the facility will pose a substantial "risk of polluting nearby property owners' water supplies" (Citizens' p.h.b., p. 9). This contention rests on two pretty much independent portions of Dr. Martha Connamacher's testimony:

> 1. She made reference to papers in the scientific literature (Citizens' Exhibits 14-16) which—according to Martha Connamacher--indicated that undesirably high concentrations of base metals, e.g., manganese, can find their way into the groundwater from fly ash disposal sites.
>
> 2. She testified that her review of water monitoring data (in DER's files) for Duquesne's Elrama disposal site showed that operation of the Elrama site had adversely affected the groundwater.

However, there was no evidence to show that experience at the fly ash disposal sites which had been studied in Citizens' Exhibits 14-16 would be useful in predicting groundwater pollution from the instant Micale site. Duquesne's expert witness James E. Niece did testify that the Elrama disposal site was built in a "somewhat similar" fashion to the proposed Micale site, in "somewhat similar" geology (N.T. 1362). But elsewhere (N.T. 1455) Mr. Niece testified that the Elrama site, having been designed many years earlier than the Micale site, did not have

as many drains or as close a drain spacing as the Micale site design. Moreover, on cross examination Dr. Martha Connamacher, who mainly complained of high manganese levels in the monitoring wells near the Elrama Site:

> (i) admitted that she did not know what the background manganese levels at the monitored wells would be in the absence of fly ash disposal at the Elrama site;
>
> (ii) conceded that drainage from a former strip mine could not be ruled out as a source of the fluctuating manganese levels recorded at Elrama;
>
> (iii) was unable to satisfactorily explain why --if fly ash disposal was responsible for the observed manganese levels--monitoring points 1 and 6 (identified as being upgradient and downgradient respectively from the area where fly ash had been deposited) manifested similarly fluctuating manganese concentrations.

Because the appellants concede that issuance of the permit does not violate any applicable regulations, the appellants are arguing in effect that under the facts of the instant appeal the regulatory scheme available to DER was insufficient to protect the public health, safety and welfare. Precisely this type of challenge to the sufficiency of the regulations was offered in Coolspring, supra wherein we stated (at 24):

> Where there exists an applicable regulatory scheme, duly promulgated by the Environmental Quality Board, there is a presumption that the regulatory scheme does meet the objectives of the underlying statute. Such a regulatory scheme does exist in the instant appeal [see 25 Pa. Code chapter 75,...]; therefore there is a presumption that in the instant appeal the regulations DER applied do meet the objectives of the SWMA, including protection of the public health, safety and welfare.

The testimony of Dr. Martha Connamacher which we have discussed doesn't come close to refuting the above presumption, mainly because her testimony lacks any direct connection with expectations for the Micale site. No such connection

was shown between the Micale site and the disposal sites studied in Citizens' Exhibits 14-16, and Martha Connamacher admitted that she had not come across any field studies "concerning the leaching of metals or of any materials from a fly ash site where the site was designed comparable to the proposed Micale fly ash site." Similarly, without more than vague references to similarities in site geology and design, a showing (if it was shown) that disposal of fly ash at Elrama had caused increased groundwater manganese levels cannot overturn the above presumption, expecially when the Elrama site design is older than the Micale site design. Indeed, Citizens' counsel agreed that the Micale site design is "state of the art," and Martha Connamacher testified that she was not concerned about leachate (from the proposed Micale site) getting into the environment "if the drain system and the liners work as they are supposed to work" (N.T. 640).

We conclude that, if it is assumed the Micale site will operate as designed,[5] the appellants have not met their burden of showing that--because the groundwater will be insufficiently protected even though the regulations are satisfied—granting the permit was an abuse of DER's discretion. In so concluding, we have found it unnecessary to make Findings of Fact and Conclusions of Law on numerous ancillary issues concerning possible groundwater pollution, on which issues the parties expended much (now seemingly wasted) time and energy during the hearing on the merits. For instance, we have no need to rule on the hotly disputed issue of whether the fly ash leachate test results Duquesne furnished DER should have been obtained via an "acid leachate" test instead of a "water leachate" test (N.T. 510-514, 1009-1610). In the remainder of this adjudication we shall not

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5. We contrast "operation as designed" with "operation in the event of failure" of some portion of the facility (due to age, landslides, etc.) See <u>infra</u>.

bother to mention explicitly those many issues in these appeals on which the parties unnecessarily introduced testimony. We shall discuss all issues whose resolution has been required for the instant adjudication.

B. Does The Proposed Facility, Operating As Designed, Threaten Air Pollution?

Our considerations under this subheading are consistent with our discussion supra under subheading A. The appellants, having conceded that applicable regulations are not violated, nevertheless argue that compliance with these regulations will not protect the Citizen residents of Rural Ridge from hazardous air pollution. In support of this argument Dr. Robert Connamacher, Associate Professor in the University of Pittsburgh School of Medicine Department of Pharmacology, testified that from his background of expertise and from recent searches of the scientific literature he had arrived at the following findings of fact:

> 1. Fly ash contains respirable particles, which can lodge in human lungs.
>
> 2. These respirable particles can contain heavy metals, which are carcinogens.
>
> 3. Potent organic chemical carcinogens have been found to be adsorbed on the surfaces of respirable fly ash particles.
>
> 4. Such organic chemical carcinogens are found in diesel fumes.
>
> 5. Diesel trains, emitting diesel exhaust fumes into the air, run along the railroad tracks between the Micale site and the village of Rural Ridge.

Therefore, Dr. Robert Connamacher concluded, the proposed fly ash site, from which some fly ash particles assuredly will be blown into the air, will be a carcinogenic hazard to the Citizens. For simplicity, in stating these findings of Dr. Robert Connamacher's, we have ignored distinctions between the mutagenic (mutation causing)

and carcinogenic (cancer causing) activities of chemical compounds, around which distinctions much testimony swirled. As will be seen, these distinctions are quite irrelevant to our ruling.

Dr. Robert Connamacher bolstered his findings 1-5 supra by reference to Citizens' Exhibits 5-11. These Exhibits--which are copies of papers in the scientific literature describing studies of fly ash, including the physical, chemical and mutagenic properties of fly ash--were admitted into evidence under the Board's liberal hearsay rule, 25 Pa. Code §21.107(a), for the limited purpose of showing that Robert Connamacher's conclusions had support in the scientific literature (N.T. 316-320); the truth of the statements contained in Exhibits 5-11 was not conceded, by Duquesne's counsel or by the Board (N.T. 335-338). Actually, Duquesne--mainly through the testimony of its expert witness Dr. Anthony V. Colucci --strongly challenged Robert Connamacher's summary of the scientific literature on fly ash and his findings 1-5 supra thereon. In particular, Dr. Colucci claimed that fly ash is not to be classified as "carcinogenic" (N.T. 764-766); Permittee's Exhibits 6 and 7, papers from the scientific literature, were offered by Dr. Colucci to support his thesis, and were admitted into evidence under the same limitations as Citizens' Exhibits 5-11. On rebuttal, Robert Connamacher agreed that the fly ash collected at an electrostatic precipitator (the fly ash collection device used by Duquesne at Cheswick) is not carcinogenic (N.T. 1800), but insisted that the fly ash could become carcinogenic after exposure to airborne carcinogenic compounds, e.g., diesel exhaust fumes, capable of being adsorbed on the fly ash surface.

Dr. Colucci has been chief of several EPA laboratories concerned with the carcinogenic effects of various compounds, including the products of fossil fuel combustion (Permittee's Exhibit 5A); he also supervised, helped to design or was otherwise closely involved with several of the scientific studies cited by Robert

Connamacher, notably Citizens' Exhibits 8-10 (N.T. 709-710). Dr. Robert Connamacher's experience with fly ash and its carcinogenic effects has been derived primarily from reading the literature (N.T. 305-307, 342). Thus, without in any way denigrating Dr. Robert Connamacher's scientific abilities and professional stature, the Board feels that Dr. Colucci's pronouncements on fly ash carcinogenicity must be given greater weight than Robert Connamacher's. In particular, the Board does not accept Dr. Robert Connamacher's findings 1-4 supra in the precise formulation he gave; our version of these findings are Findings of Fact 41-45 supra, which should be read together with Findings of Fact 22 and 51. The Board also notes that Dr. Colucci did not accept Dr. Robert Connamacher's conclusion that fly ash particles blown from the Micale site (and from trucks carrying the fly ash to the site) will be a carcinogenic hazard to the Citizens.

Even disregarding Dr. Colucci's testimony, however, Dr. Robert Connemacher's testimony did not rebut the presumption that the proposed site, being in compliance with applicable regulations, would protect the Citizen residents of Rural Ridge from hazardous air pollution. During the hearing, the hearing examiner only very reluctantly permitted Robert Connamacher to present testimony advancing his theory that blowing fly ash particles combined with diesel fumes would be hazardous, because to the hearing examiner the whole foundation for this theory appeared to be speculative and therefore insubstantial. Eventually, toward the close of Robert Connamacher's rebuttal testimony, the following exchange took place between the hearing examiner and Mr. David Morrison, counsel for the Citizens (N.T. 1809-1813):

> MR. MORRISON:
>
> Q. Is there any scientific evidence to indicate that materials from diesel exhaust fumes when adsorbed on nascent fly ash can then be either carcinogenic or mutagenic?

ROBERT CONNAMACHER:

A. There is evidence already presented that electrostatic precipitated fly ash will absorb polyurethanic hydrocarbons, which are also found in diesel exhaust, and that these particles, with the absorbed pH's, are mutagenic.

THE HEARING EXAMINER:

Mr. Morrison, let me just say I really am getting very restless, because, is the whole point of this to become part of an embracing theory of yours that this permit is an abuse of discretion because of the possibility that there will be fly ash particles going into the air, and that these fly ash particles may absorb diesel fumes from whatever it is that goes nearby, or from automobiles:

MR. MORRISON:

Diesel engines running through the site.

THE HEARING EXAMINER:

And these diesel engine fumes will be absorbed in the fly ash, and then the fly ash will be inhaled, and then it will become carcinogenic, and this permit is an abuse of discretion because of this chain of possibility?

MR. MORRISON:

I think that is one of many which require them to look at alternative sites for issuing a permit.

THE HEARING EXAMINER:

Let me say this: This particular chain I just consider as too speculative and too beyond the bound of serious consideration, and I am just going to rule out further testimony on it. And I am sorry I allowed any testimony on it previously...

THE HEARING EXAMINER:

...That's basically the problem, you can't show this permit should not be granted because you concocted a theory of a possible risk. You have to show that there is some reasonable expectation that this risk

exists. And the risk you have concocted, here, goes as follows: First of all, there has to be a significant violation of the air pollution controls. That's number one.

MR. MORRISON:

I don't believe I ever alleged that the present diesel fumes are presently violating the air pollution --

THE HEARING EXAMINER:

I am talking about the particles. You have to first allege that the permit is going to be so operated that there will not be controls on the particles getting into the atmosphere. That's number one, the fly ash particles.

Then you have to allege that those fly ash particles will be significantly in the vicinity of these diesel fumes so that they will absorb and retain these diesel fumes on them, and then breathed in by the residents of Rural Ridge. And that this is going to happen to an amount which is significantly greater from the normal risk of those diesel fumes. You have to show this.

So far all you have done is say it may happen, it may happen. I just regard it as too speculative...

Now, after reviewing the entire record, without excluding any of Dr. Robert Connamacher's testimony in support of his aforementioned theory, the Board feels the hearing examiner's remarks just quoted were quite correct; indeed testimony about the potentially synergistic effects on human lungs of diesel fumes combined with fly ash should have been completely excluded from the outset of the hearings as altogether too speculative under the facts of the instant appeal. In fact, Dr. Robert Connamacher admitted (N.T. 445) that he had made no estimates of the concentrations of carcinogenic materials on fly ash which Rural Ridge residents might expect from operation of the site, as compared to the concentrations of carcinogens which Rural Ridge residents otherwise would be exposed to through the air they breathe.

Furthermore, fly ash is not a hazardous waste under present regulations. Also, Dr. Robert Connamacher testified under cross examination (N.T. 436):

> Q....I have one question that is really of great concern to me, which is, have you, in the course of your research come across any articles or other studies either published or unpublished that link adverse health effects with the proximity of a fly ash disposal area?
>
> A. No.

Therefore, in view of the foregoing discussion under the instant subheading B, and again assuming the site will operate as designed, we conclude the appellants have not met their burden of showing that--because there will be a significant risk of air pollution hazardous to human health at Rural Ridge as a result of the Micale site's operation--grant of the permit was an abuse of DER's discretion.

C. Will The Proposed Facility Operate As Designed

The Citizens argue that the proposed facility is likely to fail, i.e., is likely to not operate as designed throughout the period (45 years) Duquesne intends to use the Micale site for disposal of fly ash; actually, this period is longer than the expected remaining life of the Cheswick Station (about 30 years), which--according to paragraph 2 of the permit (Permittee's Exhibit 3)--presently is the sole allowed source of waste for the Micale site.

The only cause for failure which was seriously advanced by the Citizens during the hearings (and the only cause which has been even mentioned in the appellants' briefs) is sliding of fly ash, supporting earth walls, etc., at the site. The likelihood of sliding was discussed by the Citizens' expert witness Dr. Norman Flint, Professor of Geology, Department of Geology and Planetary Science, University of Pittsburgh. Dr. Flint testified that the soil type and the presence

of springs at the Micale site makes the site landslide prone. He also asserted that the area in and surrounding the Micale site shows evidence of sliding in the past. Dr. Flint further testified that subsidence could stimulate a landslide. Dr. Flint associated the risk of subsidence at the proposed site with the fact that the Micale site has been undermined; this fact has been conceded by Duquesne's witnesses, notably Thomas D. Donovan, who testified that "The bulk of the area underneath the Micale property has been totally undermined, and coal has been totally removed."

Dr. Flint's assertions about the probability of landslides at the Micale site actually were very cautious. His testimony was as follows (N.T. 120, 166):

> Q. If subsidence in the undermined area were to occur, would that—could that stimulate a landslide?
>
> A. I think it is possible...
>
> Q....As a geologist, do you think it likely there are going to be landslides where there is going to be fill or in the ponds?
>
> A. I think I already testified that I think it is possible...
>
> Q. How possible is it? Is it more probable than not in your opinion?
>
> A. I think it is more probable than not that there will be landslides encountered during the construction and possibly after.

In contrast to Dr. Flint's testimony was the testimony of Duquesne's expert witness Thomas Donovan, who took part in the stability analysis (against slides) Duquesne's engineers conducted concerning the proposed site design. Mr. Donovan testified that he presently agrees with and approves of the recommendations and the results of the analysis contained in the February 1979 GAI Report for the proposed site,

introduced into evidence as Permittee Exhibit 3, Item 1(a). This report made calculations pertaining to several different potential stability failures of the facility as designed (e.g., rotational failures). The report concluded that such failures were not probable provided certain recommended stabilization features were incorporated into the design; these recommended stabilization features indeed have been incorporated into the design. Slide-prone areas and the possible effects of subsidence were taken into consideration, said Mr. Donovan.

Mr. Donovan was quite unequivocal about his opinion that the site design was stable against landslides. He asserted that the design was "at the state of the art relative to the stability." He also asserted, without contradiction, that the design complied with DER's regulations with respect to the stability of fly ash embankments. Dr. Flint, though he has specialized in "landslide hazard mapping" of geologic formations (N.T. 146), is not an engineer (N.T. 131); certainly no evidence was presented that Dr. Flint had made calculations--or was competent to make calculations--concerning the stability of the proposed site design. Dr. Flint testified that he had reviewed the GAI Report, and had found no significant errors in it (N.T. 138-139).

In view of the foregoing paragraphs, and bearing in mind our earlier quotation from Coolspring Township concerning the presumption that compliance with applicable regulations meets the objective of protecting the public health, safety and welfare, we conclude that the appellants have not shown the proposed facility is likely to fail, i.e., will not operate as designed throughout its 45-60 year estimated life. This conclusion is strongly bolstered by responses (see infra) the Board received from Mr. Leon Baskin, in answer to questions posed by the Board after the hearings were closed. During the hearings Mr. Vito Vince Luci--who is

chief of the facilities section of the Pittsburgh regional office, DER Bureau of Solid Waste Management--testified that Mr. Baskin, who performs stability analyses for the DER Division of Dam Safety, had made an independent review of the proposed design's stability. Mr. Baskin was not called as a witness by any of the parties, but his review of the GAI Report (as embodied in a letter dated December 4, 1980 to the Chief, DER's Bureau of Solid Waste Management from the Chief, DER's Division of Dam Safety) was admitted into evidence (Permittee's Exhibit 10). This review expressed some reservations concerning the design. On December 7, 1981, however, he apparently no longer had reservations (Permittee's Exhibit 11); according to Mr. Luci (N.T. 1637) these reservations were satisfied during conversations with Duquesne's engineers after Mr. Baskin had written his December 4, 1980 review of the GAI Report.

Despite Mr. Luci's assurances that Mr. Baskin's reservations had been satisfied, the Board remained uneasy about the fact that Mr. Baskin himself had not testified. Therefore, at the close of the hearing, after some discussion, the parties agreed that the Board--after consultation with the parties--would frame questions to Mr. Baskin concerning his present views about the stability of the proposed site (N.T. 1833). It was further agreed that the parties would receive copies of the questions to Mr. Baskin and his answers, after which the parties and the Board would decide whether or not Mr. Baskin's testimony under oath and cross examination would be required in this matter. The Board put its questions to Mr. Baskin on March 29, 1983; Mr. Baskin replied on April 19, 1983. Baskin affirmed that he had been left with reservations on December 4, 1980, but that his reservations had been removed after later discussions with Duquesne and DER. In particular, Mr. Baskin was asked, and responded, as follows:

> Q. At this time, do you have any reservations whatsoever concerning stability of any portion of the proposed site?
>
> A. If design specifications are followed during construction, I have no reservations concerning the fly ash bank stability.

There has been no request by any party--and the Board has seen no need--to reopen the hearings for the purpose of calling Mr. Baskin as a witness. The parties having been given the opportunity to object (in a letter from the Board dated April 25, 1983, to all counsel), and having not objected, the Board has made its March 29 and April 19, 1983 exchange of correspondence with Mr. Baskin part of the record, as Board Exhibits 5 and 6 respectively.

Our conclusion that the appellants have not shown the proposed facility is likely to fail does not entirely close our discussion (in the instant Section C) of this failure possibility issue. In Coolspring, supra, we wrote (at 23):

> To meet his burden of showing DER has abused its discretion, an appellant need not show that the undesired and undesirable effects discussed in the preceding paragraph are certain to occur, or even very probably will occur. Requiring such a showing often would be inconsistent with the basic objectives of protecting the public's health, safety and welfare. If the effects, once they have occurred, are sufficiently calamitous, then even a small probability of occurrence may be intolerable; a nuclear power plant meltdown is a compelling, though extreme, illustration. But in any given fact situation, whatever the tolerable probability of occurrence of unwonted effects may be, it is the appellant's burden to show convincingly that this probability will be exceeded. The mere speculative possibility of undesirable effects, without the additional showing just described, cannot overcome the presumption of validity attached to duly promulgated regulations of the EQB. (emphasis in original)

Under the facts of these appeals, the "undesirable effects" mentioned in the above quote are groundwater pollution ascribable to the occurrence of landslides; the Citizens argue that the landslides will cause groundwater pollution

via damage to the facility's leachate collection system (N.T. 166-167). Martha Connamacher attempted to support this argument with her testimony about the manganese levels in the monitoring wells at the Elrama site, some of which testimony we already have discussed supra. In particular, Martha Connamacher claimed that high peaks in the reported manganese levels were associated with slides at Elrama (N.T. 1730-1736); Citizens' Exhibit 21, a letter written by a Duquesne engineer to DER on January 24, 1975, refers to "a slide in the residual soils" at Elrama, occurring on or about December 18, 1974.

The relevance to the instant appeal of Citizens' Exhibit 21 is made very dubious, however, by testimony from Duquesne's witness William Held. He testified without contradiction (N.T. 1823-1825) that the December 18, 1974 slide at Elrama involved only soil in an area where earth moving activity was taking place in preparation for ash placement; no fly ash whatever was involved in this slide, nor was the leachate collection system at Elrama affected in any way. Mr. Held did testify under cross examination that on another occasion (not on December 18, 1974) there had been a "mud-like flow" of fly ash associated with erosion on one of the Elrama site's slopes. But all in all, in the light of Mr. Held's testimony, Martha Connamacher's testimony is insufficient to prove an association between fly ash landslides at Elrama and groundwater pollution, even if we disregard the weaknesses [(i)-(iii) listed in Section A supra] in Martha Connamacher's analyses of the high manganese levels at Elrama. Furthermore, as we already have remarked, the Elrama site design is much older than the Micale site design, which is "state of the art", so that demonstrated threats (if any) to the Elrama groundwater from fly ash slides need not imply there would be corresponding threats to the groundwater at the Micale site. Indeed, Duquesne's

witness Niece, an experienced engineer who had evaluated the adequacy of the design (N.T. 1339), testified that the Micale site was highly overdesigned to ensure the groundwater would be protected; according to Mr. Niece, the design would carry away leachate, without permitting pollution of the groundwater, even if significant parts of the site's collection system failed (N.T. 1344). Mr. Niece further testified that because of the site geology, failure of the leachate collection system would not cause pollution of any existing residential water wells (N.T. 1347). Furthermore, again paraphrasing Mr. Niece, those (according to Duquesne, unlikely) failures of the leachate collection system which did cause leachate to enter the groundwater could be repaired (N.T. 1465-1467, 1479-1482).

The aforementioned testimony of Mr. Niece's was not refuted by the appellants. The permit requires Duquesne to monitor the groundwater in the vicinity of the disposal site; manganese and pH are among the parameters to be monitored (Permittee Exhibit 3, paragraph 3). If DER determines that operation of the site "causes an adverse effect upon the quality or quantity of any water source presently utilized by local residents, and if the water quality or quantity problems cannot be rectified," then Duquesne must "provide a replacement water supply of equal quality and quantity to the previous water supply" (Permittee Exhibit 3, paragraph 4). Actually, Duquesne is required to continue monitoring the groundwater for ten years after use of the site ceases (presumably because it has been filled to capacity); moreover, for water supplies affected by Duquesne's operations, Duquesne would have to continue furnishing replacement water supplies as long as necessary, more than ten years past termination of disposal activities if need be. (N.T. 1637-1638).

Reviewing the facts which have been summarized in the preceding three paragraphs, we conclude that the Citizens have not met their burden of showing that the consequences of a landslide at the facility will be so calamitous that the probability of a landslide, though small, exceeds the tolerable. In sum, the Citizens have not shown that the possible failure of the site to operate as designed has made DER's grant of the permit an abuse of discretion.

D. Article I Section 27

The main contention advanced in the Citizens' brief is that the grant of the permit was in violation of Article I Section 27 of the Pennsylvania State Constitution. The test for compliance with Article I §27 is the well-known threefold standard of Payne v. Kassab, 11 Pa. Cmwlth. 14, 312 A.2d 86 (1973), affirmed 468 Pa. 226, 361 A.2d 263 (1976):

> (1) Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources?
>
> (2) Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum?
>
> (3) Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived therefrom that to proceed further would be an abuse of discretion?

D.1. Payne v. Kassab, Prong 1

The Citizens contend that "laying waste a scenic glen area for the construction of a fly ash dump with its potential for water pollution" violates the Clean Streams Law ("CSL"), particularly 35 P.S. §691.4 which declares it is the policy of the CSL to prevent water pollution. However, the Citizens offer

no authority for the contention (that the CSL has been violated) stated in the preceding sentence. Duquesne argues no violation of the CSL has been shown, because (inter alia) the appellants have not met their burden of showing operation of the facility threatens water pollution (see Sections A and C supra). We agree with Duquesne on this issue. Similarly, we reject the Citizens' claim that operation of the site will "endanger the health, safety and welfare or the environment," in violation of the SWMA, 35 P.S. §6018.302. There was no evidence that operation of the permit will violate any applicable regulations (see Finding of Fact 13). The permit explicitly states (paragraph 18) that it does not supersede applicable local ordinances. We conclude that the first prong of the Payne v. Kassab, supra, test is satisfied.

D.2. Payne v. Kassab, Prong 2

The Citizens also claim that DER's grant of the permit failed to meet the second prong of the Payne v. Kassab test. In support of this claim the Citizens assert (p.h.b., p. 9):

> The record indicates that the primary criteria for site selection was the number of people owning the land; the secondary criteria being proximity of the plant site and capacity. Proximity to a residential area and the destruction of the glen itself was never a factor in site selection. On the contrary, the record indicates that numerous sites exist in closer proximity to the plant which have no adverse environmental consequences, nor do they impinge on the health, safety, and welfare of the residents. Thus, the record does not demonstrate a reasonable effort to reduce the environmental incursion to a minimum...
>
> The record is devoid of any evidence of the Department of Environmental Resources requiring that Duquesne Light Company examine alternate sites for disposition of its fly ash. It is the position of the Appellant that under Article I, Section 27 of the Pennsylvania Constitution, the Department of Environmental Resources is required to compel Duquesne Light Company to examine alternate sites...

In Coolspring at 47-48, the Board ruled that the second prong of the Payne v. Kassab test does not impose on DER the affirmative duty to seek out alternatives possibly more suitable than the Micale site, absent a showing that the Micale site is likely to result in significant environmental harm; we ruled similarly in Concerned Citizens of Breakneck Valley v. DER, Docket No. 78-064-B, (Adjudication, 1979 EHB 201). As discussed in earlier sections of this adjudication, there has been no showing that the Micale site is likely to produce significant environmental harm.

In addition, DER—with the intention of satisfying the second prong of the Payne v. Kassab test--has examined the environmental consequences of the proposed Micale facility in a fashion which, in many ways, goes beyond the considerations of our Sections A-C supra. Specifically, Duquesne had to submit a completed so-called Module 9 questionnaire, "General Environmental, Social and Economic Information", designed to enable DER to decide whether the proposed facility would comport with the requirements of Article I §27 [N.T. 1574-1575, Permittee Exhibit 3, Item 1(e)]. The Module 9 questions included, e.g.:

> 7. Is the property located within one mile of an historic property owned by the Pennsylvania Historical and Museum Commission?...
>
> 9. Is the project within 1/4 mile of the boundary of a state forest or state game land; or the proclamation boundary of the Allegheny National Forest?...
>
> 12. Is the project located within a wetland?...

DER concluded from the submitted Module 9 that the proposed facility had no potential for significant environmental harm (N.T. 1596-1597). The appellants have not shown that DER's reliance on Module 9 to draw this conclusion was unreasonable; in fact, neither appellant's brief even mentions Module 9. Certainly

the appellants have not explained why "laying waste to a scenic glen area" (in the words of the Citizens p.h.b., p.8) whose details are not discernible from Rural Ridge, and to which the Citizens now are being refused access by Mr. Micale, should imply violation of the second prong of the Payne v. Kassab test without any consideration of Duquesne's responses to the Module 9 questionnaire.

Furthermore, Duquesne did consider seriously ten alternatives to the Micale site (N.T. 841-842, 873-874). These sites were evaluated on the basis of a formula which--it is true--included as selection criteria only the size and disposal capacity of the site, the distance of the site from the Cheswick Station, and the number of landowners whose agreement would be required before Duquesne could obtain rights to the site. It cannot be gainsaid that the formula was arbitrary, in the sense that other formulas could have been suggested; but, as Mr. William Held's testimony established, the formula was not irrational (N.T. 839-840). On the basis of this formula, the Micale site had the next to the highest score of all sites examined (N.T. 907-908, Board Exhibit 3). The testimony was that the sole owner of this highest scoring property would not sell it to Duquesne (N.T. 908-909); on the other hand, it was not clear that Duquesne had made a good faith effort, within reason, to meet whatever this owner's asking price might have been (N.T. 908-909).

Most importantly to the issue at hand, however, there was no evidence that any of the ten alternative sites (including the highest scoring site) were potentially less harmful to the environment than the Micale site. The Citizens' assertion in the quote supra from the Citizens' post hearing brief, to the effect that "numerous sites exist in closer proximity to the plant which have no adverse

environmental consequences," simply is not borne out by our reading of the record; the Citizens did not seriously examine the environmental consequences of locating the fly ash disposal facility at any site other than the Micale site. Also, DER did attempt to minimize the environmental incursion at the chosen Micale site. The facility is overdesigned, as already pointed out supra (Finding of Fact 77); the final design includes modifications of earlier designs, so as to ensure stability (N.T. 1531-1533); various special conditions on the permit, e.g., permit paragraph 4 calling for replacement water supplies should private wells be affected, were added by DER to take into account concerns raised by the appellants and other reviewers of the original permit application (N.T. 1613-1615).

We conclude that the appellants have not shown any failure to comply with the second prong of the Payne v. Kassab test.

D.3. Payne v. Kassab, Prong 3

On this issue we once again are guided by Coolspring, supra, at 48. It is the appellants' burden to show that the environmental harm from operation of the Micale disposal facility clearly will outweigh its benefits. We already have ruled that the appellants have not shown operation of the facility is likely to cause intolerable environmental harm (see Section C supra). On the other hand, the need for a facility to dispose of the Cheswick fly ash is amply supported by the record. Presently Duquesne is disposing of fly ash from Cheswick by mixing the ash with water and pumping the resultant slurry via a borehole into an abandoned deep mine, the Harwick mine (Board Exhibit 1). In 1976, the borehole to the Harwick mine plugged, preventing disposal of further fly ash slurry and necessitating use of an emergency fly ash pond at Cheswick for temporary disposal. A new borehole into the Harwick mine finally was drilled and has been used since 1976,

but this new borehole also has had some plugging problems. Evidently the presently employed borehole method of fly ash disposal is not wholly reliable. Furthermore, even assuming continued operation of the borehole could be relied on, it has not been possible to estimate the remaining capacity of the Harwick mine for fly ash; that capacity could be exhausted at any time. Duquesne has investigated the availability, for fly ash disposal, of other (than Harwick) underground mines in the vicinity of Cheswick, and has concluded there are none. Nor are there alternatives (e.g., incorporation into building bricks) to disposal of fly ash as a waste material. Without a fly ash disposal facility, Duquesne would be required to close down its Cheswick plant, because there is only about ten months storage capacity in the Cheswick emergency ash pond, and because the plant cannot be operated legally without the electrostatic precipitators which remove the 600 tons/day of fly ash that otherwise would be emitted into the atmosphere.

Therefore the appellants have not met their burden of showing the third prong of the Payne v. Kassab test was not satisfied.

E. Effects On Traffic

The fly ash will be transported from the Cheswick plant to the proposed site in about thirty truckloads a day, each load twenty tons. The Township protests that the planned route of these trucks is over roads which--from the standpoint of width and load-bearing capacity--cannot accommodate such traffic. The Township also contends that with its present equipment the Township cannot cope with the road cleanup problems which will be generated by spillage from the trucks, and that its presently very few police officers (six, including the chief) won't be able to handle the additional responsibilities imposed by the truck traffic. Furthermore, according to the Township, its declining tax

revenues and statutorily limited millage levy do not permit it to raise the additional taxes needed to hire more police officers and purchase more road cleaning equipment. The Township claims that DER failed to consider these traffic effects on the Township, and that this failure was an abuse of discretion.

The record does not support the contention that DER failed to give <u>any</u> consideration to the traffic problems generated by truck transport of the fly ash to the disposal site. Question 18 of the aforementioned Module 9 (see Section D <u>supra</u>) asked, "Will the project create an increase in traffic on the approach route(s) leading to the project?" Duquesne was instructed that if this question was answered "Yes" then Duquesne would have to describe the traffic effects in considerable detail including capacities, widths and condition of the roads which would be used, number of residences fronting on the roads, daily traffic counts, etc.

Duquesne answered "Yes" to Question 18 of Module 9, and went on to furnish the requested detailed information on traffic effects. DER sent this information for review to the Pennsylvania Department of Transportation ("PennDOT"); PennDOT was specifically asked to comment on the amount of truck traffic with respect to the road conditions and existing traffic patterns (N.T. 1598-1599). On December 22, 1980, PennDOT informed DER by letter that it had reviewed the permit application with respect to traffic impact. PennDOT explicitly stated (Duquesne Exhibit 9E):

> The expected change or increase in traffic on the approach route is insignificant and should not result in traffic safety problems.

DER's Mr. Luci testified that this response from PennDOT allayed the concerns about traffic which he had felt when he first read Duquesne's answer to Module 9 Question 18 (N.T. 1600).

Evidently DER did consider the effects of the increased truck traffic on traffic safety, and--after receiving PennDOT's response quoted above--decided these effects were insufficiently serious to justify denial of the permit. We hold that this decision, in the limited traffic safety context just stated, was well within DER's discretion. The primary responsibility for evaluating road utilization from the standpoint of traffic safety is PennDOT's, not DER's [see, e.g., 71 P.S. §511.3(d) and §515(c)]. DER cannot be faulted for accepting PennDOT's evaluation that the trucks carrying fly ash to the Micale facility "should not result in traffic safety problems." If assuming arguendo the decision that the trucks would not cause traffic safety problems was an abuse of discretion, the abuse was by PennDOT, not DER.

The question remains, should DER's considerations of traffic effects have gone beyond direct effects on safety, to what must be termed "indirect" effects? For example, should DER have given consideration to the Township's claim that its budgetary constraints will keep the Township from hiring the extra police to handle the additional responsibilities stemming from the truck traffic? Without supporting authority, we are not prepared to answer this last query affirmatively; neither appellant has cited such authority. We do not believe that the question is conclusively answered by recent rulings which grant the Township standing to challenge a landfill permit. Franklin Township v. DER, 452 A.2d 718 (Pa. 1982) Susquehanna County v. DER, 458 A.2d 929 (Pa. 1983).

Furthermore, the Township's evidence in support of its claim that its present police and other services will be overwhelmed by the additional truck traffic is not convincing. PennDOT deems the increase in traffic insignificant, as already noted. The trucks will use Little Deer Creek Valley Road and Lefeever

Road; both these roads are State roads, however, for whose maintenance the Commonwealth--not the Township--has primary responsibility [N.T. 37, 71 P.S. §512(a)(8)]. Under paragraph 5d of the permit, as well as under the SWMA, 35 P.S. §6018.303(b)(2), Duquesne is responsible for prompt cleanup of any fly ash spillage on the haul roads. The permit, paragraph 14, explicitly makes Duquesne subject to appropriate local law, which would be expected to include punishments to deter violations.

We conclude that the Township has not met its burden of showing that DER's grant of the permit was an abuse of discretion for failure to consider sufficiently the effects of Duquesne's truck traffic on the Township.

F. Concluding Remarks.

Although the reader may find it difficult to believe, the record in this case still includes much testimony we have not discussed, on issues which the Board deems irrelevant or which have been abandoned by the appellants. For example, the Citizens and Duquesne each presented much highly contradictory testimony about the expected influence of the proposed site on real estate values. This issue appears to have been abandoned in the Citizens' brief, and the Board has been given no reason to believe it has any relevance to these appeals. Thus the issue of the influence on real estate values, and the evidence bearing thereon, has not been discussed in this adjudication. Similar remarks pertain to other testimony not discussed herein.

Ultimately, the appellants, especially the Citizens, object to having the disposal facility near Rural Ridge because (the Citizens claim) their community already is receiving its fair share of wastes stemming from electrical power generation. This objection is encapsulated at the close of the Citizens'

post-hearing brief, where they state:

> While no one community wants industrial waste products, and nearly all communities in Western Pennsylvania desire to be served by electricity, it is necessary for some communities to receive the waste products. However, it is an abuse of discretion for DER to grant a permit requiring the Village of Rural Ridge to receive all of the waste products for electrical power generation, at the Cheswick power plant.

We have not attempted to ascertain the correctness of the appellants' allegation that their local community is going to be receiving more than its fair share of power plant wastes. If the allegation is true, the appellants deserve considerable sympathy. But we see nothing in applicable law which allows DER, or this Board, to reject a permit application on the grounds that it will unfairly burden one localized community with wastes from generated power serving a wide area.

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the parties and the subject matter of these proceedings.

2. Our review of this matter is to determine whether DER has committed an abuse of discretion or an arbitrary exercise of its duties and powers.

3. Appellants have the burden of proof in these two appeals.

4. Where, as in the instant appeal, there exists an applicable regulatory scheme, duly promulgated by the Environmental Quality Board, there is a presumption that the regulatory scheme does meet the objectives of the underlying statute.

5. If it is assumed the facility will operate as designed, then granting the permit was not an abuse of DER's discretion.

6. The appellants need not show that undesirable effects of the disposal facility's operation are probable, but they must show that the probability of such occurrence--taking account of the seriousness of the effects produced--is too large to be tolerable.

7. The appellants have not met their burden of showing that--because of the seriousness of the undesirable effects which would result--the probability that the site will not operate as designed exceeds the tolerable.

8. The appellants have not met their burden of showing that DER did not comply with the requirements of the Pennsylvania Constitution Article I Section 27.

9. The primary responsibility for evaluating road utilization from the standpoint of traffic safety is PennDOT's, not DER's.

10. It was not an abuse of DER's discretion for DER to rely on PennDOT's evaluation that Duquesne's truck transport of fly ash to the facility would not result in traffic safety problems.

11. The Township has not met its burden of showing that DER's grant of the permit was an abuse of discretion for failure to consider sufficiently the effects of Duquesne's truck traffic on the Township.

12. In sum, DER's grant of the permit was not an abuse of discretion or an arbitrary exercise of its duties and powers.

O R D E R

WHEREFORE, this 3rd day of January , 1984 , the appeals at the above-captioned docket numbers are dismissed.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: January 3, 1984

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

ORVILLE RICHTER, d/b/a RICHTER TRUCKING COMPANY,	:	DOCKET NO. 80-106-M
Appellant	:	Surface Mining Bond Forfeiture
v.	:	52 P.S. §1396.1 et seq.
COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES	:	
Appellee	:	

PARTIAL ADJUDICATION

By the Board: This adjudication was originally drafted by Theodore Baurer, Examiner, from the record, and is issued after the Board's review, with modifications.

Dated: April 24, 1984

Orville Richter, doing business as Richter Trucking Company ("Richter"), a surface mine operator, has timely appealed DER's forfeiture of four surface mining bonds posted by Richter to guarantee reclamation of two mining sites in Menallen and Springfield Townships, Fayette County. A hearing on this matter was held October 15, 1981, before the Honorable Dennis J. Harnish. Post-hearing briefs were filed by appellant and appellee on December 17, 1981 and April 25, 1983, respectively. On March 28, 1983, Richter petitioned for leave to supplement the record and file a supplementary brief. On April 18, 1983, DER opposed this petition. The Board had not acted on it by November 1, 1983, when the file on this matter was delivered to the Board-appointed Hearing Examiner, Mr. Baurer, for adjudication. 71 P.S. §510-21 (e).

FINDINGS OF FACT

1. Appellant is Orville Richter, an individual doing business as Richter Trucking Company ("Richter"), a sole proprietorship with offices located at 1425 Chestnut Street, South Connellsville, Pennsylvania 15425.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources ("DER"), with offices located on the seventh floor, Fulton Bank Building P.O. Box 2063, Harrisburg, Pennsylvania 17120, and is the agency empowered to enforce the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §691.1 et seq.; and the Rules and Regulations promulgated thereunder.

3. At all times relevant hereto, Richter conducted surface coal mining operations under permits which were duly issued by DER.

4. On March 23, 1978, DER issued to Richter, Mine Drainage Permit #3377SM34, covering a mining site located in Springfield Township, Fayette County.

5. On April 23, 1978, DER issued to Richter, Mining Permit #1463-3 authorizing commencement of operations on the Springfield job.

6. On May 26, 1978, DER, acting through D.R. Thompson, Bureau of Surface Mine Reclamation, notified Richter that a portion of the mine drainage permit would have to be deleted to comply with Section 522(e) of the Federal Surface Mining Control and Reclamation Act 95-87 (August 3, 1977) 30 U.S.C. §1201 et seq., which precludes, inter alia, mining in the visual corridor of a river designated for study as a Wild and Scenic River.

7. The Springfield operation is located on a mountain adjacent to the Youghiogheny River which is designated for study as a Wild and Scenic River within the meaning of the federal legislation cited above, and that portion of the Springfield mining site lying below the 1400-foot level of the mountain is within the visual corridor of the said river.

8. On June 27, 1978, Richter filed a timely appeal with this Board, from DER's notification (supra, #6) of May 26, 1978.

9. On July 28, 1978, DER, again acting through D.R. Thompson, rescinded the May 26, 1978 letter (supra, #6), this rescission being based upon the following understanding as set forth in the letter of July 28:

> Assistant Attorney General Thomas Y. Au has been in contact with Mr. Charles C. Gentile, Esquire, your Attorney in this matter. They have agreed that further time to study the matter is needed and any action concerning the Youghiogheny Wild and Scenic River Study area could be taken at the time of decision for surface mining permits for the area covered by Mine Drainage Permit #3377SM34.

10. On August 21, 1978, Assistant Attorney General Thomas Y. Au ratified Mr. Thompson's letter of July 28, 1978 (supra, #9), in a letter to this Board, the entire text of which is as follows:

> As indicated by Mr. Thompson's letter dated July 28, 1978, the Department is withdrawing its action of May 26, 1978.
>
> Further action may be taken at a later time, without prejudice to the respective positions of the Department and Mr. Richter. The case before the Environmental Heaing Board may be discontinued.

11. Assertedly relying on inferences drawn from the letters of July 28 and August 21, 1978 (supra, #9 and #10, respectively), Richter commenced mining at the Springfield site.

12. More than one year later, on October 31, 1979, the site was inspected and a report was filed by Perry Confer, a Mine Inspector for the Bureau of Surface Mine Reclamation, setting forth several detailed directives which he had issued to Richter, in order to alleviate certain unsatisfactory conditions (infra, #14) which Confer had found, but making no recommendations regarding actions to be taken by the Bureau.

13. On or shortly after November 1, 1979, Richter received a mailgram from Mr. Thompson ordering him to cease and desist all strip-mining operations at the Springfield site "within the visual area corridor of the Wild and Scenic River Systems (sic) that includes the Youghiogheny River".

14. The Cease and Desist Order was issued not only because Richter was mining within the visual corridor of the Youghiogheny River in contravention of federal legislation (cited supra, #6), but for the additional reasons that Confer had reported (supra, #12) ineffective erosion and sedimentation controls at the site, and a safety hazard to the nearby Baltimore and Ohio Railroad line arising from slumping spoil.

15. At the time, on or after November 1, 1979, when Richter ceased his operations at the Springfield site in obedience to the Cease and Desist Order (supra, #14), he had already affected eleven of the forty acres covered by the relevant permits at that site.

16. The uncontroverted (and unappealed) testimony of Mark Frederick, a Surface Mine Conservation Inspector with the Bureau of Surface Mine Reclamation, was to the effect that, during the course of Richter's operations at the Springfield site, he had mined by the contour method rather than by the block cut method specified in the permits, failed to conserve topsoil, affected within one hundred feet of certain waterways, and affected between two and five acres not authorized by the permits as a result of a landslide caused by casting spoil onto steep slopes.

17. Frederick also testified that, as late as August 7, 1981, numerous corrective conservation measures had still not been effected at the Springfield site.

18. Richter never appealed the Cease and Desist Order.

19. After the Cease and Desist Order was issued, and as a result of the said Order, Richter was deprived of revenue, but nevertheless commenced backfilling until such time as he assertedly ran out of both fuel and funds and, unable to make payments on the equipment he had financed, lost that as well by repossession.

20. In a thus-far unsuccessful effort to raise additional funds with which to complete reclamation, Richter attempted to have the Federal Office of Surface Mining (Department of Interior) remove the legal impediments to further mining within the visual corridor and, failing in this, had discussions with another surface mine operator, one Arthur J. Boyle, about an agreement to reactivate the Springfield site.

21. Had an agreement between Richter and Boyle been reached, Richter would have received twenty-five cents (25 ¢) per ton of coal mined by Boyle at the Springfield site, and Boyle also agreed to backfill at that site in accordance with law.

22. Simultaneously with his operations at Springfield, and somewhat predating them, Richter had also been mining surface coal at a separate site in Menallen Township, Fayette County, pursuant to Mine Drainage Permit #3375SM29 and three Mining Permits (#1463-1RE, #1463-2, #1463-2A) secured by a total of $15,137.50 in bonds.

23. In the course of mining the Menallen site, Richter had affected approximately 24 of the 24.4 acres covered by the permits cited supra (#22), and had removed substantially all the coal therefrom.

24. Mr. Gildo Santella, a Mine Conservation Inspector for District 61-J, Fayette County, testified that, as late as October 14, 1981, numerous corrective conservation actions had still not been taken at the Menallen site.

25. The amount of reclamation work which remains to be done at the Menallen site is substantial, and has been estimated to cost approximately $14,000 to $15,000 which was to have been realized, according to testimony by Richter's authorized representative, William Richter (Richter's son), from the 25 ¢ per ton Richter would have received from Boyle under the projected agreement regarding the Springfield site (supra, #21).

26. On January 30, 1980, all mining within the visual corridor of the Youghiogheny River having ceased, John Mason, an Inspector for the Office of Surface Mining Reclamation and Enforcement of the United States Department of the Interior, issued Notice of Violation #80-1-3-3, which cited Richter for, inter alia, a violation of Section 522 (e) of the Federal Surface Mining Control and Reclamation Act (supra, #6), and ordered him to cease immediately all mining within the visual corridor.

27. Testimony by Mason was to the effect that any resumption of mining

operations by Richter within the visual corridor would bring down another Notice of Violation, but that the Office of Surface Mining was considering permitting such mining nevertheless, pending only approval by the National Park Service, which approval has not yet been forthcoming.

28. It was testified that Richter continued in negotiations with both DER and OSM, looking to the reactivation of the Springfield site.

29. Of forty acres covered by Mining Permit #1463-3 at the Springfield site, approximately 38 lie within the visual corridor and thus are barred from further mining operations under DER's Cease and Desist Order.

30. At least 100,000 tone of recoverable coal remain at the Springfield site.

31. On May 23, 1980, DER, acting through J. Anthony Ercole, Director of the Bureau of Mining and Reclamation, forfeited the following Surety and Collateral Bonds:

> (1) Mine Permit No. 1463-1RE: Certificate of Deposit #C100025, executed 10/8/75 in the amount of $5750 on the property of Darlton Langley and Frank Moser, Menallen Township, Fayette County (M.D. #3375SM29).
>
> (2) Mine Permit No. 1463-2: Savings Account Cerfiticate #03 00336, executed 10/6/76 in the amount of $7187.50 on the property of Darlton Langley and Frank Moser, Menallen Township, Fayette County (M.D. #3375SM29).
>
> (3) Mine Permit No. 1463-2 (A): Cashier's Check #1112064, executed 10/20/77 in the amount of $2200 on the property of Darlton Langley, Menallen Township, Fayette County (M.D. #3375SM29).
>
> (4) Mine Permit No. 1463-3: Surety Bond #B1102, executed 12/2/77 in the amount of $40,000 with Mid-Continent Insurance Company on the property of Clyde and Agnes Shipley, Sprinffield Township, Fayette County (M.D. #3377SM34).

32. DER proved and Richter did not contest DER's findings as set forth in its letter of May 23, 1980 (supra, #31) that Richter had failed to correct violations at each of the said sites, as previously described in the Cease and Desist Order of November 1, 1979 (supra, #13) and in the Notice of Violation of January 30, 1980 (supra, #26), and that Richter had failed to reclaim areas affected in the course of his surface mining operations, as required by law.

D I S C U S S I O N

The burden of proof of the facts justifying forfeiture of bonds securing surface mining permits such as those involved in the instant appeal lies with DER. See *Rockwood Insurance Co. v. DER*, EHB Docket No. 78-168-S, (1981 EHB 424). This burden is defined by statute:

> If the operator fails or refuses to comply with the requirements of the act in any respect for which liability has been charged on the bond, the department shall declare such portion of the bond forfeited... Section 4 (h) of SMCRA, 52 P.S. §1396.4 (h)

Thus DER is first constrained to prove that Richter fell short of fulfilling his bonded obligations, either by failure to comply, or refusal to comply, with any of the statutory imperatives which he is compelled to obey and which he has bonded himself to obey.

In many respects this case is similar to, although not on point with, the case of *Reiner v. DER*, EHB Docket No. 81-133-G (issued July 28, 1982), where, as here, surface mining bonds were forfeited under the same section of SMCRA as quoted above. There as here, "DER's reason for its action were not as clearly and consistently articulated to the appellant as this Board or DER should like." There as here, the "requirements of the act" which assertedly had not been complied with were stated dissimilarly in communications to the permittee/appellant predating forfeiture (upon which forfeiture was explicitly based) and in DER's Pre-Hearing Memoranda filed subsequent to forfeiture. There as here, the permittee/appellant based his appeal at least in part upon a theory of estoppel and in part upon a lack of funds with which to achieve compliance.

A. The forfeiture

In *Reiner*, we wrote:

> ...(W)hen (appellant received DER's ...(notification) of the forfeiture, he was entitled to believe that the reasons for DER's forfeiture of his bonds were the reasons stated in that letter. ..... (I)f a reasonable man would not read the ... letter (of notification) as stating that the reasons for the bond forfeitures included (the delinquencies asserted later),

> then (appellant at the time of notification) would not have had notice his bonds were being forfeited because of such failure .....
>
> .....
>
> That such notice...is a constitutional due process requirement has been vigorously affirmed by Pennsylvania courts and by this Board... (Citation omitted; emphasis in the original.) *Reiner* at 197-198.

However, the manner of articulation to appellant of DER's reasons for forfeiture, complained of in *Reiner* as deficient in clarity and consistency, was an absolute paragon of those two literary virtues as to *Reiner*, when compared with DER's performance in those respects here. In *Reiner*, DER's letter of forfeiture referred to a specific prior letter which had cited certain excessive discharges as violative of the relevant acts, and it was not until DER's Pre-Hearing Memorandum was subsequently issued that the permittee's failures to fulfill stated reclamation requirements were listed. This Board held that notwithstanding whatever ambiguities might have resulted from this succession of notifications, DER's Pre-Hearing Memorandum, dated eight months prior to the EHB hearing, had afforded the permittee sufficient notice of those violations for which his bonds were forfeited, as to make it "not necessary...to construe the import of the (forfeiture) letter." (Id. at 198.)

In the instant case DER's letter of forfeiture was even less explicit, in that it referred merely to prior "Notices of Violation", of which the record discloses first, the correspondence of May through August, 1978 (Findings of Fact #6, #8-10) concerning the visual corridor issue; second, the Cease and Desist Order conveyed by mailgram (Finding of Fact #13) on November 1, 1979, again citing the visual corridor issue and "in addition" the presence of ineffective erosion and sedimentation controls and the safety hazard potentially affecting the Baltimore & Ohio Railroad right-of-way; and third, the federal government's Notice of Violation of January 30, 1980 (Finding of Fact #26), listing several individual violations of which the matter of the visual corridor was first on the list.

Moreover, although none of these prior communications concerned the Menallen site (except by implication at best), all of them referring explicitly to the Springfield site, the forfeiture letter spoke of prior "Notices of Violation with regard to

all permits under which your company has been conducted surface mining operations" (emphasis added), and proceeded to forfeit the three bonds covering the Menallen operation as well as the single bond covering the Springfield job. Nevertheless, following *Reiner*, this Board finds that notwithstanding the confusion occasioned by this course of communication and miscommunication, DER's Pre-Hearing Memorandum of February 2, 1981, predating the EHB hearing of October 15, 1981 by more than eight months, conveyed sufficient notice of the real violations for which forfeiture was invoked at both sites, and in sufficiently explicit terms, as to justify once again setting aside any further effort "to construe the import of the (forfeiture) letter." (Supra.)

DER's Pre-Hearing Memorandum alleged in particular a total of fourteen specific violations of regulations governing Richter's performance at both operational sites; the visual corridor issue was nowhere mentioned. Richter's Pre-Hearing Memorandum, on the other hand, filed the same day as DER's, concentrated almost entirely on the visual corridor issue and its purported consequences. The operational failures and delinquencies which DER was citing were nowhere mentioned by Richter.

Nonetheless, as stated above, we follow our previous reasoning in *Reiner* and rule that appellant was sufficiently on notice, more than eight months prior to his hearing, of the violations (sufficient in themselves to warrant bond forfeiture if proved) which DER was alleging and would attempt to prove before this Board. Hence (and again following *Reiner* in principle) we also set aside as immaterial DER's earlier statements basing the bond forfeiture on the visual corridor issue. However, we shall necessarily consider infra Richter's asserted reliance on certain of those earlier statements, in connection with his defense of estoppel, derived therefrom.

B. The Charges Underlying Forfeiture

Richter's Post-Hearing Brief makes much of the statutory language (quoted supra) which requires bond forfeiture, viz., "...the department shall declare..." (emphasis added), for either failure to comply or refusal to comply with the relevant requirements. Richter correctly argues that "refusal" is not an issue inasmuch

as DER's letter of forfeiture asserted only "failure" and indeed, nowhere in the record do we find any evidence of DER's contending otherwise. Richter next defends against the charge of "failure to comply" by alleging "that it was the DER which prevented (him) from correcting violations and reclaiming areas affected by his operation." (Post-Brief, Richter, 25.) Richter thereby impliedly admits his "failure to comply" even while defending against the legal consequences of his admission. The matter of Richter's defenses will be treated separately below. What is important here is the admission, however stated, that Richter indeed "failed to comply", for whatever reason or reasons. Nowhere is his Post-Hearing Brief is this failure effectively refuted or overcome. The best he can do is to rely on a definition of "failure" as "suggest(ing) a neglectful omission" (citation omitted), and arguing that his omission was not "neglectful" but rather was one forced upon him by "the arbitrary actions of the DER" (Id), thereby reasserting his same defense.

Notwithstanding DER's more restrictive dictionary definition of "failure and its assertion that Richter's definition is "neither necessary nor appropriate in this instance" (Post-Brief, DER, 8-9, n. 1), the volume of reclamation work remaining undone and the extent of the operational violations attested to, at both sites (Findings of Fact #15, #16, #23, #25) as of November 1, 1979 when the Cease and Desist Order was issued, i.e., after about fourteen months of operations at Springfield and substantially longer than that at Menallen, lead inescapably to the conclusion, nowhere refuted, that throughout that entire period of operation Richter was in fact "neglectful' in his "failure to backfill concurrent with the progress of the stripping operation", as alleged, inter alia, in DER's Pre-Hearing Memorandum.

The thirteen other charges brought by DER in its Pre-Hearing Memorandum and never refuted by Richter likewise betray a pattern of "neglect" as well as mere "omission". For example, various "failures to maintain" certain requisite facilities cannot be explained, during a period of uninterrupted and presumably lucrative operations, other than as a result of neglect.

It follows that Richter "failed to comply", as he was required to do, by

any definition of "failure", in that he both omitted performance and neglected his bonded obligations to perform according to law. Therefore the charges underlying forfeiture are well-founded, and DER neither abused its discretion not acted arbitrarily or cpariciously in having for feited the bonds. It remains to examine Richter's defenses to DER's action, and to discover whether these defenses provide any basis for reversing or mitigating the effects of that action. Insofar as Richter seeks to propound affirmative defenses, the burden of proof is on him. *Reiner, supra.*

C. Richter's Defenses to the Forfeiture

Richter's Notice of Appeal listed four defenses, and two others were added in subsequent pleadings and/or argument.

1. Breach of contract. This defensive contention was set forth once in the Notice of Appeal, never heard of again, is absolutely without merit, and is there fore summarily rejected.

2. Deprivation of property rights without due process. This constitutional argument has been resolved (supra) in prior discussion vis-a-vis any assertion of lack of notice of the charges underlying forfeiture. Notwithstanding DER's poorly articulated notice in its letter of forfeiture, this deficiency was sufficiently remedied in DER's Pre-Hearing Memorandum as to afford Richter more than eight months' notice, prior to the EHB hearing, of fourteen specific and well-articulated charges. No other due process deficiency having been alleged, this defense is therefore rejected as well.

3. Estoppel. We come now to Richter's principal line of affirmative defense against forfeiture of the bonds. The asserted estoppel defense has its origins in the sequence of communications during the period April-August, 1978 (Findings of Fact #5-10), concerning the Springfield permits and the visual corridor issue. The penultimate document in this sequence was that of July 28, 1978, conveying DER's agreement that "any action concerning the visual corridor issue) could be taken at the time of decision for surface mining permits for the (Springfield site)." (Finding of

Fact #9). This agreement, ratified on August 21, 1978 (Finding of Fact #10), was part of the rescission of an earlier order deleting the visual corridor area from Richter's Mining Permit for the Springfield site. However, the agreement as above-quated was inherently ambiguous, in that "the time of decision for surfact mining permits" to which it seemed to look forward as a future event was in fact already a matter of past history, the permit in question having issued —mistakenly, in view of the federal statute governing the visual corridor—on April 23, 1978, more than three months earlier.

As Richter would have it, "(t)his DER letter misled (him) into believing he could proceed with mining at Springfield since the mining permit had already been issued. (N.T. 219, 220)" (Post-Brief, Richter, 16.) DER's view, on the other hand, is that "Richter possessed sufficient information to discern the inconsistency...," inasmuch as the substance of the federal law had been revealed to him as early as May 26, 1978 (Finding of Fact #6), but that he "chose to ignore the federal surface mining act's prohibition against mining in the Visual Corridor..." (Post-Brief, DER, 23). Moreover:

> An honest person would have mentioned the already-issued mining permit to (relevant DER personnel); the fair dealing concept underlying equitable remedies such as estoppel requires that Richter have done so. A reasonable person would have investigated; Richter's failure to do so is fatal to his estoppel argument.
> Post-Brief, DER, 23.

We find that DER has much the better of the argument here. Richter's self-characterization as one who was led down the primrose path into violating federal law, believing in August, 1978 that "...everything was finalized and it was okay to move in and to start work" at the Springfield site (N.T., 220), despite the obvious ambiguity inherent in the situation, despite his counsel's discussions with DER personnel regarding the visual corridor issue some months earlier (N.T., 151), simply will not wash. Unlike appellant in the *Reiner* case, supra, whose conduct this Board was able to excuse in certain respects because he was "not an educated man,... who surely (had) not been trained to construe legal documents" (*Reiner* Adjudication,

195), and who was not represented by counsel (Id. at 183), appellant here has not pled lack of education, has at all times relevant to the matter at hand been represented by counsel, and hence can fairly be held to the standards of reasonable behavior which DER has enunciated in its brief (supra).

In sum, we conclude that Richter has not met his burden of showing reasonable reliance on DER's July 28, 1978 letter, and accordingly we rule that the defense of estoppel is rejected. We reject as well, on the same basis and by the same reasoning, Richter's alternative plea of "temporary estoppel".

4. Financial exigency. The SMCRA requires bonding as a means of providing funds for reclamation purposes where the operator lacks the wherewithal to do so himself. *Snyder, et al. v. DER*, EHB Docket No. 79-210-B (issued June 25, 1980). Hence lack of funds is no defense to bond forfeitures based on default of bonded performance.

The defense is rejected.

5. Public policy. In his Post-Hearing Brief filed on December 17, 1981, Richter contended

> ...that when the harm which will accrue to the public and Richter is balanced against the interest sought to be protected by DER in this matter, public policy constrains this Board to defer a decision on the merits of this case until such time as Richter cannot or does not take advantage of the opportunity to resume mining and reclaim his mining sites.
>
> Post-Brief, Richter, 30.

Contrary to this view of the matter, this Board finds that both "the interest sought to be protected by DER' and "public policy" have been defined by the relevant statutes.

The defense is rejected.

6. Disproportionate forfeiture. This is more a plea for mitigation that a defense. As such it may have a degree of merit. Richter's Notice of Appeal has alleged, inter alia, failure by DER to apportion the amounts forfeited to the acreage involved, but this point was not pled again until March 28, 1983, when Richter petit-

ioned for leave to supplement the record and file a supplementary brief. Two grounds were asserted: failure to enter of record copies of Mining Permit 1463-1 (partially covering the Menallen operation) and of bonds posted to cover both this mining permit and #1463-3 (covering the Springfield operation); and the adjudication of a related case, *Southwest Pennsylvania Natural Resources, Inc. v. DER*, EHB Docket No. 81-001-H (issued March 11, 1982). Richter's request for copies of the relevant mining permit and bonds was assertedly for the sake of determining whether these documents might contain certain language supportive of his contention, under *Southwest Pennsylvania*, that he should suffer forfeiture of only that proportion of the bonds corresponding to the proportion of acreage affected at each site.

In its opposing response filed April 18, 1983, DER asserted first that Richter as permittee/obligor of the documents requested should always have had access to them, and had ample opportunity in any event to have obtained copies through discovery motions well in advance of the EHB hearing; and second, that Richter's reliance on *Southwest Pennsylvania* was untimely based, in that 25 Pa. Code §21.122 sets a limit of twenty days from the date of issuance of the "controlling case", during which to petition on the basis of such case. (Here of course, the time lag was just over a year.) DER went on to challenge Richter's arithmetic whereby only $5175 of the $15,137.50 in bonded coverage of the Menallen operation was asserted as forfeitable. DER did not similarly challenge Richter's parallel computation regarding the Springfield operation, whereby only $11,000 of the $40,000 bond was conceded as forfeitable. We now grant the petition to the following extent: For the Springfield site, DER will be required to put the bond language and documents pertinent thereto on the record; our decision regarding the proportionality of liability for the bond covering the Springfield site is deferred, pending the Board's evaluation of the language actually included in the relevant documents. For the Menallen site, Richter's petition is rejected.

The ruling immediately supra is based on the following reasoning. First of all, despite DER's arguments to the contrary, there are no procedural bans to our granting of Richter's petition. Except when the Board's special rules in 25 Pa. Code Chapter 21 are superseding, this Board's procedures are governed by the Gen-

eral Rules of Administrative Practice and Procedure (1 Pa. Code §31.1). These General Rules permit reopening a hearing for the purpose of taking additional evidence (1 Pa. Code §35.231). The Board's Chapter 21 rules do not supersede 1 Pa. Code 35.231. Our rule 25 Pa. Code §21.122, on which DER relies, on its face applies only to petitions for rehearing or reconsideration after a decision has been rendered; therefore the 20-day limit in Section 21.122 has no application to Richter's petition. Indeed, our Section 21.122 explicitly states it is superseding 1 Pa. Code §35.241, but makes no mention of 1 Pa. Code §35.231.

Having decided it is within our power to grant Richter's petition, we next look at its substantive ~~events~~ merits. As stated previously, DER bears the burden of proof in this matter; that burden included proving that DER is entitled to complete forfeiture of the bonds, rather than--as held in *Southwest Pennsylvania, supra*--a proportionate forfeiture. Before *Southwest Pennsylvania* the language of the bonds had not been held to be germane; therefore neither party is to be faulted for not having introduced the bond language into the record during the hearings in the instant appeal. But now that the Board has issued *Southwest Pennsylvania*, it would be an abuse of our discretion to grant DER's request for full forfeiture without requiring DER to meet its burden of showing full forfeiture is justified. DER is reminded of the language of 1 Pa. Code §35.231:

> (a) Petition to reopen. At any time after the conclusion of a hearing, any participant...may file...a petition to reopen the proceeding for the purpose of taking additional evidence. Such petition shall set forth clearly the facts claimed to constitute grounds requiring reopening of the proceedings, including material changes of fact or of law alleged to have occurred since the conclusion of the hearing. (emphasis added).

In *Southwest Pennsylvania*, the ruling was based on the language of the bond. Correspondingly, our determination as to the merits of Richter's contention regarding proportionality of liability in the instant appeal must await examination and evaluation, by this Board, of the language actually included in the relevant documents. Depending on the purport of this language, Richter may well be found entitled, as a matter of Law, to have the measure of his liability and forfeiture determined in proportion to that amount of the lands covered by his permits, which have been affected

by his mining operations. Therefore, we must and do require the production by DER, for such examination and evaluation, of documents pertaining to whichever (or both) of Richter's operations as may qualify for proportionate, as opposed to total, liability.

However, the quantitative extent of Richter's liability at each site, even if his liability will prove to be proportionate, still must be examined. We consider first the Menallen site: Richter suggests, without adequate substantiation, a liability of $5175 based on one of three bonds, and says nothing of the other two. The total value of the three bonds is $15,137.50, covering 24.4 acres at this site, virtually all of which (24 acres or in excess of 98%) have been affected (Finding of Fact 23).

In other words the proportionality issue is irrelevant to the Menallen site. There was no evidence from which we could conclude that reclamation has been completed on any of these areas.

We therefore rule that, with respect to Menallen, forfeiture is affirmed as to all three bonds, viz., Certificate of Deposit #C100025, Savings Account Certificate #03 00336, and Cashier's Check #1112064 (Finding of Fact #31).

Regarding the Springfield site: Here bonding was at the rate of $1000 per acre, hence $40,000 for forty acres, and only eleven acres were affected. Richter's petition therefore prays that no more than $11,000 of the $40,000 bond be forfeited, and the balance be released to him. DER does not counterargue to this computation. We conclude that forfeiture of the full $40,000 bond would be unwarranted, provided that language of proportionality is indeed present in the relevant documents.

We therefore direct that, with respect to Springfield, DER shall forthwith provide this Board with true copies of Surety Bond #B1102, Mine Drainage Permit #3377 SM#$ (issued March 23, 1978), and Mining Permit #1463-3 (issued April 23, 1978), for examination and evaluation pending a supplementary ruling as to the permissible degree of forfeiture of the Springfield bond.

D. Conclusion

The foregoing considerations lead this Board to rule that DER neither abused its discretion nor arbitrarily exercised its powers in this case, except possibly with respect to the magnitude of the bond forfeiture at the Springfield site. While DER's initial justification of its action was couched in unnecessarily confusing and ambiguous terms, this shortcoming was corrected by DER sufficiently early to avoid compromising Richter's constitutional due process rights.

We find that none of Richter's asserted defenses are meritorious, and that total forfeiture, at least as to the Menallen operation, was eminently justified. However, we withhold for the present any final judgment as to the Springfield forfeiture, in view of the unresolved question regarding proportionality of Richter's liability in this instance. A later ruling on this phase of the matter will be forthcoming after this Board has had the opportunity to examine and evaluate the relevant documents.

CONCLUSIONS OF LAW

1. This Board has jurisdiction over the parties and the subject matter of this appeal.

2. The burden of proof of the facts justifying forfeiture of the bonds which are the subject of this appeal lies with DER.

3. Notwithstanding DER's vague and potentially misleading initial articulation of its grounds for forfeiture, Richter's constitutional right to due process was not violated, inasmuch as DER's later presentation of its charges was sufficiently specific and comprehensive, and offered in sufficient time (more than eight months) prior to the EHB hearing, as to correct all prior shortcomings and provide Richter with adequate and timely notice of the issued.

4. The visual corridor issue was irrelevant to the instant appeal.

5. The issues which were relevant were those which arose from Richter's custodianship of the lands covered by his permits, viz.: Richter's asserted failure to comply with numerous reclamation and safety requirements at both sites; the validity

of Richter's asserted defenses; the justifiability of forfeiture; and the permissible degree of mitigation, if any.

6. Richter "failed to comply" with statutory reclamation and safety requirements in several respects, for which liability on the bonds was rightly charged.

7. Richter's asserted defense of breach of contract is rejected as without merit.

8. Richter's asserted defense of deprivation of property rights without due process is without adequate basis and is therefore rejected.

9. Richter's asserted affirmative defense of estoppel, a defense based on consideration of Equity, is rejected.

10. Richter's asserted defense of temporary estoppel is similarly rejected.

11. Richter's asserted defense of financial exigency is rejected as inconsistent with statutory purposes of bonding.

12. Richter's asserted defense on grounds of public policy is rejected.

13. There are no procedural bars to our granting, even at this late date, Richter's petition to reopen the record for the purpose of introducing the language of the bonds which are the subject of this appeal.

14. The meritoriousness of Richter's plea for mitigation on the basis of disproportionate liability and forfeiture cannot be determined from the existing record, necessitating an Order to DER to produce certain documents for examination and evaluation by this Board.

15. Even if Richter should later be found to merit mitigation of the forfeiture of its bonds, such mitigation does not extend to the specific bonds covering the Menallen operation, but may or may not be applied to the single bond covering the Springfield job.

16. DER acted within its discretion and did not exercise its powers arbitrarily in forfeiting the bonds.

O R D E R

AND NOW, this 24th day of April , 1984, it is ordered that:

1. Richter's appeal of DER's forfeiture of his Certificate of Deposit #C100025 ($5750), Savings Account Certificate #03 00336 ($7187.50), and Cashier's Check #1112064 ($2200), covering the Menallen operation, is dismissed.

2. Within fifteen (15) days of the date of this Order, DER shall file a copy of the bond, the Mine Drainage Permit, and the Mining Permit covering the Springfield site, along with a Memorandum of Law explaining why DER believes itself justified in forfeiting the full value of that bond.

3. Richter is given leave to respond to DER's Memorandum within ten (10) days of its receipt.

4. A full and final adjudication of that portion of this appeal which is concerned with the Springfield site will be issued as soon as possible after the Board has received the documents called for in paragraphs 2 and 3 above, in the meantime, the Board retains jurisdiction over that portion of Richter's appeal.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: April 24, 1984

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

221 NORTH SECOND STREET
THIRD FLOOR
HARRISBURG, PENNSYLVANIA 17101
(717) 787-3483

BETHLEHEM MINES CORPORATION :

:

Docket No. 82-067-G

:

Bituminous Coal Safety Act
52 P.S. §701-270

v. :

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
and UNITED MINE WORKERS OF AMERICA, Intervenor

ADJUDICATION

By: Edward Gerjuoy, Member, April 25, 1984

This matter comes before the Board under the following circumstances. On March 23, 1981, Robert E. Fulton, a Department of Environmental Resources ("DER") Bituminous Mine Inspector in DER's Office of Bituminous Deep Mine Safety, ordered Bethlehem Mines Corporation ("Bethlehem") to employ a dispatcher in Bethlehem's Somerset No. 60 coal mine on any shift "where there are more than one track mounted vehicle operating in the mine at any given time." For some time previous to March 23, 1981, Bethlehem had not been using a dispatcher to control traffic on the mine's track haulage during certain "idle" shifts; during an idle shift, coal is not being mined, but maintenance and other operations requiring use of the track haulage may be occurring.

Mr. Fulton's order was based on his understanding of 52 P.S. §701-270(d) of the Pennsylvania Bituminous Caol Mine Act (the "Act"). On March 27, 1981

Bethlehem, pursuant to Section 123 of the Act, 52 P.S. §701-123, asked DER to appoint a commission to review Mr. Fulton's order. The commission ("Commission") was appointed on June 29, 1981; on January 28, 1982 DER sent Bethlehem a copy of the Commission's report, which recommended "that the order issued by District Mine Inspector Robert E. Fulton, dated March 23, 1981, that a dispatcher be on duty on idle days shall be held in strict compliance."

The Commission's decision was timely appealed by Bethlehem to this Board. Thereafter the United Mine Workers of America ("UMW") was granted permission to intervene, and--on February 7, 1983--hearings on the merits of Bethlehem's appeal commenced, under the above caption. The Board suspended the hearings on February 9, 1983, however, because DER and Bethlehem had reached a settlement in principle with respect to the issues on appeal. In so doing, the Board swept aside UMW's objections (N.T. pp. 413-415) that any such settlement between Bethlehem and DER would be invalid unless it received UMW's approval as well.

On March 23, 1983 Bethlehem and DER filed a Consent Order and Agreement in settlement of their appeal. Simultaneously a Notice of Termination of Proceedings was prepared for publication in the Pennsylvania Bulletin, as required by 25 Pa. Code §21.120. At about the same time UMW renewed its objections to settlement, in the form of a Petition to Disapprove Proposed Settlement. On March 31, 1983, the Board, in an Opinion and Order at the above Docket Number, affirmed its earlier rejection (on February 9, 1983) of UMW's claim that the settlement could not be valid without UMW's approval. However, the Board agreed that UMW had raised possibly meritorious substantive objections to some terms of the proposed settlement. Pending a decision on the merits of these objections, the Board has been unwilling to approve the proposed settlement.

Therefore, the Board decided to treat the aforementioned Petition to Disapprove as an appeal by UMW of the proposed settlement, in accordance with 25 Pa. Code §21.120(b). This new appeal by UMW was consolidated with the original appeal by Bethlehem, under the same caption and docket number. Also, the record already made in Bethlehem's appeal (whose hearings were suspended February 9, 1983) was incorporated into the record of UMW's appeal of the proposed settlement. In due course, four days of hearings were held on UMW's appeal of the proposed settlement. After the close of the hearings, all the parties were given the opportunity to file post-hearing briefs. UMW and Bethlehem did so file; DER decided not to file. UMW's brief, though it narrated the facts as UMW saw them, did not set forth proposed findings of fact and conclusions of law, as required by 25 Pa. Code §21.116(b); Bethlehem's brief did comport with the requirements of §21.116(b).

The subject of the parties' briefs, and of this adjudication, is whether the aforesaid settlement between Bethlehem and DER is an abuse of DER's discretion or an arbitrary exercise of its duties or functions.[1] Warren Sand and Gravel Company, Inc. v. DER, 20 Pa. Cmwlth. 186, 341 A.2d 556 (1975). For reasons to be explained, we have decided that the settlement as proposed would be an abuse of DER's discretion unless certain additional terms, described infra, are included; with inclusion of such additional terms, the settlement would not be an abuse of DER's discretion. Thus the Board will not approve the settlement without additional terms, but will approve the settlement with appropriate additional terms.[2]

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1. In the interests of brevity the phrase "abuse of discretion" will be employed to denote our complete scope of review, recognizing that in the context of the instant appeal "an arbitrary exercise by DER of its duties or functions" would be an abuse of discretion as well.

2. UMW's earlier arguments that the settlement could not be valid without UMW's approval have been abandoned in UMW's post-hearing brief, and therefore have been deemed waived.

Probably the Board has the power to order Bethlehem and DER to accept the additional terms to be described, but--whether or not the Board has such power--such an order seems inadvisable. The original settlement which UMW appealed was agreed to by DER and Bethlehem after considerable negotiation; we do not wish to discourage such negotiations in future appeals by imposing non-negotiated settlement terms on parties in the instant appeal.

The Order accompanying this Adjudication is consistent with the foregoing considerations. If Bethlehem and DER accept modifications of the sort the Board suggests, the Board will sign the modified settlement, and simultaneously will dismiss UMW's appeal; the Board's acceptance of the modified settlement also will terminate the original appeal (of the Commission's decision to sustain Mr. Fulton's March 23, 1981 order) by Bethlehem at this docket number. If DER and Bethlehem refuse to accept any modifications like those suggested below, UMW's appeal will be sustained, and Bethlehem's original appeal once more will be before the Board, to be decided on its merits. It is likely, however, that the Board--though it reserves the right to do otherwise after further due consideration--will make the instant adjudication of UMW's appeal the basis for our adjudication of Bethlehem's original appeal; in other words it is likely we will rule that Mr. Fulton's order was an abuse of discretion insofar as it departed substantially from the modified settlement terms this adjudication recommends.

FINDINGS OF FACT

1. Intervenor is the United Mine Workers of America, District 5, with its principal office at R. D. #1, Box 172, Belle Vernon, PA 15012.

2. Appellant Bethlehem is a West Virginia corporation with an office in Eighty Four, Pennsylvania with a mailing address of P. O. Box 143, Eighty Four, Pennsylvania 15330.

3. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources, which has the duty and responsibility of administering the Pennsylvania Bituminous Coal Mine Act, especially section 270(d) thereof, 52 P.S. §701-270(d).

4. Bethlehem operates Mine 60, an underground bituminous coal mine located in Washington County, Pennsylvania.

5. Mine 60 is a track haulage mine in which the coal is principally transported from the coal producing sections by trips of mine cars pulled by motors (N.T. 12).

6. Depending on the amount of traffic on the haulage, Bethlehem controls traffic within Mine 60 by various means, employing trolley phones, paging telephones, a signal light block system and dispatchers.

7. From August 23, 1980 until March 23, 1981 Bethlehem utilized the practice at Mine 60 of not using dispatchers on noncoal producing days except when two or more vehicles, in addition to those of the pumpers, mine examiners and supervisors were on the transportation system (N.T. 10, 191-2).

8. By letter of March 23, 1981, a representative of the DER, Bituminous Coal Mine Inspector Robert E. Fulton, ordered Bethlehem to assign a dispatcher to be in attendance on non-producing coal shifts, working shifts and weekends when there is more than one track mounted vehicle operating in the Mine 60 at any given time (DER Exhibit 3).

9. By letter dated March 27, 1981, Bethlehem requested that the Commissioner of Deep Mine Safety, Walter J. Vicinelly, appoint a commission

pursuant to Section 123 of the Act, 52 P.S. §701-123, to make further examination into the matter in dispute (Bethlehem Exhibit 4).

10. A Commission was appointed pursuant to this request of Bethlehem's.

11. By letter dated January 28, 1982, DER transmitted to Bethlehem the Commission's report, which purported to affirm Inspector Fulton's order (see Finding of Fact 8).

12. The Commission's decision was timely appealed by Bethlehem.

13. Hearings on the merits of Bethlehem's appeal commenced on February 7, 1983, but were suspended over the objections of UMW on February 9, 1983, because DER and Bethlehem had reached a settlement in principle with respect to the issues on appeal.

14. On March 23, 1983 Bethlehem and DER filed a Consent Order and Agreement in settlement of this appeal.

15. At about the same time, UMW renewed its objections to the settlement, in the form of a Petition to Disapprove Proposed Settlement.

16. The Board treated this Petition as an appeal of the proposed settlement, under 25 Pa. Code §21.120(b)

17. This new appeal by UMW was consolidated with the original appeal by Bethlehem, under the same caption and docket number.

18. The record already made in Bethlehem's appeal (whose hearings were suspended February 9, 1983) was incorporated into the record of UMW's appeal of the proposed settlement.

19. This adjudication is based on the aforementioned record, plus the record made in four additional days of hearings on UMW's appeal of the proposed settlement.

20. The relevant terms of the proposed settlement agreement appealed by UMW read as follows:

13. That Bethlehem will be permitted to operate Mine No. 60 without assigning a dispatcher under the following conditions:

(a) That it operates no more than eight Mine 60 vehicles on the track haulage on any shift.

(b) That there will be no more than twelve persons utilizing such vehicles for their job assignments or for traveling to their job assignments.

(c) That the eight vehicles will be limited to seven jeeps and one "working unit" as defined in the following subsection.

(d) That a working unit is defined as any of the following:

(i) a haulage rock dusting unit with appropriate equipment, tank cars and motors; or

(ii) a track cleaning unit with appropriate equipment, mine cars and motors; or

(iii) a haulage roof bolting unit with appropriate equipment and motors; or

(iv) another jeep.

(e) That the foreman who is supervising the underground employees on a shift on which there is no dispatcher will travel in the mine with a pager in order that he may be contacted by employees in the mine while away from his vehicle.

(f) That Bethlehem will instruct its Mine 60 employees in the mine on a shift when no dispatcher is employed to report their location in the mine to the foreman supervising the shift every two hours by means of the mine's communication equipment. The employees will also be instructed that, if the foreman cannot be contacted, they are to report to the person on duty at the surface facilities.

21. The record does not support UMW's contention that efficient responses to an emergency at Mine No. 60 cannot be assured without a dispatcher.

22. As of December 23, 1980, only twenty-one mines throughout the bituminous region of Pennsylvania used dispatchers (Bethlehem Exhibit 10).

23. Many of the immediately aforementioned mines did not use dispatchers on weekends, and many other mines hauled coal by rail but did not use dispatchers at all (N.T. 401-2, DER Exhibit 7).

24. There is no support in the record for UMW's contention that Mine No. 60 is unusually "accident prone."

25. If anything, Mine No. 60 has a lower accident rate than the national average (N.T. 982-3).

26. Mark Segedi, chairman of UMW's safety committee for Mine No. 60 (N.T. 495), admitted under cross examination that because there are fewer vehicles on the haulage in dispatcher-free shifts, the probability of a collision or other vehicular accident would be less on dispatcher-free days than on normal work days (N.T. 601).

27. There was no direct evidence that operation of Mine No. 60 without a dispatcher under the terms of the proposed settlement would result in more frequent accidents than with a dispatcher.

28. No "collision type" accidents were observed in Mine No. 60 during the dispatcher-free operations described in Finding of Fact 7 (N.T. 192).

29. The dispatcher-free operations described in Finding of Fact 7 also were practiced in two other mines operated by Bethlehem, Mines Nos. 51 and 58 (N.T. 221).

30. No collision type accidents were observed in Mines Nos. 51 and 58 during dispatcher-free operations over a five-year period preceding the hearings (N.T. 193-195).

31. Mines Nos. 51 and 58 have haulage and vehicles roughly resembling those in the No. 60 mine in quantity and quality (N.T. 230 and 965).

32. The conditions allowing dispatcher-free operation in Finding of Fact 7 are not precisely identical with those proposed in the settlement agreement.

33. There was no evidence that the working units allowed under the proposed settlement will make dispatcher-free operation especially hazardous.

34. There was considerable believable evidence that the proposed agreement overlooks some easily controllable hazards which <u>might</u> be significantly dangerous.

35. In general the Mine No. 60 haulage is single track and carries traffic moving in both directions, so that it is possible for vehicles to be approaching each other along the same section of track.

36. Bethlehem employs a system known as a "signal light block system" to provide protection for trips, motors and other equipment coming out onto tracks used by other equipment (N.T. 22).

37. This signal light block system divides the haulageways into segments, varying in length from a few hundred feet to several thousand (N.T. 22).

38. Before entering a segment, the operator of the entering vehicle throws a switch which turns on red lights at both ends of the segment; before leaving a segment, the operator switches off those same lights (N.T. 22-3, 654-6).

39. A vehicle operator seeing a red light at a signal block is supposed to stop and wait for the light to change. (N.T. 23, 656).

40. The lights are maintained regularly by special maintenance personnel termed "wiremen" (N.T. 144-6).

41. Nevertheless, on any one day a number of signal lights, say three or so, are likely to be inoperative (N.T. 175-7, 549-50, 652-3).

42. At present, most--but not all--signal blocks have double light sockets; burnout of a single bulb will make a single socket signal block inoperative (N.T. 886).

43. Lights frequently are inoperative for reasons other than burnt out bulbs (N.T. 146, 885-6).

44. The fact that a light is inoperative is immediately discernible by the operator entering a signal block, because the light does not respond when the operator tries to switch it on (N.T. 747).

45. On regular work shifts, when a dispatcher is on duty, the dispatcher is notified whenever a vehicle operator comes upon an inoperative signal light.

46. The dispatcher is called not only to notify him of the defective light, but also so that the vehicle operator (the one who is seeking to enter the track segment guarded by the inoperative signal light) can ascertain whether another vehicle already is located in that track segment (N.T. 30, 134-5, 656-7).

47. The aforesaid call from the vehicle operator to the dispatcher normally is made via the vehicle's "trolley phone."

48. The trolley phone system in Mine No. 60 provides a two-way radio link between the Mine No. 60 dispatcher and all Mine No. 60 vehicles (N.T. 23-26).

49. According to the mine's normal work rules, the dispatcher is notified by trolley phone whenever a vehicle seeks to move from one position to another within the mine (N.T. 27, 657).

50. It is the dispatcher's job to know whether or not a track segment guarded by a faulty signal light is occupied by another vehicle (N.T. 657).

51. If the dispatcher believes the aforesaid segment (described in Finding of Fact 50) is unoccupied, he will instruct a vehicle seeking entry to proceed with caution (N.T. 121).

52. If no dispatcher is present, operators of vehicles will "self-dispatch" their vehicles, announcing their travel plans over the trolley phone system and determining the location of other vehicles when necessary (N.T. 23, 30-1).

53. Each Mine No. 60 trolley phone automatically receives all transmitted signals from all other Mine No. 60 trolley phones (N.T. 24).

54. A vehicle operator encountering a faulty light can communicate directly with all vehicles in his vicinity, without involving the dispatcher.

55. There was evidence that on dispatcher-free days vehicles may be parked on the haulage while their occupants, e.g., pumpers checking the mine's water pumps, are engaged in their duties out of earshot of the parked vehicle (N.T. 504-7).

56. Vehicle parking under the circumstances described in Finding of Fact 55 apparently is forbidden by the mine haulage rules (UMW Exhibit 1).

57. The rules against improper vehicle parking are not enforced effectively at present (N.T. 884-5).

58. Mine No. 60 is adjacent to and interconnects with Bethlehem Mine No. 51, with which Mine No. 60 presently is in process of consolidation.

59. As of the close of the hearings on this matter, this consolidation had not been completed, but the mines had about 900 feet of common main line haulage (N.T. 36).

60. In addition, Mines No. 51 and 60 have common track haulage between the common main line haulage and one of the portals to both mines, the Somerset Portal (N.T. 36, Bethlehem Exhibit 1).

61. Testimony concerning the amount of common use this additional common track haulage (from the Somerset Portal to the common main haulage) would receive on Mine No. 60 idle days was confused, if not conflicting (N.T. 124-5, 966-9).

62. The common main line haulage does not carry any coal mined in Mine No. 51, but does carry Mine No. 51 personnel traveling through Mine No. 51 in the course of their duties (N.T. 36-9.

63. This traffic is controlled by the Mine No. 60 dispatcher, even when Mine No. 51 has a working dispatcher (N.T. 39-40).

64. Mine No. 51 has had regular working shifts at times when Mine No. 60 has had idle shifts, involving maintenance only (N.T. 86).

65. Bethlehem's Mr. Mucho, the Mine No. 60 Superintendent, asserted that he would expect to use a dispatcher whenever Mine No. 51 was on full production, even though Mine No. 60 might be having an idle day (N.T. 1049).

66. Bethlehem's post-hearing brief affirms this assertion of Mr. Mucho's.

67. Trolley phones on Mine No. 51 vehicles cannot receive transmissions form Mine No. 60 trolley phones, and vice versa (N.T. 39).

68. On days when Mine No. 60 has a dispatcher, Mine No. 51 employees seeking to enter the common haulage must halt their vehicles and call the dispatcher from a stationary (not vehicle mounted) Mine No. 60 trolley phone located near the signal block guarding entrance to the common haulage from the Mine No. 51 haulage.

69. There was evidence that on such days (as described in Finding of Fact 68), Mine No. 51 personnel were "sneaking" onto the common haulage without calling the Mine No. 60 dispatcher (N.T. 41, 733-4).

70. When a Mine No. 60 dispatcher is not on duty, vehicular safety on the common haulage under the proposed settlement will rely predominantly on "self-dispatching" (see Finding of Fact 52) by personnel who must leave their vehicles before entering the common haulage in order to communicate with vehicles who already may be on that haulage.

71. The testimony did not indicate how Mine No. 60 personnel wishing to enter the common haulage on dispatcher-free days were supposed to ascertain whether Mine No. 51 personnel already were on that haulage; correspondingly, there was no testimony about the availability of Mine No. 51 trolley phones to Mine No. 60 personnel.

72. Even when a Mine No. 60 dispatcher is on duty, the common haulage has significantly more potential for vehicular accidents than comparable haulage lengths used solely by Mine No. 60.

73. The proposed settlement overlooks signal light deficiencies which <u>might</u> significantly increase vehicular accident risks under the proposed dispatcher-free operation.

74. The proposed settlement overlooks hazards, arising from the common haulage, which <u>might</u> significantly increase vehicular accidents involving Mine No. 60 personnel during dispatcher-free operations as proposed.

75. Simple inexpensive measures which will alleviate the risks from light system deficiencies (see Findings of Fact 41-43) on dispatcher-free shifts are easily conceived.

76. Simple measures which will alleviate the common haulage hazards on dispatcher-free shifts also are easily conceived.

77. Bethlehem's Mr. Mucho testified that it is a "livable requirement" for Mine No. 60 to be barred from the common haulage during Mine No. 60 idle days.

78. UMW does not challenge DER's enforcement of any statutes or regulations other than Section 270(d) of the Act (Finding of Fact 3).

79 Paragraph 13 of the agreement (Finding of Fact 20) is a limit on Mine No. 60 vehicles only, and says nothing about the numbers or types of Mine No. 51 vehicles permitted to use the common haulage on Mine No. 60 dispatcher-free shifts.

80. The agreement provides for renegotiation prior to final consolidation of Mines Nos. 51 and 60.

81. DER seems to believe that when the mine is consolidated, dispatcher-fre operation shall be permitted with somewhat greater numbers of vehicles and personnel than are specified in Finding of Fact 20 (N.T. 1101).

DISCUSSION

The relevant terms of the proposed settlement agreement which UMW has appealed are quoted in Finding of Fact 20. It is UMW's burden to show that, as it claims, those terms constitute an aubse of DER's discretion. 25 Pa. Code §21.101(c)(4). UMW's basic argument in support of this claim is that operating the mine under the above terms "will bring about unsafe conditions and provide inadequate safeguards for the movement of men and equipment underground in Mine No. 60" (UMW brief, p. 5). According to UMW, these unsafe conditions would be remedied by employing a dispatcher in the mine on all shifts. With no dispatcher present, however, the mine is unsafe under the terms of the agreement (still according to UMW) because:

> A. Without a dispatcher to control traffic, efficient responses to an emergency (e.g., an underground accident) cannot be assured.
>
> B. Without a dispatcher to control traffic, there is a significantly increased likelihood that vehicles using the haulage will be involved in accidents (e.g., a collision between a moving vehicle and a vehicle parked on the haulage track).

A. Responses to Emergencies

We shall deal first with contention A above. The evidence just does not support UMW's contention that efficient responses to an emergency at Mine No. 60 cannot be assured without a dispatcher. In the first place, as of December 23, 1980, only twenty-one mines throughout the bituminous region of Pennsylvania used dispatchers; many of these mines did not use dispatchers on weekends, and many other mines did not use dispatchers at all. Richard Murphy, DER's "director of bituminous coal mines" (N.T. 396) presented a list of ten mines in Pennsylvania which, as of January 1981, hauled coal by rail but did not use dispatchers. It is

unreasonable to suppose that such dispatcher-free mines characteristically are unable to respond efficiently to an underground emergency; certainly no such evidence was presented.

Of course it can be argued--as UMW seemingly does argue--that Mine No. 60 is unusually "accident prone" (UMW brief, p. 11), with the implication that experience at other dispatcher-free mines is not a guide to the requirements for expeditious response to emergencies at Mine No. 60. But, as Bethlehem's brief points out (pp. 45-46), there is no support in the record for the proposition that Mine No. 60 is accident prone; if anything, Mine No. 60 has a lower accident rate than the national average. Moreover, it is clear that--whatever the typical accident rate at Mine No. 60--the likelihood of an accident requiring an efficient emergency response will be much less on shifts to which the above quoted settlement terms apply than on normal work days, simply because the level of activity in Mine No. 60 on dispatcher-free shifts is so much lower than on normal work days. Indeed, Mark Segedi, chairman of UMW's safety committee for Mine No. 60, admitted under cross examination that because there are far fewer vehicles on the haulage on dispatcher-free shifts, the probability of a collision or other vehicular accident would be less on dispatcher-free days than on normal work days. UMW's arguments that a dispatcher is needed for efficient responses to Mine No. 60 emergencies are further vitiated by UMW's apparent willingness to accept the proposed agreement (with modifications less relevant to the emergency response issue under present discussion) if the agreement would require a dispatcher whenever a "working unit"--as defined in paragraph 13(d) quoted supra (Finding of Fact 20) --is employed (UMW brief, pp. 5-6 and 17-18).

For all the foregoing reasons, we reject UMW's contention that the proposed settlement agreement does not provide for efficient responses to Mine No. 60

emergencies on dispatcher-free shifts. This ruling makes it unnecessary for us to rule on Bethlehem's claim that the specific issue of "efficient responses to emergencies" is outside the scope of UMW's appeal (Bethlehem brief, p. 42). However, we will affirm our ruling during the hearing (N.T. 556-560) that it may be an abuse of discretion for DER to approve a settlement which permits unsafe dispatcher-free operation of the mine, even though the actual specifics of the proposed dispatcher-free operation are not explicitly forbidden by any statute or regulation, e.g., 52 P.S. §701-270(d).

B. Traffic Control

We now turn to contention B above. Although UMW insists that under the conditions quoted supra (paragraphs 13(a)-13(f) of the proposed settlement agreement) a dispatcher is needed to ensure that traffic moves safely in the mine, UMW was not able to produce any direct evidence that operation without a dispatcher under the aforesaid conditions would result in more frequent accidents than with a dispatcher. During the period August 23, 1980 to March 23, 1981, the mine did not employ dispatchers on idle days except when two vehicles--in addition to the vehicles simultaneously being used by the pumpers, mine examiners and supervisors--were traveling the mine (Finding of Fact 7). Nevertheless, during the dispatcher-free operations in that period, no "collision type" accidents occurred in the mine. Moreover, no collision type accidents were observed in Bethlehem Mine Nos. 51 and 58 during dispatcher-free operations over a five-year period preceding the hearing, although these mines have haulage and vehicles roughly resembling those in the No. 60 mine which is the subject of the instant appeal, and although during this five-year period these mines were operating dispatcher-free under the same circumstances as in the dispatcher-free operation of Mine 60 during the period August 23, 1980 to March 23, 1981.

Admittedly, the conditions allowing the dispatcher-free operations just discussed are not precisely identical with those proposed in the settlement agreement and quoted supra; also, Mine Nos. 51 and 58 are not identical with Mine No. 60. Nonetheless, the non-occurrence of collision type accidents under the aforementioned dispatcher-free circumstances scarcely can be regarded as evidence favoring the belief that accidents will occur in Mine No. 60 during the dispatcher-free operations envisaged in the proposed settlement. Thus there simply is no direct evidence that the proposed dispatcher-free operation will increase the frequency of collision type accidents. This conclusion pertains also to the settlement agreement's allowance of one working unit per dispatcher-free shift. UMW's brief (pp. 7-8) argues vigorously that allowance of the working unit will make dispatcher-free operation under the proposed agreement especially hazardous, but the testimony only established that working units might be more dangerous than jeeps, not that working units were hazardous. This very weak conclusion from the testimony is insufficient "direct" evidence that the proposed dispatcher-free operation will increase accident frequencies.

On the other hand, there was considerable believable evidence--of a sort we will term "indirect" because the evidence was not directly connected with accident frequencies--that the proposed agreement completely overlooks some easily controllable hazards which indeed might be significantly dangerous, although their quantitative effects on accident frequencies (if left uncontrolled) are difficult to assess. We proceed to discuss these hazards.

B.1 Signal Light Failures

In general the haulage is single track and carries traffic moving in both directions, so that it is possible for vehicles to be approaching each other along the same section of track. To minimize the possibility of accidents stemming

from single-track two way traffic, Bethlehem relies on a signal light system, even when a dispatcher is on duty. The signal light system divides the haulage-ways into segments, varying in length from a few hundred feet to several thousand. Before entering a segment, the operator of the entering vehicle throws a switch which turns on red lights at both ends of the segment; before leaving a segment, the operator switches off those same lights. By these means, if the system is operating as designed, red lights are on at the ends of a track segment when and only when a vehicle is on that segment; correspondingly, no vehicle should enter a segment when the red light at the segment entrance is on. A vehicle operator seeing a red light at a "signal block" (the term for lights and light switches located at the segment entrance) is supposed to stop and wait for the light to change.

Unfortunately, the signal light system can fail to operate. In particular, there was considerable evidence that on any one day a number of signal lights--not a large number, but as many as three or so--are likely to be inoperative, although the lights are maintained regularly. The fact that a light is inoperative is immediately discernible by the operator entering a signal block; the light does not respond when he tries to switch it on. In this circumstance, on regular work shifts the vehicle operator calls the dispatcher to ascertain whether another vehicle already is located in the track segment whose signal light is faulty. The call is made via the vehicle's "trolley phone," a two-way radio link between the Mine No. 60 dispatcher and all Mine No. 60 vehicles. According to the mine's normal work rules, the dispatcher is notified by trolley phone whenever a vehicle seeks to move from one position to another within the mine. Thus the dispatcher should know--indeed it is his job to know--whether or not the track segment guarded by the faulty signal light is occupied by another vehicle. If the dispatcher believes the segment

to be unoccupied, he then will permit (still by trolley phone) the operator who encountered the faulty light to proceed cautiously into the track segment in question.

On dispatcher-free days, vehicle operators in the mine evidently cannot call on a dispatcher for help when faulty signal lights are encountered. Bethlehem claims, however, that calling on the dispatcher really is not necessary; according to Bethlehem, each vehicle operator can "self-dispatch," i.e., act as his own dispatcher, with the aid of the trolley phone system. Each trolley phone automatically receives all transmitted signals from all other trolley phones; thus a vehicle operator encountering a faulty light can communicate directly with all vehicles in his vicinity, to inquire and to be informed whether there is another vehicle on the track segment he seeks to enter. In fact, according to Bethlehem, calling the dispatcher on days when the dispatcher is on duty primarily serves the function--since all trolley phones receive the same call the dispatcher receives--of notifying vehicles in the area that a new vehicle intends to enter the track segment in question (N.T. 30-31, 121-2); on this view the dispatcher hardly is more than an unnecessary intermediary to trolley phone communications between neighboring vehicles. On the other hand, there also was evidence that on dispatcher-free days vehicles may be parked on the haulage while their occupants (e.g., pumpers checking the functioning of the water pumps which keep the mine dry) are engaged in their duties out of earshot of the parked vehicle.

We find that UMW has proved the existence of the above-described deficiencies of the signal light system. We do not believe UMW has met its burden of showing that these signal light deficiencies would make mine traffic under the proposed settlement "unsafe" on dispatcher-free days. But we do believe UMW has shown these signal light deficiencies <u>might</u> significantly increase the risk of

accident on dispatcher-free days, although UMW has not been able to show the risk would increase to a level warranting the appellation "unsafe."

It also is true that simple, inexpensive measures which on dispatcher-free shifts will alleviate--even if they do not wholly eliminate--the risks from light system deficiencies are easily conceived. For example, double light sockets could be installed at all signal blocks (instead of in "most places" as at present) so that burnout of a single bulb would not make the signal block non-functional. Correspondingly, spare bulbs could be located at all signal blocks and/or in all vehicles so that on dispatcher-free days burnt out bulbs could be replaced immediately, instead of having to wait for replacement by other maintenance personnel as is the present practice. Similarly, because signal lights frequently are inoperative for reasons other than burnt out bulbs, signs or other insignia could be located at each signal block and/or on each vehicle, to be put up by a vehicle operator whenever he comes across an inoperative signal light, so that any following vehicle immediately will be on notice that it must proceed with caution even if it receives no response to its trolley phone queries concerning vehicles in its vicinity. Furthermore, to minimize the possibility that a vehicle will be parked on the haulage out of earshot of the personnel who did the parking, the sanctions against this practice (which apparently is forbidden by the mine haulage rules, UMW Exhibit 1) could be stiffened and then vigorously enforced; the testimony indicated that the rules against improper parking are not enforced effectively at present.

B.2 Common Haulage of Mines Nos. 51 and 60

Mine No. 60 is adjacent to and interconnects with Bethlehem Mine No. 51, with which Mine No. 60 presently is in process of consolidation. As of the close of the hearings on this matter, the consolidation had not been completed, but the mines had about 900 feet of common main line haulage. In addition, there is

common track haulage between the common main line haulage and one of the portals to both mines, the Somerset Portal. Testimony concerning the amount of common use this common track haulage from the Somerset Portal would receive on Mine No. 60 idle days was confused if not conflicting. For the purposes of this adjudication, however, it is sufficient to focus on the aforementioned 900 feet of common main line haulage.

That common main line haulage does not carry any coal mined in Mine No. 51, but does carry Mine No. 51 personnel traveling through Mine No. 51 in the course of their duties. This traffic is controlled by the Mine No. 60 dispatcher, even when Mine No. 51 has a working dispatcher. Therefore the Mine No. 51 traffic using this common haulage would not be dispatcher-controlled on dispatcher-free shifts under the proposed settlement. Furthermore, it is conceivable (and indeed has occurred) that Mine No. 51 has a regular working shift at a time when Mine No. 60 has an idle shift, involving maintenance only.

In the circumstance just described, the 900 feet of common haulage may have much more traffic than one would anticipate from paragraph 13 of the proposed settlement's limits on vehicles and personnel, quoted supra. Bethlehem's Mr. Mucho, the Mine No. 60 Superintendent (N.T. 8), testified as follows (N.T. 1049):

> Q. So if that situation occurred that Mine 51 was doing full production and Mine 60 was idle, without a dispatcher, would you put on a dispatcher?
>
> A. In all probability, we would work a dispatcher in that situation.

Bethlehem's post-hearing brief (p. 23) cites this testimony of Mr. Mucho's, and asserts:

> In the unlikely event that Mine 60 would not employ a dispatcher and Mine 51 would have a normal production day, Mine 60 would schedule a dispatcher in order to permit Mine 51 employees to travel efficiently into their mine.

To avoid future controversy, the proposed settlement should be modified so that Bethlehem is bound by the scheduling proposition just quoted. Certainly it would be an abuse of DER's discretion to permit dispatcher-free operation, even on only 900 feet of the main haulage, whenever the Mine No. 51 traffic (which Mine No. 60 personnel may expect to encounter) on that segment of the haulage is as heavy as the traffic on a regular Mine No. 51 working shift.

We now remark that the trolley phones on Mine No. 51 vehicles cannot receive transmissions from Mine No. 60 trolley phones, and vice versa. Thus, on days when Mine No. 60 has a dispatcher, the Mine No. 51 employees seeking to enter the aforesaid common haulage must halt their vehicles and call the dispatcher from a stationary (not vehicle mounted) Mine No. 60 trolley phone located near the signal block guarding entrance to the common haulage from the Mine No. 51 haulage. Presumably because a Mine No. 51 vehicle operator is under this awkward necessity to halt and leave his vehicle before he can get the Mine No. 60 dispatcher's permission for entry onto the common haulage, there was evidence that Mine No. 51 personnel were "sneaking" onto the common haulage without calling the Mine No. 60 dispatcher.

For reasons explained in the preceding paragraph, the common haulage has significantly more potential for vehicular accidents than comparable haulage lengths used solely by Mine No. 60, even when a Mine No. 60 dispatcher is on duty. When a Mine No. 60 dispatcher is not on duty, vehicular safety on the common haulage under the proposed settlement will rely predominantly on "self-dispatching" (see section B.1 supra), by personnel who must leave their vehicles before entering the common haulage in order to communicate with vehicles who already may be on that haulage.[3]

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3. We observe that the testimony did not indicate how Mine No. 60 personnel wishing to enter the common haulage on dispatcher-free days were supposed to ascertain whether Mine No. 51 personnel already were on that haulage. Certainly stationary trolley phones operating on the Mine No. 51 frequency, if not already emplaced, could be located at signal blocks along with the stationary Mine No. 60 trolley phones presently provided. However, we recall no testimony about the availability of Mine No. 51 trolley phones to Mine No. 60 personnel.

The evidence suggests that such reliance is founded more on pious hope than on fact.

Once again, therefore, we conclude that the agreement has deficiencies --in this instance connected with the common haulage--which might significantly increase the risk of accident on dispatcher-free days, although there has been no showing that this particular deficiency increases the risk to a level which would be "unsafe." Once again, moreover, simple measures which will alleviate --even if they do not wholly eliminate--the risks (here the risk from vehicular operation on the common haulage) are readily conceived. For instance, there could be a rule that when a dispatcher-free shift in Mine No. 60 coincides with a Mine No. 51 idle shift,[4] then Mine No. 60 vehicles could use the common haulage only during the first and third quarters of every hour, while Mine No. 51 vehicles' use of the common haulage would be limited to the second and fourth quarters of each hour; occasional exceptions to this rule, if they must be allowed, should provide unquestionable guarantees that during the exceptional time intervals all vehicles entering the common haulage will stop and use the stationary trolley phones. An even simpler solution, though slightly more expensive, would be to equip with Mine No. 60 trolley phones those limited number of vehicles being used by Mine No. 51 personnel during a Mine No. 51 idle shift. Furthermore, it would not be unreasonable simply to ban Mine No. 60 vehicles from the common haulage whenever Mine No. 60 operates dispatcher-free. Mr. Mucho testified that "from management's standpoint" it is "a livable requirement" for Mine No. 60 to be banned from the common haulage during Mine No. 60 idle days (N.T. 94).

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4. Here we are no longer concerned with the circumstances that Mine No. 51 has a working shift because--as we already have explained, and as we rule infra--in such a circumstance the settlement should require that a Mine No. 60 dispatcher be employed to control the common haulage traffic.

C. Conclusion

Although the subject matter and facts are entirely different, the fundamental legal issues in the instant appeal are surprisingly parallel to issues examined in Coolspring Township v. DER, Docket No. 81-134-G (Adjudication, August 8, 1983). Coolspring involved an appeal of a permit allowing disposal of residential septic tank waste on agricultural land; the appeal was filed by citizen residents in the vicinity of the proposed disposal site. During the extended hearings on the merits of the Coolspring appeal, the appellants tried to show that granting the permit was an abuse of DER's discretion for a variety of reasons, including, e.g., the claim that there would be infection of the human population near the site via surface migration of harmful organisms in the deposited waste. In rejecting this claim and similar claims, we wrote (at page 23):

> To meet his burden of showing DER has abused its discretion, an appellant need not show that the undesired and undesirable effects discussed in the preceding paragraph are certain to occur, or even very probably will occur. Requiring such a showing often would be inconsistent with the basic objectives of protecting the public's health, safety and welfare. If the effects, once they have occurred, are sufficiently calamitous, then even a small probability of occurrence may be intolerable; a nuclear plant meltdown is a compelling, though extreme, illustration. But in any given fact situation, whatever the tolerable probability of occurrence of unwonted effects may be, it is the appellant's burden to show convincingly that this probability will be exceeded. The mere speculative possibility of undesirable effects, without the additional showing just described, cannot overcome the presumption of validity attached to duly promulgated regulations of the EQB.

In the instant appeal, UMW does not challenge DER's enforcement of any statutes or regulations other than Section 270(d) of the Act, 52 P.S. §701-270(d). In regard to Section 270(d), UMW first quotes approvingly this Board's earlier ruling that:

> the function of Section 270(d), in the statutory scheme, is to mandate a "system of signals, methods or devices" which will ensure safe transport when equipment "is coming out onto tracks used by other equipment."

Bethlehem Mines Corporation v. DER, Docket No. 82-067-G (Opinion and Order, February 16, 1983). UMW then contends (post-hearing brief, p. 14) that the proposed agreement "does not adequately provide for the health and safety of persons employed underground nor for the safe movement of men and equipment underground."

As we have tried to explain, however, UMW has not met its burden of proving its just-quoted contention. Accidents underground certainly can be serious, even calamitous. Consequently, as stated in the foregoing quotation from Coolspring, UMW "need not show that the undesired and undesirable effects [here vehicular accidents on dispatcher-free shifts]...are certain to occur, or even very probably will occur." But UMW merely has shown that accidents might occur under the agreement's dispatcher-free operation. UMW has offered no quantitative estimates whatsoever of the increased accident risk which will result from the proposed dispatcher-free operation. In fact, the only relevant quantitative evidence was that there had been no collision type accidents of any kind during the dispatcher-free operations studied. Thus we must rule, again quoting Coolspring, that "the mere speculative possibility of undesirable effects...cannot overcome the presumption of validity" [in this case the presumption of validity attached to the actions of regulatory agencies possessing special expertise]. Commonwealth v. Harmar Coal, 452 Pa. 77, 306 A.2d 308 (1973); Plymouth Township v. PennDOT, 37 Pa. Cmwlth 571, 391 A.2d 43 (1978); Pennboro Township Authority v. DER, 18 Pa. Cmwlth 58, 334 A.2d 798 (1975); DER v. Precision Tube, 24 Pa. Cmwlth 647, 358 A.2d 137 (1976). In short, UMW has not met its burden of showing that the essential substance of the proposed settlement, as quoted in Finding of Fact 20, constituted an abuse of DER's discretion.

On the other hand, the foregoing quotation from Coolspring is not the only one which is germane to UMW's appeal. In Coolspring, though we sustained the permit, we decided that the permit conditions should be modified to incorporate monitoring requirements which DER had not included. Our reasons for requiring the additional monitoring were expressed as follows (Coolspring at 27):

> As we have explained at the outset of our discussion, appellants have the burden of showing DER abused its discretion in granting the permit ...But where appellants have produced as much expert testimony about the need for monitoring as they have in this appeal, and where the monitoring would be inexpensive and unoppressive (as it would be in the instant appeal), we feel the burden falls on DER to show that adding monitoring requirements to the permit is unlikely to additionally protect the public safety, health and welfare.

UMW has shown that there are atypical but not unlikely special circumstances--e.g., failure of the signal lights to work, failure of personnel to use the stationary phone at the common haulage--which might significantly increase the risk of accident on dispatcher-free days. We have pointed out that there appear to be inexpensive and unoppressive measures which could appreciably reduce the hazards (apparently overlooked in the agreement) associated with those special circumstances. Therefore, much as in the immediately preceding quote from Coolspring, we feel that in the instant appeal a burden does fall on DER (or Bethlehem) to show that adding such measures to the requirements of the agreement is unlikely to appreciably reduce those hazards. That burden has not been met. Consequently we rule that DER's acceptance of the proposed settlement agreement, without requiring measures which could appreciably reduce the hazards we have discussed in sections B.1 and B.2 supra, was an abuse of DER's discretion.

Under the authority of Warren Sand and Gravel, supra, the Board can substitute its discretion for DER's when DER has abused its discretion; thus we

probably have the authority to order specific modifications of the instant agreement. However, we will not order DER to include in the agreement measures like those we suggested in sections B.1 and B.2; as we explained earlier, we do not wish to discourage future settlement negotiations of the sort which led to the agreement. Moreover, it would be fatuous for the Board to pretend that it possesses expertise in the area of work safety rules in deep coal mines; the detailed modifications of the agreement, following up on our suggested measures for remedying the agreement's deficiencies, should be left to the true expertise of DER and Bethlehem, who negotiated the original settlement agreement.[5]

To summarize, we will not approve the proposed agreement as it stands. We will approve a resubmitted agreement containing additional terms which seem reasonably calculated to reduce the hazards of dispatcher-free operation associated with signal light failures and the common haulage. The additional terms we are seeking are of the inexpensive and unoppressive sort suggested in sections B.1 and B.2; DER's abuse of discretion in the original agreement does not extend to non-inclusion of expensive or oppressive measures to remedy the aforementioned hazards, under the instant circumstances that the amount of added risk posed by those hazards is wholly speculative.

However, the new agreement certainly should include the requirement that while there is a common haulage between Mines Nos. 51 and 60, Mine No. 60 will schedule a dispatcher whenever Mine No. 51 has a regular working shift; as stated earlier, Bethlehem already has agreed to this requirement, and its explicit inclusion in the agreement will avoid later controversy. Similarly, to avoid later controversy,

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5. The Board reiterates its feelings, stated to the parties during the hearing, that this matter "is really a matter of work safety rules," and that "the Environmental Hearing Board...is really quite an inappropriate forum in making a decision in this regard" (N.T. 438).

the resubmitted agreement should be quite explicit about the types and total number of Mine No. 51 vehicles which will be permitted to use the common haulage on shifts when Mine No. 60 is operating dispatcher-free; the Board interprets paragraph 13 of the present agreement (Finding of Fact 20) as a limit on Mine No. 60 vehicles only.

Before concluding, we must say a few words about the duration of the agreement. UMW correctly points out that paragraph 18 of the agreement provides for renegotiation of the agreement prior to final consolidation of Mines Nos. 51 and 60. At the hearing, the Board ruled orally that any renegotiation of the agreement would be an action by DER which is appealable to this Board (N.T. 1099); the Board affirms that ruling here, and suggests--once again to avoid controversy--that the appealability of a renegotiated agreement be stated in the modified agreement the Board hopes to see. We believe such appealability is sufficient to preserve all UMW's rights should UMW have objections to the terms of a renegotiated contract. We need not and will not rule--as UMW requests--that it is an abuse of discretion for DER to believe now [as it apparently does believe] that the consolidated mine should permit dispatcher-free operation with somewhat greater numbers of vehicles and personnel than are specified in paragraph 13 of the present agreement.

The following Order is consistent with the foregoing.

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the parties and the subject matter of these proceedings.

2. Our review of this matter is to determine whether DER has committed an abuse of discretion or an arbitrary exercise of its duties and powers.

3. It is UMW's burden to show that the proposed settlement agreement was an abuse of DER's discretion.

4. UMW's contention, that the proposed settlement agreement does not provide for efficient responses to Mine No. 60 emergencies on dispatcher-free shifts, is rejected.

5. It may be an abuse of discretion for DER to approve a settlement which permits unsafe dispatcher-free operation of the mine, even though the actual specifics of the proposed dispatcher-free operation are not explicitly forbidden by any statute or regulation.

6. UMW has not met its burden of showing that deficiencies of the signal light system would make the mine traffic "unsafe" on dispatcher-free days.

7. UMW has shown that deficiencies of the signal light system <u>might</u> significantly increase the risk of accident on dispatcher-free days.

8. UMW has shown that the proposed agreement has deficiencies, associated with the common haulage, which <u>might</u> significantly increase the risk of accident on dispatcher-free days, although there has been no showing that this deficiency increases the risk to a level which would be "unsafe."

9. UMW has not proved its contention that the proposed agreement "does not adequately provide for the health and safety of persons employed underground nor for the safe movement of men and equipment underground."

10. In this appeal, the mere speculative possibility of accidents during dispatcher-free operation cannot overcome the presumption of validity attached to the actions of regulatory agencies, such as DER, possessing special expertise.

11. UMW has not met its burden of showing that the essential substance of the proposed settlement constituted an abuse of DER's discretion.

12. Because there appear to be inexpensive and unoppressive measures which could appreciably reduce the dispatcher-free operational hazards associated with signal light failures and the common haulage, in the instant appeal the burden falls upon DER to show that adding such measures to the requirements of the agreement is unlikely to appreciably reduce those hazards.

13. The burden just enunciated (Conclusion of Law 12) has not been met.

14. DER's acceptance of the proposed settlement agreement, without requiring measures which could appreciably reduce the hazards referred to in Conclusion of Law 12, was an abuse of DER's discretion.

15. The aforesaid abuse of DER's discretion does not extend to non-inclusion of expensive or oppressive measures to remedy the aforementioned hazards, under the instant circumstances that the amount of added risk posed by those hazards is wholly speculative.

O R D E R

WHEREFORE, this 25th day of April , 1984, this Board presently is deferring formal approval of the settlement agreement which is the subject of this appeal, and is remanding this matter to DER and Bethlehem for action in accordance with the accompanying Opinion. More particularly, it is ordered that:

1. The Board will approve a resubmitted, modified settlement agreement containing:

a. The terms of the present agreement; and

b. Additional terms, of the inexpensive and unoppressive sort suggested in sections B.1 and B.2 of the Opinion, which seem reasonably calculated to reduce the hazards of dispatcher-free operation associated with

signal light failures and the common haulage.

2. The resubmitted settlement agreement should include, inter alia, terms stating:

a. The requirement that while there is a common haulage between Bethlehem Mines Nos. 51 and 60, Mine No. 60 will schedule a dispatcher whenever Mine No. 51 has a regular working shift; and

b. The types and total number of Mine No. 51 vehicles permitted to use the common haulage on shifts when Mine No. 60 is operating dispatcher-free; and

c. Once the Board has approved the resubmitted agreement, any renegotiation by DER of its terms will be a DER action which is appealable to this Board.

3. Provided the resubmitted, modified agreement satisfies the requirements of paragraphs 1 and 2 supra, there will be no need to republish its terms in the Pennsylvania Bulletin pursuant to 25 Pa. Code §21.120(a), nor will there be any need for the Board to hear additional arguments or to receive additional briefs on the merits of this matter.

4. Approval by the Board of a resubmitted settlement agreement simultaneously will dismiss UMW's appeal of the settlement and will terminate (as moot) the original appeal by Bethlehem at this docket number.

5. If a modified agreement consistent with paragraphs 1 and 2 supra is not submitted within 60 days of the date of this Order, UMW's appeal of the settlement agreement will be deemed sustained, and Bethlehem's original appeal at this docket number once more will be before the Board, to be decided on its merits.

6. Extensions of the 60-day due date in paragraph 5 supra will be

considered upon petition by any party, but will be granted only for very good cause shown.

7. Until the final Board actions described in paragraphs 4 or 5 supra are taken, UMW remains a party to these proceedings and must receive copies of all documents filed by any other party.

ENVIRONMENTAL HEARING BOARD

ANTHONY U. MAZULLO, JR.
Member

EDWARD GERJUOY
Member

DATED: April 25, 1984

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

PENNSYLVANIA ENVIRONMENTAL MANAGEMENT SERVICES, INC. Appellant v. COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES COUNTY OF CHESTER, NEW GARDEN TOWNSHIP and CONCERNED CITIZENS Appellee	:	DOCKET NO. 79-153-M Solid Waste Management Act of 1980, 35 P.S. §6018.101 et seq.

A D J U D I C A T I O N

By: Anthony J. Mazullo, Jr., Member, May 29, 1984

History of the Case

This appeal began as the result of an order of the Department of Environmental Resources (DER), dated September 7, 1979 denying Pennsylvania Environmental Management Services, Inc.'s (PEMS) application for a solid waste permit.

After bifurcation, hearings were held on the so-called "bird" issue, which resulted in an adjudication by the Board dated February 13, 1981 which, inter alia, remanded the matter to the DER.

After remand, and after further review, DER, on July 10, 1981, denied PEMS application, and hearings were thereafter held on the basis of the denial letter of July 10, 1981.

The hearing examiner conducted two visits to the site, and one visit to the Modern Mushroom facility, as well as a site visit to the Stroud Water Research facility. The examiner also travelled the various approach roads to the proposed landfill site.

Oral Argument was held before the Board En Banc.

FINDINGS OF FACT

1. By notice dated September 7, 1979 the Department of Environmental Resources (DER), through Donald A. Lazarchik, Director of the Bureau of Solid Waste Management, notified the appellant, Pennsylvania Environmental Management Services, Inc. (PEMS), that its application for a solid waste management permit was denied.

2. On October 5, 1979 PEMS timely filed a notice of appeal with this Board.

3. Petitions to intervene were filed by New Garden Township, Chester County, Concerned Citizens of Southern Chester County, New Garden Aviation, Inc., Alexis I. duPont, Anne duPont, and Ralph LaFrance, and intervention was allowed.

4. The appeal was bifurcated and hearings were held on the issue of bird hazard, out of which hearings this Board issued on adjudication dated February 13, 1981, remanding the matter to DER for further review.

5. After review, DER, by notice dated July 10, 1981, denied PEMS' application for a landfill permit.

6. The proposed site for the landfill is located in New Garden Township, Chester County, in a predominately rural, agricultural area.

7. Several residences are located along Glen Willow Road adjacent to the western edge of the site, and along the eastern edge of the site on Church Road.

8. Along the southern boundary of the site are located the following:

a. Crowell Log Cabin House
b. Springs Valley Inn and Motel
c. Ralph LaFrance well
d. Keystone Mushroom-the facility for which is located 25 feet from the property line of the proposed site.

9. A fruit orchard, which relies upon water from the White Clay Creek, is operated across the creek from the proposed site.

10. Forty-five percent (45%) of the tax base of New Garden Township is dependent upon the mushroom industry.

11. Modern Mushrooms, a mushroom growing business, employing approximately one hundred fifty (150) persons, is located within one mile of the proposed site.

12. The Holman mushroom growing facility is located within approximately one mile of the proposed site.

13. Modern Mushroom's payroll in 1981 was approximately $2,000,000.00, and has gross sales of approximately $8,500,000.00 annually.

14. Modern Mushroom has invested approximately $6,200,000.00 in capital improvements in its facility and comprises approximately seven and one-half (7 1/2) acres under roof.

15. Modern Mushroom is in operation growing mushrooms throughout the year.

16. Keystone Mushrooms, located immediately adjacent to the proposed site, along its southern boundary, employs from twelve (12) to fifteen (15) employes in its mushroom growing operation.

17. The White Clay Creek flows along the western edge of the proposed site.

18. White Clay Creek is as close to a natural stream as can be found in North America.

19. The watershed of White Clay Creek is rural, without industrialization and with limited development.

20. White Clay Creek is highly biologically diverse, in that it contains many different species of each organism at all trophic levels, and it is highly productive.

21. White Clay Creek is stocked with brown and rainbow trout annually and harbors natural reproduction of trout.

22. White Clay Creek is a heavily fished stream due to its consistent high quality.

23. Natural reproduction and native populations of brook trout are indicative of high stream quality and low pollution.

24. White Clay Creek has excellent water quality.

25. The base stream flow of White Clay Creek upstream of the confluence of the East and West Branches of the Creek is approximately one-half cubic foot per second, or 13,500 gallons per hour.

26. The base stream flow of White Clay Creek downstream of the confluence of the East and West Branches of the Creek is approximately one cubic foot per second, or 27,000 gallons per hour.

27. The stream is approximately ten feet wide and averages six inches in depth.

28. The Stroud Water Research Center (Stroud) is an experimental research center of the Academy of Natural Sciences and is located on the White Clay Creek approximately one mile upstream from the proposed site.

29. Stroud was located in its present site in 1967 and is devoted primarily to theoretical and applied studies of upstream river ecology.

30. The Stroud laboratory was situated on White Clay Creek because of the creek's extremely high biological diversity, its extreme productivity and its excellent water quality.

31. Since 1967 scientists at Stroud have been studying the various physical, chemical and biological processes of White Clay Creek, in attempts to develop models of how various aspects of stream ecology are.

32. It is expected that studies of the stream shall continue for up to one hundred years, since the data collected cannot be evaluated until thirty or forty years of information have been collected.

32. Stroud is one of the largest laboratories in the United States devoted solely to fresh water ecology.

34. Stroud laboratory develops new concepts and ideas concerning stream ecology, using data from White Clay Creek as the source of these ideas.

35. Models developed from data obtained from White Clay Creek concerning a particular aspect of the ecology of a river system are tested by the lab on river systems in other parts of the United States.

36. Stroud collaborates with other scientific institutions in the United States and abroad in stream research.

37. Stroud uses the White Clay Creek as a testing or proving ground for its research from just upstream of Avondale to the site of the laboratory.

38. Stroud regularly studies the White Clay Creek from the proposed site downstream to a point just upstream from Avondale.

39. Dr. Bernard Sweeney is a research associate employed at Stroud who has conducted research on the White Clay Creek for nine years preceeding the hearings in this appeal, has a doctoral degree in biology and is an expert limnologist.

40. Dr. Sweeney qualified as an expert on the ecology of White Clay Creek, including the potential effects of pollution upon White Clay Creek.

41. Stroud is presently conducting several studies in White Clay Creek downstream of the proposed landfill site.

42. One study currently being conducted involves a species of fresh water mussel, the margaritifera-margaritifera, which are located immediately downstream of the confluence of two tributaries of White Clay Creek, at a point on the western edge of the proposed landfill site.

43. Stroud is also studying a species of aquatic insect downstream of the proposed landfill site, the mayfly, which study will eventually continue for approximately three years.

44. Stroud is currently engaged in an ongoing study in White Clay Creek dealing with the utilization of dissolved organic carbons in stream water by bacteria.

45. The presence of over fifty species of mayfly in White Clay Creek, which is unprecedented in limnological literature, attest to the high stream quality of White Clay Creek since the mayfly is very sensitive to pollution, whether of toxic-type material or sediment.

46. The toxicity of heavy metals is affected by the hardness of water, therefore the lower the hardness of the water, the more toxic are the materials.

47. Stroud scientists have conducted flow-through bioassy tests on copper and static bioassy tests on mercury and cadmium on algae and bacteria in White Clay Creek.

48. Above certain levels, measured in parts per billion, concentrations of copper, mercury and cadmium are toxic to algae and bacteria.

49. Concentrations of copper of thirty parts per billion would, within five days, kill all the algae in microcosmic streams, i.e., simulated stream systems.

50. Bioaccumulation is a phenomenon wherein algae and bacteria and other aquatic life, including fish and mollusks accumulate heavy metals to higher levels, i.e., the heavy metals are stored in the biomass of algae fish, and bacteria without the ability to actively excrete it.

51. Sessile organisms do not have the capacity to move about, are immobile, and cannot avoid toxic material.

52. White Clay Creek contains sessile organisms.

53. Toxic means cell death within twenty-four hours.

54. At most times of the year there is not sufficient flow discharge in White Clay Creek to dilute a spill of one thousand (1,000) gallons per hour of leachate from the proposed landfill to levels that would not be toxic to aquatic life, including algae, mayflies, fish and other invertebrates.

55. Spring seeps have been observed on the proposed landfill site.

56. The water from the spring seeps enters the White Clay Creek.

57. Stroud has done studies in White Clay Creek on the effects of erosion and sedimentation upon aquatic life in the stream.

58. Sediment is one of the major pollution problems in the United States.

59. Stroud intends to do more extensive studies in the future on the effects of sediment upon aquatic life.

60. Generally, streams flow at the lowest point in a watershed, and the elevation of a stream usually depicts the elevation of the groundwater table in that area.

61. White Clay Creek is characteristic of the general groundwater flow from higher elevations in the watershed to the stream.

62. The proposed landfill site is located within the watershed of White Clay Creek.

63. The area of White Clay Creek between the proposed landfill site and Avondale is heavily fished for trout.

64. White Clay Creek is used as a source of drinking water.

65. White Clay Creek is a "flashy" stream, i.e., the discharge of the stream responds very rapidly to a rainstorm.

66. White Clay Creek responds within one-half hour to intense rainfall.

67. Dr. Sweeney was of the opinion that the steepness of the final slopes proposed by PEMS on the site will be difficult to stabilize and erosion will occur, causing a release of sediment to the White Clay Creek.

68. Approach route "A", as proposed by PEMS would entail the use of U.S. Route 1 to the Baker Exit to Pa. Route 41 toward Avondale (where it is designated Pennsylvania Avenue), left at Church Road (which later is designated as L.R. 1547) to the proposed site, at which a left turn would be required to enter the site.

69. Route 41, including the area designated as Pennsylvania Avenue, is commonly traversed by vehicles as large as, or larger, than those contemplated

to be used in hauling refuse materials to the proposed landfill.

70. Church Road, at its intersection with Pennsylvania Avenue, is narrower than Pennsylvania Avenue, has a light duty pavement from that intersection to the site, and is a substandard road.

71. From its intersection with Pennsylvania Avenue to the proposed site, Church Road averages fourteen (14) feet to sixteen (16) or eighteen (18) feet in width, and passes through residential and farming areas.

72. The maximum permitted width for trucks using Church Road is eight (8) feet.

73. Church Road is winding and hilly in the area between its intersection with Pennsylvania Avenue and the proposed landfill site.

74. Eight (8) foot wide trucks passing one another on Church Road would create a dangerous condition by reason of the narrow width of Church Road, the sharp curving of the road at some points and the lack of shoulders and guard rails.

75. In areas where Church Road is only fourteen (14) to sixteen (16) feet wide, two eight (8) foot wide trucks would be required to leave the roadway and use a portion of the shoulder of the road, causing deterioration of the edge of the roadway.

76. Approach route "B", as proposed by PEMS, entails the use of the roads specified in access route "A", with the exception that trucks would be required to use Third Avenue to reach Church Road from Pennsylvania Avenue.

77. Third Avenue is a residential street, is very narrow, and contains no radii at its intersection with Pennsylvania Avenue. A portion of the street has no curbs, has grassy shoulders, and cars parked near the intersection with Church Road use part of the road while parked.

78. Making a left turn from Pennsylvania Avenue to Third Avenue would be difficult for trucks going to the proposed landfill site.

79. In using Third Avenue, traffic must cross a narrow bridge, the width of which would cause problems for trucks of the size contemplated to use the landfill site for dumping of refuse.

80. The weight limitations of the bridge on Third Avenue are not known, but vehicles weighing more than fifteen (15) tons should not use it.

81. Approach route "C", as proposed by PEMS, would entail the use of U.S. Route 1, to the Newark Road exit (also known as L.R. 15036) north to London Grove Road, left at London Grove Road (also known as L.R. 15047) to a point where it curves left and is known as Avondale Road (also known at L.R. 15047) then to the proposed site, at which a right turn would be required to enter the proposed site.

82. London Grove-Avondale Road is a light-duty road according to PennDOT's Straight-Line Diagram.

83. At a point immediately north of the U.S. Route 1 overpass, on London Grove-Avondale Road, the road splits a golf course, and golfers on foot or in carts must cross the road to continue playing the course.

84. London Grove-Avondale Road contains no substantial subbase between the base courses and the pavement structures.

85. London Grove-Avondale Road is approximately sixteen (16) to eighteen (18) feet wide, and contains two (2) curves of particular note from its intersection with Newark Road nad the proposed site.

86. The shoulders of London Grove-Avondale Road are narrow, from a minimum of a few inches up to several feet.

87. Under the U.S. Route 1 bridge forming the underpass for London Grove-Avondale Road, the road measured twenty (20) feet.

88. Traffic entering London Grove Road from Newark Road would not be able to make a smooth turn and would go into the opposing lane of traffic to complete the turn.

89. Traffic entering Newark Road from London Grove Road would, because of the short turning distance, go into the opposing lane of traffic in order to complete the turn.

90. At the point where London Grove Road curves into Avondale Road, there is a severe horizontal curve, with the road curving at almost a right angle.

91. Because of the narrow width of London Grove-Avondale Road, trucks passing one another would cause them to force one another to the edge of the roadway, causing the edge of the roadway to deteriorate rapidly.

92. Approach route "D", as proposed by the PEMS, entails the use of Polo Road, in addition to other roads, to reach the proposed site.

93. Polo Road is a township road, and is narrow.

94. Polo Road is posted for a vehicle gross load limit of eight (8) tons.

95. Loaded garbage trucks weigh more than eight (8) tons are usually eight feet wide; and may weigh as much as 20 tons.

96. Approach route "D", as proposed by PEMS, entails the use of Church Road, in addition to other roads, to leave the proposed site.

97. PEMS would not be able to control the choice of roads to be used by persons seeking to dump refuse material at the proposed site.

98. PEMS would seek to have haulers use approach route "C" in their approach to the site.

99. All approach routes were traversed by the hearing examiner during the course of the hearings on this appeal.

100. Portions of all approach routes, as proposed by PEMS, pose severe traffic safety problems for trucks of the size and weight contemplated to be travelling to and from the proposed site.

101. All approach routes, as proposed by PEMS, entail the use of some roads which are structurally unsound for use by heavy trucks of the size and weight contemplated to be using the proposed landfill site.

102. In order to make a determination as to what levels of leachate discharge to White Clay Creek would be acceptable to DER under its regulations, a bioassay test would be required to be done.

103. A bioassa test is a study of a representative species in a stream to determine what concentrations of an effluent introduced into a stream over a period of ninety-six (96) hours will kill fifty percent (50%) of the test species.

104. Particular species in a particular stream may be able to withstand a toxicity level different than those in a different stream.

105. A bioassa study of White Clay Creek was not done on White Clay Creek by DER.

106. PEMS submitted to DER a projection of the content of chemical constituents which it expected to be found in the leachate to be generated at the proposed landfill. (Exhibit 25-b).

107. DER, in response to PEMS submission of the projected concentrations of pollutants in the leachate to be generated at the proposed site, sent to PEMS a letter wherein discharge criteria were set forth. (Exhibit 27-1).

108. The discharge criteria contained in DER's response to PEM's application are based upon guidelines contained in the Delaware River Basin Commission Interpretive Guidelines Number 1, Exhibit 2A-2.

109. The discharge criteria set forth in the Delaware River Basin Commission guidelines (Exhibit 2A-2) are considerably higher than those contained in the Federal Register, published November 28, 1980, for the Environmental Protection Agency (EPA), Water Quality Criteria Documents.

110. PEMS has not applied for a permit to discharge leachate from its proposed landfill operation to the White Clay Creek.

111. PEMS plan for leachate disposal is to hold the leachate in a holding tank for further disposal.

112. The quality of leachate above projected to be generated at the proposed site is not a determinative factor in determining the grant or denial of a permit.

113. The quality of the leachate projected to be generated by PEMS at the proposed site is an important factor to be considered when determining the impact of the proposed landfill upon the White Clay Creek pursuant to the requirements of Article 1, Section 27 of the Pennsylvania Constitution, and DER considered this factor in its environmental assessment of the application by PEMS.

114. The need for additional disposal sites in the region encompassing Philadelphia, Montgomery, Bucks, Delaware and Chester Counties in Southeastern Pennsylvania is becoming a very critical problem, however, it is not critical that the proposed site be a site for landfilling.

115. Chester County enacted the Chester County Solid Waste Management Plan (PLAN) in 1972.

116. The Chester County Plan is a study of solid waste needs in Chester County for the period 1970 thru 1990, including the problems associated with solid waste, the recommendation of certain solutions, and the recommendation of "certain sitings of landfills".

117. Under the provisions of the Chester County PLAN, the County was divided into five regions because of similar physical setting, demographics and social economic aspects.

118. The proposed site is located in southern Chester County, in Region V of the Chester County PLAN, in an area which is semi-rural, with rolling hills and open spaces.

119. The Chester County PLAN addressed the storage, collection, transportation and disposal of solid waste, by municipalities in Chester County.

120. In the Chester County PLAN which related to prospective sanitary landfill sites for Region V, the area of Chatham-Cockranville was recommended as the best site for a future natural renovation sanitary landfill to be operated by public authority or by private enterprise.

121. In determining that the Chatham-Cockranville area was the ideal

area for siting of a sanitary landfill, the following factors were considered: the transportation network, the soils, the slope of the land, the geology, groundwater, and the availability of large, open tracts of ground.

122. On sites having a slope of less than eight (8) percent (8%) operators would not be faced with severe erosion and sedimentation problems, so prospective sites were sought with slopes of zero to eight degrees in that portion of the PLAN dealing with site recommendations.

123. Where the underlying bedrock is limestone-marble, there is a danger of the presence of solutional openings in the rock being very near the surface, as well as the potential for sinkholes.

124. Cockeysville marble is the formational name applied to a type of marble to distinguish it from other marbles-limestones, and has the characteristics of limestone-marble noted in Finding #123 above.

125. Cockeysville marble is found in Region V of Chester County.

126. The Chester County PLAN did not exclude areas other than the Chatam-Cockranville area of Region V as possible sites for sanitary landfills.

127. An environmentally sound lined landfill can be designed in or directly above a sinkhole.

128. No landfilling operations have commenced in the area recommended as the best area in Region V of Chester County for the siting of prospective sanitary landfills.

129. A hydrogeologist is a geologist whose specialization is groundwater flow.

130. The majority of the area to be landfilled at the proposed site contains slopes of 10% to 15%, with some slopes as high as 25%, based on the topography presented in PEMS plans.

131. After landfilling, the final slopes in the filled portion of the site, as contained in the application of PEMS, will be thirty-three percent (33%).

132. The proposed site contains a swale, running northwesterly to south-

easterly, on each side of which are ridges which are slopes of approximately fifteen percent (15%).

133. At a point (A) approximately halfway down the swale, the present elevation is approximately three hundred forty-five (345) feet. (Exhibit S-8, T.B. Number 1).

134. After filling, the final contour of the point in the swale specified in Finding #133 above will be at an elevation of four hundred eighty-five (485) feet to four hundred ninety (490) feet, or approximately one hundred forty (140) feet of composted refuse at that point.

135. After landfilling the surface waters will ultimately flow to the White Clay Creek.

136. The proposed site is underlain by Cockeysville marble and the Setters formation.

137. Test borings were not drilled to determine if Cockeysville marble underlays the area of the fill.

138. Bedford soils are located on the proposed site in the southwest portion of the area of the site proposed to be landfilled. (Exhibit S-8, Erosion and Sedimentation Plan, New Garden Facility Number II).

139. The percentage figure attributed to a slope is the rise or fall in feet, over a distance of one hundred (100) feet, from the horizontal.

140. Glenelg soils, present on the proposed site, are highly erodible soils.

141. On thirty-three percent (33%) slopes Glenelg soils present severe erosion hazards.

142. Mottling is a condition where soil is discolored by reason of the soil being submersed by the groundwater table.

143. Mottling of the soil is indicative of the presence of groundwater.

144. Mottling was observed in three (3) of the seven (7) test pits dug on the proposed site.

145. In two of the test pits, nos. 4 and 6, PEMS plans call for ec-cavation below the level of the mottling.

146. Excavating below the level of the mottling will have the effect of placing the liner below the level where groundwater may have been in the past.

147. Placement of a liner below past groundwater elevations could result in hydrostatic pressure being applied to the liner, that is, a vertical uplift on the liner.

148. Mottling was observed in auger test boring no. 9 at a location within the area proposed to be landfilled.

149. PEMS drilled three monitor wells at the proposed site, and reported in its application the depth to groundwater of each well.

150. Test well no. 3 was reported by PEMS to have a depth from surface to groundwater of 7.26 feet. (N.T. p. 934, S-8 hydrogeologic maps), and is located in the area proposed to be landfilled.

151. The bottom of the proposed landfill will be approximately four (4) feet above the level of the groundwater in well no. 3, as measured on May 4, 1977.

152. PEMS, in its application, expects fluctuations in the groundwater table of less than three (3) to five (5) feet in the lower western end of the site, and at the eastern higher end of the site the water table may fluctuate five (5 to (10) feet during the year. (S-8, Module 5A, Phase 1, Supplementary Geology and Groundwater Information dated May 12, 1977, New Garden II).

153. Groundwater flow at the proposed site is generally east to west and downhill, and flows to White Clay Creek. (N.T. pp. 943,44 and Exhibit S-8, Module 5A, p. 5A-10).

154. The plans submitted by PEMS did not indicate the existence of any springs on the proposed site.

155. The finished landfill will be terraced, or benched, so that for every twenty (20) foot rise of the thirty-three percent slopes there will be an almost level terrace, or bench, of ten feet. (N.T. p. 953).

156. In soils terminology, a horizon is a layer of soils with consistent properties.

157. The purpose of a sedimentation basin is to receive runoff water from upstream (upslope) and to reduce the water velocity to zero, thereby allowing the sediment to drop from the water so that only clear water will drain from the basin.

158. Sediment is being generated at the proposed site at present, and the volume of sediment will be increased as soon as the site is disturbed.

159. A flood plain is land which is periodically inundated by overflow from a stream.

160. PEMS plans used a ten (10) year rainfall in making its calculations to manage surface water.

161. Under the pertinent provisions of Chapter 75 of DER's regulations (25 Pa. Code §75.24 C (2) (i)) provisions shall be made to manage surface water at the sanitary landfill site. Calculations indicating water quantities shall be submitted to the Department based on a one-hour rainfall in inches to be expected once in ten years.

162. The hurricane flood line for hurricane Eloise was shown by PEMS to be at contour elevation 295 on its Hydrogeologic Data plan.

163. PEMS application provides, in Exhibit S-8, Soil and Erosion and Sedimentation Notes and Details Plan:

> "Temporary cover. All sediment producing areas where a period of exposure will be more than two months, shall be stabilized immediately following exposure by establishing temporary annual grosses or small grains in order to provide rapid cover for the control of rapid runoff and erosion until permanent vegetation or other stabilization materials can be established." (N.T. p. 1063).

164. According to PEMS application five (5) acres of the proposed site will be exposed and unvegetated at any one time. (N.T., p. 1067).

165. PEMS application provides for anchoring of sod with wire staples, five mesh wire or wood pins and other twine to hold the sod until secured by plant growth.

166. Landfilling at the site will cause continued runoff of surface water, with resultant gully erosion on the slopes. (N.T. p. 1098).

167. The Department (DER) conducted an environmental assessment of the application submitted by PEMS, including the matters of transportation to and from the proposed site, and the impact upon the White Clay Creek.

168. The location of the proposed site is not critical, or essential, to meet the solid waste needs of Revion V of Chester County, or to meet the solid waste needs of the entire county.

169. Industrial waste is wastewater resulting from any industrial activity which wastewater requires treatment for disposal, including wastewater from a sanitary landfill.

170. Spray irrigation is the spraying, in controlled amounts, of wastewater onto the land surface so to allow it to percolate through the soil and allow the soil to degrade the wastewater.

171. Leachate is water in a landfill which comes into contact with material in the landfill and becomes altered or contaminated by its contact with the material.

172. The capacity of soils to treat biodegradable components is, theoretically, infinite, while the exchange capacity of the soil for removal of heavy metals is finite and can be measured.

173. PEMS application included a schematic of a treatment system (for leachate) which including primary biological treatment, lime addition thereto if required, and annonia stripping. (Exhibit S-8, Leachate Pretreatment Schnotic, Final Contours, New Garden Facility Number II and note thereto, N.T. P. XI-37).

174. PEMS application included a drawing entitled "Fixed Spray System, Pretreated Leachate Spray Alternative", (N.T., P. XI-38) and a document entitled

"New Garden Facility Number II, Leachate Treatment and Land Application Narrative". (N.T., p. XI-41, 42).

175. Biological treatment of wastewater is the supplying of sufficient oxygen to a wastewater containing biodegradable materials so as to convert a soluble biodegradable component into cell mass which can be removed from the wastewater. (N.T., P. XI-43).

176. Biological treatment does not result in the removal of metals from wastewater. (N.T., p. XI-44).

177. Biological treatment is considered to be primary treatment of wastewater. (N.T. p. XI-45).

178. Secondary treatment of groundwater entails the addition of a chemical into the wastewater to enable removal of other components from the wastewater such as the addition of lime to remove metals. (N.T., p. XI-40).

179. Tertiary treatment is further treatment, beyond primary and secondary treatment, for the purpose of further removal of metals, or further biological oxidation or for the removal of other substances, including air stripping, carbon obsorpotion columns, and nitrification/denitrification. (N.T. p. XI-51).

180. The schematic presented by PEMS envisions the use of a combination primary, secondary and tertiary system of wastewater treatment. (N.T., p. XI-52).

181. PEMS treatment system (treatment train) includes the use of a retention equalization and aerated lagoon as a primary treatment system; a clarifier, or settling basin; ammonia stripping; biological treatment, secondary clarifier; sand filter; nitrogen removal and a settling basin. (N.T., pp XI-55,56,57).

182. PEMS concept for wastewater (leachate) treatment includes the use aeration, lime addition and settling to treat the leachate to achieve specified effluent limitations prior to its land application. (Exhibit S-8, 7-19-79 letter, Bodner to Lynn, N.T., pp. XI-49, 50).

183. The leachate treatment train proposed by PEMS is intended to spray treated leachate onto a spray field located on the proposed site.

184. As an alternative, PEMS has also proposed to haul the pretreated leachate to a certified disposal site, or to recirculate the leachate through the landfill.

185. Sludge created through the treatment train will contain such concentrations of heavy metals as to be considered a hazardous waste under present standards. (N.T., p. XI-70).

186. If the treated leachate is sprayed onto the surface of the proposed site, the renovated portion of that effluent will reach the groundwater which flows to the White Clay Creek.

187. Cation exchange is the electrochemical process wherein soil will act as an absorber of metals, and the absorption quantity is limited and can be calculated. (N.T., p. XII-9).

188. PEMS expert estimated that the total cation exchange capacity of the spray field upon which the treated leachate will be sprayed to be ten (10) years. (Exhibit S-8).

189. Intervenors' expert estimated that the total cation exchange capacity of the spray field upon which the treated leachate will be sprayed to be 1.88 years.

190. The assumptions relied upon by Intervenors' experts to reach the conclusion that the exchange capacity of the spray field would be reached in 1.88 years are:

a. The total dissolved solids in the wastewater are 1,000 milligrams per liter.

b. The substances provided by PEMS in their application account for all but 500 to 600 milligrams per liter.

c. The unaccounted for dissolved solids are composed of calcium sulfate, i.e., 600 milligrams per liter.

d. Calculate the number of equivalents or exchangeable metal present in the wastewater per unit volume, or total accumulative exchange (milli-equivalents of exchangeable cations in the wastewater).

e. Calculate the total quantity of soil present.

f. Calculate total quantity of wastewater being applied yearly.

g. ph level of 6 to 8.

191. Intervenors' expert concluded that PEMS formula for expected cation exchange capacity did not account for the accummulative total of all the metals, and therefore the estimate of 10 years by PEMS expert was excessive. (N.T., P. XII-8, 9, 10, 17, 18).

192. When the spray field reaches its cation exchange capacity the metals in the leachate will pass through the soil and enter the groundwater untreated. (N.T., p. XII 19).

193. A cation is a positively charged ion. (N.T., p. XII 22).

194. The higher the ph of water reaching the spray site the more efficient the exchange capacity of the soil would be. (N.T., p. XII 23).

195. An application of acidic water to the spray field would lessen the efficiency of the cation exchange capacity of the spray field and vice versa. (N.T., p. XII 20).

196. A review of PEMS application by Intervenors' expert did not reveal any consideration by PEMS of the consequences of acidic rain or acidity in the wastewater being applied to the spray field upon the cation exchange capacity of the spray field. (N.T., p. XII 26).

197. The addition of lime to the wastewater treatment process acts to raise the pH of the wastewater, and the effect of raising the pH is to effect a more significant reduction of metals in the wastewater. (N.T., p. XII 65).

198. If PEMS applied 24,500 gallons of wastewater to the spray field per week, instead of the assumed 42,500 gallons per week, the longevity of the spray field would be 3.7 years per foot of soil according to Intevenors' expert.

199. If lime is used to significantly raise the level of pH of the wastewater which has the effect of reducing the concentration of metals in the wastewater, the effect would be that PEMS could achieve the values for metals concentration as described in its application. (N.T., pp XII 69, 70).

200. Intervenors' expert did not take into account, in estimating the life expectancy of the spray field to be 1.88 years the following:

a. The addition of lime in the treatment process to raise the level of pH as high as 10 or 11.

b. The effect of added reduction of metals by raising the pH level to above relatively neutral, i.e., 6 to 8.

c. The uptake of metals by plants in the spray field.

d. The physical filtration of insolubilized metals in the soil.

e. The particle size distribution of the soils on the PEMS property.

201. The PEMS application did not address the pH level of the wastewater effluent as affecting the ability to reduce the solubility of metals.

202. PEMS application does not discuss the effects of metal uptake by plants, physical filtration of metals by the soil, or pore size.

203. Intervenors' expert concluded that the raising of the pH beyond the neutral range to induce further reduction of metals in the wastewater would not, in practice, significantly reduce the concentrations of the metals in the wastewater, despite the theoretical correctness of the procedure.

204. If PEMS uses a sand bed, and the sand bed is composed of seventy percent sand and less than fifteen percent clay, and if a hot asphalt material is sprayed overtop the sand bed, the vehicle spraying the asphalt will cause ruts in the sand, and the liner of asphalt will not be thoroughly uniform but will be breached, unless the spraybar is attached to the side of the truck.

205. An asphalt liner has little tensile strength and could be ruptured by hydrostatic pressure from groundwater, or by subsidence due to sinkhole.

206. In the operation of a landfill earth materials must be moved daily to provide a six inch cover of these materials over the waste deposited in the landfill each day.

207. Dust is generated in landfills by movement of cover materials and

by movement of trucks which dump waste at the landfill, and by dumping of waste in the landfill.

208. PEMS plans provide for application of water if dust is generated during operation of the landfill.

209. The proposed site is highly visible from Route U.S. 1 and Glen Willow Road.

210. The springhouse on the proposed site is approximately three-hundred fifty (350) feet from the White Clay Creek.

211. On an annual basis the waters of the White Clay Creek have risen to the lever of the springhouse two or three times per year.

212. On three occasions in the last five years (prior to October, 1981) the water of White Clay Creek rose above the level of the springhouse.

213. In December, 1977, January,1978 and February, 1978 surface water runoff and the waters of the White Clay Creek which rose to a high level caused flooding to a height of 38 inches at its highest in the basement of the home located adjacent to the springhouse on the proposed site.

214. During heavy rainfall, surface water runoff from the proposed landfill area runs directly to White Clay Creek.

215. In December, 1977, January,1978 and February, 1978 the level of the waters of White Clay Creek rose above the level of a tree or bush designated by PEMS expert as the edge of the proposed area to be landfilled.

216. During the storm of February, 1978 the level of surface water runoff from the proposed landfill area was ankle deep to knee deep in the driveway to the rear of the tenant house on the proposed site.

217. In the area where PEMS proposes to locate a sedimentation basis, which is approximately 380 feet from the White Clay Creek, the waters of the White Clay Creek have risen to a level which would cause the proposed sedimentation basin to be beneath the floodwaters of the creek.

218. PEMS proposes to utilize underground sub-drains over approximately thirteen (13) acres of the landfill site, the effect of which would tend to lower the groundwater table in the wet areas and relieve any hydrostatic pressure.

219. PEMS proposes to install a witness liner in the landfill area, which is a piping system placed underneath the landfill liner, and the purpose of which is to act as a collector for any leachate which may penetrate the landfill liner.

220. Any leachate collected in the witness liner proposed by PEMS would flow by gravity to collector tanks to be located on the westerly side of the site near the White Clay Creek.

221. One of such collector tanks is proposed to be located approximately 465 feet and the other 400 feet east of the White Clay Creek.

222. The proposed collector tanks are projected to be one thousand gallons each in capacity, and will be placed below the surface of the ground.

223. Leachate entering the witness liner zone could percolate into the subsoil beneath the landfill area.

224. The presence of leachate in the witness liner will reveal a breach in the landfill liner, but the location of the breach will not be revealed thereby.

225. If raw leachate is recirculated into the landfill mass by use of a truck with a spraybar attached to the rear of the truck, an odor problem would be created since raw leachate is highly odorous.

226. PEMS plans call for a leachate holding tank of 20,000 gallon capacity to be placed underground in a position parallel to the White Clay Creek, in the western area of the proposed site, in the discharge zone of the site and in the floodplain.

227. Any overflow from the leachate holding tank would flow to White Clay Creek.

228. The anchor trench proposed by PEMS provides for four inches of excess height for raw leachate to form before overflowing the area being landfilled and entering ground areas not lined.

229. If leachate entered the soil underdrain system proposed by PEMS it would drain directly to White Clay Creek.

230. Keystone Mushroom utilizes a well for water in the growing of mushrooms, said well being approximately 75 feet from the proposed landfill area, downslope from the proposed landfill area, and approximately 200 feet deep.

231. The presence of dust in proximity to a mushroom growing facility causes contamination of the soil in which the mushrooms are grown.

232. Contamination of the soil in which mushrooms grow adversely affects the crop yield to the extent that an entire crop would be lost.

233. The proposed landfill site would be visible from the Springs Valley Inn and Motel.

234. Three springs have been observed on the LaFrance property, which are lower than the elevation of the proposed landfill and all flow toward White Clay Creek.

235. Floodwaters from the White Clay Creek have come close to the Keystone Mushroom facility but not into the facility.

236. The prevailing winds in the area of the Keystone Mushroom facility are across the landfill site to the facility.

237. The Keystone Mushroom facility is upwind of the orchard adjacent to the facility, assuming prevailing winds.

238. Modern Mushrooms, Inc's (Modern) facility is climate controlled and all air coming into the facility is filtered.

239. The pathogens which cause the most crop failure, in mushroom industry, are located in the soil.

240. The compost and top soil used in the growing mushrooms must be sterilized so as to prevent infection or disease of the mushrooms.

241. Pathogens, spores and viruses are contaminants to mushrooms, and are airborne as well as being contained in soils.

242. Spores of pathogens can travel in the wind a distance of a mile to a mile and a half.

243. Modern is located directly East of the proposed landfill site, and in the path of prevailing winds from the proposed landfill area.

244. The daily movement of earth at the proposed landfill site would present a risk of contamination of the growing mushrooms with mycogene and verticillium, both known contaminents in the mushroom industry.

245. Molds contaminate the substrate in which mushrooms grow, and molds are found in any buildup of trash and garbage.

246. Mushroom facilities have experienced increased levels of contamination when any type of earth moving is conducted near such facilities.

247. Of the total of 225,000,000 pounds of mushrooms grown annually in Pennsylvania, approximately 125,000,000 pounds of mushrooms are grown in southern Chester County.

248. Glen Willow orchard consists of 100 acres upon which apples, peaches and pears are grown.

249. Glen Willow orchard is located west of the proposed landfill site and across White Clay Creek from the site.

250. Glen Willow is solely dependent upon water from White Clay Creek for irrigation and spraying trees.

251. The water quality standards of water used in orchards sprays are set by federal government and state government agencies.

252. Contaminated water may not be used for use in orchards.

253. The water drawn out of White Clay Creek for use at Glen Willow orchards is pumped out of the creek at a point approximately 300 yards downstream of the proposed landfill site.

254. Any change in the present natural quality of the water used for irrigation in White Clay Creek would change the foliage and the breathing pattern of the trees in the Glen Willow orchard.

255. Spraying of the fruit trees is done weekly from early spring to the end of August or beginning of September.

256. A day of spraying requires the pumping of approximately 3,000 to 3,500 gallons of water from the White Clay Creek.

257. Dust in an orchard causes problems because it settles on the leaves of the trees and blocks sunlight from getting into the leaves.

258. Continuing dust in the air in an orchard will adversely affect the quality and taste of the fruit.

259. Dust from the proposed landfill site could be carried by the winds to the Glen Willow Orchard.

260. The Institute of Ecology is a private research institute which performs research on policy development.

261. The Institute of Ecology is contracted by governmental agencies to perform studies pertaining to ecological research.

262. The National Science Foundation contracted with the Institute of Ecology to undertake a study pertaining to the availability of research facilities in the United States and to develop a network of experimental ecological reserves.

263. The purpose of the study conducted by the Institute of Ecology was to develop a list of research facilities that deal with terrestial and aquatic ecosystems considered by the Institute to have the greatest potential for doing long-term high quality research, and Stroud was designated by the Institute as part of the national network of experimental ecological reserves.

264. Stroud is is considered by the Institute of Ecology to be the most outstanding facility in the Central Hardwood geologic province.

265. In the Central Hardwood Province, which includes most of Pennsylvania, Ohio, Indiana, Kentucky, Virginia, Tennessee, the northern parts of Alabama, Georgia, western part of South Carolina, western part of North Carolina, parts of New Jersey, New Hampshire and Connecticut, Stroud is the only designated facility devoted solely to river and stream ecology.

266. White Clay Creek is considered to be representative of natural stream systems in the Central Hardwood Province

267. In preparation for a geologic site investigation PEMS expert reviewed the published geologic information on the proposed site, including the Chester County Soil Survey.

268. The published information revealed that the proposed site was in a geologic setting of two rock types, Setters quartzite and Cockeysville marble, with some uncertainty as to the exact boundary between the two bedrock types.

269. PEMS Expert walked the proposed site looking for streams, seeps, wet areas, nearby wells, bedrock outcrops, location of tributary streams and nearby houses using groundwater wells.

270. After walking the entire site on May 2 and 3, 1977 PEMS expert dug eight test pits by use of a backhoe; drilled three test wells with an air rotary maching and drilled eleven or twelve test borings, four inches wide, with an auger rig, to a depth of ten to forty-eight feet.

271. The information contained in PEMS Module 5-A of its application was the result of the work done by PEMS expert at the site, and as specified in Finding of Fact 268, 269 and 270.

272. Mottling can be caused by moisture being slow to drain through soils during wetter parts of the year as well as from a rise in the groundwater.

273. The permeability of various layers of soil can affect the length of time it takes moisture to travel through the soil and cause mottling.

274. Faint mottling was observed on the proposed site in test pits 4, 6 and 7, and borings 8 and 9.

275. Test pits 6 and 7 shows mottling at a depth of 21 inches and 55 inches, respectively.

276. An argument could be raised that the mottling in test pits 6 and 7, which are located at the lower southwestern corner of the site at a surface elevation around 300 feet, are the result of the water table being as high as the depth of the mottling during unusual flood events.

277. PEMS expert did not observe any sinkholes on the proposed site.

278. At the proposed toe of fill area, in test pit 7, Setters quartzite was encountered in the bedrock.

279. Cockeysville marble is not found in the area proposed for landfillin

280. The contact point of the Setters formation and Cockeysville marble is coincident with White Clay Creek, based on test logs examined by PEMS of borings made by Penn Dot preceding the building of the bridge on Route 1 west of the proposed site.

281. PEMS expert did not observe any springs discharging on the proposed site during his site investigation in May, 1977.

282. The observations made of the backhoe test pits revealed soils generally classified as silt loam, sandy loam, and sandy and clay silt.

283. The depth of soil in the proposed spray field area vary from 14 feet to 25 feet, as revealed by test borings done in that area.

284. The depth of soil in the area between White Clay Creek and the toe of the area proposed to be landfilled is between 13 feet and 14 feet as revealed by the test pit and test boring done in that area.

285. The White Clay Creek is the discharge point of the groundwater flow from the proposed site.

286. At the lower end (western end) of the proposed site the water table is in the soil so that any liquid emanating from the landfill area will move laterally westward toward White Clay Creek.

287. The monitoring wells proposed by PEMS in its application are located so as to reveal the existence of any zone of water quality that has been altered by the landfill activities on the proposed site.

288. The velocity of groundwater flow is a function of the permeability and the hydraulic gradient (the slope of the water table).

289. From the toe of the landfill to the stream, the movement of groundwater is slow due to the permeability of the soils and the flat hydraulic gradient.

290. By placing a liner under the landfill, recharge of that covered area will be blocked causing the water table to drop somewhat below the site.

291. Underdrains have been added to the design of the landfill, after comment by DER, for the lowest (western) portion of the fill area where the excavation plan calls for digging down to closer than four feet to the watertable.

292. Geomorphology is the study and interpretation of the slope that the surface of the earth is given by various erosional processes.

293. PEMS' expert in hydrogeology and Intervenors' expert disagreed on the extent to which monitoring wells on the western portion of the proposed site would reveal leachate escaping the fill area and flowing to White Clay Creek in the groundwater system.

294. PEMS' expert concluded that leachate escaping from the fill area would greatly diffuse in the area below (to the west of) the toe of the landfill because of the presence of a thick layer of soil through which the leachate must necessarily flow to reach the White Clay Creek, and the diffused leachate plume would be of such a magnitude that it could not pass the monitoring wells unidentified.

295. Standard procedures and methods exist for collection of leachate from groundwater.

296. The bedrock underlying the proposed site is capable of enduring loads vastly in excess of the load expected from landfilling.

297. An ideal site for a landfill, from a geologic and hydrogeologic standpoint, should, among other things, be located within the surface watershed such that a lot of storm water runoff is not focused onto the site or is not allowed to trespass onto the site, and should be in an area where the slopes are low enough to be manageable from the standpoint of equipment and construction and from the standpoint of handling storm water runoff within the site.

298. PEMS expert did not use piezometers to determine the hydraulic head upon the site.

299. One of the methods proposed by PEMS during the hearings, for the retrieval of leachate escaping from beneath the landfill, is the installation of a trench eight to ten feet deep parallel to White Clay Creek and in, or adjacent to, the flood plain of the creek.

300. The placement of the trench is dictated by the design of the landfill and the flowlines of groundwater under the landfill, which flowlines would

not be in excess of eight to ten feet in depth in the area west of the toe of the the landfill and adjacent to White Clay Creek.

301. PEMS hydrogeologist did not calculate the flow of surface water run-off at the site.

302. Glenmg soils are listed by the Soil Conservation Service as being highly erodible.

303. A perched water condition is a condition where there are isolated wet zones of soil within the ground above some deeper groundwater system.

304. In some areas on the proposed site perched water conditions exist.

305. The site investigations done by PEMS hydrogeologist were conducted within the area proposed to be landfilled.

306. The final slopes of the landfill area, as proposed by PEMS, are the maximum allowable under DER regulations.

307. Water table fluctuations at the proposed site were based on PEMS hydrogeologist's experience in similar geologic settings and reports from the Pennsylvania Geologic Survey.

308. PEMS proposed to use cover material from excavation of soil on-site, as well as from off-site.

309. The proposed landfill site is located on the zone of lateral transport, and the discharge zone in the area of the proposed site is around the toe of the landfill.

310. By reason of the proposed placement of a membrane liner over the filled area, the liner will not allow a recharge of that area and consequently the groundwater flow lines will be redirected toward the interior of the filled site.

311. In the event of leachate runoff during filling PEMS has proposed the use of collection trenches to collect the leachate.

312. An environmental geologist retained by PEMS, John Casselberry, walked along White Clay Creek from Avondale to Stroud, which includes the proposed site's boundary with White Clay Creek.

313. PEMS environmental geologist made observations during his walking tour of the White Clay Creek concerning stream bed conditions, side bank conditions, entry into the stream by animals, destabilization of stream banks, sediment build-up in the stream, fish in the stream, stream bank erosion due to various causes, stream riffles, channel width and depth, tributaries entering White Clay Creek, stream temperature, stream flow, conductivity of the water to determine the amount of dissolved materials in the water, algae material, composition of sediment in the stream, stream depth, stream meanders, water velocity, and aquatic life in the stream.

314. PEMS environmental geologist did not observe any trout in the stream on his walking tour of the creek.

315. PEMS' environmental geologist did not spend enough time on White Clay Creek to have an indepth idea of the productivity of the stream, i.e., an expert opinion on a very detailed study.

316. PEMS' environmental geologist concluded that White Clay Creek has high biologic diversity and productivity.

317. PEMS' environmental geologist concluded that the White Clay Creek had a sedimentation problem, which conclusion did not result from the making of any tests to determine the nature, extent and amount of sedimentation.

318. The proposed landfill site is adjacent to the creek for a distance of approximately 2,700 feet from the confluence of the tributaries northward.

319. PEMS' environmental geologist conducted a field stream reconnaissanc which was not meant to make a definitive statement on the value of White Clay Creek.

320. The leachate treatment train (system) proposed by PEMS in its application is a chemical/physical treatment system, with no provisions in the proposed schematic for biological treatment.

321. The initial section of the system (of leachate treatment) is a retention equalization lagoon, the purpose of which is to equalize the flow of leachate into the clarifier.

322. The clarifier is set up for lime addition, with concentrations of lime added to the incoming leachate, the purpose of which is to raise the pH to cause precipitation of metals out of the leachate.

323. In the clarifier the pH is raised to between 9 1/2 to 11 1/2 levels.

324. In the clarifier the lime and leachate are mixed together very slowly so as to form an accummulation of solid particles (floc).

325. The mixing of the lime in the leachate causes the formation of a metal hydroxide, in a colloidal-sized particle which adheres itself to the lime particles (and to themselves) so that a larger sized particle is formed (flocculation) which coagulates and settles out (sedimentation).

326. The processes discussed in Finding of Fact Nos. 324 and 325 represent the use of a chemical process to form the precipitation and the physical process of flocculation and coagulation.

327. A colloidal particle is a physical particle which is suspended in a liquid.

328. The environmental engineer retained by PEMS concluded that colloidal particles could be removed by lime additions by providing for the use of large amounts of lime to induce flocculation and sedimentation.

329. The method described by PEMS environmental engineer for use at the PEMS site has been in use at a landfill in Bucks County, Pennsylvania (GROWS) for some time.

330. The liquid which overflows the clarifier has very little, if any, suspended or solid materials in it. Also 90% to 95% of the heavy metals are precipitated out in excess lime in the literature.

331. After processing in the first clarifier, PEMS proposed an additional clarifier for the purpose of removing additional solids from the liquid, through the use of an electrolyte determined in the field to be appropriate.

332. PEMS environmental engineer opined that the second clarifier will not be required in the leachate treatment system since the lime clarifier is efficient between 95% to 99% in the removal of all heavy metals.

333. After leaving the clarifier(s), the leachate moves to the ammonia stripping lagoon, where it is aerated and the aeration effects the removal of ammonia (in the form of a gas), up to 75% of it.

334. Subsequent to the chemical/physical process, biological treatment can occur wherein the pH is lowered to the 6 to 8.5 range and phosphoric acid is added, as well as sulfuric acid.

335. The addition of phosphoric acid and sulfuric acid were not noted in the PEMS schematic which is a part of S-8, but were testified to by the environmental engineer retained by PEMS.

336. The biological treatment suggested by PEMS engineer,though not proposed in PEMS schematic,is identical to that treatment in a sewage treatment plant, i.e., the organic material is brought into contact with the nutrients and after a period of time decomposition occurs forming carbon dioxide, water vapor, and bacteria which forms a solid bacterial mass (floc) which settles out.

337. The opinion of PEMS environmental engineer is that the biological floc which is formed in the biological treatment also causes the removal of 25% to 95% of the heavy metals during the treatment process, although not a design parameter of the biological treatment system.

338. After biological treatment the liquid overflows into a secondary clarifier, is allowed to settle, overflows into a filtration unit (sand filter) then falls into the removal of nitrogen-by nitrification.

339. The biological treatment will remove 85% to 90% of the organic material, between 30% and 90% of the heavy metals, any additional nitrogen and the solids content, according to PEMS environmental engineer.

340. PEMS environmental engineer experienced 40% to 50% removal of metals in biological treatment in the field.

341. PEMS environmental engineer concluded that with proper use PEMS could achieve, in its pretreatment train (system), the level of removal of heavy metals stated in its narrative in its application.

342. In a liquid solution milligrams per liter is equal to parts per mill:

343. Acidity of precipitation, the presence of heavy metals in soil, would tend to diminish the cation exchange capacity of a given spray field.

344. The leachate treatment system proposed by PEMS does not provide for disinfection of the treated leachate.

345. Treated leachate contains contaminants such as viruses, pathogens, fungus, spores unless disinfected by the use of chlorine or some other form of disinfectant.

346. PEMS environmental engineer estimated that the cation exchange capacity of the spray field at the proposed site was in the range of five (5) years to 146 years per foot of soil.

347. PEMS proposed leachate treatment schematic was a conceptual plan, not an operational plan, and its environmental engineer agreed that the schematic did not contain all the information which would be required to reach the conclusions stated by him.

348. PEMS environmental engineer did not disagree with DER's calculations that the useful life of the spray field was 10.25 years.

349. Sludge generated in the leachate treatment process is proposed by PEMS to be disposed of in the landfill (the proposed site).

350. The precise treatment of leachate to be employed at the proposed site will depend upon the quality of leachate produced at the proposed site, which quality cannot be known until the landfill is operating and leachate produced.

351. PEMS environmental engineer had no experience in the spray irrigation of leachate onto virgin ground.

352. The cation exchange capability of the soil is not the determining criteria for the design of the spray application site.

353. PEMS environmental engineer did not use sodium, calcium and the rest of the total dissolved solids as cations in his computations in determining the cation exchange capacity of the soil at the proposed spray application site.

354. If calcium, sodium and the rest of the total dissolved solids are used as cation the cation exchange capacity of the soil will be limited, i.e., less than the capacity estimated by PEMS environmental engineer.

355. A portion of the proposed spray irrigation field is located in a floodplain area.

356. Field capacity is the amount of moisture that the refuse will retain without discharge of leachate.

357. The concentration of leachate is inversely proportional to the quantity of flow.

358. DER regulations require PEMS to calculate that precipitation falling upon a landfill result in thirty percent (30%) of it becoming leachate, and that the remaining seventy percent (70%) will result in run-off and evapo-transpiration.

359. Methane gas will be generated in the fill as a result of the decomposition process in the landfill.

360. Methane gas can be hazardous to the general public or to the enviroment.

361. Because the proposed landfill contains a PVC liner, methane gas will rise to the surface and pass through the surface of the landfill.

362. If methane gas is trapped in an enclosure or confined area it could cause an explosion.

363. PEMS application provides for the venting of methane gas to the atmosphere.

364. All of the various plans submitted by PEMS were approved by DER.

365. PEMS agreed to do no landfilling or excavation for landfilling below the elevation of 295 feet (above sea level).

366. The elevation of 295 feet is the best estimate of PEMS engineer of the historic high flood level.

367. The elevation of 285 feet is the one hundred year flood level as proposed by DER.

368. The one hundred year flood level is the elevation that water would reach statistically only one time in one hundred years.

369. PEMS proposed to locate its sedimentation basin between the 285 and 295 elevations.

370. PEMS included a pollution incident prevention plan (program) in its application although not required or requested to do so.

371. On or about October, 1978, after PEMS had changed its application from stream discharge of treated effluent to recirculation of leachate to the landfill and a procedure of hauling leachate from the site to approved disposal areas, DER advised PEMS OF its "no third party" policy.

372. The "no third policy" policy of DER required that any leachate generated at a site must be managed without reliance upon a third party.

373. DER, in October, 1978, advised PEMS representatives that despite the provisions of 25 Pa. Code §75.25 (o) (7), the regulations promulgated by DER which dealt with handling and disposal of leachate, an arrangement to haul leachate off-site was an acceptable leachate management alternative, but was not sufficient as the sole plan for leachate management.

374. PEMS primary intent as to management of leachate is to haul it away to an external treatment facility, and the bond application of leachate is included in PEMS application so as to comply with DER's "no third party" requirement.

375. As of August, 1979 PEMS engineer, who submitted application for the solid waste permit, was of the impression that all outstanding issues between PEMS and DER had been resolved to the satisfaction of DER.

376. Pursuant to directions from DER, PEMS engineer used EPA guidelines with respect to allowable loadings of metals for land application of leachate.

377. After consultation with DER staff, PEMS engineer submitted a plan wherein a required discharge standard of leachate quality was established from the pretreatment facility on the proposed site prior to land application.

378. In its estimate of leachate quality prior to treatment, PEMS used the highest estimate of constituents since that value was not the critical concern,

i.e., the effluent standards of the treated leachate to be applied to the land onsite were the standards which were of concern to DER.

379. DER determined the criteria required to be met by PEMS in the quality of the leachate after treatment.

380. PEMS engineer listed only five metals for cumulative loadings in land application since EPA only listed those five metals in its guidelines, and PEMS maximum cumulative loading in pounds per acre are less than the EPA maximum.

381. DER, in April, 1979, advised PEMS engineer that revised Sludge Utilization Guidelines for Agricultural Purposes had been published by DER, and that PEMS application would be required to comply with those guidelines.

382. In August, 1979, PEMS engineer notified DER that its narrative with regard to land application of treated leachate was revised to meet DER's guidelines as opposed to the EPA guidelines.

383. As of the date of the hearings conducted by the Board in this appeal, DER had not promulgated regulations concerning application of treated leachate to land.

384. The ten year period of time for the spray irrigation field upon which the treated leachate was to be applied was used by PEMS so as to conform with DER requlations requiring management of leachate for a pericd of ten years after closure of the landfill.

385. According to PEMS engineer, the life of the spray field as estimated by him assumes worst case conditions as to leachate quality and loading maximums.

386. The drainage ditches at the proposed site are to be constructed so as to handle a 100 year storm, although DER regulations require management of a one hour rainfall to be expected once in ten years (25 Pa. Code §75.24 (c) (2) (i)).

387. PEMS' revision of its plans of March 21, 1979 provided for the sealing and securing of the leachate holding tank to be located below the elevation of 295 feet.

388. The 20,000 gallon leachate holding tank is proposed to be connected to a four inch Schedule 80 PVC pipe which will transmit raw leachate over and uphill to a lined lagoon.

389. If the four inch PVC pipe should be ruptured, the consequent loss of pressure would act to deactivate any pumping and trigger an alarm.

390. PEMS proposes to install a twenty-mil PVC liner at the site.

391. The twenty-mil PVC liner proposed for the proposed site will be placed on the bottom of the landfill pad and up to present ground level on the sides of the fill area.

392. Seeps or breakouts of leachate from the slopes of landfills are a common occurrence.

393. PEMS engineer has designed the landfill so that leachate percolating down through the cells will flow to the middle of the fill area, and gas forming in the fill area will flow upward and outward.

394. The lowest elevation of the PVC liner is at 296 feet, the lowest elevation of the sedimentation basin west of the fill area is 285 feet, and the hundred year flood is between 284 and 285 feet.

395. The use of a PVC liner in landfills began in the sixties or early seventies (late 1960's and early 1970s) and PEMS engineer could not recall any studies having been conducted to determine potential degradation or breakdown of the liner or chemical reaction of the liner to leachate.

396. Some highly erodible soils will be used as cover material at the proposed site and will be stockpiled on the site.

397. The steeper the slope of the side slopes of the landfill, the more runoff can be expected to flow as compared to less steep slopes.

398. In the event of a leachate seep, or breakout, PEMS application proposes the use of a perimeter trench and drain downslope on three sides of the landfill and incorporating seeps or breakouts into that drain and the flow therefrom being conveyed into the 20,000 gallon leachate holding tank.

399. As a result of and after testimony was given by Dr. Vannote of Stroud in February, 1978, PEMS engineer made provisions in PEMS' application for certain procedures in the design and operation of the proposed landfill for protection of White Clay Creek.

400. Robert R. Buckley is the controlling shareholder of Buckley and Company, which company is a family-owned business.

401. Buckley and Company is a heavy construction and highway contractor and has been in business since 1928.

402. Buckley and Company and its subsidiaries, in the memory of Robert R. Buckley, have never been under citation for environmental violations of any type.

403. Buckley and Company has been involved in projects in which it was necessary to handle large quantities.

404. Robert R. Buckley is a civil engineer and is of the opinion that the proposed landfill is one of rather simple construction which poses no difficulty for proper soil control.

405. PEMS will use traffic control devices, sometimes referred to as barrier-type traffic control, which would restrict vehicles from turning in one direction or another, and around which large trucks cannot proceed.

406. One of the Somerset companies owned by Buckley and Company purchased, in company with one other individual, all of the stock of Continental Sand and Gravel.

407. New Garden Township has made application to DER for reissuance of a permit to operate a solid waste disposal site which had been originally permitted to A. A. K. Company, at a location within five (5) miles of the proposed site.

408. New Garden Township applied to London Grove Township for a conditional use to operate the site (AAK) which is located in London Grove Township and London Grove Township denied the requested conditional use.

409. New Graden Township officials testified at the zoning hearing on the conditional use (Finding of Fact 408) that there was a need for a landfill

in Southern Chester County and New Garden Township wanted to gain permission to use the already permitted A.A.K. site and limit access to it to residents of Southern Chester County.

410. PEMS agreed to widen London Grove Road and Avondale Road and to improve the intersection of London Grove Road and Newark Road to increase the turning radii to accommodate trucks.

411. PEMS officials consider approach Route "C" to be the most acceptable approach to the proposed landfill.

412. In its application to DER for a solid waste permit PEMS did not inform DER that it would be responsible for any improvements to any road on any approach routes to the proposed landfill.

413. After denial of its application for a solid waste permit because of, inter alia, concerns as to road safety and integrity, and during the course of these hearings, PEMS sought to reach an accommodation with Penn Dot as to the viability of approach Route "C" as an acceptable approach route to the proposed landfill.

414. By letter dated September 16, 1981 Penn Dot advised PEMS that Approach Route "C" was a viable route, subject to certain specifications which specifications were based upon certain assumptions.

415. The letter of Penn Dot of September 16, 1981 states:

> This is in response to your September 8, 1981 letter requesting verification of your contacts with the Department to determine the extent of roadway improvements that will be needed to provide an acceptable approach route to the proposed New Garden Land Fill.
>
> On July 14, 1981, Mr. John Hendricks of our Traffic Unit, met with your and Mr. David Ehlrich of the site. The main items agreed to at that time were:
>
> 1. That approach Route "C" as identified in your response to question 18.(a) (1) (i) of Module 9 is a viable approach to the proposed landfill.
>
> 2. That widening of London Grove Road and Avondale Road should be undertaken by the developer in order to maintain the structural integrity of the roadways

to mitigate potentially hazardous conditions that would be created if significant truck traffic were introduced onto the narrow cartways of London Grove and Avondale Roads.

3. That improvement to the intersection of London Grove Road with Newark Road should be undertaken by the developer. The specific improvement needed is to increase the turning radii to accommodate trucks.

More recently, I am informed that you again met with Mr. Hendricks and Mr. Paul Zahn, our District Pavement Management Engineer, here in the District office of September 8, 1981. The purpose of this meeting was to establish the Department's requirements if widening of London Grove Road and Avondale Road were pursued. Mr. Zahn, therefore, conducted a tentative pavement analysis, based on certain assumptions, to provide you with an idea of the materials that would be required by the Department to be used in the roadway widening. The results of the analysis indicated that 9 inches of Bituminous Concrete Base, Course placed on a prepared subgrade would be needed in the widened portion. In addition, the entire width of the roadways would have to be overlaid with 1 1/2 inches of ID-2A Wearing Course to maintain the structural integrity of the existing roadbed.

It was also tentatively determined that the total width of the widened cartway should be 26 feet, with a minimum width for the roadway to be 22 feet. Two foot wide shoulders would be provided on each side of the roadway to obtain the total 26 foot cartway. This was based on current Department guidelines of for similar type projects.

The foregoing cross-section and width of the final cartway is subject to some modification depending on the receipt of more detailed information pertaining to the existing roadbed, number anticipated truck trips, types of trucks, etc.

I hope that this summary of your meetings with Department representatives clarifies what the Department feels is needed in the way of roadway improvements should the landfill be approved and approach Route "C" be designated as the primary route to and from the site."

416. Prior to issuance of its letter of September 16, 1981, Penn Dot did not conduct a traffic engineering study on any of the roads proposed as approach roads, nor did Penn Dot perform any core borings on any of these roads.

417. Penn Dot would be required to conduct a traffic engineering study and core borings prior to final determination of the improvements required to be made by PEMS to render Approach Route "C" a viable approach route to the proposed landfill.

418. The PennDot letter of September 16, 1981, was not a final determination of the viability of Approach Route "C" insofar as it required studies to be conducted as to pavement, shoulders, drainage and other matters pursuant to PennDot requirements.

419. The present Solid Waste Management act (SWMA) was effective September 7, 1980 (35 P.S. §6018.101 et seq.); and replaced the prior act (35 P.S. §6001 et seq.).

420. The Clean Streams Law (CSL), as amended, 35 P.S. §691.1, et seq., was effective and in force during the pendency of this appeal.

421. The SWMA requires compliance with the CSL.

DISCUSSION

The hearings in this matter, exclusive of those conducted by then Chairman Waters on the "bird" issue, extended from July 20, 1981 intermittently, until April 28, 1982. A total of thirty-one (31) days of hearings were held in the taking of testimony, as well as one day of oral argument before the Board en banc.

Post-hearing briefs as well as reply briefs were filed with the Board by the parties to this appeal.

During the course of the hearings counsel produced testimony which, if pursued further, would have given rise to a consideration of countless issues by the Board in this Adjudication. However, the briefs submitted by counsel limited the issues which will be considered herein, and the Board considers those issues not raised in counsels' briefs to have been waived.

However, in order that a full and complete review of this appeal be rendered by the Board, we will address, in a limited manner, those issues which were raised during the course of the hearings but which may not have been raised in counsels' briefs.

A substantial number of witnesses testified as to the sufficiency of the design of the landfill and the suitability of the site as a landfill. Included in this aspect of the appeal were questions regarding the geology of the site, hydrogeology, erosion and sedimentation control plans, liner characteristics, leachate collection, treatment and disposal, soil characteristics, and proposed operation of the landfill.

A fair reading of the findings of fact, as gleaned from the notes of testimony, reveals that the experts retained by the respective parties, as expected, reached varying conclusions on these aspects of the controversy. The Board had no reason to doubt the veracity and integrity of any of the experts who testified at the hearings, and it is of the opinion, and so finds, that any differences of opinion were not significant. If anything, the varying conclusions reached by the ex-

perts amounted to differences of opinion in degree, but no differences as to deficiencies under the regulations or as to conformity with accepted expert practices. In short, the Board concludes that the experts did not reach any conclusions from which PEMS application could have been found to be legally insufficient. We note that DER, in both instances in which it was required to review the application of PEMS also failed to find PEMS application legally insufficient. Further, then Chairman Waters, in his adjudication dated February 13, 1981,[1] found that the application met all of DER's requirements for issuance of a solid waste permit.

DER has asserted, in the most cursory fashion, that the Board has no jurisdiction to hear this appeal since PEMS failed to file a timely appeal to DER's permit denial letter of July 10, 1981, as allegedly prescribed by 25 Pa. Code §21.52(a). Other than the bare notation of failure to file an appeal from the denial letter on page 35 of its post-hearing brief, DER's brief is without any argument on this issue. Perhaps the brief notation of this seeming defect is indicative of DER's perception of the gravity of the consequences of PEMS' failure to file an appeal.

We feel it sufficient to merely allude to the Board's retention of jurisdiction upon remand of the appeal to DER to conclude that no new appeal was required to be filed by PEMS in order for this appeal to continue after DER's decision upon remand. Having retained jurisdiction in the appeal, DER's denial letter of July 10, 1981, in no wise affects the continuing jurisdiction over this appeal by the Board. PEMS' counsels' thoroughly competent and expert presentation of PEMS position during all stages of this appeal belies any motion that they failed to comprehend their professional responsibility with regard to the denial letter of July 10, 1981. We are of the opinion that PEMS' counsel perceived no legal reason to file an additional appeal due to the Board's retention of jurisdiction of the appeal, and we hold that such perception by PEMS counsel was correct.

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1. Finding of Fact Number 50, *PEMS v. DER*, 1981 EHB 403.

We now proceed to a detailed review and analysis of those issues wherein a genuine controversy was presented to the Board under pertinent statutes, regulations, and judicial precedent.

Burden of proof

This matter arose before the Board as the result of PEMS appeal of DER's action in refusing to issue a permit to PEMS to operate a solid waste landfill.

PEMS does not deny that it has appealed DER's refusal to issue a permit to it. However, PEMS asserts that once it has produced a certain quantum of evidence the burden of proof should shift to DER.

The Board's rules and regulations provide that the burden of proof rests upon the party appealing the denial by DER of an application for a permit.[2] The Board has not made any order in derogation of its normal procedure and therefore the Board's normal rule is applicable, i.e., that the party appealing DER's refusal to issue a permit bears the burden of proof and the burden of proceeding.

The burden of proof in the instant matter is to show that DER's action in refusing to issue the permit was arbitrary, capricious and an abuse of discretion. This standard has been applied consistently by the Board and no circumstances have been brought to the attention of the Board which would justify a change in this appeal. *Compass Coal Company v. DER and City of DuBois*, 1975 EHB 129.

PEMS argues that the opinion of the Commonwealth Court in *Warren Sand and Gravel Company, Inc. v. DER*, 20 Pa. Cmwlth. Ct. 186, 341 A.2d 556 (1975), is supportive of its position that the burden shifts to DER once PEMS produces a certain quantum of evidence. However, PEMS' reliance on *Warren*, supra, is without merit. In *Warren*, supra, the Commonwealth established the principle of the scope of review of the Board of DER actions. According to the Court, the Board, in matters involving discretionary action of DER, may substitute its discretion for that of DER. The Court noted that hearings before the Board are de novo, and it is this

2. 25 Pa. Code §21.101 (c) (1).

principle which has been adhered to in this appeal. PEMS has been afforded the opportunity to present all relevant evidence in support of its position. In this context, DER has no affirmative duty whatsoever, although it may as it did in this appeal, produce such evidence as would show that it acted in a reasonable manner in denying the issuance of the permit sought by PEMS.

PEMS has also asserted that under the authority of the case of *Harmon Coal Company v. DER*, 1977 EHB 1, aff'd 384 A.2d 289 (1978), an applicant "is entitled to have its application reviewed on the merits and not peremptorily refused on the basis of a policy that has not been reduced to legislation". Id at 8. The quoted portion of the *Harmon* adjudication did not apply to appellant in that case, and likewise does not apply to PEMS in this appeal. In the *Harmon* case the application was denied on the basis of a high probability of acid mine drainage into streams in contravention of the Clean Streams Law and regulations promulgated thereunder. Id at 8.

In the instant appeal PEMS application was refused, after review, on the basis of the newly enacted Solid Waste Management Act (SWMA) which became effective September 7, 1980, in particular on the basis of Section 102 (a) (4) and Section 102 (a) (10). 35 P.S. §6018.102 (a) (4) and (10), which sections deal with, inter alia, transportation of solid waste and implementation of Article 1, Section 27 of the Pennsylvania Constitution. In this appeal DER was required (emphasis supplied) to review PEMS application with those considerations in mind, and it did. The review by DER was pursuant to a ruling by then Chairman Waters that the application of PEMS was subject to the provisions of the SWMA, which ruling has not been controverted by PEMS. Therefore, PEMS assertion that its, PEMS, application was "peremptorily refused on the basis of a policy that has not been reduced to regulation" is without merit. The review by DER was made pursuant to Board order and in conformity with statutory mandates, and was, therefore, proper. PEMS application failed to meet the requirements of DER's review process, and therefore PEMS now carries the burden of proof in these proceedings.

Also, the Environmental Assessment Process (EAP) developed by DER and applied by DER in this appeal is DER's response to the constitutional mandate of Article I, Section 27 and the test required under *Payne v. Kassab*, 11 Pa. Cmwlth 312, 312 A.2d 86, aff'd 468 Pa. 226 (1976). The EAP was applied in furtherance of the purposes expressed in the constitutional mandate and judicial decision and therefore is a proper exercise of authority by DER, although such policy is not afforded the weight accorded regulations.

On the bases of the Board's rules, and prior Board and judicial decisions, we hold that PEMS bears the burden of proof and the burden of proceeding in this matter.

Conflict with Chester County Solid Waste Management Plan

Intervenor, Chester County, has contended that since its solid waste management plan does not provide for a landfill site where PEMS proposes to operate a landfill, PEMS application is not in conformity with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources.[3]

While it is true that Chester County, and all other counties, were mandated to prepare and implement a solid waste management plan, the admitted mandate placed no duty upon the private sector to comply with said plan in siting proposed locations for landfills. The mandate extended to public bodies insofar as they were required to plan for their future solid waste management needs. Nowhere in that mandate, or in the legislation,[4] is a private person precluded from siting a specific location as a landfill. The argument proposed by Chester County, if extended to its logical conclusion, would preclude DER from exercising any discretion

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3. County of Chester's Proposed Findings of Fact and Conclusions of Law and Brief, p. 27, 28.

4. Solid Waste Management Act of 1968, 35 P.S. §6001, et seq, Act of July 31, 1968, P.L. 788, No. 241.

in its permitting process as to the location of a site for a municipal landfill. Such a situation is in complete derogation of the provision of past and present solid waste legislation.[5] DER is specifically charged with the responsibility to determine if a solid waste permit should issue, notwithstanding that counties are afforded the right to comment on any such application for a solid waste permit.[6] The statute also requires DER to render override justification if it chooses to act in a manner inconsistent with the county's recommendations.[7]

The statutory scheme noted above is clearly indicative of a legislative intent to place the matter of permit review in DER, on a statewide basis. Chester County's concept of its place in the regulatory scheme is at variance with the expressed statutory scheme and therefore cannot be supported.

We therefore hold that PEMS application is not violative of Chester County's Solid Waste Management Plan such that it should, on that basis, be denied a solid waste permit from DER.

PEMS Refusal to Answer Compliance History Questionnaire

One of the bases for DER's refusal to issue a solid waste permit to PEMS, as contained in DER's denial letter of July 10, 1980, was PEMS refusal to answer Question 8 of DER's Compliance History Questionnaire.

This aspect of the appeal consumed considerable time during the hearings, and PEMS has consistently taken the position that it need not reply to that question.

While there may have been a reason, at some time during the pendency of this protracted appeal, to discuss the issue at length, the Board sees no reason to engage in such activity at this point.

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5. Solid Waste Management Act of 1968 and Solid Waste Management Act of 1980, 35 P.S. 6018.101 et seq, Act of July 7, 1980, P.L. 380, No. 97.

6. Solid Waste Management Act, 35 P.S. §6018.501, 502, 503, 504.

7. Solid Waste Management Act, 35 P.S. §6018.504.

After the denial letter was issued by DER, and during the course of the hearings held by the Board, sufficient testimony and evidence has been adduced to satisfy the Board that the matter is now moot.

It is true that PEMS refused, on the advise of counsel, to answer the question. It is also true that during the course of the hearings the Board heard sufficient, credible evidence that the question was answered in a manner such that it satisfied the pertinent sections of the SWMA.

The action of DER was proper and reasonable at the time it issued its denial letter in denying PEMS application on the basis of its refusal to answer Question 8. On the basis of what has since transpired, the Board finds that PEMS has now complied with DER requirements, and will not consider this issue in deciding the merits of this appeal.

Article I, Section 27 and *Payne* Considerations

We now reach the decisive issue to be resolved in this appeal, and that is, the decision to deny issuance of a solid waste permit to PEMS on the basis that PEMS "application failed to address risk of potential harm to the White Clay Creek from major leachate spill or discharge".

As has been the case throughout the Board's involvement in this case, these issues involve the consideration of many factors developed during the course of the hearings held by the Board upon PEMS appeal. Of course, such a posture of the appeal does in no way detract from the right of PEMS to contest DER's action. If anything, it reinforces an appellant's right to assert its full position before the Board.

As a result of the enactment of Article I, Section 27 of the Pa. Constitution, and the enactment of the SWMA in 1980, DER developed its Environmental Assessment Process (EAP) in landfill applications for the purpose of comparing any potential detriment to the environment as against any benefits which might accrue from grant of a permit.

As part of the EAP, DER required completion of a Module 9, a form which

posed questions, the answers to which assisted DER in making a determination as to any environmental problems posed by the application. PEMS completed the module pursuant to DER's assertions that the module and DER's EAP required submission of the answers by applicants for solid waste permits, despite the fact that PEMS so questioned the authority of DER to require compliance with Module 9 under the authority of the SWMA of 1980 that this Board was requested to rule on the question and the Board ruled, on April 15, 1981, that the law to be applied is initially for DER to determine. See post-hearing memorandum of the Commonwealth of Pennsylvania, Department of Environmental Resources, p. 33, 34.

PEMS assertion in this regard appears to have overlooked or ignored the provisions of 25 Pa. Code §75.21 (f) which state:

> "The Department (DER), upon its own recommendation,...will adapt and revise and conduct periodic reviews of such standards as it deems necessary to prevent nuisances and pollution of the air, land, or water of the Commonwealth. Such standards and reviews will include... procedures to insure suitability of the site...".

Such a broad grant of authority to DER by regulations appears, without more, to enable DER to establish its environmental assessment process.

It is as a result of the decisions reached by DER pursuant to the EAP that this appeal continued past the "bird" hearings and the adjudication thereon.

To determine the legal propriety of DER's decision to deny PEMS application for a solid waste permit, the Board's first task is to inquire into the standards used by DER in arriving at its decision.

The record is clear that DER perceived its role under Article I, Section 27, the *Payne v. Kassab* case, the Clean Streams Law, 35 P.S. §691.1 et seq. (CSL) and the SWMA of 1980, such that it added the EAP to its decision making process in its review of solid waste applications. We concur in this perception by DER, and hold that DER applied proper standards in its review of PEMS application.

What remains to be accomplished is the determination of whether or not

the decision reached is a reasonable one in light of the record now under review by the Board.

Three areas of legitimate concern were raised in the hearings before the Board. They are the approach route problem, the threat to the creek, and the threat to the surrounding area, i.e., the orchard and the mushroom industry. These three separate areas of concern will be reviewed and considered as serious for obvious reasons. Also, we shall consider each of them fully, without initial regard to their individual and respective impact upon the final decision herein.

We also are of the opinion that this is an appropriate point to distinguish an apparent misconception by PEMS of the burden of proof at this point in our review. In the EAP it is the duty of DER to make an assessment. *Concerned Citizens for Orderly Progress v. DER* 36 Pa. Cmwlth. 192 (1979). That assessment must be made upon a reasonable basis, i.e., it cannot be based upon whim, fancy, or speculation. PEMS has asserted that once PEMS has shown compliance with all applicable rules and regulations, "the burden of proof now shifts to DER to show why the permit should not be issued". See post-hearing brief of appellant Pennsylvania Environmental Management Services, Inc., p. 5.

While it is true that DER must conduct an environmental assessment, it is not true that DER, after conducting the assessment, must affirmatively show why the permit must not be issued. PEMS' conception of the burden of proof in this narrow area is in contravention of the Board's rules of practice and precedent, as noted hereinbefore in this adjudication.

Since our inquiry in this portion of this adjudication will, however, be entirely confined to the environmental impact aspects of the appeal, we felt it appropriate, and necessary, to distinguish between the duties and responsibilities of DER in the environmental assessment process, and those of an appellant in that process. In *Concerned Citizens*, the Commonwealth Court recited the duty of DER as regards proof of benefits in the assessment of environmental factors:

> "It is the obligation of the agency or instrumentality of the Commonwealth involved to balance benefits against environmental damages, where an action of that instrumentality or agency might cause a diminution of Pa's natural resources as set forth in Article I, Section 27".

36 Pa. Cmwlth at 200.

It is the clear, unambiguous language of *Concerned Citizens*, supra, which forms the basis of our holding that the Commonwealth's (DER) duty under *Payne* is to conduct the balancing test, and once the balancing has been accomplished the decision reached may be attacked. However, one appealing from that decision has the burden of proof and DER, in that appeal, need only show that the balancing was, in fact, done.

We note finally that the EAP conducted by DER encompasses the three prong test of *Payne*:

> "(1) Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources?
>
> (2) Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum?
>
> (3) Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived therefrom that to proceed would be an abuse of discretion?"
> 312 A.2d at 94.

The test will be referred to at length in the remaining portion of this Discussion section of this adjudication, and therefore merited our verbatim quotation at this juncture.

Safe Access to the Site

In its application PEMS proposed five alternate approach routes to the site. The examiner assigned to hear the case travelled all of the roads comprising the five alternate approach routes. Much testimony was received at the hearings concerning the character, pavement structure, width, terrain, shoulders and surrounding terrain of the roads in question.

PEMS has conceded that Approach Route "C" is the most viable route, and that it would seek to have trucks hauling to the site use this approach route. PEMS also proposed to install traffic control devices at the proposed site so as to direct trucks to the roads encompassed in Approach Route "C". It is conceded that PEMS could not guarantee that truck hauling to the site would use this approach route.

At the time that DER reviewed PEMS application and thereafter denied the permit on the basis of road safety and integrity, the application was devoid of any preference as to routes, and no proposal was made by PEMS at that time to make any improvements in any roads on any of the routes suggested in the application.

During the course of the hearings PEMS introduced evidence of its willingness to improve portions of Approach Route "C" in accordance with conversations it had been engaged in with Penn Dot officials and correspondence with Penn Dot. PEMS characterized its discussions as an agreement with Penn Dot "that Penn Dot would approve Route "C" as long as the London Grove/radii (right turn and entire roadway are widened")[8].

PEMS does not concede that road safety and integrity are a proper area of concern for DER in its review process since, according to PEMS, traffic safety is not a potentially harmful factor under any statute and therefore not encompassed under Article I, Section 27 of the Constitution of Pennsylvania.[9]

DER, and Intervenors, argue that DER is mandated by the SWMA to determine in its environmental assessment process the potential harm threatened by the proposed operation.

The SWMA, in its declaration of purposes, states that the purpose(s) of this act is to:

> "(4) protect the public health, safety and welfare from the short and long term dangers of transportation, processing, treatment, storage, and disposal of all wastes".

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8. Post-Hearing Brief of appellant Pennsylvania Environmental Management Services, Inc., p. 30.

9. Post-Hearing Brief of appellant Pennsylvania Environmental Management Services, Inc., p. 28, 29.

35 P.S. §6018.102 (4), and we have previously ruled that PEMS application herein is subject to review under the provisions of the SWMA.

Notwithstanding the fact that PEMS application must be in conformity with the provisions of the SWMA, supra, there is precedent in prior decisions of the Board to find that traffic safety is cognizable under Article I, Section 27 considerations.

In the matter of *Township of Middle Paxton, et al. v. DER,* 1981 EHB 315, the Board considered traffic safety in its decision, and found precedent for its inclusion of this factor under Article I, Section 27 considerations citing *DER v. Glasgow Quarry, Inc.*, 23 Pa. Commonwealth Ct. 270, 351 A.2d 689 (1976). In the *Middle Paxton* case, the applicant herein, PEMS, was a party. The Board stated in *Middle Paxton*:

> "the traffic safety can not help but be adversely effected by the large numbers of dump trucks using the roads, one of which (#443) is, in some places so winding and the berms so constructed as to be properly characterized as hazardous at times".

Middle Paxton, at p. 339, 340. That sentence, above quoted, contained a footnote which is as follows:

> "22. The question has been raised as to whether the haul roads are a proper area for consideration by DER in its permitting process. We believe that such evidence is clearly proper when it is alleged there are no adequate roads available. Even when some roads are adequate and others are not, we believe that Article I, Section 27 is extended by the third *Payne* consideration to permit inquiry into this area.

Middle Paxton, at p. 340, footnote 22.

PEMS suggests that the Board reconsider its holding in *Middle Paxton* in light of *Snelling v. Dept. of Transportation*, 27 Pa. Cmwlth. 276, 366 A.2d 1298 (1976). PEMS cites *Snelling* for the proposition that "Article I, Section 27, does not require consideration of factors beyond those which, <u>by statute</u> (PEMS emphasis),

must be considered in evaluating projects which are potentially harmful to the environment".[10] We are of the opinion that the *Snelling* case is precedent for DER's position since it requires a statutory basis for consideration of potentially harmful factors, and the SWMA's defined purposes in regulation of wastes include transportation of wastes. 35 P.S. §6018.102 (4). Further, in another section of the SWMA, Section 6018.104 (6), DER has the power and its duty is to:

> "regulate the storage, collection, transportation, processing, treatment and disposal of solid waste".
> 35 P.S. §6018.104 (6).

PEMS argues that traffic safety is not a "specified interest to be protected" under the provisions of the SWMA. While the term "traffic safety" is not specified in the SWMA, one must conclude that "traffic safety" is embodied in the mandatory duty to regulate transportation of solid wastes. If traffic safety is not an inherent and necessary factor to be considered in the regulation of transportation of solid wastes, then regulation becomes meaningless. We hold that traffic safety is a necessary element of transportation in the regulatory scheme of the SWMA, and therefore is cognizable as a consideration to be reviewed by DER under Article I, Section 27 of the Pennsylvania Constitution. We note that traffic safety hazards are explicitly provided for in present regulations, as follows:

> "Standards for the collection and transportation of solid waste.
> (a) Goal. Solid waste shall be collected and transported so as to prevent public health hazards, safety hazards, and nuisances."
> 25 Pa. Code §75.29.

Positing that DER acted reasonably, and with legal justification in determining that traffic safety and road integrity were proper subjects for consideration in its environmental assessment process, we must now assess the legal sufficiency of its decision.

Approach route "C" envisions the use of, inter alia, Newark Road and, therefrom, London Grove/Avondale Road and a brief length of Church Road.

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10. Post-Hearing Brief of appellant Pennsylvania Environmental Management Services, p. 29.

Trucks proceeding to the landfill would be required to turn left from Newark Road to London Grove/Avondale Road. The present physical layout of the intersection is such that such a turn would be hazardous and difficult for a truck of the size contemplated to be using the route. The turn would be so tight that PEMS has agreed to widen the "radii" at this intersection, thereby conceding that the turn poses serious problems for use by trucks hauling to the landfill of the size contemplated. However, such a proposal addresses only one of several problems with this approach route.

London Grove/Avondale Road is very narrow, contains two light turns, has substandard shoulders, has a cartway which is unsuitable for use by heavy trucks, is located in a rural setting, is traversed at one point by golfers who must cross the road to continue play, and at the point where it "becomes" Church Road is part of a quiet, scenic, semi-rural residential setting. The record is replete with observations of witnesses testifying in corroboration of the above characterization of the road. The examiner who travelled the entire route is of the opinion that London Grove/Avondale Road, and the short length of Church Road to be used as presently constituted are not appropriate and safe for use by the numbers and sizes of trucks anticipated to be hauling to the landfill.

On the basis of the information submitted to DER by PEMS, and as the basis for review of the road situation, DER had ample legal justification for the decision it rendered.

PEMS perhaps concedes this point, at least insofar as it has agreed to "widen London Grove/Avondale Road along its length. Since this appeal is de novo before the Board, we agree that the Board must consider all of the evidence in order to render a proper decision. The remaining question presented on the road issue then, is whether PEMS agreement, as testified to, will have the effect of making the road(s) in question safe roads for use as an approach route to the proposed landfill.

As noted hereinbefore in this discussion, PEMS has agreed to widen London Grove/Avondale Road on the basis that PennDot would consider Approach Route "C" a viable one if widening and extension of the Newark Road radii were done by PEMS.[11] If Mr. Hendricks had agreed to bind PennDot to consider Route "C" as viable upon the conditions as stated by PEMS, one might (emphasis supplied) consider the road issue as being resolvable in PEMS favor. Unfortunately for PEMS, the opinion of Mr. Hendricks was not so clear cut.

By reason of the crucial nature of the viability of Route "C" in the review by the Board of this appeal, Mr. Hendricks' testimony has undergone the deepest and most painstaking scrutiny, and we have seen fit to include his letter of September 16, 1981 in its totality as finding of fact, No. 415. We applaud PEMS willingness to voluntarily (emphasis supplied) assume the cost of the contemplated improvements. The principals of PEMS who testified are considered by the Board to be high principled, experienced, ethical persons who will honor any commitments made by them. Counsel for PEMS are correct when they argue strenuously that PennDot considers the route as being viable if the improvements are made, but the "Achilles heel" of their argument is Mr. Hendricks' own admission that the letter is not a final agreement on the viability of Route "C".

Mr. Hendricks' testimony on this very critical and crucial issue must be read in its entirety in order to determine his complete understanding of the position

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11. In its brief at p. 30, PEMS asserts the following:

> "Assuming, arguendo that DER has jurisdiction to consider traffic safety issues in a Solid Waste Permit Application, the issue is moot in this case because PennDot has agreed that a safe access route is available. In testimony before this Board, John Hendricks, a PennDot Assistant District Traffic Engineer who reviews applications for Highway Occupancy permits, indicated that PennDot would approve Route "C" as long as the London Grove/radii (right turn) and entire roadway are widened. (Hendricks N.T. 142-143 on 12/14/81; Ex. 21-12; 2A-13). He further testified that while PennDot has no legal right to obligate a landfill operator to make off-site improvements to highways, PEMS had voluntarily agreed to make the requisite improvements. (Hendrick N.T. 53-55 and 75 on 7/20/81)".

of PennDot on the road issue. In that regard, the Board's review of his testimony concentrated upon pages 142 thru 171 of Volume XIX of the notes of testimony taken December 14, 1981. Mr. Hendricks, to his credit, answered all questions put to him in an honest, forthright and credible manner. The Board finds him to be a thoroughly competent and qualified person in his field.

In unqualifiedly accepting Mr. Hendricks' testimony, and his position, we cannot, and do not, conclude that his letter, Exhibit 2A-13, constitutes a final, binding decision by PennDot, that widening of the road and extension of the radii would render Route "C" a viable route for trucks hauling to the landfill. Our conclusion is not only based upon Mr. Hendricks' own admission that such is the case, but also upon the review of all of his testimony. We need only consider that drainage, shoulder width and composition of the cartway considerations which have not been studied and properly addressed, as well as the requirement for a traffic engineering study and the taking of core borings for the cartway, to base our conclusion that Mr. Hendricks did not intend to have the letter relied upon by PEMS to be final, and binding, upon the question of the viability of Route "C". By way of explanation to anyone who might review this adjudication for any purpose, we wish there were sufficient space herein to explicate our position, by way of reference to quotations from Mr. Hendricks' testimony in the body of this portion of our adjudication, or by way of a footnote, but we cannot do so by reason of the length of the testimony and the consequent physical impossibility of including all of that herein in this already long adjudication. It is for this reason that we have alluded to section of the appropriate volume of the notes of testimony and our opinion that that <u>entire</u> portion of the notes be considered as the basis for our immediate holding.

<u>White Clay Creek</u>

In order that the Board's review process be completed, the environmental impact, whether real or the product of speculation, of the operation of the proposed landfill upon White Clay Creek will proceed as though the road issue were separate and apart and without any bearing upon the outcome of this appeal.

Both PEMS witness, John Casselberry, and intervenors' witness, Dr. Bernard Sweeney, agreed that White Clay Creek (Creek) is highly diverse and extremely productive. Beyond this observation, the Board is presented with some conflict as to the importance, if any, of White Clay Creek as a valuable natural resource which is entitled to protection from dangers considered to be present by the siting and operation of a landfill in such close proximity to the Creek.

PEMS only witness on the Creek, John Casselberry, openly admitted that he "may not qualify as an expert to evaluate the Creek as a stream ecologist". Casselberry's sole basis for his lengthy testimony was one visit to the Creek, during the course of which visit he walked the Creek from Avondale to the Stroud Water Research Center (Stroud). The Board has summarized his observations in Finding of Fact No. 313. PEMS produced no other witness to testify concerning the Creek.

Dr. Sweeney testified as to the value of the Creek as a natural stream and as the site for extensive, ongoing and permanent study by Stroud. Dr. Sweeney is the holder of a doctoral degree in biology and is an expert limnologist.

The Creek has been characterized as being as close to a natural stream as can be found in North America. The Creek has excellent water quality and the aquatic life living in it are indicative of high stream quality and low pollution. The Creek contains a colony of fresh water mussel margaratifera -margaratifera which is the southern, most such colony in North America and this mussel is found in only one in Pennsylvania. The Creek is stocked with brown and rainbow trout and harbors natural reproduction of trout and is heavily fished. Immediately downstream from the proposed landfill site, water is drawn from the Creek to be used for spraying fruit orchards. Federal and state regulations require high quality water for use in orchards, and the Creek is the sole source of water for the adjacent fruit orchard.

Stroud is an experimental research center of The Academy of Natural Sciences and is devoted primarily to theoretical and applied studies of upstream river ecology and has been engaged in such activities at the Creek since its location on the banks of the Creek in 1967. Stroud's studies will continue indefinitely into the future by reason of its studies which sometimes require in excess of thirty years in order

to produce reliable data. Investment in capital for Stroud exceed 1.1 million dollars, and its annual budget is approximately six hundred thousand dollars.

Stroud has been designated by the Institute for Ecology as one of 97 sites in the United States as a national network of ecological reserve institutions and Stroud is considered to be the outstanding research facility of its type in the Central Hardwood Province, a geographical area encompassing all, or parts of, thirteen states.

Stroud uses the Creek as a testing ground and the area of the Creek adjacent to and bordering the proposed landfill is part of the testing ground.

The Board member assigned as the hearing examiner in this appeal viewed the Stroud facilities.

Against this imposing list of factors attesting to the importance of the Creek as a valuable natural resource of the Commonwealth, PEMS counters with the argument that since the Creek had not been officially designated as a Class 1A (high quality) stream, and its environmental geologist, John Casselberry did not consider the Creek to be a high quality stream, the stream should not be viewed by the Board as a "unique natural resource".[12] It is difficult to consider PEMS' argument in this regard in a serious vein.

In view of Casselberry's own admission, as recounted hereinbefore, and the work of Stroud in the Creek, and the quality of the water in the Creek, we can only conclude that the Creek is indeed a unique, valuable natural resource of the Commonwealth which must be afforded adequate protection against the threat of pollution from the proposed landfill.

In determining if the plans submitted by PEMS satisfy the now famous three prong test of *Payne v. Kassab*, and therefore meet the judicial and statutory requirements for protection of the Creek, we must proceed to an analysis of PEMS application,

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12. Post-Hearing Brief of Appellant, Pennsylvania Environmental Management Services, Inc., p. 41.

and its evidence as presented to the Board during the course of the hearings, as they pertain to the standards mandated by *Payne*. We note at the outset that none of the parties contest the applicability of the *Payne* test in the review of this appeal.

For initial consideration by the Board there is the question of how PEMS application and evidence adduced at hearing comport with the requirement that PEMS complied with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources. (*Payne* test No. 1).

Since we have previously concluded that the Creek is a unique valuable natural resource entitled to protection, we will not further elaborate here on the question of whether the Creek is a valuable natural resource.

In defense of its position that it has complied with all applicable statutes and regulations, PEMS asserts that the denial letter of DER of September 7, 1979; the finding of then Chairman Waters in his adjudication dated February 13, 1981; the testimony of DER officials on July 16, 1980 and on July 20, 1981; and the testimony of PEMS' engineer on April 20, 1982, conclusively establish that PEMS had complied with all applicable statutes and regulations as required.[13] The Board, at the beginning of this Discussion portion of this adjudication also accepted the fact of PEMS' compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources.

On the basis of the above, we hold that PEMS has met the burden imposed by the first prong of the *Payne* test.[14]

The second prong of the *Payne* test requires that the record demonstrate

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13. Post-Hearing Brief of Appellant, Pennsylvania Environmental Management Services, Inc., p. 7, 8 and 9.

14. We note only in passing that noncompliance by PEMS with the road issue is not such an issue as is contemplated by the first prong of the *Payne* test and we have not considered it as such.

reasonable effort to reduce the environmental incursion to a minimum. We interpret this second prong *Payne* requirement as placing the applicant in a position such that its proposal for a landfill at this site have included within it such safeguards as are necessary to minimize environmental harm, irrespective of the "legal" requirements its proposal must meet.

PEMS has enumerated a number of measures taken by it which were "designed to prevent leachate and/or other contaminants, including sediment, from entering the groundwater system and/or White Clay Creek". Post-Hearing Brief of appellant Pennsylvania Environmental Management Services, Inc., p. 18. PEMS also asserts that some of those measures it has taken are ones which are not required by regulation.

We believe that a fair reading of the testimony will sustain a finding that PEMS did take some reasonable steps to reduce the environmental incursion to a minimum, although not to the extent claimed by PEMS.

The final test to be applied is, "Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived therefrom that to proceed further would be an abuse of discretion?", as enunciated in *Payne*.

Testimony concerning environmental harm reasonably to be expected by the grant of a permit in this appeal was lengthy and persuasive, although bitterly contested by PEMS. Since the landfill is not now in existence, the "reasonably to be expected environmental harm" involves opinions of witnesses who testified before the Board at the hearings. PEMS can hardly claim it is placed thereby at a disadvantage since all findings made by the Board and based on testimony taken at the hearings as well as the application filed by PEMS is totally reliant upon what will take place <u>if</u> the landfill were constructed as proposed.

The genesis of the tests to be applied under *Payne* is found in the following language of Article I, Section 27 of the Pennsylvania Constitution:

> "The people have a right to clean air, pure water and to the preservation of the natural, scenic, historic and esthetic values of the environment."

It is the consideration of these necessary foundations of DER's EAP which we must keep in mind when applying the third prong of the *Payne* case to this appeal. In addition to the constitutional requirements of Article I, Section 27 of the Pennsylvania Constitution, the provisions of the SWMA and the CSL are required to be considered as part one parcel of our review, since the latter cited legislative enactments form the bases for the statutory authority upon which DER formulated the EAP. In addition to the mandates emanating separately from Article I, Section 27, the SWMA, and the CSL, we also note that the SWMA requires compliance with the CSL. See SWMA, Section 502, P.L. 380, No. 97 Act of July 7, 1980, 35 P.S. §6018.502. The intent of the legislature, in intertwing the CSL with the SWMA, is clearly expressed and requires DER to review, analyze and assess applications for solid waste permits in a comprehensive manner embracing all aspects of environmental concern.

DER, in its review process, did consider the mandates imposed by the CSL and the SWMA, and therefore properly discharged its responsibilities thereunder. We may now move to a review of those facts which will determine whether or not the decision by DER, based upon the application and the record before the Board, will support the refusal of the issuance of a solid waste permit to PEMS.

The appellant, PEMS, proposed to build a pyramid-shaped mountain of trash in excess of one hundred feet above present countour elevations which would be visible to residents of Glen Willow Road, and to traffic moving along U.S. Route 1.

Dust created by daily earthmoving activities at the landfill will travel in the air and settle on the trees in the adjoining orchard, endangering the continued production of the orchard.

Earth moving activities conducted daily at the proposed site will release pathogens, molds and spores in the soil into the air and can lead to the destruction of entire crops of mushrooms which are raised in an approximate one mile radius of the proposed site.[15]

15. The importance of this aspect of the case can be even more appreciated by a review of the following language of Pennsylvania's Supreme Court in the case of

By proposing 33% slopes on the site which will be covered by highly erodible soils, sediment can be released to the Creek, causing pollution to the Creek.

Placement of a 20,000 gallon leachate collection tank in the historic floodplain of the Creek at least creates an immediate and substantial threat of pollution to the Creek, even in minute quantities.

Placement of a sedimentation basin at an elevation such that portion of the basin is in the floodplain of the Creek poses an immediate and substantial risk of sediment pollution of the Creek.

Traffic safety is seriously endangered by reason of a presently inadequate network of adequate roads to reach access to the site.

Leachate seeps and breakouts, which are a common occurrence at landfills, pose an immediate and substantial risk of pollution of the Creek.

Against this imposing array of reasonably to be expected environmental harm, the sole benefit proposed to be gained by locating this landfill at the proposed site is the relief of urgent need for landfills in the region.

Admittedly, there is an urgent need for landfills in the region services by the Norristown region of DER, which region covers the proposed site. However, this proposed site is not critical to the needs of the region. PEMS rationale of benefit to be derived is misplaced when it asserts that this site is critical to the landfill

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15 Continued.
DER v. Locust Point Quarries, Inc., 483 Pa. 350, 396 A.2d 1205 (1979) where the Court was discussing the provisions of Section 4002 of the Air Pollution Control Act:

> "...the legislature has declared a policy the protection of air resources to the degree necessary for the development, attraction and expansion of industry, commerce and agriculture." emphasis supplied at 396 A.2d 1209.

and referring to the case of *Commonwealth v. Bethlehem Steel*, 469 Pa. 578, 367 A.2d 227 (1976), cert. denied, 430 U.S. 955, 97 S. Ct. 1600, 51 L.Ed. 2d 804 (1977).

While the Air Pollution Control Act was not cited as a basis for DER's action, and perhaps should have been our Supreme Court's recognition of the importance of protection of air resources corroborates and strengthens the Board's view that the adjacent orchard and adjacent and nearby mushroom facilities are proper objects for the Board's concern in this appeal.

needs of the region. Nowhere in the excruciatingly lengthy record is there any basis laid for the argument that this site is so urgently needed for the location of a landfill.

Without a legal basis in the record for selection of the proposed site as a landfill which will alleviate the urgent need for landfills in the region the record is bereft of any evidence of the benefit to be derived by siting a landfill at the location proposed. The admittedly urgent need for landfills in the region can be met at any otherwise suitable site in the region, and therefore mere location of a proposed site is not a legally justifiable basis to conclude that the site alone will provide a benefit.

No evidence has been produced from which the Board might find that any social benefits will be derived by the operation of a landfill at the proposed site.

We therefore hold that the environmental harm reasonably to be expected from the proposed landfill far exceeds and clearly outweighs any benefit to be derived therefrom.

We have not discussed New Garden Township's contention that to site a landfill at the proposed location would be violative of that township's ordinances. Our reason is that we need not now reach that issue in light of our holdings hereinbefore in this portion of this adjudication.

CONCLUSIONS OF LAW

1. The Board has jurisdiction over the parties and the subject matter of this appeal.

2. This appeal is governed by the provisions of the Solid Waste Management Act of 1980 (Act 97).

3. PEMS was not required to file an appeal of DER's denial letter of July 10, 1981, and its failure to do so did not deprive the Board of jurisdiction to hear this appeal.

4. PEMS has complied with Section 503(c) of the Solid Waste Management Act, 35 P.S. §6018.503(c).

5. The application of the *Payne* test was appropriate in this appeal.

6. The Environmental Assessment Process engaged in by DER, including the use of Module 9, is a reasonable policy to be used by DER to determine the possible environmental impact of a landfill upon resources protected by the provisions of Article I, Section 27 of the Pennsylvania Constitution.

7. DER made an environmental assessment of the effect of the proposed landfill upon the protected resources, as mandated.

8. PEMS has the burden of proof in this appeal.

9. PEMS has not sustained its burden of proof in this appeal.

10. PEMS has made efforts to minimize the environmental incursions, as required, but substantial environmental harm can be expected by the operation of a landfill at the proposed site.

11. The record shows that the reasonably to be expected environmental harm caused by the siting and operation of the proposed landfill clearly outweighs any benefit to be derived therefrom.

12. DER did not abuse its discretion in refusing to issue a solid waste permit to PEMS.

13. On the basis of the record PEMS is not entitled to a solid waste permit to operate a landfill at the proposed site.

O R D E R

AND, NOW, this 29th day of May, 1984, the appeal of Pennsylvania Environmental Management Services, Inc., at EHB Docket No. 79-153-M is dismissed.

ENVIRONMENTAL HEARING BOARD

ANTHONY J. MAZULLO, JR.
Member

EDWARD GERJUOY
Member

DATED: May 29, 1984

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

KERRY COAL COMPANY	:	Docket No. 82-142-G
v.	:	Surface Mining Conservation and Reclamation Act
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES	:	Penalty for Mining without permit

ADJUDICATION

By the Board: This adjudication was originally drafted by Theodore Baurer, Examiner, from the record, and is issued after the board's review, with modifications. June 4, 1984.

On May 3, 1982, the Department of Environmental Resources (DER) assessed a civil penalty of seven thousand dollars ($7000) against the Kerry Coal Company (KCC) for allegedly "conducting surface mining, including blasting, on approximately a five (5) acre area on or about September 21, 1981, without having first obtained the necessary permits and approvals from the Department", pursuant to the Surface Mining Conservation and Reclamation Act, Act of May 31, 1945, P.L. 1198, as amended, 52 P.S. §1396.1 et seq. (SMCRA).

KCC timely appealed this assessment, and a hearing on the merits was held on October 4, 1983. Post-hearing briefs were filed by DER and KCC on December 1, 1983 and January 23, 1984, respectively. On January 26, 1984, the file on this matter was delivered to the board-appointed hearing examiner, Mr. Baurer, for adjudication. 71 P.S. §510-21(e).

FINDINGS OF FACT

1. Appellant is the Kerry Coal Company (KCC), a Pennsylvania corporation having a business address of R. D. #2, Box 19, Portersville, Pennsylvania 16051, and whose business includes the mining of coal by the surface mining method.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources (DER), with offices located on the seventh floor, Fulton Bank Building, P. O. Box 2063, Harrisburg, Pennsylvania 17120, and is the agency empowered to enforce the provisions of the Surface Mining Conservation and Reclamation Act, Act of May 31, 1945, P.L. 1198, as amended, 52 P.S. §1396.1 et seq. (SMCRA); the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §691.1 et seq. (CSL); and the Rules and Regulations promulgated thereunder.

3. An additional party involved in and having an interest in this matter is Kerry Brothers (KB), a partnership having a business address of R. D. #2, Portersville, Pennsylvania 16051, and whose business includes dealings in real estate, various types of construction equipment, and construction work. Mr. Vernon Kerry, President of KCC, is a partner in KB.

4. On October 5, 1979, KB entered into a royalty agreement whereby it acquired the right, subject to applicable legal requirements and restrictions, to mine coal by the surface mining method on properties owned by and located in the vicinity of the Concord United Methodist Church (the Church) of North Sewickley Township, Beaver County, Pennsylvania. This agreement also required KB to enlarge the Church's parking lot, and to construct a ballfield and an outdoor amphitheater.

5. On January 15, 1980, KB assigned its Coal Lease under the aforesaid royalty agreement to KCC; although the assignment included both mining and

construction activities as set forth in Finding of Fact #4, supra, there was testimony that KB continued to be active in some of the construction work called for under the lease.

6. On or about November 14, 1980 KCC submitted an application to DER for a Special Reclamation Project Permit for the operation which is the subject of the instant appeal, the location of which has been set forth hereinabove at Finding #4.

7. In September of 1981, surface mine operators were normally required to obtain a mining permit pursuant to Section 4(a) of the SMCRA, 52 P.S. §1396.4(a), and a mine drainage permit pursuant to Section 315(a) of the CSL, 35 P.S. §691.315(a). However, in some cases where an operator proposed to conduct surface mining of coal incidental to reclamation of abandoned areas previously affected by surface mining or incidental to construction activities, the operator could apply for and receive a Special Reclamation Project Permit, which would be issued pursuant to both Acts.

8. In September of 1981, a surface mining operator could not begin mining operations at a site until he actually received the necessary permits from DER. Mere application for the permits was insufficient to authorize mining.

9. The Church wanted the new parking lot expansion completed as soon as possible, but KB, acting as agent for KCC, delayed in doing so until approximately September of 1981, so as to avoid having to move substantially the same equipment into the North Sewickley operational area more than once.

10. Fill for the parking lot was intended to come from an area located a few miles to the north, and on the other side of a road (Pleasantview Street) from the Church structure and the existing parking lot. This area was within the boundaries of the property which the Church had leased for surface mining of coal.

11. On or before September 8 or 9, 1981, trees and brush were cleared from the area from which the parking lot fill material was to come.

12. On September 15, 1981, KCC conducted a blasting of the overburden of a portion of a pre-existing highwall at the aforesaid site, from which parking lot fill material was to come, within the North Sewickley operational area.

13. According to the uncontroverted testimony of Vernon Kerry, he had consulted with J. Anthony Ercole, Director of DER's Bureau of Mining and Reclamation, prior to the aforesaid blasting, to ascertain whether a permit might be required for this purpose. Mr. Kerry testified that Mr. Ercole had advised him only to keep a log of the blast, which was, in fact, done.

14. On September 21, 1981, DER's inspectors inspected KCC's North Sewickley operational area.

15. On September 21, 1981, none of the permits described hereinabove at Finding #7 had yet been issued to KCC.

16. On September 21, 1981, access to the North Sewickley operational area could be had by a road characterized by DER as a "haul road" and by KCC as a clay or dirt road having insufficient foundation to support coal trucks. This road entered the property which is the subject of this appeal in an easterly direction from a public road designated as "Township Road 562".

17. On September 21, 1981, at the point where the "haul road" intersected "Township Road 562", there stood an identification sign of a type normally posted at surface mining sites in accordance with DER Regulations, specifically 25 Pa. Code §87.92(a) as presently designated, but as of the date stated above, 25 Pa. Code §77.92(b)(1). This sign carried the name, address and telephone number of KCC, plus its License Number, a Surface Reclamation Project Permit number, and a Federal Identification Number.

18. On September 21, 1981, a dozer operator was shoving the rock which had been blasted on September 15, and which was later identified as primarily sandstone, toward the north and northwest, i.e., in the opposite direction from the Church structure.

19. On September 21, 1981, there was an additional area adjacent to the area which had been blasted on September 15, which additional area had been cleared and drilled for blasting.

20. By September 21, 1981, approximately twenty (20) feet of the overburden material from the area which had been blasted on September 15 had been removed.

21. On September 21, 1981 a loader operator was working in an area other than the area which had been blasted on September 15, and was digging shale for the parking lot for the Church.

22. On September 21, 1981, KCC was ordered by DER to cease all mining and blasting at the North Sewickley operational site until the necessary permits and approvals would be obtained from DER.

23. On September 21, 1981, certain actions necessary to prepare the area for mining had not been taken; these included, in addition to the failure to provide a foundation in the "haul road" sufficient to support coal trucks (as noted hereinabove at Finding #16), failure to construct a bench or to install treatment or sedimentation ponds.

24. Conflicting expert testimony was recorded, as to whether the September 15, 1981 blast was or was not sufficient to allow the mining of the coal seam located beneath the blasted area, and as to whether the manner of blasting was or was not typical of normal surface coal mining practices.

25. Testimony to the effect that the explosive used in the September 15, 1981 blast (so-called 4 x 5 primers) was inferior, for mining purposes, to ammonium nitrate, which was not used, was not contradicted.

26. On September 21, 1981, no coal had been exposed as a result of the September 15 blast, nor had any coal been removed from the site.

27. On October 8, 1981, Special Reclamation Project Permit #SRP 04800902 was issued to KCC, covering its operations at the North Sewickley site. This was the same number posted on the sign described hereinabove at Finding #17.

28. Conflicting testimony regarding the acreage affected by KCC's activities at the North Sewickley operational site prior to September 21, 1981 was to the effect that the amount was either at least five (5) acres or just one and one-half (1.5) acres.

29. After October 8, 1981, KCC mined the North Sewickley area covered by the permit which it received on that date.

30. Subsequent construction of the Church's parking lot was completed, using shale (see Finding #21 above); whether or not sandstone was also used (see Finding #18 above) was not definitely established.

31. Prior to September 21, 1981, KCC knew that permits were required, as set forth hereinabove at Finding #7, in order for it to commence mining activities at the North Sewickley site; KCC knew also that it had not yet received such permits.

32. In September of 1981, when the activities in issue occurred, and in May of 1982, when DER assessed the civil penalty against KCC, there were no regulations in effect covering the amount of manner of computation of civil penalties for unpermitted mining.

33. On November 5, 1981, a memorandum entitled "Penalties/Off Permits" was issued by J. Anthony Ercole, Director of DER's Bureau of Mining and Reclamation. This document set forth a set of guidelines pending the issuance of appropriate regulations, on the basis of which penalties might be assessed.

34. In establishing its civil penalty guidelines, DER considered the criteria set forth in 35 P.S. §691.605(b) and 52 P.S. §1396.22, including as relevant factors: willfulness, seriousness, deterrent effect, cost of reclamation, and harm to the environment.

35. Application of the civil penalty guidelines to the facts of the instant case resulted in a civil penalty assessment of seven thousand dollars ($7000). This was the amount assessed against KCC on May 3, 1982.

36. Under the presently effective civil penalty regulations (25 Pa. Code §§86.153 and 86.194), the minimum civil penalty assessment against KCC, assuming its activities prior to September 21, 1981 did in fact constitute unpermitted mining and assuming the affected area to have been five (5) acres, would be greater than the amount actually assessed, namely, either nine thousand dollars ($9000) or ten thousand dollars ($10,000), depending on whether the one-acre area of the "haul road" was to be considered as an area of "mining activity" or of "mining", respectively.

DISCUSSION

A. The Issues

Two principal issues, and one subsidiary matter, present themselves for consideration in adjudicating this appeal:

(1) Did the activity complained of, viz., the blasting of overburden on September 15, 1981, constitute unpermitted mining or was it merely an unregulated removal of surface rock to be used in the construction of a parking lot?

(2) Did DER act reasonably in determining to assess a civil penalty and in computing the amount thereof as it did, or was DER's action in this regard arbitrary and an abuse of discretion? (A corollary to this question is the con-

clusion that, if the blasting activity of September 15, 1981 was merely an unregulated removal of surface rock, and/or if DER's action in assessing a civil penalty was arbitrary and an abuse of discretion, then any inquiry regarding the propriety or amount of the said penalty would appear to be mooted a priori.)

(3) A third and lesser issue is whether it was in fact KCC or KB that conducted the blasting activity on September 15, 1981. (Here again it follows that, if the blasting activity of September 15, 1981 was merely an unregulated removal of surface rock, and/or if DER's action in assessing a civil penalty was arbitrary and an abuse of discretion, then any inquiry as to which corporate entity actually conducted the activity is apparently moot as well.)

In order to preserve the opinions of this board as to each of the issues, whether or not mooted, against the possibility of future appeals, we shall consider them in reverse order.

B. Which Corporate Entity Conducted the Blasting?

Appellant KCC argued, in its Pre-Hearing Memorandum, that "(a) separate company (KB) had made an agreement to build a parking lot..." and that "(t)he actions complained of...were not done by (KCC), but were done by (KB)...to build the parking lot and not to conduct mining operations."

Subsequently, argument by opposing counsel at the hearing revealed a certain discrepancy of recollection as to whether or not counsel had agreed, during an earlier telephone conference among themselves and the examiner, that the matter would even be raised as an issue. (N.T. 106-110) The examiner, while admitting to his own uncertainty on this point, stressed that, the matter having been omitted from the Pre-Hearing Stipulations (Board Exhibit #1), it might therefore reasonably be expected to be omitted from argument as well, although he was not inclined to bar such course of later cross-examination of Mr. Kerry, who testified as follows:

"Q. Is it normal for Kerry Brothers to assign leases that they obtain for mining to Kerry Coal Company?
A. We assign leases to -- Yes, we assign leases to Kerry Coal Company.
Q. When you assign a lease from Kerry Brothers to Kerry Coal Company, do you assign with that the obligation to pay the royalties that are incurred under the lease?
A. In most cases, Kerry Brothers continues to pay the royalties.
Q. In this particular case isn't it true that the assignment of the lease assigned all the obligations under the lease from Kerry Brothers to Kerry Coal Company, including the obligations to build the parking lot and amphitheater, et cetera?
A. I don't recall.
Q. But this document is an assignment of that particular lease. DER Exhibit 6 is an assignment of the lease which was introduced as Appellant's Exhibit 2. Is that correct?
A. Yes."

(N.T. 138-139)

Our examination of the two exhibits alluded to in the concluding part of this exchange makes it clear that appellant's Exhibit #2, the leasing agreement between KB and the Church, distinctly tied together the two aspects of the agreement, mining and construction, in its penultimate two paragraphs, at page 8 thereof:

> "This agreement can not be assigned, except to KERRY COAL COMPANY, R.D. #3, ROUTE 19, PORTERSVILLE, PENNSYLVANIA 16051, without written consent of the parties of the first part (i.e., the Church).
>
> This agreement and all terms, covenants and conditions herein contained shall be binding upon and inure to the benefit of the parties of the first and second part, their heirs, executors, administrators, successors <u>or assigns.</u>" (Emphasis added)

Nowhere in the document was any provision made for its <u>partial</u> assignment. Thus the lease according to its own terms made it impossible to separate the mining and construction responsibilities therein set forth, as between KB and KCC. DER Exhibit #6, KB's assignment of the leasing agreement to KCC, made no pretense of doing otherwise.

Finally, as DER's Post-Hearing Brief correctly pointed out, "(u)nless an assignment is qualified in some way it transfers the whole interest of the assignor. In re Purnam's Estate, 358 Pa. 187, 56 A.2d 86 (1948)." (At 25; emphasis added.) No such qualification appears in the assignment comprising DER Exhibit #6.

We find, therefore, that the blasting operation of September 15, 1981 was conducted by KCC and not by KB, under the applicable lease and assignment. We hold, moreover, that any and all activities in pursuance of the objectives stated in the lease became the sole responsibility of KCC upon the execution of the assignment on January 15, 1980, and that any role KB may have played with respect to the subsequent achievement of the stated objectives were necessarily as an agent for KCC.

C. Did DER Act Reasonably, or Did It Act Arbitrarily and Abuse Its Discretion, in Determining to Assess a Civil Penalty Against KCC, and in Determining the Amount of the Civil Penalty?

This issue arises primarily because of the facts recited in Findings #32 and #33, i.e., that the asserted violation occurred at a time when no regulations had yet been promulgated covering the determination of either the amount or manner of computation of civil penalties for unpermitted mining, and that pending the issuance of such regulations DER produced a set of guidelines for computing penalties, more than six weeks after having ordered the cessation of all activities at the North Sewickley site.

The board has recently addressed the identical issue in the case of Western Hickory Coal Company v. DER, EHB Docket #82-141-G (issued June 2, 1983). There, although the fact pattern was different, the violation alleged, unpermitted surface mining of coal, was the same, and the time frame was virtually identical, the violation having assertedly occurred on September 11, 1981 and the civil penalty having been assessed on May 3, 1982, based on the same guidelines as in the instant case.

The principal difference between the two cases is that in Western Hickory the asserted violation involved unpermitted surface mining beyond previously permitted boundaries. As a result, application of the civil penalty guidelines in Western Hickory was predicated primarily on the element of willfulness of the appellant's errant behavior, willfulness being one of five criteria upon which those guidelines were based. Finding of Fact #34, supra, lists the other four as seriousness, deterrent effect, cost of reclamation, and harm to the environment. In the instant case, DER also has based its determination of the appropriateness and amount of the civil penalty on the asserted willfulness of KCC's behavior, pointing particularly to KCC's having known, on September 15, 1981, of the requirement for permits, and to KCC's lack thereof on that date. (Findings of Fact #7, #8, #31 supra; DER Post-Hearing Brief at 21, 23.) If we agree with DER that KCC was mining (see the discussion infra), we scarcely can disagree with the conclusion that KCC's action constituted willful violations of the law.

Furthermore, DER argues, it has sought in this instance to bring about the deterrent effect which was another objective of the guidelines. Additionally, DER urges consideration of the relevant statutes, which both provide in identical language that:

> "If the violation leads to the issuance of a cessation order, a civil penalty shall be assessed."
> CSL, 35 P.S. §691.605(b)
> SMCRA, 52 P.S. §1396.22

Moreover, as DER correctly points out, these same sections of law also provide that civil penalties of this type may even be assessed without regard to the factor of willfulness.

Finally, DER maintains that since it had considered all the statutory factors in both the formulation and application of the guidelines, and since the

amount assessed under the guidelines was less than the minimum which would have resulted from application of the regulations adopted later (see Findings of Fact #35, #36, supra), its determination of the amount of civil penalty to be assessed was reasonable. Therefore, DER concludes that, absent any arbitrary action or abuse of discretion on DER's part, the board may not review the aforesaid application of the guidelines and determination of the civil penalty in favor of any standard or determination of its own. Appellant KCC insists, however, that such arbitrariness and abuse of discretion did indeed characterize DER's actions in this case. Hence KCC requests that if the board finds that unpermitted mining did take place on September 15, 1981 at the North Sewickley site, it should make its own independent review of the facts and redetermine the penalty based on its own application of the statutory criteria.

As we stated above, this case is virtually on point with that of Western Hickory, supra, especially as to the civil penalty guidelines issue. Consequently, inasmuch as the line of argument posited by DER in the instant matter is exactly in accord with our own holding as to this issue in Western Hickory, we are constrained to adhere to our previous position, even though Western Hickory is presently up on appeal to the Commonwealth Court (at #1735 C.D. of 1983) on the same issue. The key factor pointing to the reasonableness of the penalty, once it is agreed that KCC acted willfully, is the same as in Western Hickory, supra: the amount DER assessed actually was less than would be authorized on the basis of presently promulgated regulations.

We therefore hold that, if the blasting activity of September 15, 1981 at the North Sewickley site constituted unpermitted mining, a determination we shall shortly address infra, then DER acted reasonably and not arbitrarily, and did not abuse its discretion, in determining to assess a civil penalty against KCC and in arriving at the amount of that penalty.

D. Did the Blasting Activity of September 15, 1981 at the North Sewickley Site Constitute Unpermitted Mining, or was it Merely Unregulated Rock Removal?

DER has been at some pains, in its Post-Hearing Brief (at 12-14), to recite statutory definitions from SMCRA, CSL and the Pennsylvania Code, in all three of which certain preparatory work, impliedly inclusive of blasting and preparations for blasting, is explicitly set forth as comprising a part of the meaning of "surface mining". There is no doubt that under appropriate circumstances the activities which are the subject of this appeal, including not only the blasting itself but certain steps ancillary thereto, e.g., clearing, drilling, and overburden removal, could fit within the various definitions.

However, the definition of "surface mining" in 52 P.S. §1396.3 contains the proviso:

> "Surface mining" shall not include (i) the extraction of minerals (other than anthracite and bituminous coal) by a landowner for his own noncommercial use from land owned or leased by him; or (ii) the extraction of sand, gravel, rock, stone, earth or fill from borrow pits for highway construction purposes, so long as such work is performed under a bond, contract and specifications which substantially provide for and require reclamation of the area affected in the manner provided by this act; nor (iii) the handling, processing or storage of slag on the premises of a manufacturer as a part of the manufacturing process."

This proviso shows the Legislature recognized that not all extraction activities of sand, gravel, rock, etc., take place in association with "surface mining"; such extraction activities may be associated with, e.g., highway construction. In 52 P.S. §1396.3, the definition of surface mining preceding the just-quoted proviso clearly limits preparatory blasting falling under the SMCRA for "surface activity <u>connected with</u> surface or underground mining" (emphasis added). In other words, the issue before us (as both parties recognized) is whether the activities for which KCC was penalized were sufficiently "connected with" surface mining to warrant classification as surface mining under the SMCRA's definition.

KCC conducted the blasting only after consultation with competent DER authority (Finding of Fact #13), and then complied fully with his suggestion that a log of the blast be kept (DER Exhibit #4). Moreover, even though there was expert disagreement in testimony regarding the sufficiency of some of the blast parameters to allow mining, and as to the typicality of the manner of blasting when compared to normal mining practice (Finding of Fact #24), the use of 4 x 5 primers, an inferior explosive for surface mining purposes, rather than ammonium nitrate, which is preferred for such uses, was undisputed (Finding of Fact #25), and was in fact duly recorded in the aforesaid log or Blasting Record (supra).

Most important, perhaps, were the actions not taken, the effects not observed, in connection with the blast, but which would have been consistent with surface mining activities. As KCC has convincingly argued,

> "neither (DER) inspector testified that any coal had been exposed by the blasting; neither one testified that any coal had been removed following the blast that had taken place at least six (6) days before the inspection; and, finally, no action was observed to prepare the area for actual mining. There was no testimony of a haul road being constructed that would support coal trucks, there was no bench constructed, and finally, no treatment or sedimentation ponds were installed."
>
> KCC Post-Hearing Brief, 5-6
> Finding of Fact #23, #26

As against these facts, DER urges us to consider KCC's stated desire to avoid having to move its heavy equipment to the site solely for the purpose of constructing the parking lot (Finding of Fact #9; N.T. 132); the erection of the sign at the entry point to the site (Finding of Fact #17; DER Exhibit #2); uncertainties as to whether or not the sandstone blasted on September 15, 1981 had in fact wound up as fill for the parking lot (Finding of Fact #18; N.T. 145-46); and testimony regarding various other activities which could as readily and circumstantially have been linked to the parking lot construction, or even one of

the lesser contractual objectives, e.g. construction of a ballfield and amphitheater, as to the alleged violation (Findings of Fact ##19-21; N.T. 15, 36-37; Board Exhibit #1), but which were never actually tied to any of these.

Neither the appellant's economies in the allocation and siting of its heavy equipment, nor its anticipatory erection of a sign, nor the indeterminateness of the fate of a quantity of sandstone, nor the other activities cited, all of which are certainly capable of supporting DER's allegations, are sufficiently probative of, or linked with sufficient proximateness to, those allegations, even collectively, to enable DER to overcome KCC's arguments in defense of its activities at the North Sewickley site prior to and including September 21, 1981.

DER has the burden of proof in this civil penalty assessment appeal (Western Hickory), and we find the evidence supporting DER's position in this matter to be, in the main, circumstantial, insufficiently probative of the violation charged, and hence inconclusive, arbitrary, and an abuse of discretion.

We therefore hold that DER has failed to show by a preponderance of the evidence that KCC was, at the time and place cited, engaged in unpermitted surface mining of coal; that DER thus has not met its burden of proof; and consequently the civil penalty imposed against KCC on May 3, 1982 was an abuse of discretion and should be rescinded.

E. Conclusion

We have found DER's action in assessing a civil penalty against KCC in the instant matter to have been unjustified on the basis of the evidence adduced, inasmuch as the said evidence was insufficient to allow DER to carry its burden of proof of the violation with which KCC was charged.

We have also held that, had we been able to sustain the charge and the assessment, both the manner of imposition and the computation of the amount of the said assessment would have been, in our view, reflective of reasonable action,

neither arbitrary nor an abuse of discretion, on the part of DER.

Finally, we have found that the blasting operation which forms the subject matter of this appeal was conducted by KCC and not by KB; any role KB may have played in the matter after January 15, 1980 was undertaken as an agent for KCC.

CONCLUSIONS OF LAW

1. This board has jurisdiction over the parties and the subject matter of this appeal.

2. The SMCRA, CSL, and pertinent regulations prohibiting surface mining of coal without a permit were in effect on September 15, 1981 when the activities which DER asserted as comprising unpermitted surface mining of coal occurred.

3. The board's purpose in this adjudication is to determine whether DER committed an abuse of discretion or an arbitrary exercise of its duties and powers in assessing a civil penalty against KCC on May 3, 1982, for having conducted surface mining without a permit.

4. The burden of proof of the facts underlying the assessment of a civil penalty in this appeal lies with DER.

5. DER has failed to show by a preponderance of the evidence that KCC was, at the time and place cited, engaged in unpermitted surface mining of coal; hence DER has not carried its burden of proof in this matter.

6. Had DER been able to show that KCC had been mining without a permit, its assessment of a civil penalty would have been reasonable and neither arbitrary nor an abuse of discretion, both as to propriety and as to amount thereof.

7. Under both SMCRA and CSL DER had a mandatory duty to assess a civil penalty against KCC, once DER had issued its cessation order against KCC and had concluded the order was justified by KCC's violations.

8. The activities complained of as assertedly in violation of the applicable laws and regulations were conducted by, and were the responsibility of KCC exclusively, from January 15, 1980 until at least those dates pertinent to this case.

O R D E R

WHEREFORE, this 4th day of June, 1984, this appeal as above captioned is sustained, and it is

ORDERED that the assessment of seven thousand dollars ($7000) as civil penalty imposed upon the appellant be forthwith rescinded, and it is further

ORDERED that the cessation order against the appellant be forthwith reversed.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: June 4, 1984

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

DEL-AWARE UNLIMITED, INC., et al.	:	E.H.B. DOCKET NOS. 82-177-H 82-219-H
v.	:	
COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES and NESHAMINY WATER RESOURCES AUTHORITY and PHILADELPHIA ELECTRIC COMPANY	:	Dam Safety and Encroachments Act, 32 P.S. §§693.1 *et seq.* Clean Streams Law, 35 P.S. §§691.1 *et seq.* NPDES Permits

A D J U D I C A T I O N

By the Board, June 18, 1984

This adjudication was drafted by Dennis Jay Harnish, Esquire, former Chairman of the Board, who heard this matter. The adjudication has been reviewed and approved with some modifications by Edward Gerjuoy, Esquire, one of the two remaining members of the Board. The other member, Anthony J. Mazullo, Jr. has recused himself at the request of the appellants. Prior to preparation of this adjudication, all the parties have agreed that -- under the circumstances -- approval by Edward Gerjuoy alone satisfies the requirements of 25 Pa. Code §21.86 concerning final decisions.

I. PROCEDURAL STATEMENT

This adjudication concerns various permit applications filed with the Pennsylvania Department of Environmental Resources (DER or Department) by the Philadelphia Electric Company (PECO) and Neshaminy Water Resources Authority (NWRA) (collectively "Applicants") for the Point Pleasant diversion project, by which NWRA proposes to provide water supplies for Montgomery and Bucks Counties and PECO proposes to obtain supplemental cooling water for the Limerick Generating Station (Limerick), a nuclear power facility located in Pottstown, Pennsylvania.

Under their agreement *inter se* NWRA will operate the Point Pleasant Pumping Station, which will transmit water pumped from the Delaware River through a jointly utilized transmission main to the Bradshaw Reservoir. From there, NWRA will divert water via the North Branch Neshaminy Creek to the North Branch Waste Treatment Plant at Chalfont. PECO will take water from the Bradshaw Reservoir by pipeline to the East Branch Perkiomen Creek, and on to the Limerick facility via the East Branch and main stem of the Perkiomen.

On April 7, 1981, December 18, 1981 and January 7, 1982, respectively, PECO filed applications with the Department pursuant to the Dam Safety and Encroachments Act, 32 P.S. §§693.1 *et seq.*, Flood Plain Management Act, 32 P.S. §§679.101 *et seq.* and The Clean Streams Law, 35 P.S. §§691.1 *et seq.* for three permits facilitating the diversion of this water to the Limerick facility (PECO Exhibits 8, 9 and 10). Accordingly, on September 2, 1982, the Department issued PECO Permit No. ENC 09-51, permitting construction and maintenance of a water supply pipeline under the bed and across the channel of various streams in Plumstead and Bedminster Townships, Bucks County (PECO Exhibit 4); Permit No. ENC 09-77, permitting the construction and maintenance of an outfall structure, energy dissipator and channel stabilization where diverted water would enter the East Branch Perkiomen Creek (PECO Exhibit 3); and Permit No. DAM 09-181, permitting construction of the Bradshaw Reservoir (PECO Exhibit 5).

On February 8, 1982, NWRA filed an application with the Department under the same statutes for a permit to construct and maintain a water intake structure in the Delaware River, an intake conduit crossing the Delaware Canal, a water main crossing Hickory Creek and an energy dissipator and outlet channel in the North Branch Neshaminy Creek. On September 2, 1982, the Department issued NWRA Permit No. ENC 09-81 (NWRA Exhibit 11), authorizing these construction and maintenance activities.

Each of the above permits has been appealed by at least one third party. In addition, two DER actions connected with--but distinct from--these permit approvals have been appealed, namely: (1) the issuance of a letter dated June 22, 1982, informing NWRA that no NPDES permit would be required for the release of water by NWRA to the North Branch Neshaminy Creek; and (2) DER's issuance of a Water Quality Certification to NWRA, by letter dated September 2, 1982, pursuant to the requirements of Section 401 of the Federal Clean Water Act, 33 U.S.C. §1341. In due course, all these appeals have been consolidated under the two docket numbers in the above captions.

II. FINDINGS OF FACT

The following Findings of Fact have been adopted with substantial additions, deletions and modifications from the proposed findings of fact submitted by DER, Friends of Branch Creek ("FBC"), NWRA and PECO. Del-Aware has not submitted any proposed findings.

A. General Background

1. The proposed Point Pleasant project will divert water from the Delaware River at Point Pleasant, Pennsylvania to provide public water supplies for Bucks and Montgomery Counties and supplemental cooling water for the Limerick Nuclear Generating Station in Pottstown, Pennsylvania. The maximum pumpage on behalf of NWRA for water supply needs through the year 2010 would be 49 mgd. A maximum of 46 mgd would be pumped on behalf of PECO for Limerick Units 1 and 2 (DER Exhibit 2 at 4-5; NWRA Exhibit 20 at 4-6; NRC Partial Initial Decision (March 8, 1983) (NRC PID)[1] at 51; PECO Exhibit 3 at 5; PECO Exhibit 11 at 3).

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1. Designated as part of PECO Exhibit 7, the Partial Initial Decision of the NRC's presiding atomic Safety and Licensing Board in the Limerick proceeding, issued on March 8, 1983, was provided to the Board during the hearing (Tr. 3406-07).

2. The Point Pleasant pumping station will be developed and operated by NWRA on behalf of both project sponsors. NWRA is entitled to withdraw water from the Delaware River pursuant to Pennsylvania Water Allocation Permit No. WA-0978601. This permit was issued in 1978 after an extensive evaluation, summarized in the Department's "Report on the Application of Neshaminy Water Resources Authority for Water Allocation from Pine Run, North Branch Neshaminy Creek, and Delaware River" (November 1, 1978) (DER Exhibit 2 at 4, 17; Board Exhibit 4 at II-6).

3. PECO also holds a valid water allocation from the Delaware River awarded by the Delaware River Basin Commission (DRBC), and could implement a Point Pleasant project on its own solely as an industrial diversion facility even if the NWRA portion of the Point Pleasant project were not constructed (DER Exhibit 2 at 28).

4. The Point Pleasant pumping station will utilize pumps with a total capacity of 95 mgd and an intake located approximately 245 feet out into the channel of the Delaware River (DER Exhibit 2 at 5; NRC PID at 52).

5. The intake structure will consist of two parallel rows of cylindrical screen sections about 70 feet in length, located two feet from the bottom of the river and extending four feet upwards at that point. Even at a comparatively low flow of 3,000 cfs, the top of the intake would be approximately four feet under the water surface (DER Exhibit 2 at 82-83; NRC PID at 10, 53-55; NWRA Exhibit 14 at 1).

6. The intake will utilize an assembly of Johnston wedgewire screens, which constitute the "state-of-the-art" technology as compared to vertical traveling screens utilized in shoreline intakes at other facilities (DER Exhibit 2 at 5, 84; NRC PID at 10, 54; NWRA Exhibit 41 at 1; NWRA Exhibit 42; Kaufmann, Tr. 597).

7. Three intake lines below the channel bottom will convey water from the intake to the pumping station (DER Exhibit 2 at 5).

B. Cooling Water for Limerick

8. Water pumped from the Point Pleasant pumping station will be transmitted approximately 2.4 miles through a combined transmission main to the Bradshaw Reservoir, which will have an operating capacity of approximately 70 million gallons (DER Exhibit 2 at 6; Board Exhibit 4, Part III at 2-13; PECO Exhibit 10).

9. Water for NWRA will be delivered by gravity flow from the Bradshaw Reservoir to the North Branch Neshaminy Creek to Lake Galena, and ultimately to the North Branch Waste Treatment Plant at Chalfont (DER Exhibit 2 at 4).

10. DRBC Docket No. D-65-76 CP(8) represents DRBC's approval of the NWRA Neshaminy Watershed Plan and Water Supply Project adopted by DRBC on February 18, 1981, as unanimously approved by all DRBC members (NWRA Exhibit 20; Weston, Tr. 3426). The Corps of Engineers also approved the project. See *Del-Aware Unlimited, Inc. v. Baldwin*, Docket No. 82-5115 (Bench Opinion issued December 15, 1982, as modified by Bench Opinion Correction Sheet issued December 23, 1982); (3d Circuit, unpublished order, July 5, 1983 at Docket No. 83-1010); (rehearing denied, 3d Circuit, August 2, 1983).

11. A transmission main approximately 6.7 miles long will connect the Bradshaw Reservoir with the East Branch Perkiomen Creek, by which cooling water for Limerick will be conveyed to the East Branch. Another outfall structure is to be located on the East Branch approximately 200 feet upstream from Elephant Road, discharging cooling water to the East Branch. This water will then follow the East Branch for approximately 22 miles, and will ultimately be withdrawn by an intake located along the main stem of the Perkiomen near Graterford (DER Exhibit 2 at 6-7; Board Exhibit 4, Part III at 2-18 to 2-25; PECO Exhibit 2 at II-1).

12. The East Branch of the Perkiomen (East Branch) is a tributary of Perkiomen Creek, originating in central Bucks County and flowing generally northwest through the boroughs of Perkasie and Sellersville. In its headwaters, for some six miles above Perkasie and Sellersville, the East Branch is a small stream flowing through a rural, largely open area of farmland. It has one principal tributary in this reach, that being Morris Run.

13. In this six-mile headwaters section, the stream is largely unspoiled, flowing according to natural conditions. It is a "flashy" stream, subject to abrupt and high rates of run-off during rainfall, especially thunderstorms. Its flows are high in winter and low in summer, when it is reduced to a series of pools connected by riffles. (Tr. 1346).

14. The headwaters and the stream in general have good water quality, though they are somewhat turbid, principally from erosion of farmland in the stream basin. This erosion is not a permanent or necessary feature of the basin, but due to correctable land management practices.

15. The banks of the stream are also subject to erosion. This occurs during common spring run-off rates and volumes of flow, and does not require major flood flows of the magnitude of the annual flood or mean annual flood. (Tr. 701, 2846, 3215).

16. At and downstream from Sellersville and Perkasie, the character of the stream changes. The stream is dammed at Perkasie. A public sewage treatment plant discharges wastewater to the East Branch at Sellersville. Channel size and flows are substantially increased by tributaries joining the stream.

17. Maximum consumptive cooling water use at Limerick will be 21.3 mgd for one unit and 42 mgd for two units (DER Exhibit 2 at 8; PECO Exhibit 1 at 2).

18. On March 29, 1973, DRBC issued Docket No. D-69-210 CP which preliminarily approved the PECO portion of the Point Pleasant project and established, *inter alia*, the limits on withdrawals from the Schuylkill River (Weston, Tr. 3450; PECO Exhibit 1). Final approval for the PECO portion of the project was granted by DRBC on February 18, 1981 in Docket No. D-79-52 CP (PECO Exhibit 11).

19. Withdrawals from the Schuylkill River pursuant to the DRBC allocation are limited to the following conditions: (1) flows (excluding augmentation from DRBC-sponsored projects) measured at the Pottstown gauge shall exceed 530 cfs for one unit in operation; and (2) no withdrawals may be made when water temperatures in the Schuylkill below Limerick are above 15°C, except when the flow at the Pottstown gauge exceeds 1791 cfs (DER Exhibit 2 at 8; PECO Exhibit 1 at 5).

20. As a result of the temperature and flow restrictions imposed by the DRBC dockets, it is estimated that Limerick will be unable to withdraw cooling water from the Schuylkill 40 percent of the time, or 146 days a year (Runkle, Tr. 1152-53).

21. The historic record of flows of the Schuylkill River demonstrates, in light of conditions imposed upon PECO by DRBC, that if only one unit were operating at Limerick, Schuylkill flows would be available only 7 to 12 additional days of the year, i.e., roughly 3 percent more of the time than would be the case with two units. Therefore, whether Limerick ultimately has one or two units in operation makes little difference in the availability of Schuylkill water (Runkle, Tr. 1154; DER Exhibit 2 at 29).

22. Thus, even if construction and operation of Limerick Unit 2 were delayed or ultimately cancelled, cooling water requirements for efficient operation of Unit 1 would still necessitate completion of the Point Pleasant project in its present dimensions or the availability of a like amount of water from another source. (DER Exhibit 2 at 29; Boyer, Tr. 3899-C).

23. In the course of its evaluation, the Department assumed that there may be only one unit at Limerick, but nonetheless concluded that the Point Pleasant project was necessary regardless of whether there were one or two units (Weston, Tr. 2366-67).

24. In approving the diversion of Delaware River water at Point Pleasant for Limerick, DRBC provided that natural flows of the Perkiomen Creek, exclusive of any water pumped from the Delaware River, may be used only when the flow at the Graterford gauge exceeds 180 cfs for one unit in operation and 210 cfs for two units in operation (DER Exhibit 2 at 8; PECO Exhibit 1 at 6). Without regard to withdrawals at Graterford for Limerick, DRBC has further required that PECO maintain, through augmentation, a minimum flow of 27 cfs in the East Branch Perkiomen Creek at Bucks Road (downstream from Elephant Road) during the period in which Limerick is utilizing water pumped from the Bradshaw Reservoir. A minimum flow of 10 cfs must be maintained the remainder of the year (DER Exhibit 2 at 9; PECO Exhibit 1 at 6; PECO Exhibit 3 at 5; PECO Exhibit 11 at 6; Boyer, Tr. 3904).

25. Under the terms of DRBC's allocation for Limerick, diversions from the Delaware River are prohibited when withdrawals would reduce the flow at the Trenton gauge below 3,000 cfs. At such times, water may be diverted at Point Pleasant only if compensated in an equal amount by release from an upstream storage facility (DER Exhibit 2 at 9; PECO Exhibit 1 at 6; PECO Exhibit 11 at 5; Board Exhibit 4 at IV-6; NRC PID at 72).

C. Aquatic Life Impacts in the Delaware River

a. Entrapment and impingement

26. The most significant aquatic life impacts attributable to operation of a water intake are generally entrainment (passage of small planktonic or nektonic organisms such as fish eggs and larvae through the intake screens)

and impingement (capture of fish and other aquatic organisms on the screens) (DER Exhibit 2 at 30; Kaufmann, Tr. 596).

27. The passive Johnson wedgewire screens utilized in the Point Pleasant intake represent the "state-of-the-art" technology in water intake structures and substantially reduce any possibility of entrainment or impingement of aquatic life at Point Pleasant as compared to conventional screening (DER Exhibit 2 at 30-31, 84; Applicant's NRC Testimony at 3-5, ff. NRC Tr. 949; Boyer, NRC Tr. 1350;[2] Kaufmann, Tr. 683).

28. In terms of protection of the fish population, it is better to have the intake screen in its proposed location--245 feet out in the Delaware channel rather than along the bank as originally planned (Kaufmann, Tr. 683).

29. Shad avoid shadows so that even though they could swim below the intake structure they will probably veer towards either the Pennsylvania or New Jersey shores on sunny days. If they veer towards New Jersey the sport fishing on the Pennsylvania side of the Delaware would be diminished. However, in terms of any potential impact on sport fishing at Point Pleasant, there is no reason to believe that shad will veer toward either the New Jersey or Pennsylvania shore as a result of the intake structure (Kaufmann, Tr. 585, NRC PID at 38-39, 89). There is no evidence that anglers will not have access to the site once the intake is operational (Kaufmann, Tr. 586-87).

30. The slots in the intake screens to be used at Point Pleasant are only 2 mm. wide (DER Exhibit 2 at 31; Applicant's NRC Testimony at 4; NWRA Exhibit 41 at 10. This is smaller than the size of a water-hardened sturgeon or shad egg (Kaufmann, Tr. 607-08).

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2. The NRC testimony was also a part of PECO Exhibit 7. See footnote 1, *supra*.

31. The maximum intake velocity through the screens is .5 fps, with an average velocity of .35 fps. The average intake velocity will decrease from about .071 fps at a distance of one foot from the screen's surface to .011 fps at five feet from the screen and to .0037 fps 10 feet from the screen (DER Exhibit 2 at 84; NRC PID at 59).

32. "Bypass velocity" is the speed of the river water passing directly in front of and parallel to the long axis of the intake. Although some experience with vertical traveling screens shows that a 2:1 ratio of bypass velocity to screen intake velocity is optimal for minimization of impingement and entrainment, the passive wedegwire screen to be utilized for the Point Pleasant intake provides considerable protection against impingement and entrainment at a 1:1 bypass, or even in the absence of any bypass velocity (NRC PID at 60-61).

33. Nonetheless, with a flow of 3,000 cfs the river velocity at the location and depth of the proposed intake has been measured at or in excess of the 1.0 fps required to provide a 2:1 bypass to intake velocity ratio, even at the maximum intake velocity (DER Exhibit 2 at 31, 83; NRC PID at 62; Kaufmann, Tr. 598-99).

34. Even at a low flow of 2,500 cfs, the minimum bypass velocity will be approximately .8 fps (NRC PID at 70).

35. The zone of influence of the intake velocity would only be approximately two inches (Kaufmann, NRC Tr. 1882).

36. The Department evaluated the potential impacts of the water intake structure on the shortnose sturgeon, an endangered species found in some reaches of the Delaware River (DER Exhibit 2 at 31).

37. Based upon a July 19, 1982 letter from William G. Gordon, Assistant Administrator for Fisheries, National Marine Fisheries Service to Lt. Col. Roger L. Baldwin, District Engineer, U.S. Army Corps of Engineers, and an attached

Biological Opinion rendered pursuant to Section 7 of the Endangered Species Act, *as amended*, 16 U.S.C. §1536, the Department concluded that: (1) the intake construction would cause no significant adverse effects on shortnose sturgeon present in the area; (2) the design of the water intake structure and projected schedule of withdrawals were adequate to ensure that juvenile and adult shortnose sturgeon as well as sturgeon eggs and larvae present in the area would not be significantly affected; (3) construction and operation of the pumping station would not likely jeopardize the continued existence of shortnose sturgeon in the Delaware River (DER Exhibit 2 at 31).

38. No shortnose sturgeon have been found at or above Point Pleasant, and there is no evidence that they spawn in or inhabit the Point Pleasant area (NWRA Exhibit 36 at 2-13; NRC PID at 73; Kaufmann, Tr. 587-88, 594). There is nothing peculiar to the Point Pleasant area that makes it a particularly desirable spawning environment for shortnose sturgeon. There are many other sites along the Delaware, upstream and downstream of Point Pleasant, that are suitable habitats as well (Kaufmann, Tr. 593, 697).

39. In any event, given the physical characteristics of sturgeon eggs and the benthic orientation and swimming ability of its larvae, entrainment and impingement of shortnose sturgeon would be highly unlikely (NRC PID at 73-78; Kaufmann, Tr. 697-98).

40. While most American shad spawn in the Delaware River upstream of Point Pleasant and pass through the Point Pleasant area during their migration, there would be no impingement or entrainment of juvenile or adult shad even if they spawned at Point Pleasant, because of their size and stage of development (NRC PID at 78-80; NWRA Exhibit 36 at 2-17). The yearly peak spawning period for American shad will have passed prior to the (summer) periods of the largest withdrawals at Point Pleasant (NWRA Exhibit 41 at 7).

41. Nothing in the Point Pleasant vicinity makes it unique as a shad spawning area for shad as compared to the rest of the Delaware River (NWRA Exhibit 41 at 8; Kaufmann, Tr. 691).

42. The operation of intakes utilizing less than "state-of-the-art" technology at three other power plants on the Delaware River in the traditional shad spawning area upstream from Point Pleasant has resulted in very little impingement or entrainment of American shad. Overall, those plants have not had a negative effect on the American shad population (Kaufmann, Tr. 695).

43. A single shad female lays an estimated 100,000 to 500,000 eggs, and less than 1 percent of these eggs would hatch even if unaffected by the intake (NRC PID at 83). The size and demersal (sinking) nature of shad eggs preclude entrainment or impingement of the vast majority of healthy eggs which would otherwise produce larvae (Kaufmann, Tr. 692-93).

44. Shad eggs, even if present at Point Pleasant as a result of spawning in the upstream pool where shad could conceivably spawn, will be no more particularly concentrated in the area of the intake than other places in that area of the river (Kaufmann, Tr. 610-11).

45. The main factors inhibiting the further growth and recovery of the American shad in the Delaware River are the dissolved oxygen block in the Philadelphia area (upper Estuary) and the locking out of shad from the Schuylkill River, Lehigh River and other tributaries by dams and other physical barriers (Kaufmann, Tr. 561, 743).

b. Dissolved oxygen and salinity

46. Historically, the dissolved oxygen block has been quite variable in terms of length. Normally, it extends from the Philadelphia area (30 miles downstream of Point Pleasant) to Chester (Kaufmann, Tr. 565-66).

47. The extent of the dissolved oxygen block is controlled by flow levels and water temperature, the latter of which is affected by industrial intakes and discharges in the Delaware Estuary (Kaufmann, Tr. 568-69).

48. For shad, the dissolved oxygen block acts as a barrier to passage upstream at a level of four parts dissolved oxygen per million parts water or less (Kaufmann, Tr. 566-67).

49. DRBC has concluded that the major causes of dissolved oxygen sags in the Delaware River are pollution loads from sewage treatment plant discharge and decay of organic debris (NWRA Exhibit 25 at 26-29; Kaufmann, Tr. 710).

50. Other factors that affect the dissolved oxygen level in the Delaware Estuary are tidal flows, temperature, precipitation, wind, climate and the level of photosynthesis (Kaufmann, Tr. 712-13).

51. Present data strongly suggest that dissolved oxygen levels are far more sensitive to minor variations in temperature than to relatively small diversions such as that at Point Pleasant (NWRA Exhibit 25 at 34; Rehm, Tr. 1467).

52. Even under extreme conditions of low river flow, e.g., 2,780 cfs, the maximum diversion of 95 mgd at Point Pleasant will result in a reduction in dissolved oxygen levels in Zone 2 (from Trenton to Philadelphia) of approximately only 0.08 mg/l. Reductions of this magnitude would produce virtually imperceptible changes in Zone 2 dissolved oxygen levels (Rehm, Tr. 1451-52, 1803). Further downriver, the effect is only about one-half (Board Exhibit 4 at IV-31).

53. The Department found that during normal periods, upper and lower basin reservoirs will be operated by DRBC to sustain the current minimum flow objective at Trenton of no less than 3,000 cfs (DER Exhibit 2 at 34). Withdrawals from the Delaware for Limerick are prohibited below this level unless

fully compensated by releases from utility-owned upstream storage (see Finding of Fact 25, *supra*).

54. A diversion of the maximum 95 mgd that will be taken by the Point Pleasant project represents less than 5 percent of the Delaware River flow when the flow at the Trenton gauge is 3,000 cfs (DER Exhibit 2 at 32, 84; Board Exhibit 4 at IV-15; NRC PID at 55; Rehm, Tr. 1848; Kaufmann, Tr. 711-12).

55. Water withdrawn at Point Pleasant for public supply by NWRA would be substantially a non-consumptive use, with substantial return of water via sewage treatment plant discharges to the Delaware River via the Neshaminy, Perkiomen, Pennypack and Wissahickon Creeks, and the Schuylkill River (NWRA Exhibit 5 at 6, 23; DER Exhibit 2 at 34, 36; Rehm, Tr. 1747). The anticipated consumptive use of only 10 percent will result in a total loss to the Delaware River Basin of less than 5 mgd (about one-fifth of one percent of a 3,000 cfs flow), which for practical purposes is not significant (DER Exhibit 2 at 34-34; Board Exhibit 4 at IV-17).

56. While NWRA may withdraw water at Point Pleasant when the flow at the Trenton gauge is below 3,000 cfs, DRBC has expressly conditioned such withdrawal upon the prohibition of nonessential water uses, as specified in DRBC Resolution No. 81-5 (to the extent applicable) and in "any other emergency resolutions or orders adopted hereafter". (NWRA Exhibit 20 at 16.)

57. At a low flow of 2,500 cfs at Trenton, the maximum diversion of 48.8 mgd for the year 2010 by NWRA for public water supplies would result in a reduction of Delaware River flows by less than 3 percent. Even during drought conditions, it is anticipated that basin reservoirs would be operated to maintain a flow at Trenton of at least 2,500 cfs (DER Exhibit 2 at 34; Del-Aware Exhibit 28 at 3).

58. Both the DRBC docket decision and the Commonwealth's permits regarding the allocation of Delaware River water at Point Pleasant indicate

that the allocations for public water supplies are subject to modification, restriction or suspension during any emergency declared by DRBC. (NWRA Exhibit 7 at 11; Finding of Fact 56, *supra*). This provision has been implemented in DRBC's Level B planning by identifying those times which are to be automatically considered drought warning or drought emergency periods when cutbacks will be effected (Weston, Tr. 2681).

59. Even assuming that the entire 95 mgd diverted at Point Pleasant were lost to the Estuary under a worst case analysis (i.e., lower than 2,000 cfs flow at Trenton), the assimilative wasteload capacity of the Delaware River would not be significantly affected or require a change in water quality wasteload allocations (Rehm, Tr. 1438-41).

60. Examining both the Level B Study results and the "Good Faith" Recommendations (Draft) (June 1982), the Department concluded that the interim salinity objective of 180 mg/l chloride at River Mile 98 can be met with existing flow management capability at Trenton, even during a record drought like that of the 1960's. The Department also concluded that salinity intrusion into the Delaware Estuary would not be exacerbated by withdrawals at Point Pleasant, since salinity control is dependent upon the combined flows entering the Estuary from the Delaware and Schuylkill Rivers and their tributaries. Salt water from the Delaware Bay is repelled by all flows which enter above River Mile 90, whether from the Delaware River mainstem or the Schuylkill River. Since nearly 90 percent of the NWRA withdrawal will be returned above River Mile 90, all but 5 mgd of the NWRA total allocation will aid in the repulsion of salt water (DER Exhibit 2 at 36; Board Exhibit 4 at IV-47; NWRA Exhibit 25 at 36; Runkle, Tr. 1096; Rehm, Tr. 1690-93, 1747).

61. Withdrawals at Point Pleasant for Limerick when flows exceed 3,000 cfs at Trenton present no significant concern for salinity control. As

for flows below 3,000 cfs at Trenton, withdrawals for Limerick cannot be made unless fully compensated by releases from an upstream storage facility, thereby resulting in an equivalent flow at the Trenton gauge as if no withdrawal had been made at Point Pleasant (DER Exhibit 2 at 36-37; Board Exhibit 4 at IV-47 to 48; see Finding of Fact 25, *supra*).

62. While Del-Aware's hydraulic witness attempted to establish that the "Good Faith" criteria could be artificially manipulated by management of upstream reservoirs to the detriment of salinity objectives in the Estuary (Phillippe, Tr. 3302-04), it was not established that any such manipulation of upstream reservoir releases had ever occurred or that DRBC, as the river manager, would tolerate any unfair or deceptive practice.

63. Because salt water intrusion will not be exacerbated by withdrawals at Point Pleasant, the oyster industry in the Delaware Bay could not be affected by the proposed project (Board Exhibit 4 at IV-32).

D. Aquatic Impacts in the East Branch Perkiomen Creek

64. The Department evaluated potential impacts upon the aquatic ecology of the East Branch Perkiomen Creek resulting from the discharge of pumpages from the Bradshaw Reservoir. In conducting this analysis, the Department reviewed DRBC's Environmental Impact Statement (1973) and its Final Environmental Assessment (August 1980), PECO's Environmental Report (July 1979) and Corps of Engineers reports (DER Exhibit 2 at 41-42; Ford, Tr. 2035).

65. The decision about these potential impacts was made by the Chief of the Planning Section in the Department's Bureau of Water Quality Management, who testified that he relied on the expertise and knowledge of the Department's Regional Water Pollution Biologist, Donald Knorr. (Tr. 1356; Environmental Assessment, p. 40)

66. The Chief of the Planning Section in fact had only a handful of informal discussions with Mr. Knorr, and Mr. Knorr had no direct input into the Environmental Assessment. Mr. Knorr did not make, and Mr. Knorr (and the Department) did not have the data adequate to make or support the conclusion in the Environmental Assessment (p. 40), that discharges of water to the East Branch would increase habitat size, decrease seasonal mortality and in general have a beneficial effect on aquatic biota. (Tr. 1353, 1356, 1358)

67. One of the present limitations on aquatic life in the East Branch is the lack of water during the summer (Knorr, Tr. 1346). Currently, the stream experiences very low summertime flows (Knorr, Tr. 1341; Runkle, Tr. 1501). The Q_{7-10} flow (defined at Finding of Fact 176, *infra*) at the mouth of the East Branch is .5 cfs (Kaufmann, Tr. 614).

68. At the present time, aquatic life and vegetation are restricted to standing ponds during low flow periods. As the ponds dry up, the aquatic life and vegetation are lost (Rehm, Tr. 1501-02).

69. Existing pool areas (i.e., standing water, now present in the East Branch under low or no-flow conditions) will be eliminated by the addition of the diverted flow, and existing riffle areas will be enlarged (Harmon, Tr. 4043-E).

70. The minimum flow requirements established as a condition of the DRBC permits will ensure that fish and other aquatic life are provided with a flowing stream throughout the year (Harmon, Tr. 5043-C to D).

71. Essentially the same situation exists in the North Branch Neshaminy Creek, as to which NWRA's expert witness on aquatic life drew similar conclusions (Brundage, Tr. 3863-64).

72. Del-Aware's ichthyological witness, Mr. Kaufmann, agreed that minimum flow augmentation and increased flows resulting from the diversion in

the East Branch would result in an increased aquatic habitat and an improvement to the fishery (Kaufmann, Tr. 621). His opinion as to adverse impacts of increased sedimentation was premised on the belief that substantial erosion would occur as a result of these flows (Kaufmann, Tr. 641).

73. Turbidity tends to limit the diversity of aquatic life because primary productivity by aquatic plants is reduced due to the lack of sunlight penetration into the water. This results in less photosynthesis and less life at the base of the food chain. Additionally, deposition of soil materials from turbid water into the rocky substrate of a riffle type bottom will limit the existing habitat and life forms present (Knorr, Tr. 1339-40).

74. Predicting impact upon aquatic life in the East Branch or North Branch from increased turbidity would require knowledge as to the level of turbidity, the length of time that the stream was exposed to these levels of turbidity, the type of life that initially existed in the stream and the morphological characteristics of the stream (Knorr, Tr. 1350). Stream depth and velocity through the riffle area and pools would also be factors, since turbidity will restrict aquatic life to a certain level of sunlight penetration (Knorr, Tr. 1351).

75. If the turbidity that might be caused by the project is of short duration, it will not be lethal to fish (Harmon, Tr. 4043-C, 4069-71; Rehm, Tr. 18520. If high levels of turbidity last for less than one full growing season, a new balance will quickly be established (Harmon, Tr. 4069-70; Rehm, Tr. 1852-53, 1878-79; Ford, Tr. 1963). Assuming short-term turbidity, any loss in aquatic life will not be significant and the overall quality of the East Branch aquatic life will improve with time (Harmon, Tr. 4043-C).

76. Based on his familiarity with the East Branch and similar streams, the Department's Water Pollution Biologist concluded that a rocky-bottomed stream

of riffles and pools, such as the East Branch, would be very adversely affected by soil deposition and high levels of long-lasting turbidity, and that this would severely reduce the varieties of life forms and life habitats in the substrate. (Tr. 1340).

77. For reasons described in detail below, it is anticipated that significant erosion and resulting turbidity can be eliminated if the velocity of the East Branch of Perkiomen Creek is kept below two feet per second; the same statement pertains to the North Branch of Neshaminy Creek.

E. Riparian Impacts in the East Branch Perkiomen Creek

a. Existing stream regime and increased flows

78. The East Branch Perkiomen Creek is highly eroded as a result of storm events and poor land management practices (Steacy, Tr. 3580-E; Kaufmann, Tr. 613, 671-72, 677-78). Many farms along the East Branch use poor land management techniques, such as failing to use contour plowing, planting too close to the stream bank without buffer strips, and grazing cattle near the banks. The resulting run-off creates erosion of stream banks and, ultimately, a large amount of siltation (Kaufmann, Tr. 613, 652-53, 678-80, 740-41). Run-off is also caused by the roadways criss-crossing the East Branch (Kaufmann, Tr. 741-42).

79. High stream velocity is the principle cause of channel configuration (Steacy, Tr. 3580-D, 3610; Ford, Tr. 2169; Harmon, Tr. 4033; Dresnack, Tr. 4434-35, 4449). Large floods with velocities as high as 7-10 fps have caused and will continue to cause the erosion occurring in the East Branch (Steacy, Tr. 3580-E, 3795; Board Exhibit 4 at IV-64; Kaufmann, Tr. 619). These very large flows with high velocities, rather than average flows with low velocities, create the channel configuration in a stream (Steacy, Tr. 3778-79, 3839; Dresnack, Tr. 4362; Harmon, Tr. 4017-19).

80. The dominant discharge, the 1.5 year flood (average recurrence interval of 1.5 years) which is assumed to be bank full flow, effectively determines the shape of the stream channel (Harmon, Tr. 4029-31, 4034, 4070, 4077-78; Dresnack, Tr. 4354).

81. While the additional pumpages into the East Branch Perkiomen Creek and North Branch Neshaminy Creek may be large in proportion to the median flows at the point of discharge, they are by no means large in comparison to the flows exhibited during storm events occurring annually or every few years (Dresnack, Tr. 4370); they are well within the 1.5 year flood and thus will not be expected to substantially alter the channel configuration.

82. Flows substantially below those associated with 1.5 year floods can cause substantial erosion of stream banks and bottoms and can, therefore, result in unacceptable turbidity in the stream. This erosion begins above a critical or threshold velocity which depends upon the type of soils encountered by the stream and the type and amount of materials already being transported by the water entering the stream.

83. The median flow at Elephant Road plus the maximum pumpage yields a flow of 66.4 cfs with a velocity of 3.02 fps as calculated by Mr. Steacy. A one-year flood at that site has a flow of 112 cfs with a velocity of 3.7 fps, while the mean annual flood has a flow of 320.0 cfs with a velocity of 5.1 fps (DER Exhibit 2 at p. 42; PECO Exhibit 2, Section IV at 4, Tables Nos. 2 and 3).

84. The possibility of erosive velocities downstream of an outfall would be a consideration for any project under the general criteria of Chapter 105 Subchapter A of the Department's regulations, which require the Department (when reviewing the environmental impacts of a project) to review the effects of a project on stream regime (Weston, Tr. 2494). Such consideration would mandate an effort to mitigate any erosive impact to the extent possible, in-

cluding the implementation of necessary protective measures. If mitigative measures could not reduce the impact to an insignificant level, the Department should consider whether on balance the need for the project outweighed the significantly adverse impact remaining after mitigation. The Department has yet to make such a balance since the Department feels that the erosional impacts will be insignificant. (Weston, Tr. 2495).

85. According to a bore hole analysis conducted by PECO's agent, the soils in the bank of the East Branch are classifiable as silty loam. According to PECO's application the soils to be excavated for the Bradshaw Reservoir also are classifiable as silty loam. PECO's expert witness, Robert Steacy, considered the soils of the East Branch bank and bed to be ordinary firm loam, but Mr. Steacy was not qualified in the science of soils analysis and was testifying from his visual examinations during a single field visit. Thus, his testimony in this regard must be accorded little weight.

86. Applying the Fortier and Scobey tabulations set forth in the "Handbook of Hydraulics" (E. Brater and H. King, 6th ed.) (PECO Exhibit 12), recognized as authoritative by the American Society of Civil Engineers, and assuming the soils of banks of the East Branch to be silty loam, the critical velocity is 2.0 fps for clear water (PECO Exhibit 12 at 7-24; Steacy, Tr. 3580-E, 3746; Dresnack, Tr. 4372).

87. Water containing greater amounts of colloidal matter has less effect than clear water in removing additional material. Correspondingly, turbid water is less erosive than clear water, at a given velocity. Thus, the range of permissible channel velocities for a formed and shaped channel is 2.0 - 2.25 feet per second (fps) for clear water, 2.5 fps for slightly turbid water, and 3.5 fps for highly turbid water; the lower value of 2.0 - 2.25 fps is most representative of water turbidity of the discharge into the North Branch and the East

Branch. This lower value takes into account the settling of sediments in Bradshaw Reservoir. It also takes into account the fact that Delaware River water may be substantially clearer than present sediment-carrying run-off from farmland especially in the East Branch watershed. The permissible channel velocity of 3.5 fps relied on by the Department in permitting the discharge was unreasonable (Tr. 3157-58, 3767, 3774).

88. The range of permissible channel velocities was developed for use in dimensionally regular channels, such as canals. The permissible channel velocity must be reduced further when channels are natural and flows are turbulent, as they are in the East Branch at and below the discharge point (Tr. 3053, 3770, 3231).

89. Aged canals and natural streams resist erosion better than new canals because colloidal material disperses into the interstices of the banks of a stream and gradually coats the sides of the stream bank. It provides a firm matting, or armor plating, which increases resistance to erosion (Steacy, Tr. 3610-11, 3761-63, 3774; Dresnack, Tr. 4373, 4470). A stream bank composed of a mixture of materials is more resistant to erosion than a single material (Steacy, Tr. 3611, 3744). Since the Brater and King Table is for aged canals, this effect has already been considered.

90. If erosion should occur as a result of the diversion, the Department has mandated that corrective action must be taken. Condition L in Permit 09-77 provides that PECO shall monitor the East Branch on a regular basis downstream to the point that its pumpages have no further significant effect. PECO must correct any damage caused by the diversion (PECO Exhibit 3 at 5; Ford, Tr. 1962-63, 2054, 2057; Weston, Tr. 2302-05). A similar condition is in NWRA's permit.

91. If the diversion causes bank damage downstream of the outlet, PECO can correct it by using riprap, gabion structures, i.e., wire baskets filled with rock, or flood walls (Ford, Tr. 2042, 2055). If property owners refuse to allow PECO (or NWRA) onto their land to correct the problem, the Department must either waive the particular condition for that property owner or enter and correct the condition itself under the Prevention and Control of Floods Act of 1936 (Weston, Tr. 2304). Condition L does not address ongoing damage to the aquatic community of the East Branch or North Branch which might be caused by continued erosion.

b. Avoidance of increased flooding

92. As a condition of its allocation of water for Limerick, DRBC has required that during periods of high natural flow in the East Branch Perkiomen Creek, "pumping from Point Pleasant shall be kept at a level so as not to aggravate high water levels" (PECO Exhibit 1 at 6; PECO Exhibit 11 at p. 5).

93. USGS will install and maintain a standard stream gauging station on the East Branch at Bucks Road, slightly downstream of the outfall. The installation of this gauge will ensure that PECO will have the capacity to monitor East Branch flows continuously and accurately. The same information will be transmitted to DRBC, for monitoring to ensure compliance with the DRBC docket condition requiring that pumpages shall not aggravate high water levels in the East Branch (Steacy, Tr. 3580-C, 3584).

94. The pumping station at Bradshaw will be fed flow data translated from gauge readings at Bucks Road and Graterford, the latter of which is the point in the main stem of the Perkiomen Creek where water will be withdrawn for Limerick (Boyer, Tr. 3903-04). When the flow in the East Branch approaches potential flood levels, an alarm will be automatically activated at the pumping control center, and the pumps (if operating) will be stopped (DER Exhibit 2 at 42; Ford, Tr. 2053; Boyer, Tr. 3905-06).

95. Utilizing information from the gauging station, the Bradshaw pumps (if operating) therefore shall be stopped well in advance of the point at which further pumpages might cause the flow at Elephant Road (the narrowest cross-section of the East Branch) to reach an equivalent one-year flood condition at 112 cfs (DER Exhibit 2 at p. 42; Board Exhibit 4 at IV-57 to 60; Steacy, Tr. 3580-C to D; PECO Environmental Report, Section IV, Table 3).

96. There would be no problems of limiting cooling water flow to Limerick caused by shutting off the Bradshaw pumps well before the flow at Bucks Road reaches 238 cfs. Assuming a generalized rain event, suppose the flow at Bucks Road (Station 13) is 238 cfs; then it will be 1,470 cfs at Station 1 downstream, and even significantly greater at the Graterford intake for Limerick on the main stem of the Perkiomen (Ford, Tr. 2164, 2166). Such heavy flows vastly exceed the flow at which PECO may withdraw water at Graterford per DRBC docket conditions (see Finding of Fact 24, *supra*). Under such conditions, there would be no reason for any pumping from Bradshaw to replace water drawn at Graterford (Boyer, Tr. 3904).

97. Further examination has indicated that the pump cutoff flow value at Bucks Road can be reduced to 125 cfs (i.e., less than 112 cfs upstream at Elephant Road) for two units and probably 75 cfs for one unit (Boyer, Tr. 3906). The Department has no objection if PECO sets a lower cutoff value than presently planned for the gauge at Bucks Road (Weston, Tr. 3460-61).

98. Final designation of an operating plan for the cutoff, including the actual cutoff figure, will depend upon the record accumulated from the new gauge at Bucks Road. The data from these actual measurements will provide the most meaningful basis for selecting the appropriate cutoff value (Steacy, Tr. 3842-43).

99. Limerick will operate with only one unit for two or three years at least, and thereafter unless and until the second unit is complete. Pumpages from the Bradshaw Reservoir will be only half of the maximum 65 cfs during that time. This will provide ample time to obtain accurate data from the Bucks Road gauging station, and will help season the creek to the new flow regime (Steacy, Tr. 3845).

100. Inasmuch as the Department determined that there would be no pumpages during flood flows, it did not find a need to analyze any potential for flood damages downstream through a loss of flood plain storage (Ford, Tr. 2051-52).

101. Since pumping will be unnecessary when the natural flows in the Schuylkill River and Perkiomen Creeks are adequate to provide cooling water for Limerick and to meet the minimum flow requirements imposed by DRBC, PECO will not be required to pump water from the Bradshaw Reservoir throughout the entire year. It is anticipated that pumpages from the Bradshaw Reservoir will be necessary from roughly mid-April to mid-November under average stream flow conditions, during which time the estimated average pumpage rate will be 34 cfs (DER Exhibit 2 at 42; PECO Exhibit 2 at Table No. 1 ff. 4; Runkle, Tr. 1148).

102. Pipeline drainage lag-time will not present a problem in terms of flooding. The pipeline between the Bradshaw Reservoir and East Branch goes over an uphill divide, such that in excess of half the water between the reservoir and the East Branch will remain in the pipe after the pumps are shut off (Steacy, Tr. 3844). The water on the East Branch side of the divide will run out within 10 minutes after the pumps are shut off (Steacy, Tr. 3841).

F. Water Quality Impacts in the East Branch Perkiomen Creek

103. The Department's water quality review for the Point Pleasant project was initially conducted with respect to the issuance of a water quality certifica-

tion under Section 401 of the Federal Water Pollution Control Act (Rehm, Tr. 1394-97). In the spring of 1982, the Department conducted an additional review based upon comments received in response to the public notice of an opportunity for comments with respect to the request for the Section 401 certification (Rehm, Tr. 1395). The water quality certification was issued by letter dated September 2, 1982 from the Department (Del-Aware Exhibit 39).

104. As part of its ongoing water quality review of the Point Pleasant project, the Department examined the effects of the diversion on water quality in the East Branch Perkiomen Creek using water quality analyses prepared by DRBC, EPA and NWRA's private consultant. The data it relied upon represent stations in the Delaware River near Trenton and in the Tohickon below the Nockamixon Dam. The Department also had data from various agencies for the East Branch (Rehm, Tr. 1454, 1506-08, 1525, 1615-16, 1807-08, 1810-12).

105. Within the Department, water quality analysis under the permit application was coordinated by Charles Rehm, Chief of the Planning Section of the Bureau of Water Quality Management (Tr. 1393).

106. Water quality data for Point Pleasant itself were not available. The Department therefore used water quality data from Trenton, New Jersey, and assumed that the water withdrawn at Point Pleasant was equivalent, though probably somewhat better quality than, the Trenton data indicated. Trenton data were assumed indicative of Point Pleasant water quality because Trenton is downstream; because additional effluent is added in the Point Pleasant-Trenton reach, it was assumed Trenton water quality could only be worse than Point Pleasant quality (Tr. 1536, 1596).

107. The Department had available and considered STORET water quality data for Lumberville, New Jersey, two miles downstream from Point Pleasant. It chose Trenton, New Jersey, data as "more representative" because it included a

greater number of samples, assumed to be within the range of values or "within the window that the Trenton gauging station was reporting". Lumberville data in fact shows significant variation from, and greater pollution than, Trenton data (Tr. 1608-09, 1618-19).

108. Data from sampling performed on either side of the Delaware River are indicative of the quality of water that would be withdrawn at Point Pleasant. While individual discharges may create some locally higher concentrations, these would be quickly eliminated by mixing of the waters. In addition, no substantial evidence of any single discharge causing an aberration was shown. Mr. Rehm tried to explain the high level of organics below Fieldsboro, New Jersey, as due to an industrial discharge there, but the organics were both industrial and pesticide chemicals and Mr. Rehm's suggestion, which was itself guarded, is not credible (Tr. 1586, 1614, 1616, 1738).

109. Water quality data from samples collected closer to the point of withdrawal are more indicative of the quality of water to be withdrawn. More frequent samplings at a distant point do not necessarily make those samplings more accurate or more indicative (Tr. 1608-09, 1818-19).

110. The Department determined that the discharge would have a significant impact on the water quality of the section of the East Branch above the Penn Ridge sewage treatment plant (12 kilometers), where present water quality is good and the discharge would be a substantial portion of flow. The Department determined that the discharge would not have a significant impact on the section of the creek below the sewage treatment plant. The Department therefore concluded that there would be no significant impact on the entire East Branch (Tr. 1426-27).

111. Water quality data at the outfall on the East Branch were not available. The Department therefore used water quality data at Station 160,

downstream from the Penn Ridge sewage treatment plant. The Department did not seek to obtain water quality data on the upper reaches, available from the County of Bucks (Tr. 1727). Water quality data downstream of the sewage treatment plant do not reflect water quality at points above the treatment plant, including the point of outfall. Measurements may be in error by as much as a factor of 20 (Tr. 1734).

112. The Department has developed a stateside water quality standard applicable to the East Branch, of 50 micrograms per liter of lead. The mean of 17 samples taken near Riegelsville, 18 miles upstream from Point Pleasant was 311 micrograms per liter for lead. If water discharged to the East Branch would reflect these lead values, it would violate the water quality standard six times over. Even the Trenton date showed, and the Department determined, that the mean value for lead in the Delaware River in the vicinity of Point Pleasant was 51.4 micrograms per liter. The statewide standard under Chapter 93 of the regulations is 50 micrograms per liter (Del-Aware Exhibit 46; Rehm, Tr. 1526). The value utilized for comparison, taken from sampling at Station 160 in the East Branch was 35 micrograms per liter (Del-Aware Exhibit 46; Rehm, Tr. 1530-31).

113. Reasonably expectable water quality in the water withdrawn at Point Pleasant, as determined from Lumberville STORET data, would violate water quality standards for discharges to the East Branch for at least three heavy metals and phosphorus. Copper concentrations could be near 9 micrograms per liter, or about twice the applicable standard. Iron concentrations would be near 110 micrograms per liter, or about 115% of the applicable standard. Zinc concentrations would be near 4700 micrograms per liter, in excess of three times the applicable standard. Phosphorus standards also would be exceeded. (Del-aware Exhibit 55; Tr. 1608-09, 1612). Fecal coliform bacteria have been observed in the Delaware near Point Pleasant (DER Exhibit 2, p. 52).

G. Archeological, Historical and Aesthetic Impacts at Point Pleasant

a. Archeology

114. The Department reviewed the Point Pleasant project and determined that it would not cause any adverse impacts upon the historical and archeological resources of the area (DER Exhibit 2 at 62).

115. An archeologically stratified site exists in one small section of the Point Pleasant project site, in the area between the Canal and the Delaware River (Landis, Tr. 385). This area comprises approximately a 75 foot square (Landis, Tr. 419). Otherwise, 95 percent of the total area of the Point Pleasant diversion project site is devoid of significant cultural resources (NWRA Exhibit 1 at 6).

116. Stratification is important because it enables one to determine the chronology of the area's inhabitants (Landis, Tr. 347-48). However, not all stratified sites are archeologically significant (Landis, Tr. 384).

117. No conclusions can be made as to the significance of this site until its material has been analyzed (Landis, Tr. 408).

118. The Advisory Council on Historical Preservation, the State Historic Preservation Officer, the Army Corps of Engineers and NWRA have entered into a Memorandum of Agreement for the conduct of an archeological survey of the Point Pleasant site and preservation of any significant archeological resources (NWRA Exhibit 18; Ford, Tr. 2193; DER Exhibit 2 at 62).

119. Although the Department was not a direct participant in the negotiation of this Memorandum of Agreement, the Army Corps of Engineers provided copies of materials pertinent to those discussions to the Department. In its consideration of appropriate mitigative measures to assure compatibility of the project with the area and to protect historical and archeological resources, the Department reviewed the draft Memorandum of Agreement, which it found

sufficient to preserve the integrity of any finds. The Department therefore conditioned the permit it issued to NWRA upon compliance with the Memorandum of Agreement (Weston, Tr. 3434-38; NWRA Exhibit 18; DER Exhibit 2 at 62).

120. Pursuant to the Memorandum of Agreement, a preliminary archeological investigation of the Point Pleasant project site was conducted by Gilbert Commonwealth Associates, a professional archeological consulting firm retained by NWRA (NWRA Exhibit 18 at 7; Landis, Tr. 340-41).

121. The purpose of this initial survey was to determine whether any archeologically significant area existed on the Point Pleasant project site and, it so, whether it should be excavated for complete data recovery or preserved in place (NWRA Exhibit 18 at 5-6; Landis, Tr. 415-16).

122. Del-Aware's archeological witness worked four days in November 1982 as a field worker for Gilbert Commonwealth Associates, the archeological consulting firm retained by NWRA for investigation of the Point Pleasant site (Landis, Tr. 341-43). He expressed his opinion that the Gilbert Commonwealth investigation was adequate for that purpose (Landis, Tr. 416).

123. The Memorandum of Agreement also provides that, once construction begins, an archeologist competent in the methods and procedures of prehistoric archeology will be stationed onsite to monitor the excavations and any archeological remains which might be encountered during the course of construction (NWRA Exhibit 20 at 15; Landis, Tr. 400, 415, 430). Del-Aware's archeological witness agreed that these measures will properly preserve the historic record (Landis, Tr. 400-01).

124. In a procedure approved by the Pennsylvania State Historical Preservation Officer, the archeologically sensitive area itself will not be excavated at this time but will be preserved in place (NWRA Exhibit 18 at 6; Landis, Tr. 402, 415). An access road will pass adjacent to the archeologically

sensitive site, but no structure will be placed there. Measures have been taken to chain off the site and prevent vehicular access (Landis, Tr. 401-03). A plastic cover will be placed over the area and covered with earth (Landis, Tr. 415, 432).

125. The measures approved by the Pennsylvania Historical Museum Commission will exclude large machinery from the archeologically sensitive area (NWRA Exhibit 18 at 6; Landis, Tr. 424).

126. Considering the difficulties in obtaining adequate resources to investigate the area, and recognizing the possibility of intrusion by the activities of man, Del-Aware's archeological witness acknowledged that the investigation of the Point Pleasant area, undertaken as a direct result of the Point Pleasant project, is a very worthy accomplishment (Landis, Tr. 425-27). By contrast, the activities of man have substantially destroyed the integrity of other portions of the stratified area in the vicinity of the construction site. Even portions of the potentially stratified area have been previously disturbed (NWRA Exhibit 1 at 4; Landis, Tr. 421).

127. If the Point Pleasant project were not going to be constructed, there would be no controls in place to protect archeologically sensitive areas, which would otherwise be as subject to disturbances and destruction as the adjacent private property has been (Landis, Tr. 428).

b. Aesthetics

128. A full set of drawings and artistic renderings showing landscaping plans for the Point Pleasant pumping station were submitted by NWRA; these documents were reviewed by various DER personnel during DER's evaluation of the aesthetic impacts of the project (Ford, Tr. 2135-38). These officials agreed that construction of the project will not harm the Delaware division of the Pennsylvania Canal aesthetically and that the project is compatible with the park

and its functions (Weston, Tr. 2405-14). In so agreeing, DER officials again relied (in part) on the above Memorandum of Agreement, which included requirements intended to minimize the aesthetic impact of the pumping station on Point Pleasant (See Finding of Fact 136, *infra*).

129. The Historic and Museum Commission and the Corps of Engineers also reviewed the proposed pumphouse, and found that it would have no adverse effect on the Point Pleasant historic district. In reaching this decision, the Corps of Engineers concluded that the pumphouse will be small, quiet, inconspicuous, built of appropriate materials, and carefully landscaped so as to blend in with its surroundings (NWRA Exhibit 44; Tr. 2077; NWRA Exhibit 23.) On this basis, the Department concluded that the project would have at most a very slight aesthetic impact on the surrounding area (DER Exhibit 2 at 45).

130. The NRC has required that any noise problems caused by the pumphouse must be mitigated (Weston, Tr. 2420; NRC PID at 101).

c. Historical and physical

131. Not only will the construction of the Point Pleasant intake cause no harm to the Canal (Oberdorfer, Tr. 1662; Nuss, Tr. 2020), but construction procedures and future maintenance requirements will ensure that it will be left in better shape after construction is completed than it is at this time (Weston, Tr. 2405; NWRA Exhibit 12 at 2; see Del-Aware Exhibits 59 and 60). The easement granted NWRA simply involves minor patch-up work (Oberdorfer, Tr. 1670).

132. Breaches in the Delaware Canal have occurred dozens and maybe hundreds of times, both man-made and naturally as the result of floods (Oberdorfer, Tr. 1670). Through the 60-mile length of the Canal there are at least 127 water, sewer and other utility crossings, along with 135 public and private bridges and culverts providing access and transport (NWRA Exhibit 12 at 2).

133. Prior to the issuance of a construction permit to the NWRA, the U.S. Army Corps of Engineers consulted with the Advisory Council on Historic Preservation and the State Historic Preservation Officer, pursuant to the National Historic Preservation Act of 1966, 16 U.S.C. §§470(f) and 470h-2(f), to insure the protection of the historic and archeological resources at Point Pleasant, Bucks County. This consultation resulted in the signing of a "Memorandum of Agreement" outlining the measures to be taken by the NWRA to protect and preserve these resources (NWRA Exhibit 18).

134. The "Memorandum of Agreement" outlines the measures to be taken to protect the Delaware Canal during construction of the Point Pleasant project: Any required blasting is to be controlled through procedures established by the DER; during excavation, a qualified professional archeologist must record cross sections and other information through appropriate photographs and drawings; following construction, the Canal and Canal towpath must be restored to their original appearance in consultation with the State Historic Preservation Officer; following construction, the Canal and Canal towpath banks must be reshaped, graded, seeded and landscaped to their preconstruction contour including the placement of an impervious clay liner; and, during construction, machinery disturbances in the vicinity of the canal must be kept to a minimum (NWRA Exhibit 18, pp. 3-4).

135. Based upon the requirements imposed by the Memorandum of Agreement, the Department, after its own independent review, concluded that the construction of the Point Pleasant Pumping Station would have no adverse permanent impact on the Delaware Canal (Nuss, Tr. 2020; Del-Aware Exhibits 59 and 60; NWRA Exhibit 12).

136. To protect the Point Pleasant Historic District, the Memorandum of Agreement required design plans and specifications for the Point Pleasant

Pumping Station and boundary fencing to be developed in consultation with the State Historic Preservation Officer, and to be approved prior to construction. Additionally, a landscaping plan, consistent with the existing natural setting of the area, has to be developed to minimize the visual impact of the pumping station and boundary fence (NWRA Exhibit 18, pp. 4-5).

137. The Department also conditioned permit approval on NWRA landscaping the Point Pleasant site with flora indigenous to the area (NWRA Exhibit 11, Special Condition K).

H. Wetlands

138. Only a small area of wetlands contiguous to the Delaware River, approximately 0.308 acres, will be affected by the Point Pleasant project. This area is about one-third of the 0.93 acres of wetlands on the site. These wetlands are typical of many flooded plain forests in southeastern Pennsylvania (DER Exhibit 2 at 66).

139. Based upon the abundance of wetlands with similar characteristics in southeastern Pennsylvania, the Department determined that the small wetland area involved at Point Pleasant was not an "important wetland" within the meaning of Section 105.17 of its regulations. Nonetheless, efforts have been undertaken to minimize and mitigate unavoidable impacts by the project, so that only 0.22 acres of wetlands will be permanently destroyed by the placement of fill. The remaining 0.08 acres of affected wetlands will be restored to original grade and pre-construction conditions (DER Exhibit 2 at 66-67).

140. Mr. Hershey, as witness for Friends of Branch Creek ("FBC") and Del-Aware, identified at least 75 acres of wetlands on the East Branch in or along the affected portion of the stream, using guidelines for identification prepared by the Bucks County Planning Commission, as well as other sources (Tr. 2895-2897).

141. The Bucks County Planning Commission has independently identified wetland areas on the East Branch, which are indicated as existing extensively along the affected portion of the stream. (FBC Exhibit 25, with supplements required by the Examiner at Tr. 4182). However, since the appellants did not carry their burden of proving that the discharge would cause the East Branch to overtop its banks or otherwise inundate any wetlands, there has been no demonstrated effect on wetlands.

I. Alternatives

a. Scope

142. Alternatives to the Point Pleasant project considered by the Department included those previously studied by DRBC and the Army Corps of Engineers in the issuance of their respective permits for the project. Other alternatives, suggested by representatives of Del-Aware and the Applicants, were also studied (Weston, Tr. 2452).

143. Friends of Branch Creek took the position that pumping the water for Limerick further downstream, to a discharge point at Sellersville, would be an alternative to the proposed transport system involving discharge near Elephant Road (Neill, Tr. 6). The Department apparently did not consider this alternative but there is no evidence that this alternative was presented to the Department prior to the hearing.

144. The Department considered a great many alternatives to the Point Pleasant project, but did not specifically describe their various combinations and permutations in the Environmental Assessment. Rather, the Environmental Assessment was designed primarily to represent the Department's understanding of the basic options available (Weston, Tr. 2451, 2472, 2479, 3524-25). Del-Aware did not suggest to the Department at the April 14, 1982 meeting or any other time any particular combination of alternatives it wished to have considered (Weston, Tr. 2452-53).

145. The Department decided to devote a specific section in the Environmental Assessment to the discussion of alternatives, after Del-Aware broached the topic in the April 14, 1982 meeting (Ford, Tr. 1924).

146. The Department previously had performed a very detailed review of alternatives for public water supply systems and consumptive use makeup by other water users, as a part of the State Water Plan; this information was included in the Department's consideration (PECO Exhibit 6 at 3; Weston, Tr. 3457-58). Some of this information was updated for the specific purpose of compiling the Environmental Assessment (Weston, Tr. 3641). The State Water Plan utilized a matrix approach for evaluating alternatives for public water supply systems and industrial consumptive uses (Weston, Tr. 3468-69).

147. In addition to reviewing the alternatives outlined in its Environmental Assessment, the Department also examined the alternatives discussed in the DRBC Level B Study (NWRA Exhibit 25) and in the Merrill Creek Draft Environmental Impact Statement. The latter was a report prepared by the Delaware River Basin Electrical Utilities Group, which examined alternative reservoir sites for makeup water for various power plants, including Limerick (Weston, Tr. 3457).

148. The DRBC Level B Study is regarded by the Department as an official recordation of the DRBC's rules and policy regarding Basin management, which have the force and effect of a regulation so far as water management by the Department is concerned. DRBC approval of the project under application is a prerequisite to issuance of a permit by the Department (Weston, Tr. 3440-42).

149. After examining all the options from the viewpoint of minimizing environmental impacts and maximizing cost effectiveness considerations under the State Water Plan, the Department determined that (from a long-term planning

standpoint) a combined system which integrated existing retail public water supply systems with a wholesale public water supply system, and also solved a major industrial user's (PECO's) water management requirements, made the most sense (Weston, Tr. 3440, 3494-95).

150. In reviewing the PECO permits under the Dam Safety and Encroachments Act, the Department considered compliance not only with its own regulations under Chapter 105, but also with all other laws and regulations administered by the Department and by the Delaware River Basin Commission (Weston, Tr. 3440-42).

151. Any one of the permits would have been denied if the Department's review of the application showed a violation of Chapter 105 of its regulations (Weston, Tr. 2489-90).

152. After reviewing all the alternatives, the Department found the Point Pleasant project to be the most reasonable regional solution to meet the needs of Bucks County, Montgomery County and Philadelphia Electric Company (Weston, Tr. 2604).

b. Groundwater

153. Conjunctive management is a term of art used by water resource managers to mean the systematic joint development and use of ground and surface waters. Conjunctive management has been the thrust of the policy underlying the State Water plan and the actions of the DRBC in past years. The Point Pleasant project is one of the prototypical conjunctive water management projects, because it represents a ground <u>and</u> surface water supply system for the region it serves (Weston, Tr. 2608).

154. Both the Environmental Assessment and the State Water Plan assume that groundwater in Bucks and Montgomery Counties will continue to be used, and further assume that in the more developed areas whose public water supply systems

now rely on groundwater, conjunctive water use management will be utilized to obtain additional water from surface supplies (Weston, Tr. 2453-54).

155. For the service area of the NWRA project, the combination of water supply alternatives contemplated by the Environmental Assessment and authorized by the permits on appeal is consistent with a continuing use of groundwater (which most of the retail systems in that area currently rely on almost exclusively) as part of a conjunctive management plan. Under this plan, groundwater will be utilized with supplemental water from surface sources, including numerous interconnections with other retail systems such as the Philadelphia Suburban Water Company and the City of Philadelphia (Weston, Tr. 2600-01; see NWRA Exhibit 5 at 8, 11, 33-34).

156. Further development of groundwater as the exclusive source of public water is not viable. This source is already highly stressed and, as a result, all of Montgomery County and part of Bucks County is regulated by DRBC as a groundwater protected area (DER Exhibit 2 at 25; NWRA Exhibit 5 at 4; Runkle, Tr. 1184-85; see also 29 C.F.R. §430). For example, many of the water supply systems in Central Bucks and Montgomery Counties relying on groundwater have experienced difficulty in providing adequate water supplies to their customers in recent years, even those years that were not unusually dry. Moreover, this area is rapidly urbanizing and can expect growing water shortage problems (NWRA Exhibit 5 at 8, 15).

157. The Neshaminy Water Supply System area is located predominantly within the groundwater protected area designated by DRBC as a critical water supply area (Runkle, Tr. 1184-85).

158. In assessing the groundwater alternative, the Department examined the normal recharge rates of the formations underlying central Bucks and Montgomery Counties, on the assumption that withdrawals could be allowed up to the

annual recharge during a normal year (no discount for drought years was included). It then determined how large an area would be required for groundwater withdrawals to serve the needs identified for the water supply portion of the Point Pleasant project; the Department did not look at the future needs of existing users in the area. The Department assumed that the area wherein new wells would be developed would be restricted to its current level of groundwater withdrawal or perhaps less (Weston, Tr. 2530-31, 3444-46, 3663-64).

159. The Department also took into account DRBC's policy of avoiding overdevelopment of stressed groundwater areas in which a regional water supply system is available. This policy applies whether or not a particular well is withdrawing or would withdraw in excess of the recharge rate. The purpose of this policy is to ensure that groundwater exists not only to support the public water supply, but also to support streams and other users in the area (Weston, Tr. 3500-01).

160. Even if withdrawal of groundwater does not exceed its replacement in an average recharge year or one in ten-year recharge period, cones of depression--which are a particularly difficult problem in Triassic formations--will result. There is a likelihood that nearby domestic wells or wells located along the same fracture traces will experience drawdown problems (Weston, Tr. 3465-66).

161. Based on recharge rates, a groundwater system would have to be spread over a very large region, rendering it impractical. An added disadvantage is that a widespread system of wells would encourage further checkerboard development. (DER Exhibit 2 at 69-71; Weston, Tr. 2422-24, 2463-64, 2535-36, Runkle, Tr. 1078-80).

c. Conservation

162. Water conservation is not a viable long range alternative to the project because even during severe drought conditions, when people are most sensi-

tive to shortages and the need to conserve, a savings of only 10-15% in average total public water supply use has been achieved. Also, this rate of savings has proved not to be sustainable over a long (e.g., five-year) period. Conservation therefore will not solve the long-range Bucks-Montgomery water supply problem (DER Exhibit 2 at 68; Ford, Tr. 2205, 2265-67).

d. Lake Nockamixon

163. Lake Nockamixon was considered as an additional water supply source for Limerick (Duncan, Tr. 770). However, Lake Nockamixon was constructed for--and is dedicated to--recreational uses up to the year 2000, and may not be used for other purposes until that time (Runkle, Tr. 1010, 1022; DER Exhibit 2 at 72-73).

164. In any event, the facility would have to be redesigned and modified before it could be used for water supply purposes. Special legislative authority would be needed before water from Lake Nockamixon could be sold (DER Exhibit 2 at 73-74). Moreover, the use of Lake Nockamixon for water supply purposes would render it unavailable for emergency use in controlling the salinity front during droughts (NWRA Exhibit 7).

e. Schuylkill River

165. The question of alternative sources of cooling water for Limerick has been extensively considered by other regulatory agencies (Boyer, Tr. 3899-E). During the planning stage of this project, PECO discussed with DRBC and the Department the possible use of water from existing or proposed reservoirs on the Schuylkill and Delaware Rivers (Boyer, Tr. 3907-08). DRBC considered the use of the Schuylkill River for Limerick in its 1973 Environmental Impact Statement and 1980 Environmental Assessment, but concluded that the Schuylkill could not absorb the year-round consumptive withdrawals Limerick will require (Boyer, Tr. 3899-E; Board Exhibit 4, Part III at 2-29). In fact, the DRBC

docket expressly provides that withdrawals from the Schuylkill River itself are not permitted when the flow at Pottstown is less than 530 cfs for one unit at Limerick and 560 cfs for two units, not counting augmentation from storage developed and sponsored by the DRBC (PECO Exhibit 1 at 5; Weston, Tr. 2509).

166. A PECO request for use of an existing reservoir on the Schuylkill River (or of the Schuylkill itself) as PECO's source of cooling water for Limerick would require further regulatory approval by DRBC. In light of DRBC's extensive consideration of alternatives in its 1973 EIS and 1980 Final Environmental Assessment, and its decision declining to reconsider its previous docket orders, it is unlikely that DRBC would approve any additional use of Schuylkill water for Limerick (Boyer, Tr. 3899-D).

167. Assuming arguendo DRBC would be willing to reconsider the Schuylkill alternatives it previously rejected as infeasible, the review process would be time consuming and potentially fraught with new objectives and objectors (Boyer, Tr. 3899-D). Even if DRBC approved a Schuylkill River alternative, PECO would still have to go back to the NRC for modification of its present construction permit and, when issued, its operating license (Boyer, Tr. 3899-D).

168. The Department likewise reviewed various alternatives in the Schuylkill River Basin for one unit, and found that no existing reservoir in that basin has sufficient storage available for use as a water source for Limerick (Weston, Tr. 2367; Runkle, Tr. 858; PECO Exhibit 2, Section III at 3).

f. Blue Marsh

169. Among the several Schuylkill River alternatives examined by the Department was the Blue Marsh Reservoir, which is owned and operated by the Corps of Engineers under the guidance of the DRBC. The Department does not have regulatory jurisdiction over Blue Marsh. Its entire operation and release schedules are under the jurisdiction of DRBC. Actual operation of the facility by the

Corps of Engineers is coordinated by the DRBC. DRBC is regularly advised as to any changes in releases, which require its concurrence (Weston, Tr. 2282, 2285, 2527-28; Erickson, Tr. 1541; Runkle, Tr. 858, 1128-30). Of the storage in the reservoir, 14,620 acre-feet has been contracted to DRBC and is within its control. This is the total amount of water up to elevation 285 (Erickson, Tr. 1543, 1568, 1571). The Department would oppose the allocation of Blue Marsh water for Limerick (Weston, Tr. 3463).

170. The Blue Marsh Reservoir is authorized by federal legislation for flood control, recreation, water supply and water quality augmentation (Runkle, Tr. 1130). In furtherance of these purposes, Congress allocated 8,000 acre feet in Blue Marsh for water supply storage and 6,620 acre feet of storage for water quality augmentation (Runkle, Tr. 875, 1112-13; Weston, Tr. 2518-19). An additional 4,400 acre-feet are allocated for recreation storage (Erickson, Tr. 1543).

171. To satisfy its water supply and water quality augmentation purposes, the pool at Blue Marsh must be maintained at an elevation of 285 feet throughout the year (permanent pool). During the summer, the pool must be maintained at an elevation of 290 feet for recreational purposes, and at an initial elevation of 285 feet in the winter and spring for flood control (Erickson, Tr. 1571-72). The permanent pool is used continuously for recreation, even though it is earmarked for other purposes as well (Runkle, Tr. 1131-32).

172. Any change in the allocation of storage at Blue Marsh would require an Act of Congress, which initially authorized the allocations with reference to the report prepared by the U.S. Army Corps of Engineers (Runkle, Tr. 1092, 1131; Weston, Tr. 2519).

173. Western Berks Township has a 50-year allocation to withdraw water from the 8,000 acre feet in Blue Marsh authorized for water supply (Runkle, Tr. 1131). The required release for Western Berks Water Authority to the year 1989,

which must be made at all times, is 9 cfs (Runkle, Tr. 922). From 1990 through 1999 this release increases to 13 cfs, and from 2000 through 2009 to 18 cfs. After 2010, it is set at 27 cfs (Erickson, Tr. 1572-73). When the Western Berks allocation reaches 14 cfs, it will require about 40 percent of the 8,000 acre feet of water supply storage contained in Blue Marsh (Runkle, Tr. 1146).

174. Western Berks has top priority on the Blue Marsh Reservoir water supply storage because of its location in the Tulpehocken watershed, which feeds Blue Marsh (Runkle, Tr. 1141, 1146).

175. Water allocated to Western Berks has not been reallocated for other downstream uses, on the theory that nonconsumptive uses will return the water to the Schuylkill River. The Department has never allocated the same block of storage for two separate purposes, nor even considered return flows as an available block of storage (Runkle, Tr. 1267). The Department does not keep records, nor is there any way it could keep track of, the return flows of Western Berks (Runkle, Tr. 1272-73).

176. In addition to the Western Berks release, another 40 cfs must be continually released from the Blue Marsh Reservoir as a minimum conservation release for downstream aquatic life in the Tulpehocken Creek (Runkle, Tr. 922-23, 1160; Erickson, Tr. 1557-58). This release must pass through the dam at all times, even during low flow conditions, but it has previously been lowered during periods of drought emergency (Runkle, Tr. 1101; Erickson, 1545). The 40 cfs continuous minimum downstream release was developed by the Corps in coordination with the Commonwealth of Pennsylvania, based on the Q_{7-10} flow of Tulpehocken Creek as reflected in the State Water Plan (Erickson, Tr. 1552-55). A Q_{7-10} flow is a low daily flow computed from a seven consecutive day flow which is so far below average that its expected recurrence interval is ten years (Erickson, Tr. 1554-55). Section 105.113(b)(1) of the Department's regulations states a

formula specifying the amount of water (in cfs per square mile of the drainage area of a dam structure) which must be released as a minimum conservation measure to protect aquatic life downstream (Runkle, Tr. 1102-03, 1105-06, 1111-13).

177. While the Department is consulted by DRBC with respect to changes in the conservation release, the Department does not have authority to approve or disapprove the change (Weston, Tr. 2527-28).

178. In addition to the Western Berks usage, the water supply storage in Blue Marsh has been utilized for emergency drawoffs during drought, e.g., in the 1980-81 drought, to control salinity in the Delaware Estuary (Runkle, Tr. 1132).

179. In 1977, Blue Marsh was considered as a source of supply for two units at Limerick, as part of the State Water Plan (Runkle, Tr. 861, 1133, 1137). The Department also evaluated the possibility of using the Blue Marsh Reservoir to provide the makeup cooling water for one unit at Limerick in response to the general suggestions expressed by Del-Aware (PECO Exhibit 6 at 12; Runkle, Tr. 861-62, 1130-31, 1221; Weston, Tr. 2367).

180. The State Water Plan staff found that it would take five times the amount of water supply storage in Blue Marsh to sustain the 530 cfs flow in the Schuylkill River one unit at Limerick would have to withdraw from the river during the second and eighth worst years of record (Runkle, Tr. 914-15, 1120). This calculation did not include flows into the Blue Marsh Reservoir because evaporation, minimum downstream releases and the Western Berks Water Authority allocation would use up the total inflow coming into the Reservoir (Runkle, Tr. 915). Additionally, this determination was based on a 27 cfs average use figure for one unit and did not make allowances for peak use (Runkle, Tr. 938).

181. The Department determined that flows from the Schuylkill and natural flows of the Perkiomen Creek would provide sufficient water for Limerick

only 60 percent of the time, and that the remaining 40 percent, i.e., for 146 days, per year, would be supplied from the Point Pleasant diversion (DER Exhibit 2 at 28; Runkle, Tr. 1152-57).

182. One cfs-day is equal to 2 acre-feet (Runkle, Tr. 1151). Therefore, utilizing the flow value for one unit at Limerick of 32 cfs times 146 days yields 4,672 cfs-days, or 9,344 acre-feet of water storage necessary to meet the demands for even a single unit at Limerick (Runkle, Tr. 1153). The figure would be double for two units (Runkle, Tr. 1154).

183. If one ignores the minimum flow requirements (of 530 cfs and 560 cfs) imposed by the DRBC for withdrawals for Limerick on the Schuylkill, flows available from the storage capacity at Blue Marsh would not, during the second worst drought year of record, provide sufficient yield to meet the demands for one unit at Limerick at less than peak demand. The 4,000 cfs available from the 8,000 acre-feet water supply storage component of Blue Marsh would just barely be enough to meet the average use at Limerick during such a drought period (Runkle, Tr. 964). Blue Marsh would have capacity for one unit at Limerick even during drought periods if a portion of the block of storage of 6,620 acre-feet which has been dedicated for low flow water quality were used.

184. Although the definition of an interbasin or interwatershed transfer varies, the transfer of water at Point Pleasant from the Delaware River to the Neshaminy and Perkiomen Creeks (both tributary to the Delaware) does not constitute an interbasin transfer for purposes of the proposed Water Resources Management Code or water management in the Commonwealth (Weston, Tr. 3648-49); transfer from the Delaware to the Schuylkill is an interbasin transfer which, pursuant to DER policy, requires that the Schuylkill's resources have been thoroughly utilized.

185. Since the Schuylkill sub-basin is very heavily allocated, all plans for future water uses in the area rely solely upon Blue Marsh inasmuch as there are no other storage projects being planned by DRBC on the Schuylkill at this time (Weston, Tr. 2661-62). Thus, the only supply available in the future for public water suppliers and private users in that sub-basin is the remainder of the Blue Marsh water supply storage (60 percent) left after the Western Berks allocation (Runkle, Tr. 1170; Weston, Tr. 2660-61).

186. Dedication of Blue Marsh to Limerick means, as a practical matter, that all other area users would be restricted to their current allocations with no capacity for expansion (Weston, Tr. 2661; Runkle, Tr. 1224). This would conflict with anticipated needs of public water suppliers for Philadelphia, Pottstown, Phoenixville and Norristown for additional withdrawals from the Schuylkill River (Runkle, Tr. 1169).

187. Aside from future allocations, allowing withdrawals from Blue Marsh for even one unit at Limerick would have an impact upon downstream Schuylkill River users. The distance between Blue Marsh and Limerick is one of the most heavily used stretches of the most heavily used rivers in the Commonwealth. There are a number of industrial and municipal intakes between Philadelphia and Limerick. These users would be deprived of any consumptive water use allowed for Limerick from Blue Marsh. For example, 21 mgd for one unit at Limerick is roughly equivalent to 13 percent of the Q_{7-10} flow of the Schuylkill at the Pottstown gauge; the Q_{7-10} flow is the flow standard customarily used during investigations concerning water quality at low flow. Accordingly, diminishing the flow of the Schuylkill by 21 mgd below Limerick would subtract a substantial amount of the low flow, would impact users along the River, and would also affect instream uses of the River, including wasteload assimilation (PECO Exhibit 6 at 16-18; Weston, Tr. 2669-70).

188. The Department therefore again concluded--in the context of these appeals--that Blue Marsh is not a viable alternative to the Point Pleasant pumping project for even one unit at Limerick, because of anticipated needs for population growth and industrial expansion within the Delaware River Basin (PECO Exhibit 6 at 16-18; Runkle, Tr. 1162).

189. Even if there were sufficient water in Blue Marsh for one unit at Limerick, DRBC would have to approve PECO's use of that water (Boyer, Tr. 3910-11). The Department does not have jurisdiction over non-potable supplies of water allocation, just public water supplies. Any industrial water allocation would therefore have to come from DRBC (Runkle, Tr. 976).

190. Allowing PECO to utilize water from Blue Marsh, to provide makeup cooling water for one unit at Limerick and to provide compensatory releases at low flow periods from Merrill Creek into the Delaware River, would not satisfy the conditions of PECO's docket at the DRBC (regarding Schuylkill flows) (Weston, Tr. 2372-74). PECO's allocation from DRBC is conditioned such that it may not withdraw from the Schuylkill River when the flow at Pottstown, not including flow from any DRBC sponsored storage, falls below 530 cfs (Weston, Tr. 2374).

191. Interpreting the DRBC docket decisions relevant to withdrawal of Schuylkill River water by PECO for Limerick, the Associate Deputy Secretary for Resources Management, who is also the Alternative Delegate for the Commonwealth of Pennsylvania to DRBC, concluded that DRBC probably would not allow Blue Marsh to be used for Limerick under those decisions (PECO Exhibit 6 at 18; Weston, Tr. 2380). Significantly, the Alternative Delegate stated that the Department and the Pennsylvania DRBC Commissioner would not support a commitment to a single user of a reservoir meant for an entire basin with 1.5 million people (Weston, Tr. 3463).

g. Philadelphia Suburban

192. The availability of water from Philadelphia Suburban Water Company for Limerick was investigated in the State Water Plan (Runkle, Tr. 1141). Philadelphia Suburban Water Company reservoirs have a combined 96.5 mgd yield. They are currently supplying 77.5 mgd and have a 17 mgd surplus (Runkle, Tr. 981-83). The frequency on which this yield figure is based is unknown. Therefore, Philadelphia Suburban may not actually have a surplus during droughts (Runkle, Tr. 984).

193. It is projected that Philadelphia Surburban will require 107.7 mgd by 1990 and 148.1 mgd by 2020 (Runkle, Tr. 1142). Even with the utilization of the Green Lane Reservoir, its four other reservoirs and its existing wells, Philadelphia Suburban faces a yield deficiency of 13.5 mgd in 1990 and 54 mgd in 2020. Thus it is not a long-term source of water for Limerick (Runkle, Tr. 1142-43, 1166-67).

h. City of Philadelphia

194. The Department also considered reducing the City of Philadelphia's allocation and having PECO take this water out at Pottstown, but rejected this alternative because of the nature of the use. One unit at Limerick requires a consumptive water use in excess of 21 mgd. The City of Philadelphia's use of its water is primarily nonconsumptive. Only ten percent is consumed; the remainder is return flow. Also, the stretch of the Schuylkill between Pottstown and Philadelphia contains a number of industrial and municipal intakes, and is one of the most heavily used reaches in the Commonwealth. Those users would be deprived of water consumed at Limerick. The loss of this water would have a substantial impact on aquatic life, recreation, users along the river and the instream uses of the river, including waste load assimilation (PECO Exhibit 6 at 6-12; Weston, Tr. 2669-70).

i. Pipeline from Philadelphia

195. The Department also considered diverting the Delaware River water at Philadelphia rather than at Point Pleasant as an alternative to the project. This alternative would only provide cooling water for Limerick. It determined that a 30-mile pipeline with pumpage over an elevation differential of 450 feet would be necessary. Installation of this pipeline, three times the combined length of the Point Pleasant combined transmission main and Perkiomen transmission main, would entail intensive construction activities through heavily populated areas at a cost exceeding 52 million dollars. It was also determined that maintenance and repair would be more difficult, and that operational costs for transmitting the water over a greater distance would necessarily be substantially higher. It was also determined that this alternative would not be environmentally preferable, particularly as regards Delaware River flow and salinity intrusion (DER Exhibit 2 at 79-80).

196. Detailed discussion of the alternatives discussed for the NWRA portion of the project is set forth in the Discussion, *infra*, and incorporated herein by reference. In sum, none of the proposed alternatives were demonstrated by the appellants to be feasible, let alone superior to the Point Pleasant project.

J. Permitting Process

197. Peter Duncan was the Secretary of the Department in 1981-82. In that capacity, he was ultimately responsible for the determination that an Environmental Assessment should be prepared for the Point Pleasant project (Duncan, Tr. 748-49). On the basis of his belief that a single focus was needed to pull all the necessary information together, Duncan assigned Timothy Weston to oversee the actual preparation of the Assessment (PECO Exhibit 6 at 2; Duncan, Tr. 751-52). Duncan assigned Weston lead responsibility for the Environmental Assessment in view of his managerial experience and background in the Department, particularly in the Division of Water Quality Management (Duncan, Tr. 751-52).

198. Duncan instructed William Middendorf, Deputy Secretary of Environmental Protection, to provide Weston with the necessary water quality information (Duncan, Tr. 752). In return, Middendorf delegated responsibility for coordination with Weston to Leon Gonshor, Director of the Southeastern Regional Environmental Protection Office, and Louis Bercheni, Director of the Bureau of Water Quality Management (Middendorf, Tr. 794).

199. Jack Ford, Chief, Eastern Section, Division of Waterways and Stormwater Management, was in charge of compiling the material for the Environmental Assessment (Rehm, Tr. 1675). As such, he drafted many of the initial sections and prepared the final sections dealing with water conservation and wetlands (Ford, Tr. 2140, 2202; Weston, Tr. 2430). Other sections were supplied by Steve Runkle, a hydraulic engineering supervisor with the State Water Plan, and John McSparran, Director of the Water Resources Management Bureau (Runkle, Tr. 822-25; Ford, Tr. 1981-84; Weston Tr. 2430).

200. In preparing the Environmental Assessment, the Department cross-checked the information supplied with the applications against information already in the Department (Ford, Tr. 1929, 2106-08).

201. As permit coordinator, Weston's duties were to coordinate the activities of an interdisciplinary staff involving professionals from a number of DER bureaus and offices (PECO Exhibit 6 at 2).

202. In conducting its review of the Point Pleasant project, the Department examined and (to some extent) relied upon numerous reviews, studies and analyses performed by DRBC, the Corps of Engineers and the Soil Conservation Service of the U.S. Department of Agriculture. In addition to the several environmental assessments and environmental impact statements prepared by these agencies, the Department also reviewed and relied upon voluminous documents, studies, reports and comments furnished by PECO and NWRA, as well as by other individuals

and organizations commenting on the project (DER Exhibit 2 at 14-23; Ford, Tr. 2195; Weston, Tr. 2327).

203. With regard to the instant appeal, the Department reviewed a number of reports and other forms of correspondence furnished by appellants and other opponents to the project (DER Exhibit 2 at A-13 to A-15; Stipulation, Tr. 213; see Del-Aware Exhibits 4-17).

204. The Department was also guided by the decision of the United States District Court for the Eastern District of Pennsylvania, affirming DRBC's previous approvals of the project in *Delaware Water Emergency Group v. Hansler*, 536 F. Supp. 26 (E.D. Pa. 1981), aff'd, 681 F.2d 805 (3d Cir. 1982) (DER Exhibit 2 at 21-22).

205. The Department reviewed DRBC's addition of the Limerick component of the Point Pleasant project to the Comprehensive Plan, as set forth in DRBC Docket Nos. D-69-210 CP (March 29, 1973) (PECO Exhibit 1), D-69-210 CP (Final) (November 5, 1975) and in DRBC Docket No. D-79-52 CP (February 18, 1981) (PECO Exhibit 11). In this regard, the Department studied DRBC's Final Environmental Impact Statement on the Point Pleasant Diversion Plan (1973) and its Final Environmental Assessment for the Neshaminy Water Supply System (August 1980), which accompanied these approvals (DER Exhibit 2 at 17, 21, 28).

206. The Department also reviewed the record before the AEC (which resulted in the issuance of the Final Environmental Statement (November 1973) related to Limerick), as well as the hearing record before the Atomic Safety and Licensing Board and the Appeal Board of the AEC on the issuance of construction permits for Limerick in *Philadelphia Electric Company* (Limerick Generating Station, Units 1 and 2), LBP-74-44, 7 AEC 1098 (1974), aff'd ALAB-262, 1 NRC 163 (1975), aff'd sub nom. *Environmental Coalition of Nuclear Power, et al. v. Nuclear Regulatory Commission, et al.*, No. 75-1421 (November 12, 1975) (DER Exhibit 2 at 18, 19, 28).

207. The Environmental Assessment was the primary decision document for all the permits on appeal issued by the Department. The entire impact of the project was considered in connection with the issuance of each permit (Weston, Tr. 2298, 2484, 2489).

208. The Environmental Assessment prepared for the Point Pleasant project is the first Assessment completed for the issuance of dam and encroachment permits under Chapter 105 of the Department's regulations (Ford, Tr. 2200-01). Prior to the fall of 1982, environmental assessments were done on short form letters with information supplied by the various Commonwealth agencies and departments (Ford, Tr. 2202).

209. On April 14, 1982, Department officials met with Del-Aware representatives and technical assistants for an entire day. The purpose of the meeting was not to solicit the views of state agencies, whose opinions had otherwise been sought through routine channels, but rather to ensure that the draft Environmental Assessment would fully address Del-Aware's concerns (Ford, Tr. 1924; Sigstedt, Tr. 216-17, 230-31; Weston, Tr. 2339, 2342-43).

210. At the April 14, 1982 meeting, Del-Aware submitted a compilation of written objections to the Point Pleasant project as well as 13 documents setting out its position on the issues (Del-Aware Exhibit 18; Sigstedt, Tr. 215; Stipulation, Tr. 212-13).

211. Various Department officials attended the April 14, 1982 meeting and noted the issues within their cognizance as discussed by Del-Aware's members. Their responses to Del-Aware's comments were then provided to Ford, as the primary compiler of the Environmental Assessment (Ford, Tr. 1935-36).

212. Del-Aware's representatives met with Department personnel with regard to the project on a number of other occasions, including one occasion in which Mr. Weston met with state legislators from the Point Pleasant area, their

constituents and opponents of the project to discuss their concerns (Sigstedt, Tr. 217; Greenwood, Tr. 259).

213. Additionally, Representative Greenwood met with Mr. Runkle in the summer of 1982, to review Schuylkill flows and the need for Delaware River water as a make-up source of cooling water for Limerick (Greenwood, Tr. 261-62). State Representative Greenwood and Del-Aware's President, Colleen Wells, subsequently reviewed this matter with Mr. Weston at a meeting on July 19, 1982 (Greenwood, Tr. 268). Mr. Greenwood and Miss Wells discussed several concerns at this meeting, regarding Merrill Creek and the PUC decision on Unit 2 of Limerick. They also discussed the Blue Marsh Reservoir as an alternative to using Delaware River water, and raised various other issues (Greenwood, Tr. 270-72, 276, 297).

214. Another meeting, held on August 17, 1982, was attended by Secretary Duncan, State Representative Greenwood, Del-Aware's legal counsel and another Del-Aware representative on these same subjects. They also discussed the potential use of Lake Nockamixon as a supplemental flow augmentation source. Secretary Duncan agreed to consider the points raised at the meeting (Greenwood, Tr. 276-77, 281).

K. North Branch Flows

215. While the additional pumpages into the North Branch Neshaminy Creek may exceed the median flows at the point of discharge, they are minor in comparison to the flows exhibited during storm events occurring every few years (testimony of Dr. Dresnack, Tr. 4370).

216. Based on Dr. Dresnack's independent analysis of the North Branch Neshaminy Creek,the 1970 calculations prepared by E. H. Bourquard are reasonable and accurate (testimony of Dr. Dresnack, Tr. 4481-85; DER Exhibit 2, Table 3; NWRA Exhibit 55 and 56).

217. Flows in the North Branch Neshaminy Creek, after the initiation of pumpages from the Bradshaw Reservoir, will be confirmed to the stream bed and will not cause overbanking (testimony of Dr. Dresnack, Tr. 4345-4349).

218. The ratio of peak flows to long-term-average flows is primarily a function of drainage area; as drainage area increases, the ratio decreases. As a result, a mean annual flood of 280 cfs at the North Branch Neshaminy Creek is considered reasonable since the drainage area is only two square miles (NWRA Exhibit 52, Testimony of Dr. Dresnack, Tr. 4364-69).

219. Using a worst-case scenario (no natural flow in the North Branch Neshaminy Creek), there will be ample in-bank capacity in the North Branch Neshaminy Creek to accommodate a maximum daily discharge of 48.8 mgd in the year 2010 (NWRA Exhibits 53 and 54; testimony of Dr. Dresnack, Tr. 4377-84).

220. Depth changes of no more than 1.5 feet above natural conditions will occur in the North Branch Neshaminy Creek (testimony of Dr. Dresnack, Tr. 4345-49).

221. Findings of Fact 86 and 87 *supra* mean that for a bare stream channel composed of silty clay loam and sandy clay loam, a non-erosive diversion velocity is 2 fps or less (testimony of Dr. Dresnack, Tr. 4371-72; NWRA Exhibit 57); the corresponding figure for water transporting colloidal silt in a firm loam channel is 3.5 fps (testimony of Dr. Dresnack, Tr. 4372; PECO Exhibit 12).

222. Using the maximum daily discharge of 48.8 mgd in the year 2010, the diverted water will exit the North Branch Transmission Main at a velocity of 7.85 fps. However, the proposed energy dissipator will reduce the flow velocity and the water diverted will enter the North Branch Neshaminy Creek channel at only 1.2 fps (NWRA Exhibits 31 and 55, testimony of Dr. Dresnack, Tr. 4348-92). In the year 2010, when conveying the average daily flow of 32.6 mgd through the North Branch Neshaminy Creek, the flow velocity in the channel will be 2.2 fps and the stream depth will be 1.2 feet (testimony of Dr. Dresnack, Tr. 4392-93).

223. The mean velocity in the North Branch Neshaminy Creek after the initiation of pumpages from the Bradshaw Reservoir will be 1 fps; maximum velocity will be 2.5 fps (testimony of Dr. Dresnack, Tr. 4345-49).

224. Impacts to the North Branch Neshaminy Creek will be minimal because pumpages from the Delaware River will be implemented gradually during a 25 to 30-year time span. There will not be a zero-to-maximum increase on a daily or weekly basis, and monitoring in the early stages will help to establish flow requirements needed for particular water demand (testimony of Dr. Dresnack, Tr. 4395-96).

225. To assure proper operation of the releases from the Bradshaw Reservoir to the North Branch Neshaminy Creek, NWRA's operating plan requires 24 hour, 7 days per week monitoring of stream flows and weather conditions. NWRA will not continue pumping during flood conditions (testimony of Dr. Dresnack, Tr. 4492-4493; DER Exhibit 2, p. 40).

226. The amount of flow in the North Branch Neshaminy Creek will be based on the daily water supply needs and on the desired storage and recreational water level in Lake Galena (NWRA Exhibit 13, testimony of Dr. Dresnack, Tr. 4423-24, 4427).

227. The refilling of Lake Galena for summer recreational use will commence in December or January of each year. If natural inflows from North Branch Neshaminy Creek to Lake Galena are considered inadequate, those inflows will be supplemented by diversions from the Delaware River. A plan of operation will establish Bradshaw Reservoir pumpage rates, based on Lake Galena recreational and storage needs and on drought considerations affecting the North Branch Neshaminy Creek (testimony of Dr. Dresnack, Tr. 4444-46; DER Exhibit 2, p. 10).

228. Although DER determined that the diversion of water into the receiving stream, North Branch Neshaminy Creek, would have no adverse erosive

impacts, DER conditioned the permit issuance on permittee's continuous monitoring for erosion in the receiving stream (testimony of Jackie Ford, Tr. 1962; Dams and Encroachments Permit ENC 09-81, Special Condition "V").

229. A seine sampling survey of the North Branch Neshaminy Creek, performed by NWRA's consulting biologist on April 17, 1983, found a very diverse fish community, typical of small temperate streams in the Mid-Atlantic region (testimony of Harold M. Brundage, Tr. 3853-54).

230. The North Branch Neshaminy Creek fish species are very similar in composition and relative abundance to those found in the Delaware River near Point Pleasant; but the Delaware River also has large game species (American Shad, Blueback Herring) not found in the North Branch Neshaminy Creek, because the Delaware has a larger volume of water and more niches for fish to occupy (testimony of Harold M. Brundage, Tr. 3855-56).

231. The North Branch Neshaminy is an intermittent stream, having dry reaches and small stagnant pools in the summer. The Delaware River pumpages would increase the fish habitat (testimony of Harold M. Brundage, Tr. 3863-64; testimony of Stephen Runkle, Tr. 856-57).

232. Aquatic life in the North Branch Neshaminy Creek currently experiences considerable changes in flow and sediment, due to flash rainfalls (testimony of Harold M. Brundage, Tr. 3855-57)..

233. The water quality Chapter 93 standards applicable to the North Branch are identical to those in the East Branch; thus the Findings above regarding water quality impacts on the East Branch (Findings of Fact 103-113) are incorporated herein as though set forth at length.

III. DISCUSSION

A. PREAMBLE

As the reader has already discerned, having waded through or skimmed over the more than two hundred findings of fact, this has been a complex and hotly contested case. In order to get a handle on the lamentably extensive discussion to follow, the first order of business is to describe: (1) the Point Pleasant project, and (2) the actions of DER regarding that project which gave rise to the appeals at the above docket.

1. Project Description--General

The description of the project which immediately follows this paragraph is from DER Exhibit 2, a document entitled Environmental Assessment Report and Findings Point Pleasant Water Supply Project, dated August 1982. It is appropriate to quote the Environmental Assessment because this document summarizes the Department's reasoning for taking each of the presently appealed actions, while simultaneously addressing each of the environmental issues raised by the appellants. This is not a coincidence; the appellants in this case, a citizens group known collectively as Del-Aware Unlimited, Inc., have been involved in DER's decision-making process to an unusal degree. Representatives of appellants participated in an April 14, 1982 scoping meeting with top-level DER personnel; during this meeting, and throughout dozens of other contacts with DER officials, appellants helped DER construct the list of environmental issues to be considered. To some extent the Environmental Assessment can be considered the Department's answer to appellants' concerns.

> The proposed Point Pleasant Project is an integral component of the Neshaminy Water Supply System that is being implemented by the Neshaminy Water Resources Authority of Bucks County. This system would divert water from the Delaware River mainstem at Point Pleasant to (1) supplement public water supplies in Bucks and Montgomery Counties, and (2) provide water, when needed, to the Limerick Nuclear Generating Station in Montgomery County.

The Point Pleasant Pump Station would have an ultimate capacity to divert 95 million gallons per day (mgd) and lift water via a transmission main some 2.4 miles to the proposed Bradshaw Reservoir. The Bradshaw Reservoir would serve as a holding and control structure. This first segment, from the Point Pleasant Pump Station to the Bradshaw Reservoir and Pump Station, would serve as a joint facility for Philadelphia Electric Company (PECO) and Neshaminy Water Resources Authority (NWRA). It would be developed and operated by the NWRA on behalf of both project sponsors.

In the second segment, the water diverted from Bradshaw Reservoir to the Neshaminy Water Resources Authority water supply system would be released into a transmission main approximately one mile long to the North Branch Neshaminy Creek, and then [would] flow by gravity into and through Lake Galena to the North Branch water treatment plant located in Chalfont, Pennsylvania. After appropriate treatment to meet Federal and State drinking water standards, finished water would be distributed through several transmission mains to serve retail public water supply systems in Bucks and Montgomery Counties serving over 50 municipalities. These transmission facilities would be constructed and operated by NWRA.

The maximum amount of water to be pumped from the Delaware River at Point Pleasant through Bradshaw Reservoir in the year 2010 for public water supply would be 49 mgd. Forty mgd ultimately would be picked up at the Chalfont Water Treatment Plant. Approximately 4 mgd would constitute evaporative and seepage losses, and 5 mgd would serve as stream flow augmentation in the Neshaminy Creek to enhance fish and wildlife, in accordance with release schedules requested by the Pennsylvania Fish Commission and imposed as conditions in the Water Allocation Permit No. WA-0978601 previously issued for the project by the Department of Environmental Resources.

The Chalfont Treatment Plant would be built in two phases. The first, with 20 mgd capacity, would serve immediate water supply needs. A second phase of 20 mgd would be added between 1990 and 2000, as projected demand requires.

In the third segment, a maximum of 46 mgd would be pumped from the Bradshaw Reservoir via a transmission main some 6.7 miles to the East Branch Perkiomen Creek. Water released to the upper reaches of the East Branch Perkiomen Creek would flow by gravity in the stream channel [some 22 miles] to a diversion point near Graterford on the Perkiomen Creek, and hence via a transmission main to the Limerick Nuclear Generating

Station. This segment, including [the] Bradshaw Reservoir, transfer facilities to Perkiomen Creek, and pumping facilities from Perkiomen Creek to Limerick, would be developed and operated by the Philadelphia Electric Company. (Reference should be made to Figure No. II-1 a schematic of the project also from the Environmental Assessment which follows this page.)

A. Point Pleasant Pump Station

The project site is located on the west bank of the Delaware River at a point near the southern limits of the Village of Point Pleasant in Plumstead Township, Bucks County, Pennsylvania. As noted in material supplied by E.H. Bourquard Associates, Inc., and in the plans associated with Application No. 09-81, the station will be approximately 80 feet long by 45 feet wide [by at least 15 feet] above finished grade and is to be a reinforced concrete structure with architectural features...[causing it to]...resemble a barn. The station will house pumps having a total capacity of 95 mgd (147 cfs), together with related heating and ventilating, electrical, and instrumentation and control facilities. (The station will be visible from the Delaware Canal a/k/a Roosevelt State Park.)

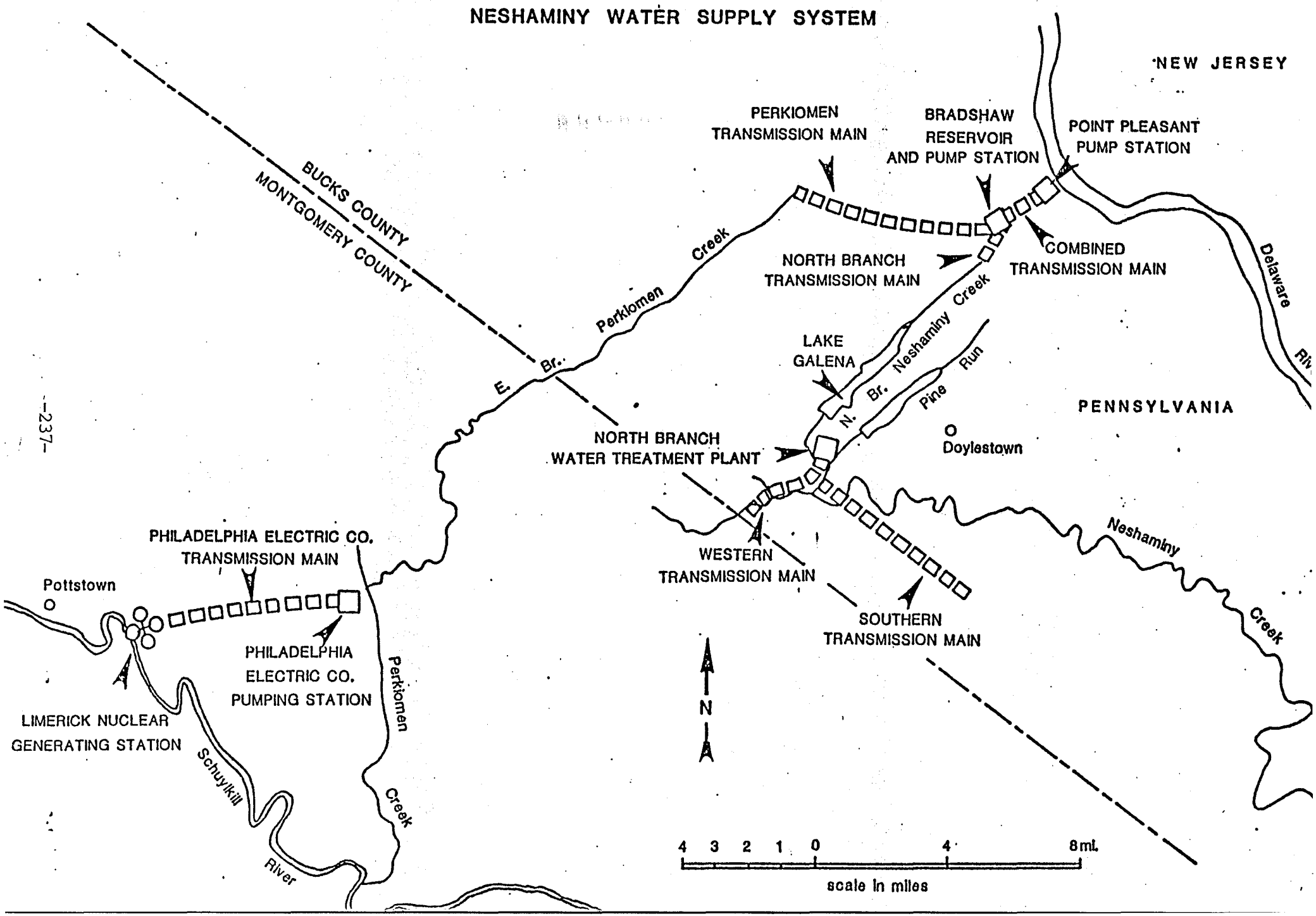
The intake for the pump station is to consist of an assembly of wedge wire screens which will be located at a point approximately 245 feet streamward of the bank and which will have an approximate minimum submergence of 4 feet during low flow stages in the river. A total of twenty-four (24) screens will be installed in three groups of eight screens each. The screens will be 40 inches in diameter and maximum flow velocities through the screen slots will be approximately 0.5 feet per second. The screens will be cleaned by both hydraulic and air wash systems.

Each group of screens is to be connected by a 42 inch diameter reinforced concrete pipe to a gate well to be located along the shore line. From the gate well, a 72-inch diameter reinforced concrete pipe will pass under the Delaware Canal (Roosevelt State Park) carrying water from the well to the pump station.

B. Combined Transmission Main

The combined transmission main will deliver flow from the pump station to Bradshaw Reservoir and will extend through a reach of approximately 2.4 miles. Based on the use of reinforced concrete pipe, the first 1600 feet of main that will traverse the steep river valley slopes will be 66 inches in diameter with the remainder being a 60 inch diameter pipe.

Figure No. II-1



C. Bradshaw Reservoir

The Bradshaw Reservoir (Application No. D09-181) will serve as the point of discharge for the water pumped through the combined transmission main. The reservoir will be structured on the drainage divide between the North Branch Neshaminy Creek and the South Branch Geddes Run. The embankment will consist of compacted earthern dikes formed from material excavated at the site. These dikes will vary in height from 5 feet to 23 feet and will form a square reservoir about 900 feet on a side. Operating capacity of the reservoir will be approximately 70 million gallons (215 acre-feet). The reservoir will have no drainage area feeding it except for the actual water surface of 18.8 acres.

D. North Branch Transmission Main

The North Branch Transmission Main will deliver a maximum of 49 mgd by gravity flow from Bradshaw Reservoir to the upper reaches of the North Branch Neshaminy Creek, from which point the flow will be via the stream approximately 4 miles to Lake Galena and then on to the North Branch treatment plant. The main is to be a 42 inch diameter pipe based on the use of reinforced concrete pipe and will be approximately one mile in length. At the point of discharge on the North Branch, an energy dissipator and riprapped channel are to be installed to reduce flow velocities and guard against erosion as the flow is discharged into the stream. The maximum flow added to the channel will be 49 mgd or 76 cfs.

E. Perkiomen Transmission Main

The Perkiomen Transmission Main which connects Bradshaw Reservoir with the East Branch Perkiomen Creek will convey water via a 42 inch diameter pipe a distance of approximately 6.7 miles along an existing gas pipeline right-of-way to the upper reaches of the East Branch Perkiomen Creek. At the point of discharge, an energy dissipator would be constructed to reduce erosion of the stream bed and stream banks. A small connecting spur channel dug perpendicular to the stream channel is also included in the energy dissipator design. The water would travel 22.2 stream miles via open channel conveyance to be picked up via withdrawal facilities located near Graterford, Pennsylvania, for eventual use at the Limerick Nuclear Generating Plant.

F. Operating Plan

This assignment is based on plans of operation for the various elements of the Point Pleasant project as outlined in the applications and in conditions imposed on project

operations by regulatory decisions and permits issued by the Delaware River Basin Commission, the Department and the Army Corps of Engineers.

Public Water Supply Operations

Public Water supply withdrawals for the Neshaminy Water Supply System involve a sequence of diversions from a series of sources. The withdrawal plan approved by the Department as part of the Water Allocation Permit No. WA-0978601 involves the following order of operations, as needed, to serve public water supply demands in the service area:

(1) Withdrawals from the natural flow of Pine Run, up to 10 mgd (subject to minimum flow requirements in the North Branch Neshaminy Creek below the Chalfont Treatment Plant, described below).

(2) Withdrawals from the natural flows of the North Branch Neshaminy Creek, up to 15 mgd (subject to minimum flow requirements in the North Branch Neshaminy Creek below the Chalfont Treatment Plant, described below).

(3) Withdrawals from releases to the North Branch Neshaminy Creek from storage in Lake Galena (subject to the Lake Galena operating plan, described below).

(4) Withdrawals from the Delaware River up to 49.8 mgd (subject to conditions imposed in DRBC Docket No. D-65-76 CP(8).

The total withdrawal of Chalfont, from natural or augmented flows, may not exceed 40 mgd. These withdrawals are conditioned upon maintaining a continuous minimum flow in the North Branch Neshaminy Creek below the Chalfont Treatment Plant of 5.3 mgd from March 1 to June 15 of each year, and 2.73 mgd from June 16 through February.

Cooling Water Operations

Withdrawals to serve consumptive cooling water requirements at the Limerick Nuclear Generating Station similarly involve a sequence of diversions. The average rates of consumptive use for cooling are 17.5 mgd for one power plant unit operating, and 35 mgd for two units. Maximum consumptive use rates are 21.3 mgd for one unit operating, and 42 mgd for two units.

Depending on actual cooling water demand at Limerick (based on electric generating demand and several technical factors), withdrawals will be made in the following order:

(1) Withdrawals from the Schuylkill River, (Subject to conditions described below);

(2) Withdrawals from the natural flow of the Perkiomen Creek at Graterford (subject to conditions described below);

(3) Withdrawals from the Delaware River (subject to conditions described below).

Each of these withdrawals is subject to limitations designed to protect water quality, in-stream and downstream uses. Withdrawals from the Schuylkill River are limited by the following conditions: (i) flows (not including flow augmentations from DRBC-sponsored projects) measured at the Pottstown gauge must exceed 342 mgd (530 cfs) with one power plant unit in operation and 362 mgd (560 cfs) with two units in operation; and (ii) no withdrawals may be made when water temperatures in the Schuylkill below Limerick exceed 15°C, except during April, May and June when the flow measured at the Pottstown gauge is in excess of 1158 mgd (1791 cfs).

Natural flows of the Perkiomen Creek may be used for cooling water only when creek flows measured at the Graterford gauge exceed 116 mgd (180 cfs) with one unit in operation and 136 mgd (210 cfs) with two units in operation. This condition assures that natural flows below Graterford will not be reduced by withdrawals when flows fall below the long-term median flow of 97 mgd (150 cfs).

Conditions imposed by DRBC further require that a minimum flow of 27 cfs (17.4 mgd) be maintained in the East Branch Perkiomen Creek at a gauge to be located at Bucks Road throughout from Bradshaw Reservoir to the East Branch and ending when pumping is no longer required for operation of the Limerick plant. For the remainder of the year, a minimum flow of 10 cfs (6.5 mgd) must be maintained in the East Branch.

Diversions from the Delaware River for cooling water purposes are prohibited when such withdrawals would reduce river flow measured at the Trenton gauge below 3000 cfs (1940 mgd). When River flows fall below 3000 cfs at Trenton, cooling water diversions from the Delaware must be curtailed, or compensated by releases made from upstream storage for such purposes.

Lake Galena Operations

Lake Galena is a multiple purpose facility, serving water supply, flood control and recreation purposes. The

operational plan for this facility was previously developed and approved at the time Lake Galena was designed and constructed. In so far as Lake Galena operations affect the operations of the Neshaminy Water Supply System, the following operating parameters and procedures apply.

Lake Galena is and will be operated to achieve and sustain a recreation pool at elevation 321.7 feet MSL throughout the recreation season, between Memorial Day and Labor Day. This recreation pool will be maintained, with minor fluctuations between elevations 320.7 and 321.7 feet through the recreation seaon. The zone of one foot at pool elevation 320.7-321.7 feet MSL involves approximately 60 million gallons of storage, which may be utilized to control reservoir inflow and releases for water supply and conservation purposes without affecting recreation uses.

During the recreation season, releases from the Lake to meet conservation release requirements and water supply needs, if not fully replaced by inflow to the Lake from natural flows of the North Branch Neshaminy Creek, will be made up by diversions of water from the Delaware River.

Following the conclusion of the recreation season, starting at pool elevation 321.7 feet MSL, Lake levels will be reduced by conservation releases and releases for water supply needs, on an "as needed" basis, drawing Lake levels down no further than the conservation pool elevation of 302.1 feet MSL. The total storage between the recreation and conservation pool elevations is 1.63 billion gallons. Because of this volume of storage, annual drawdowns during most years are not expcected to lower storage to the conservation pool level.

Releases will be made, in any event, to draw down Lake Galena by at least 10 feet below the recreation pool elevation (e.g., to elevation 311.7 feet MSL or below) each year, and to sustain such lower elevation through one or more freezing periods, as a means of retarding the growth of algae in the Lake.

Refilling of Lake Galena will commence in the period of mid-December through January (following the freeze periods described above). Refilling will rely to the maximum extent possible on natural inflows to the Lake from the North Branch. At each point through the winter-spring refilling process, natural inflows will be monitored and evaluated. If natural inflows are projected to be inadequate to reach the recreation pool elevation of 321.7 feet MSL by the start of the recreation season, natural flows of the North Branch Neshaminy will be supplemented by pumping from the

Delaware River. If such supplemental withdrawals are required to refill Lake Galena, they will be projected as far in advance as possible and spread over the maximum number of days, in order to reduce the amount of the required daily withdrawal from the Delaware and minimize flow variations in the North Branch Neshaminy Creek above the Lake. (Consistent with conditions(s) of DRBC Docket D-65-76 CP(8), NWRA as operator of Lake Galena will submit to DER for review and approval a proposed initial protocol and plan for projecting inflow/refill requirements, to be refined on the basis of the first five years of experience with the system.)

Pennsylvania Dam Safety and Encroachments Permit No. 9-169 previously issued for Lake Galena requires a minimum conservation release of 1.5 mgd from the dam, or equal to the inflow to the Lake if less than 1.5 mgd. The conservation release is made by a fixed orifice set in the dam, providing an essentially uncontrolled release of 1.5 mgd at all times.

Bradshaw Reservoir Operations

Bradshaw Reservoir is designed to be operated essentially as a control structure, within the system, controlling the release and distribution of water diverted from the Delaware into the Perkiomen and Neshaminy watersheds. Of the reservoir's total operating capacity of 70 million gallons, 46 million gallons will be held in reserve for emergency storage (this storage is equivalent to one day's use or emergency shutdown requirements at Limerick). Six million gallons is assigned for silt buildup and counted as "dead storage". The remaining 18 million gallons, stored in the top three feet of the reservoir, will provide operating capacity.

Pumping rates at Point Pleasant will be triggered by storage elevation changes at Bradshaw. As releases are made to the North Branch Neshaminy for public water supply needs, or to the East Branch Perkiomen for cooling water requirements, elevations will lower in Bradshaw. As storage falls within the three foot operating range, 1, 2, 3 and 4 pumps at Point Pleasant will be triggered in sequence, and turned off in sequence as elevations in Bradshaw rise. This pattern moderates flow fluctuations in the Delaware River and provides more efficient utilization of the pumps. This type of sequenced operation is typical of water systems, and essentially the same as used by public water supplies which trigger well operations based on water levels in a storage tank.

Daily Operations

Unlike operating plans for large Federal multipurpose projects, or typical flood control projects (which follow operating curves in adjusting storage and release rates), the Point Pleasant operating plan is geared to daily operations and constant adjustments, based on the operating parameters and conditions described above. This form of operating plan is typical of water supply system operations. It is designed to make maximum efficient use of all sources, while conserving storage and flow and mitigating any potential environmental effects.

Operation of the Neshaminy Water Supply System, following the operating plan's parameters and conditions, will be conducted on a daily basis. There will be an instrumentation system connecting the Chalfont Treatment Plant with Lake Galena, Bradshaw Reservoir and Point Pleasant Pumping Station. Data will be immediately available to the Plant operators on flows from Lake Galena, the water level in Lake Galena, flows from Bradshaw Reservoir, the water level in Bradshaw Reservoir and the operation of the pumps at Point Pleasant. Treatment Plant personnel will operate the control gates which release water from Lake Galena and from Bradshaw Reservoir. To eliminate any shock effect on North Branch aquatic biota, all releases will be started at a low rate and increased gradually to the scheduled rate, and any adjustments in daily releases will be done gradually.

The Plant production on a particular day will be scheduled on the prior day on the basis of the anticipated water needs of the service areas. As part of the procedure, natural flow takings from Pine Run and from the North Branch will be estimated on the basis of projected stream flows and climatic conditions, and any necessary releases from Lake Galena will be set up. If the estimates show that Delaware River water will be needed, this will also be scheduled.

During the day adjustments will be made in the release from Lake Galena to compensate for any change from anticipated water needs. The travel time for a release from Lake Galena to reach the Plant is about three hours. Releases from Bradshaw Reservoir take about five hours to reach Lake Galena.

Operations for cooling water will similarly be adjusted on a daily basis.

Delaware River Withdrawals

A computer program was developed to determine the amount of Delaware River water needed under the proposed operating

plan. This program utilizes flow records of Neshaminy Creek at Langhorne, Pennsylvania to develop flows of Pine Run at the intake and of the North Branch into Lake Galena and at the intake. Account is then taken of Treatment Plant production, minimum flow releases at the intakes and from Lake Galena, water level elevation and water storage in Lake Galena, evaporation from Lake Galena and cooling water needs at Limerick, in order to determine the volume of water needed daily from the Delaware River. Three different sets of stream flow conditions were examined in this program: a wet year, an average year, and a dry year. The estimated monthly withdrawals, with average stream flow conditions, to provide for projected water needs of the years 1985, 1990, and 2000 are shown in Table 1, originally prepared by E.H. Bourquard Associates, Inc.

Table 1
PROJECTED DELAWARE RIVER WITHDRAWALS
(Average Stream Flow Year)

Month of Year	Water Supply Withdrawals in MG in: 1985	1990	2000	Cool. Water Withdrawal in MG	Total Withdrawals, MG from Delaware River 1985	1990	2000
January	0	0	0	220	220	220	220
February	0	0	0	199	199	199	199
March	0	0	10	220	220	220	230
April	0	30	90	213	213	243	303
May	101	205	370	220	321	425	590
June	203	400	740	1,205	1,408	1,605	1,945
July	289	470	685	1,265	1,554	1,735	1,950
August	277	455	670	1,258	1,535	1,713	1,928
September	0	0	0	1,178	1,178	1,178	1,178
October	0	0	25	1,149	1,149	1,149	1,174
November	0	0	30	213	213	213	243
December	0	0	20	220	220	220	240
Annual	870	1,560	2,640	7,560	8,430	9,120	10,200

NOTE: The above withdrawals provide for 5.3/2.73 mgd minimum flow releases in the North Branch and a 6.5 mgd minimum flow release in the East Branch, and include a 10% allowance for possible losses in transit.

The 10% allowance for possible losses in transit includes an allowance for channel storage, travel time, scheduling and evaporation. Because the natural streams being utilized during the pumping procedure are not uniform throughout the entire system, some of the "released" water will reach the water intake ahead of time and not be withdrawn; or some of the water will lag behind the withdrawal period and not be needed. In either case, the water is "lost" to the public water supply system and will become part of the stream flow downstream of the intake. Because of the expenses involved with pumping, the program will be refined once actual conditions have been observed to minimize these losses.

It should be noted that this program and the results itemized in Table No. 1 are a result of a simulated "typical" average stream flow year. If the entire Point Pleasant Project is approved, the program will be adjusted to reflect actual conditions - not simply typical ones.

The cooling water withdrawals shown in Table 1 are from an Environmental Report Operating License, prepared by Philadelphia Electric Company (PECO) for the Limerick Station. Again, these are estimated withdrawals based on weekly mean flows of (1) daily Perkiomen Creek flows at Graterford, (2) daily Schuylkill River flows and temperatures at Pottstown, and (3) hourly meterology from the LCS tower at the Station, during the period 1974-1977.

Emergency Operations

During drought and other water supply emergencies, withdrawals and operations for both public water supply and cooling water purposes are subject to modification or suspension, as directed by the Delaware River Basin Commission pursuant to Article 10 of the Delaware Compact, or by the Pennsylvania Department of Environmental Resources and Pennsylvania Emergency Management Agency pursuant to state statute.

2. Presently Appealed Actions

The appeals presently before the Board have been very briefly described in the Procedural Statement opening this adjudication. Additional details of these presently appealed actions are as follows.

Applications for permits for the structures necessary to divert and release the water of the Delaware were filed by NWRA and PECO in 1981 and early 1982. In addition, NWRA requested DER to certify to the Corps of Engineers pursuant to §401 of the Federal Clean Water Act that construction of the intake in the Delaware and realignment of the channel of Pine Run (a tributary to the Neshaminy Creek) would not permanently violate state water quality standards.

The Department conducted a very thorough and wide-ranging review and analysis of the possible environmental effects of the proposed project and its other harms and benefits. It then summarized its review in DER Exhibit 2, the Environmental Assessment Report from which we have quoted at length immediately *supra*. In September 1982, DER issued the §401 certification and the following permits pursuant to the Dam Safety and Encroachments Act, 32 P.S. §693.1 *et seq.*, the Flood Plain Management Act, 32 P.S. §679.101 *et seq.* and the Clean Streams Law, 35 P.S. §691.1 *et seq.*:

> Permit No. ENC 09-81 to NWRA for the water intake structure in the Delaware River, an intake conduit crossing the Delaware Canal, a water main crossing Hickory Creek and an energy dissipator and outlet channel in the North Branch;
>
> Permit No. ENC 09-51 to PECO for a water main crossing various streams in Plumstead and Bedminister Townships, Bucks County;
>
> Permit No. ENC 09-77 to PECO for an outfall structure, energy dissipator and channel stabilization in the East Branch; and
>
> Permit No. Dam 09-181 to PECO for the Bradshaw Dam and Reservoir.

The certification and the permits were appealed. Besides taking these appealed-from actions (which will be analyzed below) the Department took another action which is before us on appeal, viz., the issuance of a letter dated June 22, 1982 from DER official Richard L. Hinkle to counsel for NWRA, and also to counsel for the instant appellants, informing NWRA that no NPDES permit would be required for the release of water by NWRA to the North Branch. This determination was appealed by Del-Aware Unlimited, Inc. and docketed at Docket No. 82-177-M.

3. Previous Related Actions

It is very important for a proper perspective to note that the above actions are only the most recent of a multitude of official actions of various administrative agencies regarding aspects of the Point Pleasant Project. We again quote from DER Exhibit 2:

> DER and DRBC Reviews
>
> The basic Point Pleasant-Neshaminy Water Supply Project resulted from the 1966 Water Resources Study - Neshaminy Creek Basin, Pennsylvania (Pennsylvania Water Resources Bulletin No. 2), a joint report prepared by the Pennsylvania Department of Forests and Waters (now Department of Environmental Resources), the Soil Conservation Service of the U.S. Department of Agriculture, and Bucks and Montgomery Counties.
>
> The fundamental watershed project for Neshaminy Creek was approved by the Delaware River Basin Commission and added to the Delaware River Basin Comprehensive Plan on October 26, 1966, in *Neshaminy Creek Watershed Project, Bucks and Montgomery Counties, Pa. DRBC Docket No. D-65-76-CP.* This decision was supplemented by *Bucks and Montgomery County Commissioners, Neshaminy Creek Watershed Project, Bucks and Montgomery Counties, Pa., DRBC Docket No. D-65-76 CP(2)* (January 25, 1967). The supplemental docket added the entire multipurpose project as described in the 1966 Water Resources Study to the DRBC Comprehensive Plan.
>
> In 1970, Bucks County prepared and submitted the Feasibility Study of Delaware River Pumping Facilities at Point Pleasant, Pennsylvania, which assessed the proposed design of the Point Pleasant diversion facilities to provide public water supply in Bucks and Montgomery Counties, together with water quality augmentation for the Neshaminy Creek.

The Pennsylvania Water and Power Resources Board, on December 8, 1970, issued to Bucks County Water Allocation Permit No. WA-649, authorizing the withdrawal of Delaware River water for public water supply in the following amounts:

	To 1980	To 1990	To 1995
Average withdrawal, mgd	5	15	35
Maximum withdrawal, mgd	35	60	75

The permit recognized that the county had plans to pump additional quantities of water from the Delaware River at Point Pleasant for water quality augmentation in the Neshaminy Creek watershed and for industrial water supply in Montgomery County via Perkiomen Creek.

On March 17, 1971, DRBC approved *Commissioners of Bucks County, Point Pleasant Pumping Station, Bucks County, Pa., DRBC Docket No. D-65-76 CP(3)*. This docket added the proposed project to DRBC's Comprehensive Plan, but deferred approval pursuant to Section 3.8 of the Compact until submission of final plans. The facilities included were a pumping station at Point Pleasant with the capacity and layout to handle all the required pumpage of the Delaware River water to the Neshaminy Basin, plus the proposed pumpage into the Perkiomen Creek Basin. A 66-inch transmission main, consisting of 14,000 feet of concrete pressure pipe and 5,300 feet of culvert pipe, would convey the total pumpage from the Point Pleasant Station to the terminus of this main, near Bradshaw Road, where the pumpage would be divided. The Neshaminy pumpage would flow by gravity through a 60-inch concrete culvert into the North Branch and on to Reservoir PA 617, Lake Galena. The Perkiomen pumpage would flow into a 35 mg open-storage reservoir, from where it would be pumped by means of a 46 mgd capacity station through 30,300 feet of 42-inch concrete presure pipe to the start of the Perkiomen watershed, from which point the water would flow by gravity in 6,300 feet of 36-inch concrete culvert pipe to the East Branch of Perkiomen Creek. As part of the 1971 docket review, DRBC prepared and processed an environmental statement for the project in accordance with the National Environmental Policy Act, entitled "Financial Statement - Environmental Impact of the Proposed Point Pleasant Diversion Plan, Bucks and Montgomery Counties, Pennsylvania".

In February 1973, DRBC prepared and submitted to the Council on Environmental Quality (CEQ) an expanded Final Environmental Impact Statement on the Point Pleasant Diversion Plan, Bucks and Montgomery Counties, Pennsylvania. The Final EIS concluded that the proposed project would be beneficial to the Neshaminy and Perkiomen watersheds and not detrimental to the Delaware River, provided that specific, listed mitigating measures were observed.

Meanwhile, due to the changes in growth patterns in Montgomery and Bucks Counties during the late sixties and continuing into the seventies, there was continued adjustment of the projected population to be served by the proposed public water supply facilities. The population projections and predicted supplementary surface water requirements of the Central Bucks County Service Area were updated in 1972, by a report entitled Master Plan for Water Supply - Bucks County, Pennsylvania - 1970. In 1975, further population projection adjustments were made resulting in amendments to the 1970 Master Plan for Water Supply. The adjustments were not of such magnitude to require change in the design capacities of the proposed plant. The final design of the plant started in 1975.

In early 1976, it was deemed necessary to review once again the projected population and resulting water needs. As a result, the final design of the treatment plant was halted to permit the completion of this review. During the period throughout 1976 and into early 1977, three additional studies of the Service Area were completed: The Central Bucks County Water Supply Study; the Water Supply Study for Montgomery County; and the Interim Projections Report for Bucks, Chester, Delaware, Montgomery, Philadelphia Counties, Pennsylvania. Based on these studies, the design capacity of the treatment plant was selected to remain at 20 mgd for the initial installation; however, the ultimate capacity was reduced from 80 to 40 mgd to meet the supplemental water needs of the service area.

In September of 1978, the Neshaminy Water Resources Authority filed with the Pennsylvania Department of Environmental Resources a water allocation permit application for the down-sized public water supply project. After an

extensive evaluation, summarized in the Report on the Application of the Neshaminy Water Resources Authority for Water Allocation from Pine Run, North Branch Neshaminy Creek, and Delaware River (November 1, 1978) ("DER Water Allocation Report"), the Department approved Water Allocation Permit No. WA-0978601, which superseded and replaced the permit No. WA-649 previously issued on December 8, 1970, by the Pennsylvania Water and Power Resources Board.

Concurrent with review of the basic Point Pleasant project and Neshaminy water supply system, a series of reviews were conducted regarding the Limerick Nuclear Generating Station.

In addition to providing treated water supply to Central Bucks and Montgomery Counties, the proposed Point Pleasant Project will withdraw Delaware River water for transfer via Perkiomen Creek to be used by the Philadelphia Electric Company (PECO) for cooling purposes at its Limerick Electric Generating Station located along the Schuylkill River near Pottstown, Pennsylvania.

DRBC Docket No. D-65-76 CP(3) (March 17, 1971) (referenced above), added the Perkiomen transfer element for Limerick to the overall Point Pleasant-Neshaminy project. As noted above, a Final Environmental Impact Statement on the Point Pleasant Diversion Plan, covering both the public water supply and Limerick transfers, was prepared by DRBC and filed with the Council on Environmental Quality in February 1973. The Final EIS of 1973, after considering various alternatives, concluded that a withdrawal from the Delaware River, subject to certain conditions, was necessary and proper to meet cooling water needs for the Limerick Station, and that such a withdrawal, if operated within the stated limitations, would not have a significant adverse effect on the environment.

The DRBC subsequently approved *Philadelphia Electric Company, Limerick Nuclear Generating Station, Limerick Township, Montgomery County, Pennsylvania, DRBC Docket No. D-69-210 CP* (March 29, 1973). This docket decision conditionally approved the water supply features of the project, subject to a specific list of conditions, particularly conditions relating to limits on diversions from the Schuylkill, Perkiomen and Delaware during low flow periods. One of the conditions for such withdrawal was

that the DRBC, at its sole discretion, would determine the adequacy of storage capacity in the basin necessary to provide sufficient water to meet PECO's consumptive water use at Limerick and to maintain a 3,000 cfs flow in the Delaware River at the Trenton gauge.

Approval of the water supply elements was based, at least in part, upon the previously approved Final EIS on the Point Pleasant Project. However, DRBC deferred a final decision on the Limerick Station per se until completion of a Final EIS by the Atomic Energy Commission (AEC) on the nuclear power plant and related facilities.

In November 1973, the U.S. Atomic Energy Commission's Directorate of Licensing completed the Final Environmental Statement related to the Proposed Limerick Generating Station, Units 1 and 2, Philadelphia Electric Company. Based on this EIS, the previous EIS prepared by DRBC, and the record compiled at hearings before the Atomic Safety and Licensing Board and the Appeal Board of the Nuclear Regulatory Commission (NRC), the NRC issued to Philadelphia Electric Company construction permits for the Limerick plant in March 1975. An extensive (96 pages) decision was rendered by the Atomic Safety and Licensing Appeal Board. See *In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2)*, Docket Nos. 50-352 and 50-353 (March 19, 1975). The decision addressed specifically numerous contentions made by intervenors in the AEC/NRC proceedings concerning the adequacy of the Final EIS prepared in 1973 by the Atomic Energy Commission.

The Atomic Safety and Licensing Appeal Board's decision, and NRC's issuance of construction permits for limerick, were appealed to the Third Circuit Federal Court of Appeals by the project's opponents. The appellants challenged the adequacy of the environmental impact statements relied on by the NRC, both the EIS prepared by the Atomic Energy Commission and that prepared by DRBC in February 1973. In particularly, appellants charged that the previous environmental impact statements had not properly assessed the impacts of water supply elements of the Limerick project, including the Point Pleasant diversion.

Based on the AEC's Final EIS and DRBC's own EIS of 1973, DRBC issued notice of intention to act upon Docket

No. D-69-210 CP (Supplement No. 1) in July 1974. Proceedings to amend the Commission's earlier decision on the Limerick Station, however, were deferred while objections filed by the Environmental Coalition for Nuclear Power were heard by a hearing officer appointed by DRBC.

Following hearings and argument before the Commission, in November 1975, DRBC proceeded with final action on the docket concerning construction of Limerick and related water supply facilities. *Philadelphia Electric Company, Limerick Nuclear Generating Station, Limerick Township, Montgomery County, Pennsylvania.*, DRBC Docket No. D-69-210 CP (Final) (November 5, 1975) included the Limerick project in the DRBC Comprehensive Plan. The docket further gave Compact Section 3.8 approval to construction of the Limerick Station, together with the Schuylkill River and Perkiomen Creek intake and diversion structures. The final docket imposed a series of conditions limiting the diversions and requiring specific measures to mitigate potential environmental impacts. Condition (c) required:

> 'If...the storage will not be adequate for all protected needs of the Basin, the applicant will build or cause to be built, at its own expense, at a location approved by the Commission, a reservoir of sufficient storage capacity to assure the water supply needed for consumptive use by the Limerick plant, during periods when such use would reduce the flow in the Delaware River at the Trenton gage below 3,000 cfs. Storage and release of water in such facility will be under the Commission's regulation, at the expense of the applicant.'

This DRBC docket decision was filed with the Third Circuit of Appeals prior to its decision on the then pending appeals of the Nuclear Regulatory Commission's action.

This Third Circuit's decision on the NRC appeals was rendered in *Environmental Coalition of Nuclear Power, Limerick Ecology Action, and Delaware Valley Committee for Protection of the Environment v. Nuclear Regulatory Commission and Philadelphia Electric Company*, No. 75-1421 (November 12, 1975). The Court of Appeals rejected the challenges to the environmental impact statements and, in essence, found the previous environmental assessments prepared by DRBC and the NRC adequate to satisfy the purposes of NEPA. The Third Circuit's decision and order were not appealed to the U.S. Supreme Court.

A year later, on September 30, 1976, DRBC adopted Resolution No. 76-13, concerning provision of supplementary water supply storage for certain power projects, including both the Limerick and Hope Creek Nuclear Generating Stations. The Commission exercised its authority under conditions set forth in earlier DRBC approval of Docket Nos. D-69-210 CP (Limerick) and D-73-193 CP (Hope Creek), and ordered the involved utility companies 'to proceed to develop, or cause to be developed, an application under Section 3.8 of the Compact, supported by an environmental report in compliance with the Commission's rules and regulations, for the construction of the required supplement storage.' The resolution further required that the application and accompanying environmental report be submitted by October 1, 1977.

The combined project once again came before DRBC in proceedings commencing in 1979, resulting in decisions rendered in early 1981. On January 27, 1979, PECO filed with DRBC application pursuant to Section 3.8 of the Compact for approval of the construction of its portions of the Point Pleasant pumping station, Bradshaw Reservoir, and transmission lines to the Perkiomen Creek. On July 5, 1979, NWRA filed application pursuant to Section 3.8 of the Compact for approval of construction of its portions of the Point Pleasant pumping station, the water treatment plant at Chalfont and the various transmission lines. Both Section 3.8 applications were supported by detailed 'environmental reports,' prepared by the applicants as required by the then applicable DRBC regulations, 18 C.F.R. Sections 401.51-401.53 (1977).

DRBC had available to it three final environmental impact statements, together with all the supporting data, as of the time it received the present PECO and NWRA applications. They were: (1) 'Point Pleasant Diversion Plan, Bucks and Montgomery Counties,' submitted by DRBC in 1973; (2) 'Limerick Generating Station, Units 1 and 2,' submitted by the AEC in 1973; and (3) 'Neshaminy Creek Watershed,' submitted by U.S. Department of Agriculture,

Soil Conservation Service in 1976. Each of these plans incorporated the concept of a withdrawal of a maximum of 150 mgd to the Perkiomen Creek for use as additional cooling water at Limerick, and the balance of the water to flow into the headwaters of the Neshaminy watershed with a withdrawal of approximately an equal quantity of water at Chalfont for water treatment and distribution for public consumption in sections of Bucks and Montgomery Counties.

Pursuant to DRBC's regulations on processing Compact Section 3.8 applications, DRBC prepared an environmental assessment on the projects. The Executive Director of DRBC, on the basis of the environmental assessment, recommended a 'negative declaration,' based on his conclusion that the proposed projects would have no significant adverse impacts on the environment. Public notice of intent to issue a negative declaration and of the preparation of the environmental assessment was given and a public hearing was held by DRBC on the Section 3.8 applications on November 18, 1980.

In August, 1980, DRBC prepared and published a 'Final Environmental Assessment for the Neshaminy Water Supply System' project sponsored by NWRA and PECO. This document contained approximately 230 pages, with cross-references and references by incorporation to voluminous documents, studies, reports and comments by individuals and public and private organizations. On February 18, 1981, DRBC granted the Section 3.8 applications of both PECO and NWRA, subject to certain expressed conditions and limitations. The construction details of the project were added to the Comprehensive Plan to the extent that such details were contained in the applications and had not previously been approved and included in the prior actions of DRBC.

These actions by DRBC were the subject of appeals filed before the U.S. District Court, Eastern District of Pennsylvania, in the matter of *Delaware Water Emergency Group, v. Gerald M. Hansler*, 536 F. Supp. 26 (E.D. Pa., 1981) *aff'd* No. 81-2622 (3d Cir., March 19, 1982). The primary issue before the court was whether DRBC had fully and fairly considered the environmental impacts of the proposed project, with particular emphasis on impacts upon basin water resources.

In rendering its decision rejecting these challenges, the District Court concluded:

> 'The record in this case makes four matters quite obvious. First, there have been at least three prior EIS's on the basis plan

and concept, all of which were available and considered by DRBC. With the Level B study, there have been at least four EIS's prepared. Second, the project has been under constant study and updating of factual information from the plan's inception to the present time, and indeed is subject to ongoing studies. Third, the only substantial change from heretofore approved plans based on prior environmental impact statements and other studies, is a substantial reduction in the quantity of water to be withdrawn for NWRA's water treatment plant. Fourth, the environmental assessment prepared is detailed, up-to-date and adequately considers any changed circumstances.'

By Compact signed by the four Basin States and the Federal Government, DRBC was created as the primary and lead agency of the parties to plan, coordinate and manage the water resources of this basin. It is DRBC's responsibility, recognized by Federal law, to equitably apportion the waters of the basin among the States and their respective political subdivisions, and to adopt and implement policies for the development, conservation and management of those resources.

This project and its operating conditions were made a part of the basin's Comprehensive Plan by unanimous action taken repeatedly over the past decade, and most recently in February 1981. Under the terms of the Compact, especially Compact Article 11 and Section 15.1(s) of Public Law 87-328, all Federal and State agencies are bound to recognize and act in a manner consistent with those water management policies and actions.

U.S. Army Corps of Engineers Review

In December 1980, the Neshaminy Water Resources Authority applied to the U.S. Army Corps of Engineers for a permit to (1) construct a water intake structure in the Delaware River and under the Pennsylvania Canal at Point Pleasant (Application No. NAPOP-R-80-0534-3); and (2) to relocate the channel of Pine Run and reshape the channel of North Branch Neshaminy Creek at Chalfont Borough (Application No. NAPOP-R-80-0813-3). On April 6, 1981, the Corps issued a Public Notice that NWRA had applied for the above-mentioned permits. On August 10, 1981, the Corps issued a Notice of Public Hearing concerning NWRA's applications and scheduled the hearing for September 15, 1981. The hearing was held as scheduled. A supplement to the original Public Notice for the intake structure application indicated some revisions to the project was issued February 9, 1982.

Since the original submission, the Corps has been evaluating these proposals. As of this date, the Corps has not taken any final action on these applications.

> The Corps has undertaken its own environmental assessment of the proposed project, and pursued consultation procedures required under the Fish and Wildlife Coordination Act, the Endangered Species Act, and the National Historic and Preservation Act to assess potential impacts on historical resources, fish and wildlife, and endangered species.

B. NPDES PERMIT

Now that we have described the Point Pleasant Project and summarized its tortured course through other administrative agencies, the stage is set to examine the issues raised by the appellants in the light of the record. We begin this task with the legal issue raised by appellants' appeal docketed at Docket No. 82-177-G, to wit, whether DER acted arbitrarily and capriciously (or in violation of law) in failing to require NPDES permits for the diversion of Delaware River water into the North Branch of Neshaminy Creek and East Branch of Perkiomen Creek ("North Branch" and "East Branch", respectively).

In point of fact, DER has made no explicit decision regarding the need for a NPDES permit for the diversion of water into the East Branch (it only made an explicit written decision regarding the North Branch because it was requested to do so by the counsel for NWRA and the appellants). Therefore, we could hold that as to the East Branch there has been no final decision of DER regarding the NPDES permit such as to give this board jurisdiction. *Standard Lime & Refractories Co. v. DER*, 2 Pa. Cmwlth. Ct. 434, 279 A.2d 383 (1971); *DER v. New Enterprise Stone and Lime Co., Inc.*, 25 Pa. Cmwlth. Ct. 389 (1976). We shall not, however, follow such a course. Instead, we shall treat the determination regarding the North Branch as though it also applied to the East Branch. We shall do this in part because none of the parties has raised this jurisdictional issue in the lengthy and competent briefs they filed in the issue; moreover, while the board does have authority to consider its jurisdiction *sua sponte*, it should not *sua sponte* dismiss an appeal on jursidictional grounds in any but the clearest circumstances, especially an appeal which has been before the Board as long as the instant appeal (at Docket No. 82-177-G).

Besides, under the instant circumstances our lack of jurisdiction on this East Branch NPDES permit issue is not altogether clear. On the contrary we hold we do have jurisdiction, because we find that DER made an implicit decision regarding the need for a NPDES permit for the discharge to the East Branch.[3] As DER acknowledged in its Environmental Assessment, the above permit was issued pursuant to DER's duties as a trustee under Article I, Section 27 of the Pennsylvania Constitution, which *inter alia* requires "compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources..." *Payne v. Kassab*, 11 Pa. Commonwealth Ct. 14, 312 A.2d 86 (1973). This duty is repeated in 25 Pa. Code Chapter 105, which specifically governs the issuance of the above permit.

Clearly, the Federal Clean Water Act, and especially the NPDES permit program of that Act (which was delegated to the Commonwealth by virtue of an agreement dated June 1978), is a "statute relevant to the protection of Pennsylvania's public natural resources"; thus DER would have had to determine that this federal Act had been complied with prior to issuing the above Chapter 105 permit. The reasoning upon which DER relies for its North Branch decision, being primarily a legal analysis, would apply with equal force to the East Branch.

NWRA also argues that the EHB lacks jurisdiction (under the Federal Clean Water Act) because the appellants have not stated a cause of action under federal law. NWRA cites various federal cases, all of which discuss the rights of plaintiffs to begin actions in federal courts.

NWRA, however, has neglected to cite the controlling EHB decisions. It is the duty of this board to review (properly appealed) actions of DER, not

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3. This implicit decision was not unlike DER's implicit finding of a public necessity for the right of way across the Roosevelt State Park (see discussion below). DER's decision was implicit in its issuance of Permit No. ENC 09-77 to PECO for an outfall structure in the East Branch.

to review actions of any federal agency or to act as a court of original jurisdiction for environmental causes of action. When DER takes an action under federal law, our jurisdiction rests not upon the federal statute but rather upon §1921A of the Administrative Code of 1929, 71 P.S. §510-21. *Latrobe Municipal Authority v. DER*, 1975 EHB 422. Our jurisdiction can be neither expanded nor contracted by federal statutes.

1. Standing

Before we can proceed to the merits of the "no NPDES decision", we still must take up another jurisdictional issue, namely the appellants' standing to appeal DER's decision not to require an NPDES permit for the diversion of water from the Delaware River to the North Branch of the Neshaminy. NWRA argues that the appellants do not have standing to appeal this decision.[4] There has been no corresponding challenge to the appellants' standing to appeal DER's failure to require an NPDES permit for discharge into the East Branch of the Perkiomen (see our jurisdictional discussion immediately, *supra*, concerning DER's East Branch "no NPDES permit" decision).

The relevant facts concerning the appellants' standing to raise the issue of DER's "no NPDES decision" for the North Branch are as follows. During the hearing the appellants, notably Del-Aware, Inc., failed to place on the record the name of any Del-Aware member who reasonably believably could have had standing to raise this NPDES issue; for instance, Del-Aware failed to place on the record the name of any Del-Aware member residing upon the North Branch. This failure was explained by Del-Aware's counsel as having resulted from an NWRA law suit seeking damages against Del-Aware's members. NWRA admitted that

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4. Although we here (section III B of this adjudication) are concerned primarily with the "no NPDES decision", our discussion *infra* of the appellants' standing to appeal the "no NPDES decision" for the North Branch (the appeal docketed at 82-177-G) applies equally well to the appellants' standing to appeal DER's grant of Permit No. ENC 90-81 to NWRA for, *inter alia*. construction of an energy dissipator and outlet channel in the North Branch (the appeal docketed at 82-219-G).

it had filed such a suit, and refused to hold harmless any Del-Aware member whose identity was revealed in these proceedings.

Therefore, the Board requested, and DER's counsel generously agreed, that Del-Aware would disclose the identity of relevant members to DER, who would undertake to verify this information on behalf of all parties. The information was not immediately forthcoming from Del-Aware. On May 17, 1983, the last day of the evidentiary hearings on these appeals, DER informed the Board and the parties that this information had not been received, although Del-Aware's counsel stated that he thought it had been furnished (Tr. 4262-64). NWRA's counsel then renewed his previously offered motion to dismiss Del-Aware's appeals (of NWRA's construction permit and of the North Branch "no NPDES decision") for lack of standing; NWRA's counsel also argued that the facts before the Board concerning Del-Aware's standing should not be supplemented by any evidence made available after the evidentiary hearing was closed, when NWRA would not be able to cross-examine.

Nevertheless, Mr. Harnish, who at the time still was the responsible Board Member in charge of these appeals, ruled that additional information bearing on Del-Aware's standing would be accepted, provided it was furnished by Del-Aware prior to submission of its brief (Tr. 4265). On June 27 and June 29, 1983, Edward Gerjuoy--the Board Member who by then had taken over these appeals following Mr. Harnish's resignation from the Board--issued Orders which, *inter alia*, informed the parties of the schedule for briefing the issues involved in the appeal docketed at 82-177-H (now 82-177-G), the appeal of DER's "no NPDES decision" for the North Branch. Del-Aware's brief in response to these Board Orders was filed July 20, 1983; this brief did not discuss Del-Aware's standing, and was not accompanied by any new information bearing on Del-Aware's standing. NWRA's brief in response to the aforementioned Board Orders, filed August 8,

1983, asserted that Del-Aware had not yet filed the requested additional information, and renewed its argument that Del-Aware's appeals now docketed at 82-177-G and 82-219-G be dismissed for lack of standing.

The Board has not yet ruled on any of the issues argued in NWRA's brief, including the standing issue; those rulings have been deferred to this adjudication. In the meantime, between August 8, 1983 and the date of this adjudication, other events relevant to this standing issue did occur. On October 6, 1983, DER's counsel wrote the Board as follows (in pertinent part):

> Investigation of the first line provided by Mr. Sugarman proved inconclusive, so after the hearing was over, Mr. Sugarman provided me with one additional name and address. I had an experienced member of DER's technical staff investigate the alleged property ownership in the Bucks County Courthouse records. He found that the named individual member of Del-AWARE does indeed own riparian property along the North Branch Neshaminy Creek in the area to be affected by the water supply portion of the Point Pleasant project.

This October 6, 1983 letter from DER's counsel does not state when this additional information was received from Del-Aware's counsel, Mr. Sugarman. However, the Board has been informed by DER's counsel--and sees absolutely no reason to doubt--that DER received the additional name and address on or about June 8, 1983, well before Del-Aware's aforementioned brief was submitted.

On December 8, 1983, Mr. Gerjuoy presided over a non-evidentiary hearing which disposed of various pending matters in these appeals. At this hearing, the issue of Del-Aware's standing again was discussed. The Board refused to accept NWRA's argument that Del-Aware's failure to furnish evidence sufficient to confer standing before the evidentiary hearings closed was *per se* reason to dismiss the questioned appeals (Tr. December 8, 1983, pp. 58-9). However, the Board agrees that evidence justifying standing should be on the record; as the Board said, "giving a secret list to DER,...,is definitely

irregular." Del-Aware therefore was ordered to provide NWRA with a list of Del-Aware members who could confer standing on Del-Aware, including addresses, distances from the North Branch of properties owned, etc. NWRA was given the opportunity to respond to the list, and it was understood that, if necessary, the hearings would be reopened to take evidence under oath on any of Del-Aware's factual allegations which were critical to Del-Aware's standing and were disputed by NWRA. (See paragraph 5 of this Board's Order dated December 12, 1983, at Docket Nos. 82-177-G and 82-219-G.)

The list ordered on December 8, 1983 was filed by Del-Aware on December 22, 1983. In pertinent part, the list reads as follows:

> The following members of Del-AWARE Unlimited, Inc., who live on and near the North Branch Neshaminy Creek, and use and enjoy the creek, will be directly and substantially impacted by NWRA's use of the Creek as a faucet to carry water from the Bradshaw Reservoir to the proposed Chalfont treatment plant:
>
> a. Alistair Kyle
> Fretz-Clinton House
> Fountainville, PA 18923
>
> Alistair Kyle resides at Fretz-Clinton House, approximately two miles north of the proposed discharge point into the North Branch Neshaminy Creek in the area of the proposed discharge. He enjoys the pure and unpolluted state of the creek, and his enjoyment would be directly impacted by NWRA's proposed action. Mr. Kyle has been a contributing member of Del-AWARE since April 15, 1983.
>
> b. John and Alice Thorpe
> Carverville & Street Rds.
> R. D. #2 Doylestown, PA 18901
>
> John and Alice Thorpe live and own property approximately two miles south of the affected portion of the North Branch Neshaminy. John Thorpe, in addition to being a member of Del-AWARE, is affiliated with the Paunacussing Watershed Association, and is immediately concerned with the degradation of the water quality in the North Branch Neshaminy. Both Alice and John Thorpe enjoy the unspoiled beauty of the North Branch. They have been contributing members of Del-AWARE since January 15, 1983.

c. Reginald and Rosalind Snyder
325 Bradford Ave.
Warrington, PA

Reginald and Rosalind Snyder, who live in Warrington, own property and a home within several hundred yards of the affected portion of the North Branch, at the intersection of Curly Hill Road and Route 611. The home is occupied by their son, David Snyder. Reginald and Rosalind Snyder frequently visit their son and when they do, they enjoy hiking and walking along the North Branch and they enjoy viewing the North Branch in its present unspoiled state from their property. Reginald and Rosalind Snyder first contributed to Del-AWARE Unlimited, Inc. in 1981.

d. David Snyder
8 Poplar Lane
RD #5 Doylestown, PA 18901

David Snyder resides in the home owned by his parents Rosalind and Reginald Snyder, within several hundred yards and within view of the North Branch Neshaminy. He frequently takes hikes up and down the North Branch, and enjoys the view he has of it from his home on a daily basis. The North Branch is a very small stream at that location, and Mr. Snyder fears that the flow from NWRA's proposed discharge would radically alter its character, and that he would be adversely affected thereby. Mr. Snyder has been a contributing member of Del-AWARE Unlimited, Inc. since January, 1983.

e. Jonathan and Mary Davenport
Gardenville-Pt. Pleasant Pike
Gardenville, PA 18926

Jonathan and Mary Davenport live and own property within the immediate vicinity and within view of the North Branch, close to the point of discharge. They have lived there for thirty years. The Davenports regularly walk along the stream, and enjoy its unspoiled character, which they can view from their home, looking down across an intervening cornfield. They would be directly adversely impacted in their enjoyment of the stream by NWRA's discharge of water into the North Branch, which would substanially increase its flow and change its character. John and Mary Davenport first contributed to Del-AWARE Unlimited, Inc. approximately two years ago.

f. Susan Allison
Pt. Pleasant Pike
Gardenville, PA 18926

Susan Allison lives and owns property in the immediate vicinity of the North Branch, near the point of discharge. She often hikes along the creek, and enjoys its unspoiled character. Her use and enjoyment would be directly affected by NWRA's proposed discharge into the North Branch. Ms. Allison has been a contributing member of Del-AWARE Unlimited, Inc. since November, 1982.

g. David Windhold
Dave's Sporting Goods
1127 North Easton Road
Doylestown, PA 18901

David Windhold owns a six acre homestead on North Eastern Road which abuts approximately 500 yards of the affected portion of the North Branch Neshaminy Creek. On the property is a residence occupied by Mr. Windhold's daughter Dianne and her husband. This lot fronts on approximately 400 yards of the Creek. Also located on the property is Mr. Windhold's business, Dave's Sporting Goods, the parking lot of which abuts approximately 100 yards of the Creek.

Mr. Windhold and his family members hike along the stream, use and enjoy it on a daily basis. Some of Mr. Windhold's customers fish in the Creek, specifically for catfish and bass. In the past, flows from the North Branch have at times overflowed its banks and flooded his parking lot. Mr. Windhold fears that the NWRA discharge into the North Branch will increase the flooding problems on his property. Thus, Mr. Windhold and his family members are exposed to immediate potential impacts such as flooding, erosion, and interference with their daily use and enjoyment of the North Branch.

Mr. Windhold has been a supporter of Del-AWARE Unlimited, Inc. for the past two years, and has been contributions in the name of Dave's Sporting Goods.

NWRA has argued, in its response dated January 20, 1984, that the above list is insufficient to confer standing on Del-Aware. NWRA points out, first of all, that Alistair Kyle, John and Alice Thorpe, David Snyder and Susan Allison are described in the above list as having been "contributing members" of

Del-Aware no earlier than November, 1982. The appeal docketed at 82-177-G was filed on July 21, 1982; the appeal docketed at 82-219-G was filed on September 20, 1982. Persons who became members of Del-Aware after the appeals were filed cannot now be named as justification for granting Del-Aware standing to appeal; Del-Aware needed standing at the time it appealed. Consequently the persons named earlier in this paragraph do not confer standing on Del-Aware to prosecute the instant appeals.

On the other hand, it appears that the other persons named by Del-Aware, though also objected to by NWRA, can confer standing on Del-Aware. In particular, the Board now has been informed by DER (and again sees no reason to doubt) that Reginald and Rosalind Snyder are the riparian property owners originally idenfified by Del-Aware on or about June 8, 1983 (see our quotation, *supra*, from DER's October 6, 1983 letter to the Board). Furthermore, NWRA concedes (January 20, 1984 response, p. 9) that David Windhold owns property fronting on the North Branch. These property interests of the Snyders and Windhold are sufficient to confer standing on these individuals to appeal DER actions possibly affecting the North Branch, under the test of *William Penn Parking Garage, Inc. v. City of Pittsburgh*, 464 Pa. 168, 346 A.2d 269 (1975).

However, NWRA also objects that Del-Aware has not shown these just-named individuals were members of Del-Aware when the appeal was filed. We agree with this objection of NWRA's. The Snyders are said to have "first contributed" to Del-Aware in 1981; Mr. Windhold is termed "a supporter" of Del-Aware for the past two years. These phrases do not obviously make the Snyders or Windhold members of Del-Aware at the pertinent time. We realize that citizen groups like Del-Aware tend to be loose organizations, wherein the criteria for "membership" are likely to be equally loose. But Del-Aware, Inc. is incorporated, and should have kept "membership" lists of some sort. In any event, NWRA is entitled to have Del-Aware prove that standing is legally deserved.

Therefore, in view of the claimed locations of the Snyder and Windhold properties, we provisionally do grant Del-Aware standing in the appeals docketed at 82-177-G and 82-219-G; but under 25 Pa. Code §21.122(a)(2) we will allow NWRA (should it so request) to have the hearings reopened for reconsideration of the evidence supporting Del-Aware's standing. If the hearings are reopened for this purpose, the evidence offered will be restricted to the issues of whether and when the Snyders and Windhold were members of Del-Aware, and the locations of their properties. At this late date, we are not going to litigate whether Jonathan and Mary Davenport, who live "within the immediate vicinity and within view of the North Branch," have interests deserving standing under *William Penn, supra*. The time--for Del-Aware to have clearly established the persons named on December 22, 1983 (listed *supra*) have interests meeting the *William Penn* standard--is long past. The immediately preceding rulings in this paragraph are consistent with the understanding reached on December 8, 1983, described *supra*. We already have ruled in an earlier paragraph, and do not expect to reconsider, that Alistair Kyle, John and Alice Thorpe, David Snyder and Susan Allison cannot confer standing on Del-Aware.

In making the rulings in the preceding paragraph, we have rejected an additional argument of NWRA's, to the effect that Del-Aware cannot obtain standing from the mere fact that some of its individual members might have had standing to appeal; according to NWRA, it is necessary to show--and it has not been shown--that Del-Aware itself, as a corporate entity, meets the *William Penn* standing test. NWRA has bolstered its argument with citations to an imposing array of precedents. However, the Board has examined this question of so-called "representational standing" in the recent past, and has held that the Pennsylvania courts "now would rule" an association has standing to represent its members in an appeal if some of those members themselves would have standing to appeal.

Concerned Citizens of Rural Ridge v. DER, Docket No. 82-100-G, 1982 EHB 522 (Opinion and Order, November 22, 1982). Although the Citizens Association in *Rural Ridge* was not incorporated, we believe the logic of *Rural Ridge* governs the standing issue in the instant appeal, assuming Del-Aware indeed can show it has members who would have had standing when Del-Aware actually filed its appeal. In our opinion, the recent Pennsylvania Supreme Court holdings in *Franklin Township v. DER*, 452 A.2d 718 (Pa. 1982) and in *Susquehanna County v. DER*, 458 A.2d 929 (Pa. 1983), though not quite on point with *Rural Ridge, supra* or the instant appeal, reinforce our reasoning in *Rural Ridge* and bolster our present reliance on that Board holding.

We close this discussion of Del-Aware's standing with the observation that--as NWRA accurately points out--no evidence has been offered that the individual appellants (Val Sigstedt and Colleen Wells) in the appeal docketed at 82-177-G had standing; the same assertion holds for the individual appellants (James Greenwood, Colleen Wells, Richard Meyers and Marion Masland) in the appeal docketed at 82-219-G. Therefore, insofar as these just-named individuals are concerned, their respective individual appeals at 82-177-G and 82-219-G are dismissed for lack of standing, without prejudice to Del-Aware's possible standing (as discussed *supra*) to prosecute these same appeals.

2. DER's Legal Basis For Its Decision

Having determined: (1) that we do have jurisdiction under the Administrative Code; (2) that DER's "no NPDES permit" determination on the North Branch should be treated as applying also to the East Branch; and (3) that the appellants presently have personal standing to challenge this determination, let us examine what this determination constitutes.

The following discussion of this determination (NWRA brief in response to this Board's Order of June 27, 1983, pp. 19-22) is fair, and we adopt it:

On June 22, 1982, in connection with the Department's review of NWRA's application for a permit under the Dam Safety and Encroachments Act (NWRA Exh. 31) and incident to its Environmental Assesment on the Point Pleasant Water Supply Project (DER Exh. 2), the Department concluded that no NPDES Permit would be required to authorize the release of Delaware River water into the North Branch Neshaminy Creek. (Exh. A. to appellants' 'Notice of Appeal'). DER's rationale for its ultimate conclusion that no NPDES Permit would be required is set forth in a memorandum from Robert W. Adler, Assistant Counsel, Bureau of Regulatory Control, Maxine Woelfling, Director, Bureau of Regulatory Counsel and Douglas Blazey, Chief Counsel to Leon Gonshor, Director, Norristown Regional Office. The memorandum, included as Exhibit A to the appellants' Notice of Appeal, states, in pertinent part:

> This memorandum addresses the question whether the Point Pleasant Diversion Project requires an NPDES Permit pursuant to the recent court decision *National Wildlife Federation v. Gorsuch*, which I forwarded to you with my memo dated March 15, 1982. It is the opinion of this office that a permit is not required for the Point Pleasant Project.
>
> The *National Wildlife Federation* case did not rule that all dams were point sources *per se* and, therefore, subject to the NPDES Permit requirements. Rather, the court rules that the plaintiffs had successfully proven as a question of fact that <u>certain</u> dams 'add pollutants' to navigable waters within the meaning of Section 502(12) of the Clean Water Act. Since EPA has not published categorical standards governing which types of dams 'add pollutants' to navigable waters within the meaning of the court decision, the question of whether the Point Pleasant project requires a permit is a question of fact. The memorandum to you from Charles Rehm, dated April 6, 1982, entitled 'Need for Public Hearing, Point Pleasant Diversion, Neshaminy Water Resources Authority (NWRA)' indicates that there will be no additions of pollutants to the relevant waterways within the meaning of the National Wildlife Federation decision. Therefore, unless contrary information is discovered indicating that pollutants will in fact be discharged from the Point Pleasant facilities, no NPDES Permit is required.

The singular substantive legal issue addressed in the Department's memorandum and now presented to the Board in the captioned appeal (Docket No. 82-177-H) is whether the diversion of Delaware River water to the North Branch of

the Neshaminy Creek,...constitutes the 'discharge of a pollutant' as that phrase is defined in the Clean Water Act. It is NWRA's position, based upon a review of the Clean Water Act's substantive provisions, that it does not. As a result, no NPDES permit is required.

Section 402 of the Clean Water Act, 33 U.S.C. §1342, establishes the National Pollutant Discharge Elimination System ('NPDES' or "402') permit program. Section 402(a)(1) of the Act provides in pertinent part:

> ...the Administrator may...issue a permit for the discharge of any pollutant, notwithstanding Section 1311 [301(a)] of this title, upon condition that such discharge will meet either all applicable requirements under Sections 1311 [301], 1312 [302], 1316 [306], 1317 [307], 1318 [308] and 1343 [403] of this title, or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provision of this chapter. (emphasis supplied).

Section 301(a) of the Act, 33 U.S.C. §1311(a) provides:

> Except in compliance with this section and Sections 1312 [30], 1316 [306], 1317 [307], 1318 [308], 1342 [402] and 1344 [404] of this title, the discharge of any pollutants by any person shall be unlawful (emphasis supplied).

Thus the discharge of any pollutant is unlawful unless, *inter alia*, one has a Section 402 permit for same.

1. What constitutes a "Discharge of a Pollutant?"

Query, how did Congress define the term discharge of any pollutant? Reference to the definitional section of the Act provides the answer.

Discharge of any pollutant is defined at Section 502 (12), 33 U.S.C. §1362(12), as:

> ...any addition of any pollutant to navigable waters from any point source...

Point Source is defined at Section 502 (14), 33 U.S.C. §1362 (14), as:

> ...any discernible, confined and discrete conveyance, including but not limited to any pipe ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessal or other floating craft, from which pollutants are or may be discharged. (emphasis supplied).

Neither NWRA nor any other party disputed that the North Branch Neshaminy Creek or the East Branch Perkiomen Creek constitute "navigable waters" as that term is defined in the Act. Also, NWRA agrees with appellants that "the outflow pipe into the North Branch would constitute a point source", if the Board finds the Delaware River is a "pollutant" (NWRA brief just quoted, p. 23). Thus, the key questions here confronting us are the following:

a. What is a "pollutant"?

b. What constitutes an "addition of any pollutant"?

Unfortunately, no party has cited a case applying the Act's definitions of "pollutant" and "addition of any pollutant" to a diversion of water from one river to another, i.e., to a factual situation identical to the instant one. However, all the parties except the appellants found the decision of the D.C. Circuit Court in *National Wildlife Federation v. Gorsuch*, 693 F.2d 156 (D.C. Cir. 1982) ("NWF") to be applicable and controlling. Again we quote from NWRA's brief in response to this Board's Order of June 27, 1983 (pp. 24-25):

> ...National Wildlife Federation brought a declaratory judgment action against the Administrator of the Environmental Protection Agency seeking to compel the agency to require dam operators to obtain NPDES Permits. Establishing at trial that the retention of water by large storage dams caused water quality changes having adverse impacts on downstream water quality when subsequently released, National Wildlife Federation argued 'that any adverse change in the quality of reservoir water from its natural state involves a 'pollutant' and that release of polluted water through the dam into the downstream river constitutes the 'addition' of a pollutant to navigable waters 'from' a point source.' 693 F.2d at 165. (emphasis supplied)
>
> The Circuit Court of Appeals for the District of Columbia disagreed holding that water quality conditions do not constitute 'pollutants' within the statutory definition.
>
> These dam-induced changes are water conditions not substances added to the water.

693 F.2d at 171.

> The court, by holding that water quality conditions did not constitute 'pollutants,' explicitly adopted the test applied by the Environmental Protection Agency for determining when a particular activity constitutes an addition of a pollutant from a point source:
>
> > ...addition from a point source occurs only if the point source itself physically introduces a pollutant into water from the outside world. In its view, the point or nonpoint character of pollution is established when the pollutant first enters navigable water, and does not change when the polluted water later passes through the dam from one body of navigable water (the reservoir) to another (the downstream river).
>
> 693 F.2d at 175.
>
> The EPA 'addition of a pollutant' test endorsed by the Circuit Court in *National Wildlife Federation* was implicitly endorsed by the Fourth Circuit Court of Appeals decision in *State of Missouri v. Department of the Army*, 672 F.2d 1297 (4th Cir. 1982).

NWRA, PECO and DER assert that the Department correctly applied this test in its analysis when it concluded that NWRA will not "add pollutants" to the North Branch or East Branch. These parties assert that diverting Delaware River water to the North Branch Neshaminy Creek will not "physically introduce" a pollutant "from the outside world" into the withdrawn Delaware River water; they argue additionally that Delaware River water is not a pollutant.

Appellants respond to these arguments by arguing that *NWF, supra* is distinguishable from the instant case; even if not distinguishable, appellants argue in the alternative, *NWF* actually supports the appellants' position when the teachings of this decision are transposed to the instant facts.

After a careful analysis of *NWF, supra* and the other cited cases, we are inclined to believe the circumstances of the instant matter are sufficiently different from those pertaining in *NWF, supra* that--to the extent that *NWF* provides any guidance to us--it should guide us to remand this matter to DER. Our reasons for coming to this conclusion are elaborated in the two

immediately following subsections (III B 3 and III B 4).

3. Deference Owed DER's Decision

As explained in the quote *supra* from NWRA's brief, DER's rationale for its ultimate conclusion that no NPDES permit would be required was set forth in a memorandum from DER attorneys Adler, Woelfling and Blazey. These DER counsel relied in large part on *NWF, supra*. In *NWF*, the Circuit Court began by examining the types of environmental impacts some reservoirs cause. The court compared these dam-induced water quality changes—low dissolved oxygen, dissolved minerals and nutrients (from bottom muds), temperature changes, sediment and supersaturation—to the definition of "pollutant" in §502(6), 33 U.S.C. §1362(6) to wit,

> ...dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

Noticing that none of the dam-induced water quality changes were specifically included in the pollutant list, and that EPA had construed the Act as excluding these changes from the definition of pollution, the Circuit Court held that the District Court had erred in not giving significant deference to EPA's construction of pollution. However, the Circuit Court concluded its opinion as follows:

> In closing, we emphasize the narrowness of our decision. It is not our function to decide whether EPA's interpretations of the term "discharge of a pollutant" is the best one or even whether it is more reasonable than the Wildlife Federation's interpretation. We hold merely that EPA's interpretation is reasonable, not inconsistent with congressional intent, and entitled to great deference; therefore it must be upheld.

This last quotation shows that *NWF, supra* scarcely was a ringing affirmation of EPA's thesis that dam discharges do not require NPDES permits.

Moreover, it is clear from the language in *NWF* that the Circuit Court chiefly visualized a discharge from a dammed river or stream into the lower channel of the same river or stream. Genuine pollutants, such as dissolved minerals (as opposed to temperature, which is more accurately classified as a water "quality"), would reach the downstream channel whether or not the dam was present; the major function of the dam is to change the instantaneous rates--but not the average rate--with which pollutants flow into the downstream channel.

Therefore it is far from apparent that *NWF* should be applied to the instant water project, wherein Delaware River water is being directed to a stream channel that the Delaware River otherwise would never reach. If NWRA's interpretation of *NWF* were to be followed literally, DER would have no right to establish pollutant concentration limits for discharges of the Delaware into the Neshaminy or Perkiomen, no matter how polluted the Delaware or how pristine the receiving streams; we do not believe this outcome would be consistent with Congress' intent when it passed the Federal Clean Water Act. Nor do we believe NWRA's interpretation would be consistent with the Legislature's intent in passing the Clean Streams Law, 35 P.S. §§691.1 *et seq.* or with the Environmental Quality Board's intent in promulgating the regulations in 25 Pa. Code Chapter 92. In fact, the EQB has made it explicit that the Commonwealth's standards for protecting water quality may be stricter than would follow solely from application of federal standards. 25 Pa. Code §92.17.

Furthermore, we question whether the extravagant deference (exemplified by the *NWF* decision) paid by federal courts to Federal administrative agencies should carry over to the Board's review of DER actions. This historical deference of the federal courts grows out of the constitutionally mandated separation of powers between administrative agencies (which are within the executive branch of government) and reviewing courts (which are located in the judicial branch).

In sharp contradiction, the Environmental Hearing Board is a quasi-judicial body located, as is DER, within the executive arm of Pennsylvania's government. 71 P.S. §510-21. Moreover, this Board is specifically charged with the duty to substitute its discretion for that of DER where, in the Board's opinion, DER has abused its discretion. *Warren Sand & Gravel Co., Inc. v. DER*, 20 Pa. Cmwlth. Ct. 186, 341 A.2d 556 (1975).

Even in the federal court system, statutory construction by administrative agencies is not given as much deference as questions involving questions of technical or scientific expertise, *E. I. duPont de Nemours & Co. v. Train*, 430 U.S. 112, 97 S. Ct. 965, 51 L. Ed. 2d 204 (1977). The D.C. Circuit distinguished the *duPont* case because it found the presence of scientific and technical aspects to EPA's characterization of dams as nonpoint sources, but DER's "no NPDES permit" decision under review here was based upon a legal analysis conducted by its counsel rather than upon any substantial application of technical or scientific expertise. (See Tr. 1783 for the testimony of DER official Charles Rehm.)

In determining what deference to pay to an administrative agency's decision, the federal courts also look to whether the determination was consistently held and had important policy considerations or was policy free. *NWF, supra*, 693 F.2d 156, 170. The D.C. Circuit found that EPA's determinations that dams were nonpoint sources had been contemporaneous with the Clean Water Act and had been consistently applied by EPA over the years. Of course, DER's determination, being recent, has not acquired the right to deference enjoyed by EPA's decision. Perhaps, more importantly, the court in *NWF, supra*, noted that EPA, faced with limited resources to carry out the NPDES permit program and faced with 2,000,000 dams (50,000 large dams to be permitted) had made a policy determination to take dams out of its NPDES permit program. Since it is EPA rather

than the courts which must process the permit applications the Courts quite rightly deferred to EPA's determination.

DER has not pointed us to any policy consideration supporting its instant determination. Instead of 2,000,000 or 50,000 similar cases it appears from the record that its policy decision in this appeal concerning the diversion of water from one river to another is *sui generis*. Reversing DER's policy here will necessitate processing but two permits; if it is correct (as DER argues) that its staff already has done the review work necessary to support an NPDES permit, the processing of these permits should impose no considerable burden.

In sum, the factors giving rise to great deference to the administrative decision in *NWF, supra* simply are not present here. Although the appellants have the burden of showing that DER's decision not to require an NPDES permit was an abuse of discretion, we should examine this issue without special reliance on DER's legal analysis stemming from the *NWF* holding. So doing, for reason amplified in the immediately following subsection, we conclude that the proposed discharges into the North Branch and the East Branch are potential "additions of pollutants" to those streams, requiring NPDES permits. Therefore we are remanding the permits to DER for the addition of conditions ensuing that no discharges under the project will occur unless and until NPDES permits have been obtained and are complied with.

In so ruling we are rejecting the appellants' arguments that the NPDES permits should have been secured before (or at least simultaneously with) the issuance of the permits which are the subjects of the instant appeals. 25 Pa. Code §92.21 requires persons "wishing to commence discharges of pollutants" to file an NPDES application within 180 days of the date when the discharge is expected to commence, unless exceptional circumstances receive a longer lead term. Even at this late date in these prolonged appeals, discharges are not expected to

begin within 180 days from now. The circumstances of this controversy are exeptional, unique even, but we do not see that they demand overturning the permit grants solely because NPDES permits have not yet been secured. It can be argued that the first prong of the *Payne v. Kassab* test for compliance with Article I Section 27 of the Pennsylvania Constitution (*Payne v. Kassab*, 11 Pa. Cmwlth. 24, 312 A.2d 86 (1973)) implies DER should have issued the NPDES permit (which we now have ruled is required) before the permits appealed-from were issued. However, the EQB presumably was aware of *Payne v. Kassab* when it promulgated 25 Pa. Code §92.21. The EQB could have required that an NPDES permit for a discharge be obtained before the construction permits which would produce the discharge are granted; instead the EHB merely required that an NPDES permit be obtained within 180 days of the date when the discharge is expected to commence. We agree with the EQB that 25 Pa. Code §92.21 suffices to protect the environment in a fashion fully consistent with the requirements of Article I Section 27 and the intent of *Payne v. Kassab*. Article I Section 27 does not force us to overturn the appealed-from permits, provided we can ensure (as we have) that the NPDES requirements of the applicable Federal Clean Water Act will be complied with before any discharges occur.

4. Why An NPDES Permit Is Needed

Once we have concluded that we need not defer to DER's legal analysis in this matter (including DER's reliance on *NWF, supra*), the further conclusion that we must require an NPDES permit under the facts of this appeal seems unavoidable. The record demonstrates that the Delaware River water which would be diverted into the East Branch and the North Branch contains heavy metals (including lead), phosphorus, nitrates and fecal coliform. Clearly, these substances come under some (or all) of the phrases "chemical wastes", "biological

wastes", "industrial, municipal and agricultural wastes" which are "pollutants" as defined by the Clean Water Act.

Of course, it may be these substances occur in such small amounts in the Delaware River water that no treatment will be required before discharging into the East Branch or North Branch, but this is the very question which the NPDES permit process is designed to answer. Moreover, it is already apparent, from the evidence at hand, that the levels of lead in the Delaware simply cannot be dismissed as "very small" without further careful examination. To ascertain the Delaware River's water quality, Charles Rehm, Chief of the Water Quality Planning Section of DER's Norristown Office, reviewed water quality data submitted by NWRA's consultants as well as certain STORET data (computer print-outs of water quality analyses conducted in the Delaware by various water quality control agencies in the ordinary course of their duties). Mr. Rehm chose to rely upon data gathered at the Morrisville (PA) gauge (which being essentially across the Delaware from Trenton (NJ) is located about fifteen miles downstream from Point Pleasant) because there had been substantial sampling at this location and he assumed that Morrisville water quality was representative of Point Pleasant water quality. In a chart prepared by Mr. Rehm and introduced as a Del-Aware exhibit, Mr. Rehm compared the long-term average concentrations of various water quality parameters at Morrisville to these same parameters in *inter alia* the North Branch and the East Branch. Mr. Rehm determined that the long-term average concentration for the heavy metal lead in the Delaware was 51.4 mg/l (micrograms per liter).

Mr. Rehm acknowledged that this number exceeded the instream water quality standard of 50 mg/l set in 25 Pa. Code Chapter 93 of DER's regulations, but he felt that introduction of this water into the East Branch and the North Branch was nevertheless permitted because this lead value represented only a "small increase" over the Chapter 93 standard. However, Mr. Rehm's position

ignores the plain mandate of law. Where a regulation establishes a definite numerical standard, DER may not decide that some violations of that standard are so small as to be "de minimis". *Commonwealth v. Pa. Liquor Control Board*, 471 A.2d 941 (Pa. Cmwlth. 1984). The principle that DER has a mandatory duty not to allow water quality standards to be exceeded is embodied, e.g., in 25 Pa. Code §95.1(a).

Admittedly, if the East Branch had sufficient flow at the point of discharge, a discharge of 51.4 mg/l of lead might not cause a violation of Chapter 93 standards (after dilution by the receiving stream), but this record demonstrates that during low flow periods the Delaware Diversion will constitute virtually the entire flow of the East Branch and North Branch at the points of discharge. In any event, if DER chose to rely on the diluting capabilities of the receiving stream, it should have carried through a load analysis similar to the waste load allocation process set forth in 25 Pa. Code §95.3. Because DER determined no NPDES permit was necessary for the diversions (and because Mr. Rehm was not perturbed by a "little" excess above water quality standards) it did not go through this process.

While we have emphasized Delaware River lead we note that Mr. Rehm's analysis as presented in Del-Aware Exhibit 52 also shows that the average water quality of the Delaware at Morrisville exceeds Chapter 93 standards for aluminum, bacteria, copper and phenol. Furthermore, Mr. Rehm admitted the STORET data showed that water quality in the Delaware at Lumberville (NJ), only two miles downstream from Point Pleasant, manifested the presence of: copper at 9 mg/l--compared to a 5.6 mg/l standard; zinc at 110 mg/l-compared to a 95 mg/l standard; iron at 4700 mg/l--compared to 1500 mg/l and total phosphorus exeeding the chapter 93 standard by 3 times. It is true that Mr. Rehm discounted

the Lumberville data, due to the relatively small number of samples there reported and due to his impression that the Lumberville data could have been influenced by a discharge from a plater on the NJ side. Nevertheless, the totality of Mr. Rehm's testimony hardly can be said to justify Mr. Rehm's conclusion---arrived at without quantitative analysis of present North Branch and East Branch polluted loads and flow rates--that the effects on water quality in the receiving stream would be inconsequential.

Apparently, Mr. Rehm also was influenced by his opinion that the overall water quality in the Delaware equaled or exceeded the present water quality in the receiving streams. However, even assuming arguendo that the present water quality of the East Branch (and/or the North Branch) is poorer than the Delaware River, we do not believe this is relevant to the issue of whether DER may permit Chapter 93 water quality numbers to be exceeded. This battle was fought long ago in Pennsylvania, and long ago it was determined a polluted receiving stream deserved protection so that polluted streams could be reclaimed and restored to an unpolluted condition, 35 P.S. §691.4(3); *Commonwealth of PA v. Gilpin Township*, 52 Pa. Commonwealth Ct. 414, 415 A.2d 1002 (1980); *Commonwealth v. Barnes & Tucker Company*, 9 Pa. Commonwealth Ct. 1, 303 A.2d 544 (1973); rev'd 455 Pa. 392, 319 A.2d 871 (1974).

In other words, the record indicates that the Delaware may be capable of transferring significant concentrations of pollutants to the receiving streams. Thus the only question remaining, before we legitimately can conclude that NPDES permits should be required, is whether the diversion of Delaware River pollutants to the North Branch or East Branch constitutes "an addition of a pollutant" under the Federal Clean Water Act. In view of considerations discussed *supra*, we are to decide this question without particular deference to DER's legal analysis or to the holding of the *NWF* Court, although we certainly

should pay careful attention to the reasoning of DER and the *NWF* Court. We have paid such attention, and simply cannot agree with DER or the *NWF* Court under the facts of the instant appeal. In particular, as we have stresssed earlier, we cannot agree Congress and the Pennsylvania Legislature intended that DER would have no right to establish pollutant concentration limits for discharges of the Delaware into the Neshaminy or the Perkiomen, no matter how polluted the Delaware or how pristine the receiving streams. Therefore we hold that the diversions presently appealed-from do constitute additions of pollutants under the Clean Water Act.

NWRA and PECO argue that any pollutants which may have entered the Delaware River were not introduced by their activities, so that under the Federal Clean Water Act they should not be held responsible for these pollutants. In this regard, NWRA cites *Appalachian Power Company v. Train*, 545 Fed. 2d 1351 (4th Cir. 1976), which held that utilities which remove water from a river for cooling may return the water to the river without removing the pollutants originally present. *Appalachian Power, supra* is distinguishable, however, because it (as did *NWF, supra*) dealt with the return <u>to the same waterway</u> of pollutants removed therefrom; the instant appeal deals with transfer of pollutants from one river into two other rivers. In *Appalachian Power, supra* even more than in *NWF, supra* it could be (and was) argued that the activity of the would-be permittee did not cause the pollution, so that the permittee should not be responsible for this pollution.

That a different situation pertains where <u>man made</u> activities cause pollution occurring in one body of water to reach another body of water is made clear by two Pennsylvania cases which, albeit they arose under state statutes, nevertheless addressed this very issue. In *Harmar Coal Co. v. DER*, 306 A.2d 308, 452 Pa. 77 (1973), a mine operator argued that since he didn't

cause the acid pollution of the water he was pumping from his mine, he didn't have to treat the pumped water when he discharged it into the adjacent surface waters. The Pennsylvania Supreme Court, though willing to concede that Harmar Coal Company had not caused the pollution to the groundwater, held that "but for" the company's activities the pollution would not have reached the surface waters.

The same Court utilized similar reasoning in *Commonwealth v. Barnes & Tucker Coal Company*, 455 Pa. 392, 319 A.2d 871 (1974), which involved the breakout of acid mine drainage from an abandoned coal mine. The trial court in *Barnes & Tucker, supra* had found that much of the acid mine drainage emanating from the closed mine originated in adjacent coal mines, and ran through insufficient interior barriers into the Barnes and Tucker mine before discharging; nevertheless, the Supreme Court had little trouble in assigning liability to treat all the discharged water upon Barnes and Tucker Coal Company. Again, there was no doubt in *Barnes & Tucker, supra*, as there had been none in *Harmar, supra*, that the company held responsible had not caused the pollution of the waters in question; what each company did was cause or permit the transfer of this polluted water to another body of water. That is exactly what PECO and NWRA propose to do in the instant case.

DER and NWRA also argue that DER conducted an analysis and review "as if" a NPDES permit was to be required. Frankly, the Board is at a loss as to how to consider this argument. Certainly, no party has cited any authority for the proposition that DER's efforts constitute substantial compliance with the Federal Clean Water Act; as explained above we feel that full compliance with this Act is mandated by applicable state law, including Article I Section 27 of the Pennsylvania Constitution.

To sum it up, it was an abuse of discretion for DER to have issued the appealed-from permits without requiring that discharges into the receiving streams comply with NPDES permits. This deficiency of DER's actions in issuing the appealed-from permits readily can be remedied by remand to DER, as per our Order *infra*, without any need to wholly overturn the permits already granted.

We add that the conclusion we have reached concerning the need for NPDES permits causes us to wonder about the relevance of the standing issue discussed so extensively *supra* (subsection III B 1). In the past the Board has not been willing to allow an appellant to "act as a private or Commonwealth attorney general, looking over DER's shoulders" as DER enforces its governing statutes and regulations. *Pennsylvania Game Commission v. DER and Ganzer Sand and Gravel*, Docket No. 82-284-G (Opinion and Order, February 3, 1984). For instance, in *Ganzer* we wrote:

> Every allowable Commission claim of procedural or substantive error by DER in granting *Ganzer* its permit must be related to the Commission's alleged injuries under the *William Penn* standard.

Although we certainly do not disavow this holding from *Ganzer*, we question our discretion--in the large and complex water diversion project presently before us--to ignore, solely on grounds of standing, our conclusion from a fully litigated record that an NPDES permit is needed to ensure protection of the North Branch (as explained earlier, standing to appeal the "no NPDES permit" decision for the East Branch has not been challenged). We see no need to rule on this question at this time; the issue will be mooted unless our provisional ruling that Del-Aware has standing to appeal the "no NPDES permit" decision for the North Branch is reversed after reconsideration of this adjudication. The issue will become crucial, however, if our grant of standing to Del-Aware is reversed.

C. ENVIRONMENTAL IMPACTS ON RECEIVING STREAMS

Having decided that the presently appealed permits must be remanded to DER in order that the "no NPDES decision" be remedied, we next turn to the host of additional issues the appellants have raised concerning environmental impacts on the receiving streams. The following discussion of these environmental issues is organized under a set of reasonably sensible and comprehensive subheadings; these subheadings do not include "Water Quality", however, because that subject already has been examined during our analysis of the need for NPDES permits (subsection III B 4).

1. Erosion

One of the most hotly contended items in this complex case was the accelerated erosion which the appellants (under which appellation it now is convenient to include the intervenors, Friends of Branch Creek) asserted would be caused in the headwaters of the East Branch by the diversion of up to 46 million gallons of Delaware River water per day (65 cfs) into that stream. Similar claims of accelerated erosion pertain to the North Branch.

The East Branch of the Perkiomen is a small stream, virtually a rivulet, at the point of discharge.[5] In its median flow of 1.5 cgs, a person could jump across it. The stream channel, carved by higher flows, is itself only 16 feet wide at this point.

From this point near the Elephant Road bridge, the stream meanders northwestward towards the main stem of the Perkiomen. In its upper reaches, the stream is, during normal low flows, a series of pools and riffles. The bottom is loose rock. The banks are cut through silty loam and clay loam soils.

The East Branch is a flashy stream. The large amount of land cleared for farming and the high amount of clay in the soils contribute to rapid run-off after rainfall or thaws of snowfall, causing stream flows to increase quickly

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5. This description is taken in large measure from the post-hearing brief filed by FBC.

after precipitation and then subside. Sheet and gully erosion from farmland make the high flows fairly turbid. These turbid flows are, in the creek, less erosive than clear water flows, due to the reduced sediment carrying capacity of the water which is already silt-laden.

Erosion does occur, however, at levels of flow that are below floodstage. Photographs produced during the hearings showed bank slumping and slope failure during spring run-off. (Del-Aware Exhibits 98A-C) Portions of the bank collapse into the stream in blocks, or are eroded gradually. Mr. Hershey testified that, in measuring the creek, flows from a single thaw removed a foot of soil from the bank.

Aside from the effects of erosion, which can be corrected by improved land management practices, the water quality of the East Branch headwaters is good.

In the Sellersville-Perkasie area, some six miles downstream from the point of discharge, the East Branch is pooled behind a series of low dams. Below this point, the Sellersville sewage treatment plant discharges wastewater to the stream. Water quality in general is reduced, as other sources add pollutants. The stream is much larger, with increased flows of numerous tributaries. A larger channel and larger flows combine with lower velocities to make this lower section of the East Branch a distinguishably different stream.

Since the maximum diverted flow of 65 cfs is approximately 50 times the median flow of the East Branch at Elephant Road, one's intuitive response is that this diversion must have some substantial impacts on the East Branch. Indeed, there seems to be no real dispute among the parties to the proposition that if one tries to force too much water through a small stream, the course and cross section of that stream will be changed by the removal of erodible materials from the streambanks and bottom. There also is no real dispute that in situations where streambed and bank erosion exceed normal levels, there will be increased

turbidity in the stream, increased deposition of sediment on the stream bottom and negative impacts on the aquatic community in the stream. The North Branch too is a tiny stream at the point of the outlet. It too is a flashy stream meandering through an erodible area, so the discussion relating to the East Branch holds with equal rigor to the North Branch.

The battle is joined, however, as to exactly when soil erosion begins to take place and even (though to a lesser degree) as to the mechanism which causes this problem.

DER's findings and conclusions on this issue, as contained on page 41 of its Environmental Assessment, are as follows:

> Increased Flows
>
> The major effects on the stream flows and stream channel of the East Branch Perkiomen Creek resulting from the addition of waters diverted from the Delaware were investigated in the 1970 report by E. H. Bourquard Associates, Inc. Because of proposed pumping rate changes, another review was made by Philadelphia Electric Company in its Environmental Report (July 1979).
>
> To briefly summarize the findings of these studies, a total of 15 locations were investigated along the 117,000-foot reach between the mouth of the East Branch and Elephant Road bridge. Low, median and flood flows were established at each of these locations for both existing and proposed conditions. In Bourquard's original report, the average rate of pumping Delaware River water into the East Branch was estimated to be 54 cfs. The average rate of pumping in PECO's updated calculations is estimated to be 34 cfs, not including water losses in transmit. The maximum pumping rate used in both reports was 65 cfs.
>
> For purposes of comparison, the channel section closest to the point of in-flow will be discussed. This section is considered the most critical since the cross-sectional area of the channel is the smallest at this point.
>
> During low-flow periods, only a small low-flow channel is required to convey the entire stream flow of approximately 0.05 cfs. Depths of flow are calculated to be 0.02 feet and velocities are 0.17 fps. During maximum pumpage, the flow increases to 65 cfs,

depths to 1.28 feet and velocities approach 3.0 fps. This rate of flow is not considered to be erosive and flows should be contained within existing stream channels.

During periods of median stream flow, existing conditions are such that flows are 1.4 cfs, depths approach 0.15 feet and velocities are calculated at 0.61 fps. With the maximum increased flow of 65 cfs, the depths would increase to 1.3 feet and velocities to 3.02 fps. Again, there should not be any noticable erosion on existing stream banks. (footnotes omitted)

Not surprisingly, appellants and intervenors challenge both DER's findings and the "no erosion" conclusion it draws therefrom. The record indicates that the Bourquard study upon which DER relied was the work product of a civil engineer named Robert Steacy. Although Mr. Steacy, a 1939 graduate of CCNY, has had a long engineering career (which was mostly spent with the U.S.G.S.) and certainly impressed the presiding officer as a competent and honest witness, until the present case Mr. Steacy had not proffered an opinion on expected erosion nor had he predicted future flows in a stream. In the instant matter, Mr. Steacy's predictions were based upon a single site visit to the East Branch, during which Mr. Steacy observed this stream at various points from highway bridges.

Instead of field measurements, Mr. Steacy relied upon calculations of stream velocity using Manning's formula, and compared these calculated values to a table. Both the formula and the table appear in the Handbook of Hydraulics by Brater and King, Sixth Edition.

Manning's forumla ($V= \frac{1.486\ r^{2/3} S^{1/2}}{n}$) estimates the velocity of water flowing past a point in a pipe, channel or stream, as being proportional to positive powers of the sideslope (S) and hydraulic radius (r) of the pipe channel and/or stream, and as inversely proportional to the roughness (n) of the conveying device. The hydraulic radius (r) is a measure of the curvature of the conveying medium, and thus depends upon the manner in which a given flow fits the conveying medium,

i.e., the cross-sectional area over the wetted perimeter equals r. To calculate or measure r, therefore, one must calculate or estimate the average depth of flow and the effective slope of the stream banks. At each of the points where he calculated velocities, Mr. Steacy measured neither the depth nor the slopes of the banks, but rather estimated these dimensions. The expert witnesses proffered by appellants and intervenors challenged Mr. Steacy on both these estimates. Moreover, they challenged the n or roughness value chosen by Mr. Steacy. As to the lack-of-measurement arguments raised by appellants' experts, we agree that it would have been desirable for Mr. Steacy to have measured depth and side slopes for at least one point, and we note with approval that appellants' witness John T. Hershey and his helpers did measure the depth and slopes of the East Branch at certain points; but we must note that these measurements did not take place when the flow in the East Branch was at or near 65 cfs, i.e., during conditions approximating the conditions applicable in the East Branch during maximum diversions.

It seems to us that if one really wants to know how a flow of 65 cfs fits the East Branch channel, one has to measure the channel at that flow. Failing that, the applicants, DER, the appellants, the intervenors and this Board are relegated to discussing theoretical calculations.

The most relevant of such calculations was the 3.02 feet per second velocity calculated by Mr. Steacy for the flow of the East Branch at Elephant Road with a 65 cfs diversion. DER relied on this calculation. Therefore, we will assume for the rest of this discussion that the upper reaches of the East Branch will be subjected to a velocity of 3.02 fps from the proposed diversion. So assuming, the crux question becomes whether this velocity will cause substantial erosion in the East Branch. Several of the witnesses, including Mr. Steacy, testified that there is no sharp line between those velocities which no longer

can maintain silt in motion and thus will lead to sediment settling on the bottom of the East Branch, and those velocities which will scour the banks and bed of the East Branch. Both of these velocities are considered critical velocities. For our purposes we will examine only the upper critical velocity, the velocity at which scouring begins. In this regard, Dr. Robert Dresnack, a well qualified civil and sanitary engineer proffered by NWRA, agreed that a valid approach for determining critical velocity was to refer to a table appearing on page 7-24 of Brater and King.

It is important to note that this table sets forth permissible velocities in canals after aging. The textual material preceding this table emphasizes that the process of aging--especially by the deposition of a variety of materials from fine to coarse on the sides and bed of a stream, and most especially by the deposition of colloidal materials--tends to cement the clay, silt, sand and gravel along the sides and bed in such a manner as to resist erosive effects. Thus, permissible velocities in aged canals are greater than in newly rolled canals. Several witnesses testified that the East Branch, as a natural stream which already has received substantial runoff from adjacent farmer's fields, resembles an aged canal rather than a new one. We shall make that assumption, but in doing so we note that the Brater and King Table already assumes an aged canal.

The table in question provides as follows:

Permissible Canal Velocities after Aging
Recommended in 1926 by Special Committee on Irrigation Research, ASCE

Original material excavated	Clear water, no detritus	Water transporting colloidal silts	Water transporting non-colloidal silts, sands, gravels, or rock fragments
Fine sand, non-colloidal	1.50	2.50	1.50
Sandy loam, non-colloidal	1.75	2.50	2.00
Silt loam, non-colloidal	2.00	3.00	2.00
Alluvial silts, non-colloidal	2.00	3.50	2.00
Ordinary firm loam	2.50	3.50	2.25
Volcanic ash	2.50	3.50	2.00
Fine gravel	2.50	5.00	3.75
Stiff clay, very colloidal	3.75	5.00	3.00
Graded, loam to cobbles, non-colloidal	3.75	5.00	5.00
Alluvial silts, colloidal	3.75	5.00	3.00
Graded, silt to cobbles, colloidal	4.00	5.50	5.00
Coarse gravel, non-colloidal	4.00	6.00	6.50
Cobbles and shingles	5.00	5.50	6.50
Shales and hardpans	5.00	6.00	5.00

We remark that although the table's recommendations are nearly 50 years old, the possibility that the table now is outdated was not raised during the hearings.

Mr. Steacy selected the value of 3.5 fps as the critical velocity from this table because he assumed that the banks and bed of the East Branch were composed of ordinary firm loam, and because he also assumed that the Delaware River water transferred to the East Branch would be transporting colloidal silts but not sands, gravels or rock fragments.

Both of Mr. Steacy's assumptions were hotly challenged by the appellants and intervenors. As to the type of soil in the banks and bed, the challengers noted that Mr. Steacy's assumption was based upon a visual investigation at certain locations along the East Branch, conducted during his single visit to the site. In spite of the fact that Brater and King noted the importance of properly defining the soil along the line of the waterway before applying the table, neither Mr. Steacy nor anyone else on behalf of PECO, NWRA or DER tested the soils in the vicinity of the East Branch or examined the available literature on this subject.

DER's aquatic biologist, who has examined the entire East Branch more than once, did have an opinion on the type of soil materials adjacent thereto based on visual examination; his opinion, that the substrate was composed of small rocks, boulders, rubble, a lot of silt and a lot of clay seems to be at variance with Mr. Steacy's observations (of ordinary firm loam). A similar analysis of the North Branch substrate was supplied by Paul Harmon--NWRA's aquatic biologist.

The appellants' hydrological witness, Jonathan T. Phillippe, did attempt to objectively determine soil types in and adjacent to the East Branch. One source of the information he used was the soil analysis performed on behalf of NWRA for construction of the Bradshaw Reservoir. This analysis showed the soils at the Bradshaw site to be predominately silty or sandy clay loams.

The Applicants' experts disparaged this analysis, and pointed out accurately enough that the proposed Bradshaw Reservoir was at least 6 miles away from the outlet on the East Branch. However, Mr. Steacy also didn't like the results of an analysis of borehole materials even though the borehole in question was in the bank of the East Branch.[6]

Mr. Steacy also rejected the analysis of soils contained in the Bucks County Soils Conservation Map for the East Branch area. This analysis, like the Bradshaw Reservoir and borehole analysis, supported the appellants' view that soils in and near the East Branch are more properly grouped in the silt loam, non-colloidal category than in the firm loam category. The Soils Conservation Map is a carefully prepared document. All in all, therefore, though recognizing that the appellants have the burden of proof, we find, for purposes of this Adjudication, that the soils in the vicinity of the East Branch fall under the silt loam non-colloidal category. Both Dr. Dresnack and Mr. Steacy admitted that if the soils were of the latter type the critical velocity would be 3.00 fps even assuming that the Delaware River water transported mainly colloidal silts, and would be 2.00 fps if this diverted water were considered to be either clear or containing silts, sands, gravels and rock fragments.

On the crucial issue of the quality of the diverted Delaware River water, there is again, not surprisingly, a split of opinion between appellants and Applicants' experts. Again the opinions are mostly subjective. Appellants' experts suggest that the Delaware at Point Pleasant is not greatly silt laden in the first instance, and that storage in Bradshaw Reservoir will cause much of the silt in the Delaware to settle out. The Applicants' experts argue that the Delaware River water is laden with colloidal solids, and also argue that these

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6. This analysis showed the presence of hard silt, little shale or gravel, and little clay.

solids will not settle out during the two days the Delaware water will be stored in the Bradshaw Reservoir before being released to the East Branch.

The only scientific attempt to predict the amount and nature of solids to be expected in Delaware River water was conducted by Dr. Dresnack. Dr. Dresnack reviewed water quality analyses of Delaware River water; he inferred that a large percentage of the solids in the Delaware must be colloidal because they are not suspended solids. Accepting this inference, which was contested by appellants' counsel but not contradicted by evidence, Dr. Dresnack's further analysis seems to undercut his ultimate conclusion. Essentially, Dr. Dresnack's further analysis of the Delaware River's behavior over 6 calendar years demonstrated that most of the sediment carried by the Delaware is associated with high water levels; for instance, 50% of the yearly sediment load is transported during only six days. The corollary of this analysis, as is plain from Dr. Dresnack's exhibits, is that during the warm weather-lower flow periods when the highest diversions are contemplated, little sediment (colloidal or otherwise) will be transported by the Delaware. Therefore, we find that the water to be diverted to the East Branch will be clear water. Accordingly, along with our finding on soils types, we find from the above Table and in accordance with the testimony of appellants' experts that the critical velocity in the East Branch will be 2.0 fps.

We note that Applicants' experts expounded an alternative theory to demonstrate that erosion in the East Branch will be minimal. They testified that since even the maximum diversion will not approximate the 1.5 year flow of the East Branch, and since the 1.5 year flow (the so called "bank full" flow) is the dominant flow for cutting the channel, no excessive erosion can be expected. While this testimony does alleviate the Board's concerns about possible flooding from the diversion, neither the Brater and King text nor the ASCE Manual of Practice No. 54--which sets forth a similar table (Table 5.2)--requires bank full

conditions as a precondition to erosion; critical velocity alone is the mechanism discussed in these sources (which sources were authenticated and used by all parties' experts). Thus the Board concludes that if and when flows in the East Branch exceed 2.0 fps in its upper reaches, substantial erosion of the bed and bank facing the wetted perimeter of the stream occurs.

The above discussion has been restricted to the East Branch. It holds with equal force to the North Branch of the Neshaminy. The same clear Delaware River water is proposed to be discharged into each stream. The North Branch is much closer to the Bradshaw site than is the East Branch, so that the Bradshaw soil analysis applies with even more force to the North Branch. NWRA's own expert, Paul Harmon, on the basis of considerable on-site observation, concluded that this stream's substrate was a "fairly erodible" mixture of "gravel, rubble and Bowmansville silt".

Consequently for the North Branch as for the East Branch we conclude that 2.0 fps is the critical velocity.

Since NWRA's own engineering expert, Dr. Dresnack, has calculated a maximum velocity at full diversion of 2.2 fps in the North Branch, here too the Applicants' own expert has predicted an instream flow which exceeds the velocity we've found to be critical.

What to do about this situation? DER's response to the potential for erosion in each creek was to condition each permit, so that each permittee had to: (1) monitor and inspect the portion of its respective creek adjacent to and below the outlet structure on a regular basis; (2) correct any observed erosion on the bed; and (3) stabilize and revegetate any exposed portion of the stream bank.

The appellants are not satisfied with these conditions and rightfully so. The permit conditions, described above, at best address the erosion problem

after it is created. It is the genius of the permitting process to anticipate and prevent environmental problems before they arise. Moreover, the above conditions provide neither the permittees, nor DER nor interested third parties with any verifiable standard.

The DER official in charge of this project, R. Timothy Weston, albeit by way of a legal opinion, admitted that erosive velocities caused by an outlet permitted under 25 Pa. Code Chapter 105 would have to be mitigated in order to comply with 25 Pa. Code §§105.14-16 (as well as with Article I, Section 27 of the Pennsylvania Constitution). We agree with Mr. Weston's legal analysis in this regard. In *Payne v. Kassab*, 11 Pa. Commonwealth Ct. 14, 312 A.2d 86 (1973), the Commonwealth Court promulgated a three prong test to review the compliance of an agency or instrumentability of the Commonwealth with its duties as a trustee of Pennsylvania's Public Natural Resources as per Article I, Section 27 of Pennsylvania's Constitution. This threefold standard is:

> (1) Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources? (2) Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum? (3) Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived therefrom that to proceed further would be an abuse of discretion?

This standard has been uniformly applied by this Board and Commonwealth Court when reviewing actions of DER, *Concerned Citizens for Orderly Progress v. DER*, 36 Pa. Commonwealth Ct. 192, 387 A.2d 989 (1978).

Particularly relevant to DER's obligations under the second prong of the *Payne* test is 25 Pa. Code §105.16(a) of DER's regulations, which provides:

> The determination of whether the potential for significant environmental harm exists will be made by the Department after consultation with the applicant and other concerned governmental agencies. If the Department determines that there may be a significant impact on natural, scenic, historic, or aesthetic

values of the environment, the Department will consult with the applicant to examine ways to reduce the environmental harm to a minimum.

We are not unmindful that it might be impossible for PECO or NWRA to achieve the critical velocity of 2.0 fps into the East Branch and North Branch, respectively, i.e., to reduce the impact on these streams to an insignificant level. In this event, we believe that under the third prong of the *Payne v. Kassab* test it is incumbent upon DER to balance the need for the project against the impact of erosion on the receiving streams, after all possible mitigation of the erosive impacts. Indeed, this conclusion is merely a paraphrase of the testimony of R. Timothy Weston, Esquire (Tr. p. 2495), the DER official most intimately connected with the Point Pleasant project.

Since, as per our earlier discussion, we already are remanding this matter to DER, it will have the opportunity to conduct this balancing analysis during remand.

2. Flooding

The appellants also raised concerns about the possibility of flooding in the East Branch caused by the discharge. On this point DER, at page 42 of its Environmental Assessment, set forth the following:

> To analyze the effects on flood flows, the following table was prepared for this inflow point utilizing data from Tables 2 and 3 in PECO's 1979 Environmental Report.
>
> Table 4

	Q(cfs)	Depth (feet)	Velocity (fps)
Median Flow	1.4	0.15	0.61
Median Flow + Point Pleasant Diversion	66.4	1.30	3.02
Mean Annual Flood	320.0	2.6	5.1
5 - Year Flood	467.0	3.2	5.7
50 - Year Flood	960.0	4.1	6.6

> As noted above, the addition of the 65 cfs to the median flows does not place the stream in a mean annual flood condition.
>
> The operating plan for the project requires PECO to monitor stream flows of the East Branch and, with the

advent of a flood on that stream, reduce or terminate pumpages from Bradshaw Reservoir. When the stream flow of the East Branch approaches potential flood levels (238 cfs at the Bucks Road Gaging Station which is the peak flow of a one-year flood), an alarm is automatically activated at the pumping control center and the Bradshaw pumps, if operating, shall be stopped.

The data in this table were sponsored by several of the applicants' witnesses and were subject only to a narrow attack by the appellants.

Essentially, the appellants admitted that during steady state conditions the addition of 65 cfs to the East Branch would not cause this stream to overtop its banks. However, the appellants demonstrated that because the Bucks Road Gauging Station will be downstream from the diversion point at Elephant Road, a heavy localized rainstorm could cause the East Branch to be overtopped below Elephant Road before the Bucks Road Station read 238 cfs.

Applicants counter this argument not by denying its factual basis, but by asserting that the diversion system can be operated satisfactorily if the flow from Bradshaw Reservoir is shut off when the Bucks Road Gauge reads 125 cfs rather than 238 cfs. Applicants point out that, due to the topography of the Bradshaw to East Branch diversion pipeline, only about half of the water in this pipeline will reach the East Branch after the reservoir discharge is terminated (half of the pipeline runs up-hill). Applicants further assert that this cutoff can be effected in 10 minutes. Neither of these assertions were contradicted by the challengers.

We therefore conclude that if PECO's permit is conditioned to call forth a cutoff if and when the Bucks Road gauge reads 125 cfs, no flooding of the East Branch will be expected.

With regard to the North Branch, here too the undisputed evidence demonstrated that the addition of even a full diversion (of 160 cfs) to the

median flow of 1.34 would not cause flow therein to exceed the mean annual flow in the North Branch of 280 cfs. Challengers did not dispute this evidence and, unlike the situation on the East Branch, offered no evidence of even short-term flooding problems which would be exacerbated by the diversion.

3. Wetlands

Appellants raised an issue concerning the adverse impact on wetlands adjacent to the East Branch caused by the diversion. Appellants' evidence on this issue consisted in large part of testimony based upon a poorly scaled Bucks County map and other unidentified maps, from which challengers' witness John Hershey calculated that as much as 100 acres of wetland would be affected. Setting aside the question of whether the wetlands identified in this map are "important wetlands" as used in 25 Pa. Code §105.17 (see section III D 2 *infra*), there is no evidence that the diversion would cause any wetlands to be inundated. Absent such evidence we cannot call DER remiss in failing to additionally condition the permits in question to protect these wetlands. The small amount of wetlands adjacent the Delaware which would be affected by the project are discussed below.

4. Aquatic Biota

Considerable testimony in this matter addressed the present state of the aquatic communities in the East Branch and the North Branch as well as the projected impacts on these communities from the proposed diversions. DER's aquatic biologist, Donald Knorr, testified that the aquatic community in the upper reaches of the East Branch, just below the proposed discharge point, was typical of streams that experience dry periods and also experience agricultural runoff. He admitted, in response to a hypothetical question, that if the East Branch were subject to continued high levels of turbidity over a long period of time (as throughout a summer), the aquatic community therein could be damaged.

However, absent excessive and long lasting erosion, Mr. Knorr predicted that the diversion would actually improve the environment for the aquatic community in the East Branch by increasing the habitat available to this community. Whereas without the diversion the upper reach of the East Branch "dries up" in the summer leaving only isolated pool areas, the diversion would insure a year round supply of moving and oxygenated water.

Applicants' aquatic biologist, Paul Harmon, who has studied the aquatic biology in the East Branch for the last 12 years, agreed with Mr. Knorr on both of the above points. The appellants did not introduce any evidence to contradict the above witnesses, and in general narrowed their concerns on aquatic biology to the erosional effects discussed above. Since we have found that imposing a 2.0 fps limit on velocity in the East Branch will reduce accelerated erosion caused by the diversion to minimal levels, we also find that imposing this velocity limit will eliminate any undue stress on the East Branch aquatic community.

Although it is not so clear from the record that the appellants even questioned the impacts of diversion upon the aquatic community in the North Branch, we find that since the same limitation will appear in NWRA's permit as in PECO's, the North Branch's aquatic community should be equally protected.

D. DELAWARE RIVER IMPACTS

As described in more detail above, the intake structure for the Point Pleasant Project is to be located on the west bank of the Delaware River near the southern boundary of the Village of Point Pleasant, Plumstead Township, Bucks County. The intake structure itself will consist of an assembly of 24 Johnston wedge wire screens which are to be located approximately 245 feet streamward of the Pennsylvania bank of the Delaware River. The screens, each of which is 40 inches in diameter, will be grouped in 3 groups of 8 each and

will be connected by a 72-inch diameter reinforced concrete pipe to a gate well located along the bank. Each grouping of screens and connecting pipe comprises a cylinder, whose long axis is aligned with the Delaware River's main axis.

These cylinders are to be supported some two feet above the Delaware's floor and some four feet below the river surface at low flows. From the gate well, a buried 72-inch diameter reinforced concrete pipe will pass under the Delaware Canal to a pump station located on the Delaware's bank east of the Delaware Canal (Roosevelt State Park).

The pump station is to be 80 feet long and will stand 45 feet above finished grade. The grade of the station is below that of the tow path along the Delaware Canal, but the roof of the station will be at least 15 feet above the Delaware Canal. The station, which is to be constructed of reinforced concrete, is designed to resemble a barn. Behind the pump station (facing the canal) an electric substation protected by a chain fence is to be located, the fence approaching within 30 feet of the canal, and the substation and fence being clearly visible therefrom.

1. Impacts on Local Fishing

Appellants raised concerns about the effects of installation and operation of the intake on the local aquatic ecology. The only effects of the intake to be considered here are the operational impacts.

For purposes of this section of this Adjudication the inquiry will be further limited to the impact of the structure on local fishing. In this regard, appellants raised concerns that the intake structure could pose a physical hazard to fishermen fishing in this area from boats or inner tubes, that its presence could cause the shad to veer away from the Pennsylvania shore, and that it would adversely impact local fish populations through the entrainment and impingement of fish eggs and larvae.

In order to better comprehend each of these issues it is desirable to know that the proposed intake structure is to be located approximately 800 feet downstream from the point where the Tohickon Creek enters the Delaware. Over the years the Tohickon has created a bar or thumb of land which is about 800 feet in length and extends perhaps 100 feet streamward from the Pennsylvania shore. At Delaware River flows of 6000 cfs this bar becomes overtopped and no longer influences the surface flow of the Delaware, but at lower flows the bar begins to emerge from the Delaware and its emergence causes an eddy to form downstream. The size and shape of this eddy changes with changes in Delaware River flow. Lower flows cause the eddy to lose strength, but also to extend further out into the Delaware River.

The testimony in this matter and even the exhibits introduced by Del-Aware (see especially Del-Aware Exhibit 23C) demonstrate that the intake structure is usually located out of the eddy and to the New Jersey side of the eddy wall.

At certain flows, however, it appears that the intake structure may be in contact with the eddy wall. (The record demonstrates that the eddy is a favored fishing spot for typical warm water fish such as bass, as well as a popular fishing spot during the annual run of the American Shad.)

Due to the uncontradicted facts: (1) that the intake structure will be located at least four feet below the Delaware River's surface and (2) that even at full diversion the intake velocity will be very low (.011 fps) at a distance of even one foot from the intake's screen, so as to be imperceptible at the Delaware's surface, we can find no physical danger posed to fishermen passing even directly over the screen in a boat or inner tube. Certainly, the appellants introduced no evidence which even began to indicate any such danger. Our finding mercifully makes it unnecessary to examine the appellants' standing to raise this "danger to fishermen" issue.

As to the impact on shad fishing, Mr. Kaufmann of the Pennsylvania Fish Commission did testify that American Shad, being shy of shadows, would not pass under the intake structure on sunny days when the structure cast a shadow on the Delaware's bed. Further, Mr. Kaufmann expressed concern that in veering away from the shadow the shad could veer towards the New Jersey shore, and thus diminish fishing from the Pennsylvania shore. On the other hand, Mr. Kaufmann admitted that it was just as likely that the shad would veer towards Pennsylvania and thus improve Pennsylvania fishing. The possibility of a split flow of shad was not discussed nor was the question of how seriously a structure located 245 feet from shore would affect a fisherman casting from the shore. In short, Mr. Kaufmann's testimony, while credible, does not support a finding that the intake structure will harm fishing by its mere existence.

The appellants also expressed concern that the eggs and larvae of American shad and the shortnose sturgeon could be sucked through the screening (entrained) or held fast thereto (entrapped) by the suction through the intake screens. The record again does not validate this concern. Even the appellants' witnesses agree that the proposed Johnston wedgewire screen is the state of the art in water intake technology. This screening, with its 2 mm. openings, is smaller than the size of a water-hardened sturgeon or shad egg, and thus cannot entrain either of these. Moreover, the zone of influence of these screens even at maximum intake velocity is very small. The maximum intake velocity at the screen is only .5 fps and this velocity drops to .011 fps at five feet from the screen; even Del-Aware's ichthyological witness agreed that the influence of the intake velocity would extend only 2 inches from the screen.

When we further consider that a single shad female lays an estimated 100,000 to 500,000 eggs, that less than 1 percent of these eggs would hatch even under normal circumstances, that these eggs will be no more likely to pass

the intake structure than any other point of the Delaware, that there is no evidence that the shortnosed sturgeon even inhabits the Point Pleasant area, and that no more than 2 percent of shad eggs passing Point Pleasant could conceivably be affected by the intake, we cannot help but conclude that the intake's operation will not adversely impact the aquatic community of the Delaware River at Point Pleasant.

2. Archeology and Wetlands

Turning to the pumphouse, here the issues raised concern the alleged impacts of this pumphouse on: (1) the historic and scenic integrity of the Roosevelt State Park; and (2) a valuable archeological site located on the land acquired for the pumphouse. The appellants also expressed concern about the effects of the pumphouse construction on wetlands adjacent to the Delaware.

According to the testimony of Del-Aware's witness, Samuel Landis, the entire Point Pleasant area, and especially that portion of this area contiguous to the Delaware River, was a gathering place for Indians. It is not surprising, therefore, that an archeologically stratified site exists in that portion of the Point Pleasant project site lying between the canal and the Delaware River. This archeologic site, which has a surface area of approximately 75 square feet, was discovered by a team of archeological consultants hired by NWRA, including Del-Aware's archeological witness. This witness had no complaints about the methods used by the said consultants in surveying and identifying the site in question for significant archeological resources, nor did he disagree that the small site identified was the only such site on the project property. He even agreed, in general, with the methods used by NWRA to protect this area, e.g., avoiding the archeological site during construction, covering it with earth and covering the area with plastic. It is true that Mr. Landis also would have the archeologically sensitive area fenced off, but when the measures undertaken to

protect this area are compared to the complete lack of safeguards on adjacent private property, it cannot be denied that NWRA has taken all reasonable measures to protect this site. Finally, in this regard, it should be noted that the above-described archeological survey and preservation techniques were required by a Memorandum of Agreement between NWRA, the Advisory Council on Historic Preservation, the Pennsylvania Historic Preservation Officer and the Army Corps of Engineers. The relevant DER personnel had knowledge of this agreement, and relied upon it in concluding that the Point Pleasant Project would not significantly affect any archeologically sensitive resources. Beside the above protections, this agreement requires NWRA to station a competent archeologist on site to monitor the excavations during construction. In the absence of any countervailing argument or evidence we find these protections to be adequate.

The appellants admitted that the Point Pleasant Project would affect .30 acres of wetlands, and agreed that while .22 acres of wetlands would be permanently lost, the remaining .08 acres would be restored to their original grade and pre-construction condition. Even the appellants didn't seriously question the removal of this small amount of wetlands, but rather directed their attention to the wetlands located adjacent to the East Branch. Those wetlands have been discussed above (section III C 3). In the absence of any countervailing evidence (or even argument) from the appellants, and in the presence of testimony that the affected wetlands are typical of the adjacent flood plain forests along the Delaware which will not be affected, the Board can find no fault with DER's determination that the wetlands in question are not "important wetlands" within the meaning of 25 Pa. Code §105.17.

3. Historic, Aesthetic and Scenic Impact

Point Pleasant Village is a very pretty collection of attractive residences set in a scenic area hard adjacent to the Delaware River. Its historic

significance is reflected by its registration as a National Landmark. Moreover, the Delaware Canal, which parallels the Delaware, is one of Pennsylvania's Public Natural Resources, being in fact Pennsylvania's Roosevelt State Park. The pumphouse of the Point Pleasant project, which is described in more detail above, is within plain view from the Delaware Canal and is visible from at least some of the Point Pleasant residences. Further, in order to transport water from the pumphouse to the Bradshaw Reservoir a 72-inch diameter reinforced concrete pipe must cross the Delaware Canal, which will necessitate the temporary closing of a section of the Canal and a right-of-way across state land.

The appellants assert that DER violated its fiduciary duties as a trustee of the Roosevelt State Park by granting a right-of-way across the Canal, and that DER violated the spirit (at least!) of the applicable statute allowing DER to grant rights-of-way across state land.

We were initially perplexed with DER's treatment of the impacts of the pumphouse. It is true that certain officials of DER examined a full set of drawings and artistic renderings showing elevations and landscaping plans for the Point Pleasant pumphouse. But the only reviewing official with any trace of expertise in this area, Mr. John Nuss, asserted that he had not considered the aesthetic or scenic impact of this pumphouse on users of the Roosevelt State Park, because the pumphouse was located outside of the State Park (Tr. 2010-11). Further testimony, however, demonstrated that DER officials also relied upon reviews of the pumphouse by officials of the Pennsylvania Historic and Museum Commission and the Corps of Engineers and the NRC. We think that it is appropriate for an agency to rely upon the expertise of its sister agencies where they are functioning within the scope of their implementing legislation. Indeed, this seems to be the holding of such cases as *Delaware County Community College v. Fox*, 20 Pa. Commonwealth Ct. 335, 342 A.2d 468 (1975). Here, as with regard

to archeological resources, DER relied upon the above-referenced Memorandum of Agreement, which bound NWRA to protect the Point Pleasant Historic District by: (1) submitting designs, plans and specifications for the Point Pleasant Pumping Station and its boundary fencing to the State Historic Preservation Officer; and (2) developing a landscaping plan to minimize the visual impact of the pumping station and the boundary fence, consistent with the area's natural setting.

Again the appellants introduced no evidence, let alone expert evidence, that the above measures are inadequate to minimize the archeological, scenic and historic impacts of the pumphouse. We find, therefore, that they are adequate.

4. Grant of the Right-of-way

Appellants also attack DER's grant of a right-of-way across the canal pursuant to the Administrative Code of 1929, as amended, Section 1926-A. DER agrees with the appellants that §1926-A requires that the easement is not only in the public interest, but that this public interest outweigh any permanent deleterious effect on State land. DER does not agree, however, that DER must make an explicit, prior, finding of paramount public interest before granting an easement. Instead, DER's officials maintained that any necessary findings were made implicitly by the grant of the easement in question. Moreover, DER asserts, and the uncontradicted evidence shows, that the right-of-way will cause no permanent deleterious effect on State land. DER's Wilson Oberdorfer pointed out that there have been dozens, if not hundreds, of breaches in the 60-mile long Delaware Canal, and that neither the historical nor physical integrity of the canal has been undermined by the 127 plus utility crossings.

Again, in the complete absence of any testimony challenging the precautions described by DER's officials, we cannot help but find that DER has mandated all actions necessary to minimize the impact of NWRA's proposed pipeline crossing on the Delaware Canal.

5. Downstream Water Quality Impacts

At its maximum rate of withdrawal, the Point Pleasant pumpstation is projected to withdraw 95 million gallons (mgd) a day of water from the Delaware River at Point Pleasant. Of this total withdrawal, 48.8 mgd is targeted for the NWRA, the remainder being targeted for PECO. While 95 mgd of water seems (and is) a substantial amount of water, this withdrawal represents no more than 5% of the normal low flow of the Delaware at Trenton (3,000 cfs).

The amount of Delaware River flow reaching the Delaware Estuary has important water quality impacts on the Estuary. Because of population density and industrial activity, the Delaware Estuary receives a substantial load of pollutants, which tends to deplete the dissolved oxygen in the Estuary. Historically, as warm weather arises the dissolved oxygen level in the Upper Estuary falls below the level of 4 mg/l; at this point the American Shad no longer will migrate upstream past Philadelphia to their spawning grounds in the Delaware Water Gap area. This dissolved oxygen block is controlled by flow levels and water temperature and is therefore quite variable, both in terms of length along the river and durational extent. All parties agree that the oxygenated Delaware River water reaching the Estuary helps to raise and maintain the dissolved oxygen level in the Estuary, so that the removal of a significant amount of Delaware River water would exacerbate the dissolved oxygen problem.

Fresh Delaware River water also is necessary to keep the tide-affected Delaware Estuary (which is the site of the water intakes of the City of Philadelphia) from becoming too salty. (This latter phenomenon is called salinity intrusion.)

According to the Delaware River Basin Commission (DRBC) the 3,000 cfs flow objective can be maintained by releases from upstream reservoirs during almost all conditions, including drought conditions equal to those prevalent

in the 1930's, but not in a 1960's drought (which has an estimated recurrence of once in 100 to 300 years). If and when the Delaware River flow at Trenton falls below 3,000 cfs, PECO's DRBC Docket precludes PECO from withdrawing water unless an equal amount of water is released from the (yet unbuilt) Merrill Creek Reservoir which is to be located upstream from Point Pleasant on the NJ side. As to the NWRA withdrawal, up to 90% of this water, which will be used as a public water supply in the watersheds of the Delaware and its tributaries, will be returned to the Delaware tributaries (such as the Neshaminy, Pennypack and Wissahickon Creeks and Schuylkill River) as discharge from various sewage treatment plants, and will thus return to the Delaware Estuary.

The impacts on dissolved oxygen levels and salinity intrusion at a 3,000 cfs level (at Trenton) or at any other level, and the likelihood that these other levels will occur, are matters which require scientific analysis, including water quality modelling. The Delaware River Basin Commission has the legal authority, the expertise, and the resources to perform such analysis, and it is customary for DER to rely upon the DRBC to conduct such analysis. The DRBC has studied the impact of the Point Pleasant withdrawal--upon the dissolved oxygen level in, and salinity intrusion into, the Delaware Estuary--in its Level B study (May 1981), as well as in the Final Environmental Assessment (August 1980) for the Point Pleasant Project.

After giving detailed consideration to salinity intrusion and low dissolved oxygen levels associated with low flow periods, DRBC concluded in its Level B Study that "[d]ownstream low flows on the Delaware River would not be significantly affected" by withdrawals at Point Pleasant. Moreover, the DRBC concluded as a result of modelling that even under extreme low flow in the Delaware River (2,780 cfs at Trenton) the dissolved oxygen in zone 2 (from Trenton to Philadelphia) would be reduced by no more than .08 mg/l, and that

further downriver the reduction would be less than .08 mg/l. These reductions were characterized by DER's water quality planning chief, Charles Rehm, as being virtually imperceptible.

Similarly, DRBC and DER concluded that salinity control in the Delaware Estuary would not be exacerbated by withdrawals at Point Pleasant because: (1) salt water from the Delaware Bay is repelled by all flows of fresh water entering the Estuary above River Mile 90; (2) the Schuylkill enters the Delaware Estuary above River Mile 90; (3) 90% of the NWRA withdrawal at Point Pleasant will be returned to the Delaware; (4) PECO withdrawals at Point Pleasant pose no significant concern for salinity when the Delaware flows at Trenton equal or exceed 3,000 cfs; and (5) PECO cannot withdraw water at Point Pleasant below the 3,000 cfs flow level without discharging an equal amount of water into the Delaware (from the Merrill Creek Reservoir). Indeed, DRBC determined and DER concluded that salinity objectives can be met in the Delaware Estuary with releases from existing reservoirs, even during a record drought like that of the mid-1960's, so that even at flows well below 3,000 cfs no substantial saltwater intrusion problems are anticipated.

The appellants' counsel clearly disagreed with some (if not all) of the above conclusions by DER and DRBC, but on this issue, as on others above, the arguments and objections of counsel are not legally sufficient substitutes for evidence. The appellants presented no numerical or scientific evidence on either the dissolved oxygen or the salinity issue (as opposed to the expression of concerns). They, as third party appellants of a permit issuance, bear the burden of proof, 25 Pa. Code §21.101(c)(3); *Czambel, Sr. v. DER*, EHB Docket No. 80-152-G, 1981 EHB 88; *Doris J. Baughman v. DER*, Docket No. 77-180-B, 1979 EHB 1. Thus, in the absence of any evidence on the part of third party appellants, and in view of the presumption of regularity which pertains to actions of admin-

istrative agencies like DER and DRBC (*Warren Sand & Gravel v. DER*, 20 Pa. Commonwealth Ct. 186, 341 A.2d 556 (1975)), we accept the above conclusions of DER and DRBC that the proposed withdrawal will not significantly affect either the dissolved oxygen or salinity levels in the Delaware Estuary.

E. ALTERNATIVES

1. NWRA Alternatives

A considerable portion of the record in this matter was addressed to the discussion of various alternatives to the Point Pleasant Project. DER's discussion of these alternatives is given in its Environmental Assessment, beginning on page 67. We found this discussion of DER's useful, and quote heavily from it in the following pages. We start, as does the Environmental Assessment, with an examination of the water conservation alternatives to the NWRA project.

1a. Water Conservation

The appellants assert that there is no need (or at least no need greater than that which can be addressed by water conservation) for the NWRA part of the project. In this regard DER found that (Environmental Assessment, pp. 23ff):

> Bucks and Montgomery Counties face together a regional water supply problem. For the past three decades, the people of this region have relied on increasingly intense development of groundwater to provide both public and private water supplies. The Department's and the Delaware River Basin Commission's studies in recent years document growing problems created by over-reliance on groundwater in the region. The Pennsylvania State Water Plan, Comprehensive Water Quality Management Plan (COWAMP/208), and DRBC Level B Study, as well as several recent water supply cases in Montgomery and Bucks Counties, strongly indicate that intensive public and private groundwater withdrawals in substantial portions of Bucks and Montgomery Counties have oversubscribed or threaten to oversubscribe the resource.
>
> The most recent study of groundwater conditions in the region was completed in 1982. This report, prepared by R. E. Wright Associates, Inc. as part of DRBC's comprehensive groundwater study, refines and confirms the assessments of withdrawal rates and densities, compared to recharge rates for the Triassic aquifers serving the populated areas of Montgomery and Bucks Counties.

Current groundwater withdrawals, especially in the Triassic rock formations, exceed, or threaten soon to exceed, the recharge and safe yield of the groundwater basins upon which a majority of the population relies for supply. Calculations by DER and DRBC indicate that in the Brunswick, Lockatong, and Stockton formations of the Triassic Lowlands, the normal year recharge rates average some 300,000 - 600,000 gallons per day per square mile. However, the region cannot count on every year being "normal". Yet, public and private water supplies must be capable of providing reliable service in all kinds of years.

As noted by R. E. Wright Associates, like annual precipitation, the annual groundwater recharge for a watershed varies from year to year. Using a "normal" year recharge rate as a withdrawal limit for groundwater-management purposes may leave open the possibility that, in a fully developed area, annual groundwater production would exceed annual recharge 50 percent of the time. This could lead to the long-term depletion of the resource, with resulting conflicts among its users. Groundwater may justifiably be more conservatively managed using a lower rate of annual recharge as a guideline for withdrawal.

From a water supply perspective, this area must be especially concerned with dry year recharge rates, rather than normal rates, because of the relatively quick reaction of Triassic formation groundwater to low precipitation. In 1976, for example, a short period of low recharge resulted in substantial drops in groundwater levels, diminishing public water well yields by 30 to 40 percent, while leaving some homeowner wells high and dry.

If previous dry periods were not enough, the drought of 1980-81 clearly dramatized to the people of Bucks and Montgomery Counties the insecurity and vulnerability of their water supply systems.

Rainfall deficiencies began in February and March of 1980 in many areas of eastern Pennsylvania. Problems mounted steadily throughout the year and by February of 1981, 85 public water systems faced severe shortages. Under Emergency Proclamations and Executive Orders issued by the Governor, 44 systems serving over 120 municipalities adopted full rationing plans - mandating cuts in water use by 25 percent or more, and reducing residential allotments to a mere 40 gallons per person per day. Other water systems were forced to turn to emergency supplies, such as quarries, strip mine pits and overland lines from distant streams and lakes, to meet essential needs.

Bucks and Montgomery Counties were among the most severely affected. Eleven public water suppliers in the two county region were forced to impose restrictions on all nonessential

water use. Several municipalities lost wells because of TCE contamination and others faced greatly reduced water levels in their wells.

Dry periods of varying degrees of severity are not an infrequent occurrence in eastern Pennsylvania, and in an area serviced only by a highly subscribed groundwater table the result can be debilitating. In the Triassic formations dry year annual recharge rates are much lower than average year rates. For typical water sheds in the Triassic formations, based on the water budget for the dry year 1966, R. E. Wright Associates calculated annual baseflow/groundwater recharge rates of 146,000 - 331,000 gpd/sq. mi. The R. E. Wright Associates study, confirming the observations of prior reports, found that groundwater production rates exceed 100,000 gpd/sq. mi. throughout much of the Montgomery and Bucks County Area. The Wright study further found that the 1-year-in-10 annual recharge rates to the affected aquifers is exceeded by current groundwater withdrawals over a relatively large portion of Montgomery County, and is generally pervasive throughout the DRBC designated Groundwater Protected Areas.

These withdrawals in excess of recharge result in lowered water tables and groundwater mining, leading to periodic water supply crises, interference with private homeowner wells, and depleted stream flows. Indeed, the imbalanced conditions of groundwater use and reliable supply have led DRBC to designate major portions of Bucks, Montgomery, and Chester Counties as a Groundwater Protected Area, 29 C.F.R., Part 430. Under the Southeastern Pennsylvania Groundwater Protected Area regulations all new or expanded groundwater withdrawals exceeding an average of 10,000 gpd in any 30 day period are subject to permit approval. More careful review is imposed on all applications, requiring detailed pump tests to assess potential impacts on other uses, stream flows and the environment. Conservation programs are required of all groundwater uses. Most important, no new or expanded withdrawals will be permitted by DRBC if, as the result, the total of all withdrawals in a groundwater basin or subbasin would exceed the "withdrawal limit" of the basin or subbasin, based on the recharge rates available during drought years.

The Department in its State Water Plan has recommended that the water suppliers in Bucks and Montgomery Counties that show an existing or projected yield deficit encourage and support water conservation programs among their customers. Even with water conservation, however, supplemental and replacement supplies of water are needed to serve current and future demand in the service area of the Neshaminy Water Supply System.

As part of its evaluation of NWRA's water allocation permit application, DER conducted a detailed review of the public water supply needs in the projected area. In that assessment, the Department found that projections by the State Water Plan, the Delaware Valley Regional Planning Commission, and NWRA all agreed that there is a clear and pressing need for additional and supplemental water in the project area.

Presently, the planned service area of the Neshaminy Water Supply System is served by twenty or more public water systems which depend almost completely on wells as their source of water supply. Many people still depend on private wells. The result of the development of the area is a growing demand for more water just at the time when the existing wells are drying up or losing yield because of declining groundwater tables caused by over-pumping, paving over recharge areas, and the installation of storm and sanitary sewers.

Within the proposed NWRA service area, the State Water Plan projects a drought period yield deficiency by 1990 of 27.5 mgd, which will have to be made up with supplemental water developed from ground or surface water sources. NWRA's projections of yield deficiencies, submitted as part of its water allocation permit request in 1978, are actually slightly lower, projecting a 1990 supplemental water need of 23.1 mgd. By the year 2010, NWRA projects a supplemental or replacement water need of 39.1 mgd. State Water Plan projects indicate this estimate may be conservative.

The Department concurs with the DRBC forecast of supplemental water needs for the Neshaminy Water Supply System, included as part of DRBC Docket No. D-65-76 CP (8) (Figure B). DER finds that the supplemental water needs for the NWRA service area, shown in Table 2, are reasonable in light of current information and plans. The Department reconfirms its conclusion, made as part of the approval of Water Allocation Permit No. WA-0978601, that the allocation of 40 mgd for public water supply needs, for withdrawal at the Chalfont Treatment Plant, is reasonably necessary to provide supplemental and replacement supplies adequate to serve present purposes and future needs in the NWRA service area.

Table 2

Forecast Supplemental Water Needs
Neshaminy Water Supply System

Service Area or Agency	Average Daily, mgd 1981	1990	2000	2010	Maximum Daily, mgd 1981	1990	2000	2010
Central Bucks County	2.7	4.9	5.9	7.3	2.7	7.3	8.9	10.9
Central Montgomery County	7.3	10.5	15.7	18.8	7.3	15.8	23.5	28.2
Minimum Flow Releases[1]	3.5	3.5	3.5	3.5	5.3	5.3	5.3	5.3
Water Supply Needs	13.5	18.9	25.1	29.6	15.3	28.4	37.7	44.4
Water Supply Withdrawal[2]	14.9	20.8	27.6	32.6	16.8	31.2	41.5	48.8

(1) Minimum release of 5.3 mgd shall be maintained from 3/1 to 6/15 and 2.73 mgd shall be maintained during the remainder of the year in the Neshaminy Creek.
(2) Includes 10% for water losses in transit.

> The Department is convinced that the citizens of Montgomery and Bucks Counties cannot continue to rely almost exclusively on groundwater for private and public water supplies. A balanced use of surface and ground water sources (otherwise known as "conjunctive management") is necessary to protect all water users in the region. After some 15 years of study by the counties, the Department and the Delaware River Basin Commission, DER has concluded that the Neshaminy Water Supply System including the Point Pleasant Diversion-Chalfont Water Treatment Plant Project is the most viable solution to provide conjunctive management of ground and surface waters capable of serving the citizens of the region.
>
> More detailed information on these needs can be found in the report prepared in conjunction with NWRA's Water Allocation Permit WA-0978601 and the State Water Plan reports for this portion of the State.

The appellants did disclose some inconsistencies in yield deficiencies reported to DER by certain public water supply companies including those relied upon in the development of Table 2 above, and appellants did raise some questions regarding population projections upon which future need was based, but overall the challengers completely failed to negate the weight of the evidence, which

clearly supports a finding that before 1990 (let alone 2010!) there will be a need to supplement groundwater withdrawals as a public water supply source in central Bucks and central Montgomery Counties.

As to the efficiency of water conservation, we note that DER assumed that reasonable water conservation measures would be followed, but that an additional source of public water would still be needed.

> Water Allocation Permit No. WA-0978601 and the Policy and Guidelines for subsidiary allocations require both NWRA and any retail water system receiving water from the Point Pleasant Project to implement conservation measures on a continuous basis. NWRA and the retail systems must submit and implement an adequate program to encourage water conservation by residential, commercial, and industrial customers; and further must implement an adequate, systematic program of monitoring, repair, and preventive maintenance to detect, correct, and where possible, prevent leakage in transmission and distribution lines.
>
> In assessing the need for the project, both DER and DRBC have considered that reasonable water conservation measures and practices will be followed. Without a continuing conservation program, demand in the area to be served would be even higher.
>
> Water conservation is a necessary part of the solution to problems in central Bucks and central Montgomery Counties, but it is not a panacea. The effectiveness of water conservation is limited by the type of residential and commercial uses served by the public water systems in the area. Compared to residential per capita uses in the western United States, which often exceed 300-400 gallons per day per person, total per capita use in the NWRA service area is relatively low (100-130 gpcd). Discretionary water uses, such as lawn watering, are not predominant.

> In order to effect conservation savings, basic changes in water-using appliances, processes and habits must be evolved. Because of water pollution control costs and regulatory requirements, many businesses have already implemented changes in their processes to minimize water use, and further reductions are likely to be more difficult and expensive. Residential uses may be reduced by utilization of low-flow plumbing (toilets, shower heads and faucets). While such conservation plumbing may be implemented readily on new construction, retrofitting of existing homes will take many years. The net conservation effect will not be instantaneous, but will evolve over time.
>
> Finally, the volume of water to be saved via conservation should not be overestimated. Even during severe drought conditions, such as occurred during 1980-81, when people are most sensitive to shortages and the need to conserve, a savings of only 10-15% in average total public water supply use may be achieved. This alone is not enough to solve the Bucks-Montgomery water supply problem.

The appellants introduced some evidence that in individual residences water conservation in excess of 10-15% can be achieved. Indeed, one of appellants' witnesses testified about a completely recycled system which eliminates sewage outflow and drastically reduces water usage. However, appellants introduced no evidence disputing DER's findings which are based upon the aggregate of existing and proposed customers.

DER has summarized its own position on water conservation as follows (Environmental Assessment, p. 67):

> DER has gone on record many times in support of water conservation. Conservation is considered as the first priority alternative for satisfying an existing or projected water supply deficit for all water companies in its State Water Plan. However, the Department realizes that, at best, this alternative offers only a short-term partial solution to the problem.

We believe this statement of DER's represents an accurate evaluation of the actual facts about water needs in the Bucks and Montgomery Counties area. The appellants have not come close to meeting their burden of showing water conservation could be a feasible alternative to NWRA's proposed use of Delaware River water. The Board rejects the suggestion that water conservation is a basis for holding DER abused its discretion in awarding NWRA its permits.

1b. Further Development of Groundwater

Appellants next contended that any additional public water needs could be met by further exploiting groundwater in the area. DER's position on this issue is (Environmental Assessment, p. 69):

> In the absence of a concerted regional effort to develop and distribute surface water supplies, and to effect conjunctive water management, the most likely structural alternative to meet public water supply demands would involve further development of already stressed groundwater resources.
>
> As already noted, DER -- along with most of the other agencies responsible for water management in this region -- believes that this area is already overdependent on groundwater. Clearly, the problems associated with the recent drought illustrate the validity of these concerns. If groundwater is to be managed as a replenishable resource, withdrawals must be brought in line with groundwater recharge. We cannot continue to overdraw this region's groundwater basins without facing the inevitable consequences: lowered water tables, depletion of private residential wells, diminished stream flows (especially in summer), and, in turn, reduced assimilative capacity, higher wastewater treatment requirements and costs, and adverse impacts on aquatic ecosystems.
>
> If anyone doubts the problems associated with overreliance upon, and competition in, development of groundwater, the experience of the past year of drought should be sobering. In 1980 and early 1981, the region endured a period of moderate to serious rainfall shortages, but far less than a record drought condition. Nevertheless,

by March 1981, over 4,000 domestic wells in eastern Pennsylvania had gone dry as a result of this drought event. Four thousand families found themselves without water for essential drinking, sanitation and other domestic uses. The costs of replacing these supplies represented an economic loss of over $6.7 million, borne primarily by these homeowners. The area surely does not need a record drought to make the point more clearly.

Theoretically, it might be possible to serve the more developed portions of Bucks and Montgomery Counties by installing a wide ranging system of wells in the rural areas, with water lines conveying groundwater to the already overpumped communities. Even if economically feasible (which is open to some doubt), for environmental reasons the Department would express serious reservations regarding such a scheme.

In order to develop a well system, yielding 40 mgd public water supply capacity equivalent to the Point Pleasant Project, a large number of wells would have to be dispersed in a pattern which extracts water efficiently, but avoids exceeding the recharge rates of the involved aquifers. Even assuming that normal year recharge rates of 300,000 - 600,000 gallons per day per square mile are the limiting factor, and that no other users were in the area, such a groundwater development project would involve a minimum of one or more wells in each of over 65-130 square miles. Based on water budgets in a dry year, as calculated by R. E. Wright Associates, some 120 to 274 square miles would be required. (To serve the cooling water needs of the Limerick plant, an equivalent well project would be involved.)

Unless such a well system were dispersed far from the existing areas of heavy groundwater use, it could lead merely to further exacerbation of the groundwater mining problem. Groundwater mining can occur whether the withdrawals are made by a few wells, or many dispersed wells; the problem arises whenever the total amount of groundwater withdrawals in an area exceeds the recharge in the area. In portions of the Montgomery and Bucks County region, groundwater withdrawals already approach or exceed recharge rates. The communities immediately adjacent to these areas are developed in large part, and also primarily rely on groundwater through homeowner or public water system wells. Placing additional wells in these nearby communities to serve the existing "groundwater mining" areas is likely to combine with local uses to simply spread the "mining" areas.

The R. E. Wright Associates groundwater study plotted the density of current groundwater uses in the area. Based on the use densities and recharge rates of local aquifers, in order to avoid interference with neighboring uses, a supplemental well system to serve the needs of the Lansdale, Hatfield, Warrington and Warminister areas would have to be sited at least 6 to 10 miles from those communities, in undeveloped areas or in less developed portions of other municipalities and other water companies.

Placing a system of wells in more remote rural areas would naturally involve installing an extensive series of water transmission lines through now undeveloped lands. But placing a widespread network of water lines in rural areas would provide an attraction for suburban development in those rural areas, most likely leading to the same groundwater overuse problems now being experienced.

Even if a dispersed well system did not lead to groundwater mining, it is likely to create problems of local interference with homeowner wells. Most homeowner and farm wells in rural areas of this region are relatively shallow (from 50 to around 200 feet deep). New wells developed to serve subdivisions or community water supply systems are likely to be deeper and more powerful than the typical homeowner well. As seen in a series of recent cases in Montgomery, Bucks, Chester and Lehigh Counties, such development may create cones of influence which draw down water tables in nearby shallow wells, causing interference and/or total depletion. The more groundwater is relied upon as the almost sole source of supply, the more prevalent these problems are likely to become.

The Department is equally disturbed by the prospect that dispersed well development would tend to attract and encourage a checkerboard of subdivision developments, with attendant adverse environmental, social and economic impacts. The most likely sites for supplemental well fields to serve central Bucks and Montgomery Counties fall within areas of prime farm lands. Both counties and the Commonwealth have expressed policies to protect and conserve these valuable soil and land resources. Encouraging more groundwater development in rural areas as a solution to water shortage problems would tend to undermine these prime farmland protection policies.

Thus, as an alternative solution, further development of the groundwater is unsatisfactory from many perspectives, and the Department finds it an unacceptable option for this region.

The only issue raised by appellants regarding this alternative was the possibility of locating public water supply wells in remote rural areas to supplement existing groundwater withdrawals. DER, in the section of the Environmental Assessment quoted above, has addressed this concern. In the opinion of this Board DER has satisfactorily explained why the rural well solution is not an appropriate alternative.

1c. Utilization of Lake Galena

The next alternative to be analyzed is the use of Lake Galena. DER's assessment of this alternative follows (Environmental Assessment, p. 71):

> Proposals have been made that the storage of Lake Galena (PA-617) alone be used to supply public water supply needs, without augmentation by waters diverted from the Delaware River.
>
> Lake Galena was designed incorporating a long term water supply storage capacity of 5000 acre feet (1.63 billion gallons). The gross yield of this storage in a drought of record would be 9 mgd. Accounting for the minimum continuous conservation release of 1.5 mgd required to protect downstream areas on the North Branch Neshaminy, the net yield of Lake Galena is 7.5 mgd. It is assumed this water would be picked up at Chalfont, treated and distributed under arrangements and conditions similar to those contemplated by the proposed Point Pleasant-Chalfont project. Reservoir storage combined with the natural flow of Pine Run and the North Branch Neshaminy, would yield approximately 8.5 mgd at Chalfont.
>
> As noted previously in part 3.A. of this report, the supplemental average daily water needs in Central Bucks and Central Montgomery Counties totalled 14.9 mgd in 1981, and are expected to rise to 20.8 mgd by 1990. Lake Galena alone could not serve the public water supply demands contemplated within the service area of the Neshaminy Water Supply System.
>
> The storage yield of Lake Galena might serve a portion of the NWRA service area, or (as contemplated by the proposed project) serve a portion of needs in the entire service area. Considering the minimum flow requirements in the North Branch Neshaminy below Chalfont (averaging 3.5 mgd), Lake Galena alone would barely meet the 1981 needs of Central Bucks County (2.7 mgd + 3.5 mgd, or a total of 6.2 mgd). By 1990, the projected average daily supplemental water supply demand of 4.9 mgd in just Central Bucks County, coupled

with the required flow rates below Chalfont - totalling 8.4 mdg - would exceed the net yield of Lake Galena and just barely be covered by the combined yield of the reservoir storage and natural stream flows. The combined yield of Pine Run and the North Branch Neshaminy watersheds (including Lake Galena storage) would clearly be inadequate to serve Central Bucks County needs beyond the year 2000.

Use of Lake Galena alone, without the Point Pleasant Project, would engineer addtional drawdowns of lake levels and fluctuations of pool elevations, especially through summer months. Certain recreation uses at Peace Valley Park would be sacrificed to meet water supply demands, and fish spawning areas in Lake Galena would be eliminated.

Because of the inadequacy of Lake Galena to meet the public water supply demands of the Neshaminy Water Supply System service area, the impacts and costs of this alternative must be considered in conjunction with one or more other projects required to address the entire regional water supply problem.

The appellants did not deny the inadequacy of Lake Galena, alone, to supply even the near future needs of Central Bucks and Montgomery Counties. Appellants did urge that Lake Galena should be used along with other sources of water to supply these needs. As NWRA points out, however, Lake Galena's capacity along with that of Pine Run will be utilized in the presently designed project. We cannot agree that the possibility of using Lake Galena's water shows DER's issuance of the NWRA permits was an abuse of discretion.

1d. Utilization of Lake Nockamixon

Use of Lake Nockamixon as an alternaitve to the instant NWRA project also has been proposed. On this subject DER writes:

Suggestions have been made that a direct withdrawal from the State-owned Lake Nockamixon be used in lieu of a diversion at Point Pleasant, as the source for the NWRA water supply system. Since the Department of Environmental Resources constructed and operates this facility, it has some knowledge and views regarding this option.

When the Department constructed Nockamixon Reservoir, storage was included in the reservoir for long-term future water supply needs. However, DER developed the project with the understanding and plan that it would be operated as a single purpose recreation facility until at least the year 2000, before any water supply would be utilized. Under this assumption, the recreational facilities along the lake were designed to accommodate a five-foot drawdown, which is only slightly greater than the normal drawdown resulting from low flow releases and evaporation. Any water supply usage would cause much greater drawdowns, necessitating the redesign and modification of these facilities, in addition to substantially reducing the recreational usefulness of the lake. In light of the fact that Lake Nockamixon and the surrounding State park provide a major regional recreational resource, which is heavily used by citizens of the five-county metropolitan area, DER would be extremely reluctant to reduce its recreational capacity at this time in order to allow water supply usage, unless no other feasible, cost-effective alternative for public water supply were available.

Even if Lake Nockamixon were to be utilized for public water supply, a direct diversion from the reservoir would not be the most efficient mode of operation. It would be preferable to use Lake Nockamixon in conjunction with a downstream diversion on the Delaware, such as the proposed Point Pleasant withdrawal. In this mode, moderate to high flows on the Delaware could support public water supply for most of the year, while the available storage in Nockamixon is saved to augment available flows during dry periods. In contrast with a direct reservoir tap, which draws on storage all the time, a river withdrawal-reservoir augmentation arrangement would greatly enhance the yield from Lake Nockamixon and allow more water to be made available when it is most needed.

There is an additional disadvantage to a direct tap-off of Lake Nockamixon. Such a withdrawal would make the NWRA system heavily reliant on continuous operation of the Lake. However, it is probable that at several points over the life of the facility, the Lake will have to be drawndown for inspection and perhaps maintenance and repairs. It would be extremely hard to take the reservoir out of service for maintenance if it were to become the direct and sole, or primary, water source for the entire NWRA system.

In summary, DER cannot endorse the use of Nockamixon Reservoir for public water supply at this time. It is serving a large public demand for recreation, while providing some backup insurance for drought protection to the Delaware Estuary. In addition, the Department notes that special legislative authority would be needed for DER to sell water from Nockamixon or any other State-owned reservoirs.

The appellants argued that if Lake Nockamixon can be used during drought to augment Delaware River flow, why can it not be used as a water supply source. DER answered this argument, to the satisfaction of the Board, in the above quoted section of the Environmental Assessment. Appellants also attempted to show that DER had been considering certain releases for Lake Nockamixon to support recreational boating on the Tohickon River. However, the only thing clear about these negotiations is that they did not conclude in any agreement. Also, appellants introduced no testimony showing that Lake Nockamixon could supply all of the water supply needs of Central Bucks and Montgomery Counties. The Lake Nockamixon alternative is rejected.

le. Withdrawals From the Schuylkill River

The withdrawals discussed *supra* were concerned mainly with the water needs of the central Bucks area. The appellants also raised a number of alternatives relating mostly to Montgomery County needs. The first of this latter set of alternatives, namely the use of Schuylkill River water, has been addressed by DER as follows (Environmental Assessment, p. 74):

> Comments have been received suggesting that Montgomery County utilize withdrawals from the Schuylkill River for public water supply, rather than interconnect with the NWRA system.
>
> It must be recognized that Montgomery County has made a good faith effort to develop the resources of the Schuylkill River. Several communities, including Norristown and environs, derive their water supplies directly from the Schuylkill, and others are now using groundwaters of the Schuylkill Basin. Philadelphia Suburban Water Company has intensively developed the Perkiomen Creek watershed, via its Green Lane Reservoir and intakes near the confluence with the Schuylkill River.
>
> In fact, the Schuylkill River is the most intensively used watershed in the entire Commonwealth, and its resources are already used and reused to close to their practical limits. The City of Philadelphia now withdraws an average of 180 mgd from the Schuylkill for municipal water supply. However, the Schuylkill's record seven day average low flow is 200 mgd. The lower Schuylkill is heavily indus-

trialized, while the upper reaches sustain considerable agricultural production. According to State Water Plan assessments, withdrawals in the Schuylkill River watershed today total over 950 mgd. During low flow periods, every drop of water flowing in the Schuylkill River is used five to six times over. Even with modest increases in use, the potential conflicts among agricultural, power, municipal, industrial, and other uses during drought conditions are obvious.

Unfortunately, opportunities for developing further storage in the Schuylkill watershed are extremely limited, due to geology, past mining activities in upper reaches, and the location of communities in several of the technically viable reservoir sites. Both the State Water Plan and the DRBC Level B Study indicate that technical, environmental, economic or social conditions virtually preclude development of significant new surface water storage facilities in the Schuylkill Basin in the foreseeable future.

Because of the already intensive use of the Schuylkill, we must conclude that further significant withdrawals for public water supply would not be the optimal choice to serve regional needs. Such increased use on the Schuylkill would likely lead to further quantity conflicts, and because of the increasing factors of reuse, a further buildup of total dissolved solids and deteriorated water quality.

Little more needs be said concerning this Schuylkill alternative. The appellants completely failed to rebut DER's findings with any testimony. The Board adopts DER's findings (and rejects the appellants' contentions) on this alternative.

1f. Other NWRA Alternatives

Other alternatives--to NWRA use of Delaware water--which have been advanced but have not yet been discussed in this Adjudication include: (1) development of Evansburg Reservoir; (2) import of Susquehanna River water; (3) construction of an independent Montgomery County water supply; and (4) use of the City of Philadelphia's water supply. We see no reason to burden this already excessively long Adjudication with quotations from DER's Environmental Assessment of these alternatives, which bear primarily on Montgomery County needs. Suffice it to say that DER gave serious consideration to these alternatives, and that the appellants offered no credible reasons to disagree with DER's rejections of these alternatives.

Indeed, DER's analysis of the NWRA alternatives went well beyond the legal requirements imposed by DER's regulations and/or Article I Section 27 of the Pennsylvania Constitution. The Board has stated recently (*Coolspring Township v. DER*, Docket No. 81-134-G (Adjudication, August 8, 1983) at 47):

> The Township appears to challenge this conclusion [that there has been compliance with the second prong of the Payne v. Kassab test] with the contention that DER could have found 'other more suitable sites removed from the public'. But the Township cites no authority holding that under the second prong of the Payne v. Kassab standard it is DER's affirmative duty to seek out alternative possibly more suitable sites than the site Higbee originally proposed. Although the holdings of the Pennsylvania courts on this issue are not completely clear, it does seem that DER only has the duty to minimize the 'immediate' environmental incursion, i.e., the environmental incursion produced by the immediate project DER is evaluating. Swartwood v. DER, 56 Pa. Cmwlth. 298, 424 A.2d 993 (1981); Mignatti v. DER, 49 Pa. Cmwlth. 497, 411 A.2d 860 (1980); Delaware County Community College v. Fox, 20 Pa. Cmwlth. 335, 342 A.2d 468 (1975). In fact, requiring DER to perform its own search for alternative sites every time it receives a permit application would put an almost impossibly heavy burden on DER. As the Township rightly argues, if DER had the affirmative duty of finding alternative sites, it hardly could rely on the applicant's assurances that there are no superior alternatives; such assurances actually were received from Higbee. A search for alternative sites might be DER's duty when the proposed operation is expected to produce serious environmental incursions, but no such expected incursions have been shown in the instant appeal.

NWRA's post-hearing brief, noting this language from *Coolspring, supra*, argues (at 27):

> It is apparent that the Department fully complied with the requirements set forth in Section 105.15(b)(2) of its regulations relating to consideration of alternatives. The Department fully assessed, and in some cases reassessed, all viable alternatives, including all alternatives posited by appellants. That alternatives other than the alternatives considered by DER could possibly have

> been considered is not cause for reversal, especially in light of this Board's recent pronouncement in Coolspring Township, supra.

NWRA's cite to *Coolspring* is not completely apposite, because in the instant appeals (unlike the situation in *Coolspring*) possible serious environmental incursions have been identified, and have been the basis for the remand to DER we are ordering. On the other hand, the above quotation from NWRA's post-hearing brief correctly points out that DER did affirmatively examine a very wide variety of suggested alternatives to the proposed project, despite the very heavy burden this examination imposed on DER. The appellants have not shown that DER overlooked alternatives which reasonably might have been expected to mitigate the aforesaid environmental incursions requiring remand. For the one possible exception to this last assertion, namely the possible erosive impacts on the receiving streams, we have ordered DER either to reduce the erosion to insignificance or to balance the need for the project against the minimized erosive impact (subsection III C 1 *supra*).

In short, except possibly for deficiencies involving erosive effects on the receiving streams (which deficiencies will be remedied on remand), there has been no showing--in the light of Article I Section 27--that DER's issuance of the permits was an abuse of discretion for failure to adequately examine alternatives to the NWRA portion of the Point Pleasant project. The same conclusion holds for 25 Pa. Code §§105.14-105.16 which--in an apparent attempt to guarantee DER compliance with Article I Section 27--do require that DER take affirmative steps: (1) to minimize the environmental incursion; and (2) to balance the residual minimized incursion, if still significant, against the expected benefits of the project.

2. PECO Alternatives

A very considerable portion of the record in this matter deals with the possibility of using the Blue Marsh Reservoir which is located upstream from Limerick on Tulpehocken Creek, a tributary of the Schuylkill, as a source for cooling water for Limerick. We are convinced from a careful review of this record that Blue Marsh would not be even a technically feasible alternative to provide cooling water to both Limerick units.

Whether Blue Marsh is a technically feasible source of cooling water for one unit of Limerick is a closer question. For starters, the parties argue vigorously as to whether the 41 cfs which must be released at all times from Blue Marsh--to preserve the aquatic community downstream therefrom on the Tulpehocken Creek--could be counted as a release usable by Limerick. Some of this water would reach Limerick. However, this release constitutes the Q(7-10) low flow in Tulpehocken Creek. In other words, it is the lowest consecutive 7-day flow occurring (statistically) once in ten years; it does not represent water which was added to the Schuylkill Basin by creation of the Blue Marsh Reservoir, but rather the pre-reservoir flow of the Tulpehocken under low flow conditions. Thus, we think that DER was right to not count this flow in ascertaining the technical feasibility of Blue Marsh.

The next issue regarding Blue Marsh was whether DER should look just at the 8,000 acre-feet reserved in Blue Marsh for water supply, or whether it should also look at the 6,620 acre-feet of storage in Blue Marsh reserved for water quality augmentation. This is important because in an average year Limerick would need a cooling water supplement on 146 days, which equates to a need for 9,344 acre-feet. Thus, the 8,000 acre-feet alone clearly would be insufficient even in an average year (and this doesn't count the 8 mgd of the 8,000 acre-feet which is reserved for the Western Berks Municipal Authority). If, on the other

hand, the entire 14,620 acre-feet were available, Blue Marsh might be sufficient to satisfy Limerick's needs.

If the Blue Marsh release were given to Limerick, however, up to 21 mgd of this flow would be immediately consumptively used at Limerick (assuming full operation of one unit); thus these 21 mgd would not be available for maintaining flow in that portion of the Schuylkill downstream from Pottstown. Although we clearly understand the desire of the appellants to avoid the Point Pleasant project, we very much appreciate that it is DER's duty to protect the lower reaches of the Schuylkill. Therefore, we agree with DER that even technically the Blue March Reservoir is not a viable alternative to PECO's proposals for Limerick cooling water.

Further, there are many legal impediments to the use of Blue Marsh. Blue Marsh is owned by the Army Corps of Engineers, which operates the Reservoir in cooperation with the DRBC. Thus the DRBC would have to authorize the use of Blue Marsh for Limerick. The reasons why such authorization is most unlikely are succinctly described by Mr. Weston, who is not only a DER official but also is Pennsylvania's alternate commissioner on the DRBC.

In addition, even if the DRBC permitted Limerick to use Blue Marsh, and even if this were a technically viable solution, it would still not be an acceptable alternative given the requirement in PECO's DRBC Docket that PECO cannot withdraw water from the Schuylkill for cooling water purposes when the Schuylkill's flow at Pottstown falls below 530 cfs (for one unit or 580 cfs for both units). The testimony of DER's witness, Stephen Runkle, that Blue Marsh (even all 14,000 acre-feet of it) could not sustain a flow of 530 cfs in the Schuylkill during the second and eighth worst drought years was not contradicted. Indeed, 5 times as much water would be needed.

Finally, we note that recreation is one of the prime purposes of Blue Marsh, that Blue Marsh has a beach and a boat launching area, that Blue Marsh is used continuously for recreation during the summer months, that the recreational use of Blue Marsh depends upon maintaining a permanent pool level in the Reservoir and, finally, that withdrawals from Blue Marsh for Limerick would lower this pool and interfere with the recreational use of Blue Marsh.

In fact, the use of Blue Marsh has been thoroughly studied by DRBC and Blue Marsh has been identified as the sole substantial reservoir on the Schuylkill through the year 2000. Its future has been committed to all would-be users of water downstream from Tulpehocken Creek. Giving all of this water supply to one consumptive user is not just poor water planning, it is simply unfair.

Also suggested as alternate sources for Limerick are proposed Red Creek and Mill Creek Reservoirs. These proposed sites have been discussed as alternatives to the unbuilt Merrill Creek Reservoir, but neither site is approved by the DRBC nor under construction.

The appellants also suggested that it would be a viable alternative for the City of Philadelphia to transfer its allocation from the Schuylkill to PECO. In the first place, DER countered, this alternative would deprive the lower Schuylkill of the water consumed at Limerick, whereas withdrawal by Philadelphia at the mouth of the Schuylkill would not have this effect. In addition, Mr. Weston testified that Philadelphia's allocation is not transferable and thus could not be transferred to PECO. His testimony is uncontradicted.

In summary, there also has been no showing that issuance of the permits was an abuse of DER's discretion for failure to adequately consider alternatives to PECO's part of the Point Pleasant project.

Before leaving the subject of alternatives to the project, we feel compelled to state our view that appellants' attacks--whether on the NWRA or the PECO portions of the project--display a disregard for the orderly process whereby public projects are planned, designed and constructed.

The testimony of several witnesses concerning water quality planning, especially of the extremely well-qualified R. Timothy Weston, shows clearly that the consideration of needs for alternatives to water supply projects is best addressed in the planning process.

The Point Pleasant project has been exposed to intensive planning since 1966--a detailed history of DER and DRBC reviews appears above. DER, especially in the State Water Plan, and DRBC, especially in its Level B study, reviewed the need for the Point Pleasant project and each of the alternatives discussed above. This Board and the courts of this Commonwealth in the related field of sewage facilities planning have made it abundantly clear that the time to challenge the planning process is when the plan is being formulated, not later (and collaterally) when it is being implemented. *Kidder Township v. Commonwealth, Department of Environmental Resources*, 399 A.2d 799 (Pa. Cmwlth. 1979).

While we recognize that, unlike planning and permitting in the sewage facility arena, the present planning and permitting processes are not explicitly bound together by court decision or statutory language, we agree that DER need not "reinvent the wheel" with each permit application. At the very least, the fact that DER followed the recommendations of the State Water Plan and DRBC's Level B study in approving the Point Pleasant project is strong evidence that DER's decisions to permit the project were reasonable.

F. LAND USE

Appellants also challenge the secondary impacts of the Point Pleasant project. They argue that by providing abundant supplies of public water in areas where water is scarce today, undesirable growth would result. This argument fails to find either factual support in this record or support in the law. As to the lack of factual support, it is noted there is not a scintilla of evidence in this record that the Point Pleasant project would induce undesirable (or even desirable) growth in Bucks and Montgomery Counties.

Perhaps more importantly, under Pennsylvania law, local governments--not the state--are assigned the right and power to determine the type and rate of growth to occur within their jurisdictions.

They, and not the state, are considered to be the trustees of Pennsylvania's public natural resources in this regard. *Cyril Fox, supra.*

G. CONCLUDING REMARKS

Even with this lengthy Adjudication, we have not dealt with all of the appellants' myriad of contentions and charges. However, we believe we have dealt with any grounds raised by the appellants which conceivably could be of merit in these appeals. We therefore state categorically that any of appellants' contentions which have not been specifically ruled on *supra* have been rejected as wholly without merit.

In particular, we have been given no urgent reasons to overturn DER's issuance of a water quality certification to the Corps of Engineers, pursuant to §401 of the Federal Clean Water Act (see subsection III A 2). That appeal, which has not been specifically discussed *supra*, is unequivocally dismissed, independent of our ultimate resolution of the standing issue discussed in subsection III B 1 *supra*.

We also observe that all our rejections of appellants' contentions have been based on the merits of those contentions. By so doing, we have avoided reliance on principles of issue preclusion, which for many of appellants' contentions well might have been applicable; as our review of previous related actions in subsection III A 3 has indicated, the environmental impacts of the Point Pleasant project have been litigated and relitigated in agency decisions and court rulings alike. As we have proceeded, however, there has been no need to rule on the difficult issue of whether other agency rulings would be as preclusive as rulings by courts of record, nor have we had to decide whether the subjects on which we have ruled really were adequately litigated in previous hearings. We add, importantly, that insofar as we can judge there have been no previous litigations--by which we should feel bound[7]--of any of the issues which we hold require remand, namely: (1) the need for NPDES permits; (2) the requirement that the need for the project be balanced against the impact of erosion on the receiving streams, if the velocities in the East Branch or the North Branch cannot be reduced to 2.0 fps; and (3) the requirement that PECO's permit be conditioned to call forth a cutoff when the Bucks Road gauge reads 125 cfs.

Except for our rulings that the permits are remanded to be conditioned in conformity with the requirements (1) - (3) just summarized, the appealed-from permits are upheld, as not having been shown to be an abuse of DER's discretion.

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7. This assertion explicitly applies to the "Initial Decision" of PUC Administrative Law Judge Isadore Kranzel, Docket No. A-00103956 (December 12, 1983).

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the parties and subject matter of the consolidated appeal.

2. The Environmental Hearing Board's scope of review in this consolidated appeal is to determine whether the Department of Environmental Resources has commited an abuse of discretion or an arbitrary exercise of its duties and powers.

3. Appellants Del-Aware Unlimited, Inc., et al. and intervenors Friends of Branch Creek have the burden of proof in this appeal.

4. A National Pollutant Discharge Elimination System Permit is required for the diversion of water from the Delaware River to the North Branch Neshaminy Creek and to the East Branch of Perkiomen Creek.

5. The Department correctly applied Subchapter G as opposed to Subchapter F of the Department's Chapter 105 regulations in reviewing NWRA's and PECO's applications to construct outfall structures in the North Branch Neshaminy Creek and the East Branch of Perkiomen Creek. This Subchapter required the Department to consider the erosive impacts of these outfalls.

6. DER's analysis of alternatives to the Point Pleasant project, as presented in its Environmental Assessment, more than satisfied the requirements of Article I Section 27.

7. The Department complied with its Chapter 105 regulations in preparing the Environmental Assessment, including its consideration of alternatives.

8. Under Article I, Section 27 of the Pennsylvania Constitution the Department's actions must meet the three-fold standard adopted by the court in *Payne v. Kassab*, 11 Pa. Cmwlth. 14, 312 A.2d 86 (1973), exceptions dismissed,

14 Pa. Cmwlth. 491, 323 A.2d 407 (1974), aff'd, 486 Pa. 226, 361 A.2d 263 (1976), for compliance with Article I, Section 27 of the Constitution.

9. Because it did not require NWRA and PECO to obtain NPDES permits, DER did not comply with the first of the three *Payne* standards, i.e., DER did not ensure compliance with one of the statutes relevant to the protection of the Commonwealth's public natural resources; however, the requirements of Article I Section 27 will be satisfied by conditioning the appealed-from permits so as to forbid actual discharges into the receiving streams before these NPDES permits are received and complied with.

10. In order to comply with the second and third of the three *Payne* standards, DER should have required NWRA and PECO to cease discharges if and when the flow velocities of the respective creeks below their outfalls exceed 2.0 fps, or, in the alternative, DER should have quantified the damage to the receiving streams caused by velocities above 2.0 fps and determined that the benefits to be derived from the project would clearly outweigh this environmental harm.

11. DER has met the expressions of the *Payne* standards contained in 25 Pa. Code Chapter 105, particularly at §§105.14(6)(7) and (d), 105.15(b)(2) and (3), and 105.16 (a) and (d), except possibly for erosive effects on the receiving streams (see Conclusion of Law 10 *supra*).

12. The present deficiencies of the permits vis-a-vis the second and third prongs of the *Payne* standard can be corrected by remand as per Conclusion of Law 10 *supra*.

13. DER did not abuse its discretion in reaching the conclusions of no significant environmental impact regarding the following issues which were addressed in the Environmental Assessment:

A. Operational impacts of intake structure on the Delaware River

(1) aquatic ecology

(2) low flows

(3) salinity

(4) water quality (all aspects)

B. Delaware Canal

(1) Installation Procedure

(2) Aesthetic, Scenic and Historic Considerations

(3) Archaeological Impacts

C. Land Use

D. Wetlands along East Branch Perkiomen Creek

E. Alternatives

14. The property interests of riparian landowners on the North Branch are sufficient to confer standing to appeal DER actions affecting the North Branch.

15. Del-Aware has representational standing to appeal, if at the time it filed its appeal there were members of Del-Aware who had standing to appeal.

16. Though Del-Aware has been granted provisional standing, NWRA retains the right to demand proof of the facts on which Del-Aware relies for its representational standing.

O R D E R

WHEREFORE, this 18th day of June , 1984, the Board remands all the outfall permits to DER for actions--on (1) NPDES permits; (2) erosional impacts; and (3) Bucks Road gauge determination of PECO's flow cutoff--consistent with the accompanying Opinion; the Board retains jurisdiction. The appeal of DER's water quality certification is dismissed.

ENVIRONMENTAL HEARING BOARD

Edward Gerjuoy

EDWARD GERJUOY, Member

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

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HARRISBURG, PENNSYLVANIA 17101
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WILLOWBROOK MINING COMPANY :

:

Docket No. 82-137-G

:

v. :

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

ADJUDICATION

By Edward Gerjuoy, Member, July 19, 1984

Syllabus

DER's denial of a mine operator's requested variance to mine within 300 feet of occupied dwellings on the sole ground that the operator had failed to obtain the consent of the owner of three such dwellings, as required by section 4.5(h)(5) of the Pennsylvania Surface Mining Conservation and Reclamation Act, 52 P.S. §1398.4e(h)(5), did not constitute an abuse of DER's discretion and did not amount to a taking of the operator's property in violation of the Pennsylvania and U. S. Constitutions.

Since no taking has occurred the Board need not decide whether the term "valid existing rights" as employed in section 4.5(h) of the Pennsylvania Surface Mining Conservation and Reclamation Act should be construed as encompassing the definition provided in the present version of the federal regulations promulgated

under the federal Surface Mining Control and Regulation Act, 30 U.S.C. §1201 et seq., because the mine operator has conceded that if the denial of the variance does not constitute a taking, then it does not have valid existing rights, even under the federal regulatory definition.

In determining whether denial of the variance amounted to a taking of the mine operator's property, the Board employed the standard set forth in Lawton v. Steele, 152 U.S. 133 (1894) and adopted by the Pennsylvania Supreme Court in Natural Wood Preservers v. DER, 489 Pa. 221, 414 A.2d 37 (1980):

> To justify the State in thus interposing its authority on behalf of the public, it must appear, -- first, that the interests of the public . . . require such interference; and second, that the means are reasonably necessary for the accomplishment of the purpose, and not unduly oppressive upon individuals.

First, the prohibition against mining within 300 feet of an occupied dwelling is clearly related to the state's legitimate interest in protecting its citizens and residents from exposure to the hazards of mining. Second, restricting mining to within 300 feet is a means reasonably related to the attainment of that goal. The fact that the statute requires the consent of the neighboring landowners, as opposed to occupants of neighboring dwellings, does no violence to this conclusion as the legislature may have reasonably concluded that the owners would take pains to preserve their property and would be more likely to have continuing interests in the effect of the mining operation upon their property than would potentially transient occupants thereof. Likewise, the consent requirement is a constitutionally valid means of ensuring that the interests of these neighboring property owners would be protected.

Finally, refusing permission to mine if allowing the mining would be hazardous to the general welfare is not an unduly oppressive exercise of the police

power. Irrespective of this holding, in the instant appeal the restriction cannot be said to be unduly oppressive where there has been no showing that the mine operator is left with no possible reasonable use of its property. There has been no showing that it is impossible to reach the coal in the variance area by deep mining nor that paying the neighboring landowner to obtain his consent to surface mining within the 300 feet limit would render such mining economically impracticable.

INTRODUCTION

This matter has become ripe for adjudication following a hearing on March 22, 1984, wherein the parties engaged in oral argument in support of their respective motions for summary judgment. Previously the parties had stipulated to all the relevant facts; the Findings of Fact below are taken predominantly from the stipulation, filed with the Board July 11, 1983, as amended (again by stipulation) April 12, 1984. The parties also filed briefs in support of their respective positions, and furnished the Board with a plethora of federal and Pennsylvania case citations purportedly upholding those positions.

FINDINGS OF FACT

1. Willowbrook, a division of Adobe Mining Company, operates a surface mine in Worth and Jackson Townships, Mercer County, pursuant to Mine Drainage Permit No. 3070BSM6 and Mining Permits Nos. 130-9 and 130-9A, a surface mine encompassing approximately 803 acres ("surface mine").

2. In a letter dated March 22, 1982, Willowbrook requested a variance from the Department of Environmental Resources("DER") to mine within 300 feet of sixteen occupied dwellings which are located in Worth and Jackson Townships,

Mercer County, adjacent to the northeast side of Pa. Route 965.

3. The area for which a variance was requested is located in Worth and Jackson Townships, Mercer County, adjacent to a natural gas pipeline located on the northwest side of, and parallel to, Pa. Route 965, on property owned by Albert Jones, Tract 1, and Willowbrook Mining Company, Tract 8, beginning approximately 1600 feet north of the intersetion of Pa. Route 965 and Township Road 561, and continuing for a distance of approximately 2400 feet north.

4. The area for which a variance was requested on March 22, 1982 encompasses approximately 6.3 acres.

5. Larry F. Funk is the owner of three of the occupied dwellings referred to in Finding of Fact 2.

6. On or about April 20, 1982 DER received a letter from Larry Funk who notified the Department of his objection to Willowbrook's request for a variance to mine within 300 feet of his three occupied dwellings.

7. Larry F. Funk has refused to consent to mining within 300 feet of the dwellings he owns.

8. The March 22, 1982 letter from Willowbrook indicated that Larry F. Funk was willing to give consent for remuneration of $2,400 per dwelling; according to Willowbrook, this is a "totally unrealistic price."

9. George Coast is the owner of two of the occupied dwellings referred to in Finding of Fact 4.

10. On March 5, 1982, Willowbrook obtained the consent of George Coast to conduct mining within 300 feet of his two occupied dwellings.

11. On August 3, 1982, DER issued to Willowbrook Mining Permit Amendment No. 3070BSM6-01-4, authorizing mining on an area located within 300 feet of the occupied dwellings owned by George Coast.

12. On or about April 16, 1982, DER issued to Willowbrook Mining Permit Amendment No. 3070BSM6-01-3, authorizing mining on the southern portion of the area for which a variance originally had been requested.

13. In view of Findings of Fact 11 and 12, the area for which Willowbrook is requesting a variance, and which DER still refuses Willowbrook permission to mine (henceforth the "variance area"), encompasses only about 4.5 acres, rather than the 6.3 acres for which a variance originally was requested (Finding of Fact 4).

14. These 4.5 acres include the land which exists within 300 feet of the dwellings owned by Larry Funk (finding of Fact 5).

15. In a letter dated May 5, 1982, which is the DER action from which this appeal has been taken, J. Paul Linnan, Chief, Technical Services, Bureau of Mining and Reclamation, formally denied Willowbrook's request for a variance to mine within 300 feet of the occupied dwellings owned by Funk.

16. DER denied the requested variance on the basis of the Pennsylvania Surfact Mining Conservation and Reclamation Act, 52 P.S. §1396.1 et seq. (the "State Act"), particularly Section 4.5(h)(5) thereof, 52 P.S. §1396.4e(h)(5).

17. Section 4.5(h)(5) of the State Act states that--subject to valid existing rights as defined under Section 522 of the federal Surface Mining Control Reclamation Act of 1977, 30 U.S.C. §1201 et seq. (the "federal Act")--surface mining operations are prohibited within 300 feet of any occupied dwelling unless the dwelling owner has consented to such operations.

18. Section 522 of the federal Act does not define "valid existing rights."

19. Section 522(e)(5) of the federal Act, 30 U.S.C. §1272(e)(5) does provide:

> After the enactment of this act and subject to valid existing rights no surface coal mining operations except those which existed on the date of enactment of this Act shall be permitted...
>
> (5) Within three hundred feet from any occupied dwelling, unless waived by the owner thereof...

20. The date of enactment of the federal Act was August 3, 1977.

21. As of August 3, 1977, Willowbrook had not applied for any mining permit pursuant to the State Act which included the variance area.

22. As of August 3, 1977, Willowbrook had not applied for any mine drainage permit pursuant to Section 315 of the Clean Streams Law of Pennsylvania, the Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §691.1 et seq. ("Clean Streams Law"), which included the original area.

23. As of August 3, 1977, Willowbrook had not requested a variance under any act to mine within 300 feet of the occupied dwellings mentioned in paragraph 2.

24. Willowbrook did not apply for an amendment to Mine Drainage Permit No. 3070BSM6 to include the original area until on or about August 18, 1978.

25. Willowbrook's Mining Permits Nos. 130-9 and 130-9A are the two mining permits existing on Mine Drainage Permit No. 3070BSM6 which are closest of all its mining permits to the area for which a variance was requested.

26. Applications for both Mining Permits Nos. 130-9 and 130-9A were submitted to DER on August 11, 1978.

27. DER issued Mining Permit No. 130-9, which encompasses 172.5 acres, on or about October 27, 1978.

28. DER issued Mining Permit No. 130-9A, which encompasses 257.5 acres, on or about November 13, 1978.

29. Mining Permits Nos. 180-9 and 130-9A have never included the variance area.

30. At the time Willowbrook applied for Mining Permits Nos. 130-9 and 130-9A, Appellant did not include the variance area in its application.

31. At the time Willowbrook applied for Mining Permits Nos. 130-9 and 130-9A, Willowbrook did not request a variance to mine the variance area.

32. The variance area presently is not included in any valid mining permit issued by the Department to Willowbrook under the Surface Mining Act or the Clean Streams Law.

33. Willowbrook did not apply for all necessary permits and variances prior to August 3, 1977 to conduct surface mining operations on the variance area for which a variance was requested.

34. Prior to denying Willowbrook's request for a variance, DER had been informed by Willowbrook that one dwelling owner did not consent to the operation.

35. On or about March 14, 1970, Willowbrook leased coal rights for an area encompassing approximately 700 acres, which area includes the variance area.

36. Prior to August 3, 1977, Willowbrook leased the surface estate for an area encompassing approximately 71 acres, including the variance area.

37. Because of Larry Funk's continued refusal to grant Willowbrook consent to mine within 300 feet of his occupied dwellings, DER continues to refuse Willowbrook's request for a variance to mine the variance area.

38. Section 4.5(h)(5) of the State Act was passed on October 10, 1980 as part of Pennsylvania's effort to obtain exclusive jurisdiction to regulate surface coal mining and reclamation operations within its borders ("primacy").

DISCUSSION

The Findings of Fact supra make it apparent that DER is refusing to allow mining of the variance area on the sole ground that--in the light of Larry Funk's refusal to give Willowbrook a release--such mining is forbidden by Section 4.5(h)(5) of the State Act. Therefore this appeal turns on the following narrow question: Under the facts, does Willowbrook have "valid existing rights" in the variance area which override the Section 4.5(h)(5) prohibition on mining within 300 feet of any occupied dwelling "unless the dwelling owner has consented to such operations"? Dispute about the correct answer to this question is possible only because of the unfortunate language employed in Section 4.5(h)(5), which relies for its definition of "valid existing rights" on a non-existent definition in Section 5.22 of the federal Act to which Section 4.5(h)(5) refers.

A. Definition of Valid Existing Rights

Section 4.5(h)(5) was passed on October 10, 1980, well after the August 3, 1977 date of enactment of the federal Act. By that time, federal Office of Surface Mining ("OSM") had promulgated regulations to implement the federal Act. In particular, 30 CFR §761.5, promulgated by OSM on March 13, 1979, provided in pertinent part:

> Valid existing rights means:
>
> (a) Except for haul roads
>
> (1) Those property rights in existence on August 3, 1977, that were created by a legally binding conveyance, lease, deed, contract or other document which authorizes the applicant to produce coal by a surface coal mining operation; and
>
> (2) The person proposing to conduct surface coal mining operations on such lands either

(i) Had been validly issued, on or before August 3, 1977, all State and Federal permits necessary to conduct such operations on those lands, or

(ii) Can demonstrate to the regulatory authority that the coal is both needed for, and immediate adjacent to, an on-going surface coal mining operation for which all mine plan approvals and permits were obtained prior to August 3, 1977;

* * *

(c) Interpretation of the terms of the document relied upon to establish valid existing rights shall be based upon the usage and custom at the time and place where it came into existence and upon a showing by the applicant that the parties to the document actually comtemplated a right to conduct the same underground or surface mining activities for which the applicant claims a valid existing right;

(d) "Valid existing rights" does not mean mere expectation of a right to conduct surface coal mining operations or the right to conduct underground coal mining. Examples of rights which alone do not constitute valid existing rights include, but are not limited to, coal exploration permits or licenses, applications or bids for leases, or where a person has only applied for a State or Federal permit.

This regulation was modified by the OSM on August 4, 1980, to take into account a court decision holding that--because there are bureaucratic delays in acting on permit applications--"a good faith attempt to obtain all permits before the August 3, 1977 deadline should suffice" to meet the intent of 30 CFR §761.5(a)(2)(i). Permanent Surface Mining Regulation Litigation, 10 ELR 20208, (D.D.C., Feb. 26, 1980). This court decision was incorporated into 30 CFR §761.5(a)(2)(i) [45 Fed. Reg. 51548, August 4, 1980].

On September 14, 1983, the OSM again modified its regulation 30 CFR §761.5. Specifically, 30 CFR §761.5 now reads, in pertinent part:

> Valid existing rights means:
>
> (a) Except for haul roads, that a person possesses valid existing rights for an area protected under section 522(e) of the Act on August 3, 1977, if the application of any of the prohibitions contained in that section to the property interest that existed on that date would effect a taking of the person's property which would entitle the person to just compensation under the Fifth and Fourteenth Amendments to the United States Constitution;
>
> ...
>
> (c) A person possesses valid existing rights if the person proposing to conduct surface coal mining operations can demonstrate that the coal is both needed for, and immediately adjacent to, an ongoing surface coal mining operation which existed on August 3, 1977. A determination that coal is "needed for" will be based upon a finding that the extension of mining is essential to make the surface coal mining operation as a whole economically viable;
>
> (d) Where an area comes under the protection of Section 522(e) of the Act after August 3, 1977, valid existing rights shall be found if--
>
> (1) On the date the protection comes into existence, a validly authorized surface coal mining operation exists on that area; or
>
> (2) The prohibition caused by Section 522(e) of the Act, if applied to the property interest that exists on the date the protection comes into existence, would effect a taking of the person's property which would entitle the person to just compensation under the Fifth and Fourteenth Amendments to the United States Constitution.
>
> (e) Interpretation of the terms of the document relied upon to establish the rights to which the standard of paragraphs (a) and (d) of this section applies shall be based either upon applicable State statutory or case law concerning interpretation of documents conveying mineral rights or, where no applicable State law exists, upon the usage and custom at the time and place it came into existence.

This is the version of the federal regulation 30 CFR §761.5 which presently is in effect.

The regulations implementing the State Act were promulgated by the Environmental Quality Board ("EQB") on July 31, 1982. These State regulations

included the following definition of "valid existing rights," in 25 Pa. Code §86.1:

> Valid existing rights -- Includes the following:
>
> (i) Except for haul roads, those property rights in existence on August 3, 1977, that were created by a legally binding conveyance, lease, deed, contract, or other document which authorizes the applicant to produce minerals by a surface mining operation; and provided further that the person proposing to conduct surface mining operations on such lands holds all current State and Federal permits necessary to conduct such operations on those lands and either held those permits on August 3, 1977 or had made by that date a complete application for the permits, variances, and approvals required by the Department.
>
> (ii) For haul roads, "valid existing rights" means:
>
> (A) a recorded right-of-way, recorded easement, or a permit for a haul road recorded as of August 3, 1977; or
>
> (B) any other road in existence as of August 3, 1977.
>
> (iii) Interpretation of the terms of the document relied upon to establish valid existing rights shall be based upon the usage and custom at the time and place where it came into existence, and upon a showing by the applicant that the parties to the document actually contemplated a right to conduct the same underground or surface mining activities for which the applicant claims a valid existing right and that such document has been signed by the surface owner.
>
> (iv) Valid existing rights does not mean mere expectation of a right to conduct surface mining operations or the right to conduct underground coal mining.

This definition of "valid existing rights" has not been modified by the EQB to date, nor has it been specifically invalidated by any court decision.

Willowbrook concedes that if 25 Pa. Code §86.1 is the applicable definition of valid existing rights, then Willowbrook does not have valid existing rights in the variance area and DER's prohibition of mining in the variance area

without a release from Funk was a proper interpretation of Section 4.5(h)(5) of the State Act. However, Willowbrook does not concede that the definition of "valid existing rights" in 25 Pa. Code §86.1 is applicable. Willowbrook argues that the language of Section 4.5(h)(5) of the State Act--which refers the State definition of "valid existing rights" to the federal definition--implies that the State definition of "valid existing rights" now must be the September 14, 1983 version of 30 CFR §761.5 quoted supra, rather than the 25 Pa. Code §86.1 definition promulgated July 31, 1982 by the EQB and quoted more immediately above. Willowbrook further argues that denying Willowbrook its requested variance amounts to a taking of Willowbrook's property interest in the coal, as "taking" is defined in subsections (a) or (d)(1) of the presently effective version of 30 CFR §761.5. On the basis of these arguments, Willowbrook concludes that Willowbrook does have valid existing rights under the State Act, implying it was as abuse of discretion for DER to deny the variance on the sole ground that Willowbrook did not have the valid existing rights needed to override the State Act §4.5(h)(5) prohibition.

Willowbrook's brief bolsters this conclusion by recapitulating the history of 30 CFR §761.5. The OSM has explained that its September 14, 1983 modification of Section 761.5 was designed to remedy the possibility that the language in the March 13, 1979 version of Section 761.5 might not exclude unconstitutional takings [48 Fed. Reg. 51313-14, September 14, 1983]. Willowbrook points out that the definition of "valid existing rights" in 25 Pa. Code §86.1 is almost (though not precisely) a copy of the definition to be found in the March 13, 1979 version of 30 CFR §761.5. Thus, according to Willowbrook, the "valid existing rights" definition in 25 Pa. Code §86.1 cannot be applicable, and could not have been intended by the Legislature to be applicable, because it still has the

fatal deficiency (no longer present in the September 14, 1983 version of 30 CFR §761.5) of requiring DER to impose a mining prohibition on Willowbrook amounting to a taking. It is true, of course, that the Legislature is presumed not to intend any constitutional violations. 1 Pa. C.S.A. §1922(3). Moreover, in enacting Section 4.5 of the State Act, the Legislature specifically has stated, in Section 17 [see the commentary to 52 P.S. §1396.1]:

> "In order to maintain primary jurisdiction over coal mining in Pennsylvania, it is hereby declared that for a period of two years from the effective date of this act the department shall not enforce any provision of this act which was enacted by these amendments solely to secure for Pennsylvania primary jurisdiction to enforce Public Law 95-87, the Federal Surface Mining Control and Reclamation Act of 1977 [30 U.S.C.A. §1201 et seq.], if the corresponding provision of that act is declared unconstitutional or otherwise invalid due to a final judgment by a Federal court of competent jurisdiction and not under appeal or is otherwise repealed or invalidated by final action of the Congress of the United States. If any such provision of public Law 95-87 is declared unconstitutional or invalid, the corresponding provision of this act enacted by these amendments solely to secure for Pennsylvania primary jurisdiction to enforce the Federal Surface Mining Control and Reclamation Act of 1977, Public Law 95-87 shall be invalid and the secretary shall enforce this act as though the law in effect prior to these amendments remained in full force and effect.

This Section 17 language could be taken to support Willowbrook's contention that the Legislature intended that parallel clauses in the State and federal Acts, e.g., the definitions of "valid existing rights," would be construed similarly.

As might be expected, DER vigorously disputes Willowbrook's contentions, described in the last two paragraphs. In particular, DER rejects Willowbrook's contention that denial of the variance constituted a taking. For reasons explained <u>infra</u>, we agree with DER on this point. The point is crucial, because Willowbrook

grants that if denial of the variance does not constitute a taking, then Willowbrook does not have valid existing rights under the State Act (N.T. 13), even on Willowbrook's contention that the present version of 30 CFR §761.5 applies to the State Act. Therefore we need not, and will not, rule on Willowbrook's preliminary contention that valid existing rights under the State Act are defined by the present version of 30 CFR §761.5.

B. Was There a Taking?

Under both federal and Pennsylvania law, the State, under its police power, may very broadly regulate the private uses of property in order to preserve the general welfare. Penn Central Transportation Co. v. New York City, 438 U.S. 104 (1978); Commonwealth v. Barnes & Tucker, 472 Pa. 115, 371 A.2d 461 (1977). There are no "bright line" criteria for deciding when would-be regulation under the police power has become an unlawful taking, but it is a fair summary of the pertinent cases that--again under both federal and State law--to be a taking: (1) the regulation must interfere so excessively with private property uses as to be "unreasonable" under the circumstances; and (2) the regulation must leave the property owner with no possible "reasonable" use of his property.

United State Supreme Court holdings illustrating the immediately preceding assertion are:

> The question of what constitutes a "taking" for purposes of the Fifth Amendment has proved to be a problem of considerable difficulty. While this Court has recognized that the "Fifth Amendment's guarantee . . . [is] designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole," this Court, quite simply, has been unable to develop any "set formula" for determining when "justice and fairness" require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons. Indeed, we have frequently observed that whether a

> particular restriction will be rendered invalid by the government's failure to pay for any losses proximately caused by it depends largely "upon the particular circumstances [in that] case." (Penn Central, supra, citations omitted).
>
> [T]he denial of one traditional property right does not always amount to a taking. At least where an owner possesses a full "bundle" of property rights, the destruction of one "strand" of the bundle is not a taking, because the aggregate must be viewed in its entirety.
> [Andrus v. Allard, 444 U.S. 51, 100 S.Ct. 318 (1979)].

Pennsylvania rulings along the same lines include:

> The police power of the state is as comprehensive as the demands of society require under the circumstances. . . . "[T]he very essence of the police power (as distinguished from the power of eminent domain) is that the deprivation of individual rights and property without compensation cannot prevent its operation, so long as its exercise is proper and reasonable." . . . Thus, we find that restrictions or obligations imposed on the use or ownership of property to protect the public health, safety or morals from dangers threatened, if reasonably necessary to dispel the particular danger, do not constitute a taking. (Barnes and Tucker, supra, citations omitted).
>
> One of the most frequently used determinants of whether a zoning ordinance constitutes a taking of private property without just compensation is the "diminution in value" test, which terms a property "taken" when it is rendered valueless or no longer useful in a reasonable manner. Pennsylvania Coal Company v. Mahon, 260 U.S. 393, 67 L.Ed. 322 (1922), [Snyder v. Railroad Borough, 59 Pa. Comm. 382, 430 A.2d 339 (1981)].

On a number of occasions, the Supreme Court of Pennsylvania has adopted the standard of Lawton v. Steele, 152 U.S. 133, 14 S.Ct. 499 (1894), for the assessment of regulatory legislation under the Pennsylvania Constitution. Natural Wood Preservers v. DER, 489 Pa. 221, 414 A.2d 37 (1980); Barnes and Tucker, supra; Commonwealth v. Harmar Coal, 452 Pa. 77, 306 A.2d 308(1973). The Lawton v. Steele standard is:

> To justify the State in thus interposing its authority in behalf of the public, it must appear,--first, that the interests of the public . . . require such interference; and, second, that the means are reasonably necessary for the accomplishment of the purpose, and not unduly oppressive upon individuals.

Though it hardly furnishes a "bright line", this Lawton v. Steele standard does seem to offer more specific criteria for determining when regulation has become a taking than do the rather more diffuse holdings of Penn Central, Andrus, Barnes and Tucker and Snyder quoted supra, or than do the very many other reasonably recent Pennsylvania and U.S. Court decisions the parties have cited.

The Lawton v. Steele standard apparently was not adopted by the United States Supreme Court in the Penn Central and Andrus decisions quoted supra, but certainly the Lawton v. Steele standard is not inconsistent with Penn Central and Andrus. Therefore, in view of the considerations in the preceding paragraph, we shall use the Lawton v. Steele standard to determine, on the instant facts, whether denial of the requested variance constituted a taking under U. S. as well as Pennsylvania constitutional law. This procedure appears to be quite consistent with the parties' expectations; the briefs of both Willowbrook and DER largely have founded their respective contentions--as to whether or not denial of the variance constitutes a taking--on the Lawton v. Steele standard.

We have no difficulty concluding that prohibiting Willowbrook from mining within 300 feet of Larry Funk's occupied dwelling without Larry Funk's consent satisfies the first two prongs of the Lawton v. Steele standard. As DER puts it (brief in support of summary judgment, pp. 34-35):

> The first prong of the Lawton test is clearly met. That the prohibition against mining within 300 feet of an occupied dwelling without consent of the owner advances a legitimate state interest cannot seriously be disputed. The legislature determined that the Surface Mining Act "shall be deemed to be an exercise of the police powers of the Commonwealth for the general welfare of the people of the Commonwealth . . ." Section 1 of

> the Surface Mining Act, 52 P.S. §1396.1. Prohibiting surface mining within 300 feet of an occupied dwelling is clearly related to the state's legitimate interest in protecting its citizens and residents from exposure to the hazards of mining.
>
> The distance prohibition also clearly meets the second prong of the Lawton test. Restricting mining within 300 feet is reasonably related to the attainment of that end, namely insuring that the state's residents be protected from having their homes and families exposed to the hazards of a mining operation, including blasting, open pits and highwalls, and noise and air pollution.

Willowbrook does not seriously challenge these arguments by DER. In fact, Willowbrook writes (brief, p. 11): "It is not contested that the imposition of the 300 foot limitation on mining may be within the power of the Commonwealth." Willowbrook does argue that if it really is the State's purpose to protect the occupants of neighboring dwellings, then consent to mining within 300 feet should be required from these occupants, not from the dwelling owners who need not be occupants (brief, p. 20). We find this argument to be almost frivolous, however; we do not believe Willowbrook would withdraw its claim that the mining prohibition is a taking if the Legislature were to modify Section 4.5(h)(5) of the State Act so that the consent of neighboring dwelling occupants, rather than dwelling owners, would be required. Furthermore, in enacting Section 4.5(h)(5) the Legislature surely could reasonably conclude that dwelling owners would take pains to preserve their dwellings from hazards, and as such would provide a more reliable regulatory mechanism for forestalling hazards to dwelling occupants than the occupants themselves, who might be unknown transients whereas the owners have their names recorded and are likely to remain owners for extended periods.

We also remark that Willowbrook does not question, and we see no basis for questioning, the Commonwealth's power to legislate the dwelling owner consent

requirement. Granted, as Willowbrook does grant, that "the imposition of the 300 foot limitation may be within the power of the Commonwealth," requiring the consent of neighboring dwelling owners before mining within 300 feet can occur is legitimate under the authority of Thomas Cusack Co. v. City of Chicago, 242 U.S. 526 (1917). In Cusack the Court held that such a consent requirement makes the regulation--here the restriction on mining within 300 feet--more rather than less acceptable, because without the possibility of obtaining neighboring dwelling owners' consent the prohibition on mining within 300 feet is absolute.

Thus we come to the third prong of the Lawton v. Steele standard, on which Willowbrook's arguments primarily focus. Willowbrook argues that the regulation has effected a taking because the prohibition on mining the variance area without Funk's consent bars Willowbrook from making any use of its only property interest in that area, namely its coal mining rights. There is no doubt that a taking would be "unduly oppressive" upon Willowbrook and thus would violate the third prong of the Lawton v. Steele standard. The point of the Lawton v. Steele standard, however, is that the consequences of a regulation which satisfies the first two prongs of the test are not to be termed "a taking" unless those consequences, however onerous they may appear on first sight, actually are found to be unduly oppressive. Willowbrook has not convinced us that the consequences of DER's prohibition on mining the variance area are unduly oppressive.

In the first place, Willowbrook appears to believe that the prohibition is per se a taking if it prevents Willowbrook from making any use of its only property interest(s) in the variance area. We do not agree with this thesis. As we have stated at the outset of this Section B, our reading of the applicable law does indicate that regulation under the police power, for the purposes of preserving the general welfare, will not be a taking unless the property owner is left with

no possible "reasonable" use of his property. But this principle does not imply that every exercise of the police power which leaves the property owner with no possible reasonable use automatically becomes a taking. For example, Willowbrook does not challenge the powers of the Commonwealth to require that no area be mined without a mining permit, and to refuse permits under appropriate circumstances (N.T. 78-79); yet forbidding mining without a permit, and then refusing a permit, certainly leaves the coal owner in the same "no possible reasonable use" situation Willowbrook complains of in this appeal.

In fact, forbidding mining without a permit, and then refusing a mining permit, are reasonable, not unduly oppressive exercises of the police power if allowing the mining would be hazardous to the general welfare, even if the forbidden area is very large. Correspondingly, if mining within 300 feet would be hazardous to neighboring dwelling occupants, prohibiting mining in a 4.5 acre area (Finding of Fact 13) unless there is consent from the owners of their dwellings is not unduly oppressive, even if the prohibition leaves the coal owner--in this case Willowbrook--with no other uses of his property. "There is no presumptive right to cause injury to another." Bortz Coal Co. v. Air Pollution Commission, 2 Pa. Cmwlth. 441, 279 A.2d 388 (1971).

Moreover, we are not convinced that the instant prohibition has deprived Willowbrook of any possible reasonable use of the coal in the variance area. As DER remarks, it may be possible to reach the coal in the variance area by deep mining, which does not fall under the "consent of dwelling owners" provision of Section 4.5(h)(5). Willowbrook counters this remark by asserting that there are no facts on record which support DER's contention that deep mining would be practical. However, the burden of proof in this appeal is Willowbrook's [25 Pa. Code §21.101(c)]; if Willowbrook wishes to maintain that the prohibition has

wholly deprived Willowbrook of its rights to the coal, then Willowbrook must shoulder the burden of showing that other non-surface mining means of reaching the coal are wholly impractical.

Even more to the point, the stipulated facts show that Willowbrook could have obtained Larry Funk's consent for a total expenditure of $7,200 (Finding of Fact 8). DER contends that this is a very small sum compared to the estimated value of the coal in the variance area (brief for summary judgment, p. 45); although the value of the coal in the variance area was not stipulated, the record appears to bear out this contention of DER's (N.T. 93). But there is no need for us to rest our decision on the possibly disputed valuation of the coal in the variance area, whose worth to Willowbrook in the context of DER's instant contention really should be measured by the profits Willowbrook expects rather than by the market value of the coal. Similarly there is no need for us to decide (as DER urges) that the economic loss to Willowbrook from not using the 4.5 acre variance area should be measured against Willowbrook's expected profits on the entire 700 acre coalfield (Finding of Fact 35). The fact that Willowbrook's anticipated profits from the coal would have to be diminished by $7200 in order for Willowbrook to avoid the prohibition does not--in and of itself--imply there has been a taking.

> It is, to be sure, undeniable that the regulations here prevent the most profitable use of appellees' property. Again, however, that is not dispositive. When we review regulation, a reduction in the value of property is not necessarily equated with a taking.
> (Andrus, supra)

Without a showing that the $7200 demanded by Funk would make surface mining the coal unprofitable, one cannot even conclude that Willowbrook has been deprived of

its right to surface mine the coal in the variance area; Willowbrook has not made such a showing. Without the sustainable conclusion that Willowbrook's original expectations of surface mining the coal have been wholly negated by the complained-of consequences of the consent requirement in Section 4.5(h)(5), Willowbrook's taking claim must be deemed quite without merit.

In sum, there has been no taking, Willowbrook does not have valid existing rights in the variance area, and DER's denial of Willowbrook's requested variance was not an abuse of discretion.

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the parties and subject matter of this appeal.

2. Willowbrook has the burden of proof in this appeal.

3. Our review of this matter is to determine whether DER has committed an abuse of discretion or an arbitrary exercise of its duties and powers.

4. This appeal turns on the following narrow question: Under the facts, does Willowbrook have "valid existing rights" in the variance area which override the State Act's Section 4.5(h)(5) prohibition on mining within 300 feet of any occupied dwelling "unless the dwelling owner has consented to such operations"?

5. If DER's denial of Willowbrook's request to mine in the variance area did not constitute a "taking", then Willowbrook does not have valid existing rights in the variance area.

6. In view of the preceding conclusion of law, this adjudication need not, and does not, rule on the issue of whether "valid existing rights" under the State Act, 52 P.S. §1396.4e(h) are defined by the present version of the federal regulation 30 CFR §761.5.

7. There are no "bright line" criteria for deciding when would-be regulation under the police power has become an unlawful taking.

8. In this appeal, the standard of Lawton v. Steele can be used to determine whether DER's denial of the variance constituted a taking, under U.S. as well as Pennsylvania constitutional law.

9. On this standard, and under the instant facts, there has been no taking.

10. A prohibition which prevents a party--in this case Willowbrook--from making any use of its property interests in some area is not necessarily an unconstitutional taking.

11. Willowbrook has not shown that non-surface mining means of reaching the coal in the variance area are wholly impractical.

12. The mere fact that Willowbrook's anticipated profits from mining the variance area must be diminished to avoid the disputed prohibition does not --in and of itself--imply there has been a taking.

14. DER's refusal of Willowbrook's requested variance was not an abuse of discretion.

O R D E R

WHEREFORE, this 19th day of JULY , 1984, Willowbrook's motion for summary judgment is rejected, DER's motion for summary judgment is granted, and the above-captioned appeal is dismissed.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR., Member

Edward Gerjuoy

EDWARD GERJUOY, Member

DATED: July 19, 1984

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

SUSSEX, INCORPORATED,	:	DOCKET NO. 82-238-M
Appellant	:	
	:	Pennsylvania Sewage Facilities Act (Act 537) 35 P.S. §§750.1 et seq. 25 Pa. Code Chapters 71, 73
v.	:	
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES	:	
Appellee	:	

A D J U D I C A T I O N

By the Board: This adjudication was originally drafted by Theodore Baurer, Examiner, from the record, and is issued after the Board's review, with modifications.

Dated: July 27, 1984

Syllabus

Developer appeals from a DER refusal to approve a proposed revised plan for on-lot sewage disposal within one section of developer's subdivision, which plan had been submitted pursuant to the Pennsylvania Sewage Facilities Act, 35 P.S. §750.1 et seq. Approval was denied on the basis of inadequacy of soil conditions to support the number and configuration of the lots projected for the subdivision section. Five previously submitted plans for other sections of the subdivision had been approved by DER prior to submission of the plan at issue. Substantial expenditures had been made by the developer in construction of the subdivision prior to its first submission of the plan to DER. Upon rejection of this plan, a revised plan was compiled and submitted. DER' rejection of this revised plan forms the subject matter of this appeal.

This Board's review of a DER action is to determine whether DER committed an abuse of discretion or an arbitrary or capricious exercise of its duties or functions. The burden of proving that DER abused its discretion or exercised its duties or functions arbitrarily lies with the appellant. 25 Pa. Code $21.101(c)(1). The

testimony given at the hearing was conflicting and ambiguous regarding soil suitability. Although the data was only marginally supportive of the conclusion that the soils were not suitable for their intended use as on-lot sewage disposal sites, DER is obliged to exercise its independent judgment and is justified in adopting a conservative and cautious approach. The appellant has failed to meet its burden of proof. It has shown nothing more than an honest difference of opinion among experts and the existence of a more conservative approach by DER at the time of its disapprova of the plan at issue than at the time of its approval of plans submitted for other sec tions of the subdivision. The Board therefore finds that DER acted reasonably and neither abused its discretion nor exercised its duties arbitrarily or capriciously.

Appellant cannot prevail upon its argument that prior DER approval of plans submitted for five other sections of the proposed subdivision estops DER from withholding approval of the plan at issue. In enforcing governmental enactments DER is exercising a governmental function, so that even had its agent been mistakenly indulgent or lax in enforcing the laws, DER cannot now be prevented from performing its duty of enforcing the statutes. Further, the establishment of an estoppel requires a showing of reasonable reliance upon some statement of the party sought to be estopped. Prior DER approval of plans for other sections of the subdivision does not amount to a statement which could be said to induce reasonable reliance. The great likelihood of change in DER standards, practices and procedures in the period between approval of the earlier plans and rejection of the plan at issue, coupled with the intervening decision of this Board in an unrelated case holding that mistaken indulgence by a commonwealth employee creates no prescriptive rights in a regulatee, precludes a finding that the appellant's reliance was reasonable. In addition, the record indicates that many of the costs incurred by appellant in alleged reliance upon DER approval pre-dated submission of the revised plan to DER, in some cases by several years. Therefore, the Board holds that estoppel does not lie agains DER in this matter.

INTRODUCTION

This matter comes before the Board as an appeal from DER's refusal to approve an Act 537 revision to the Official Plan for East Hanover Township, Dauphin County.

The proposed revision concerns Section 6 of the Fairfield Subdivision in the said township. Appellant, the developer, has previously had five other sections of Fairfield approved. Approval of Section 6 has been withheld on the grounds of inadequacy (or marginal inadequacy at best) of the soil conditions to support the number and configuration of lots projected for the site, in view of both the short- and long-term sewage disposal needs of the development.

The appeal charges DER with arbitrary and capricious decision-making constituting an abuse of discretion, and charges further that DER's disapproval of the proposed plan revision was unreasonable and discriminatory. DER cites its statutory responsibility to ensure the adequacy of the site to provide for on-lot septic systems as proposed, and seeks further testing at the site as a prerequisite to reconsideration of its decision.

A hearing on this matter was held on November 18, 1983 before Board Member Anthony J. Mazullo, Jr. Post-hearing briefs were filed by appellant and DER on December 30, 1983 and February 3, 1984, respectively. On March 6, 1984 the record was transmitted to the Board-appointed Hearing Examiner, Theodore Baurer, for adjudication. 71 P.S. §510-21(e).

FINDINGS OF FACT

1. Appellant is Sussex, Incorporated ("Sussex"), a Pennsylvania corporation with a business address at 1719 North Front Street, Harrisburg, Pennsylvania 17110, and doing business, inter alia, as a residential land developer. Messrs. John Purcell, Jr., and John Purcell, Sr., are, respectively, the President and sole shareholder of the corporation.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources ("DER"), which is the state agency charged with the duty and responsibility of administering the Pennsylvania Sewage Facilities Act, the Act of January 24, 1966, P.L. 1535, as amended, 35 P.S. §§750.1 et seq. ("the Act"), and the supporting Regulations, 25 Pa. Code Chapters 7, 73 ("the Code"), promulgated thereunder, as hereinafter cited.

3. The Fairfiled Subdivision in East Hanover Township, Dauphin County, covers more than 100 acres and comprises six sections (Exhibit A-1), the first four of which were approved prior to January, 1978, and the fifth during 1979 (Exhibit A-5).

4. This appeal concerns Section 6 (Exhibit A-2), which covers 13.5 acres more or less and comprised originally nine lots, two of which have been joined to others and a third eliminated entirely, thereby reducing the present number of lots to six (designated as Nos. 22, 46, 47, 48, 69 and 71); the first four numbered of these cover approximately one acre each and therefore account for approximately one-third of the total Section 6 acreage.

5. No plans exist for either a public sewerage system or public water supply system for Section 6 or for the vicinity of the Fairfield Subdivision, and none are planned within the next ten years, the closest existing sewer line, the Beaver Creek Interceptor, lying approximately six or seven miles to the west. (N.T. 21).

6. Red Fox Lane, a road traversing Sections 5 and 6, was completed by early 1980, prior to the submission of any plan for Section 6 to DER. (N.T. 107.)

7. Deep-probe soil evaluation testing in Section 6 had been carried out in August 1978 by Edward J. Gaydos, who at the time was Sewage Enforcement Officer ("SEO") for East Hanover Township (Exhibit A-3); similar testing was performed in May 1980 by Bruce P. Willman, an employee of then-SEO R.E. Wright Associates (Exhibit A-4).

8. Present during the latter tests was Charles D. Ferree, Jr., Sanitarian of DER's Bureau of Water Quality Management, who expressed no difference of opinion with Willman's observations at the time (N.T. 25), but who recalled at the Hearing only some "discussion as to whether or not long-term sewage disposal needs were (being) met" and possibly also some talk regarding changes in the numbers and configurations of the lots. (N.T. 123.)

9. Willman concluded that the six lots in Section 6 had suitable sites on each of them for on-lot septic systems, using the elevated sand mound concept (N.T. 20); he also testified that he "could make a recommendation to accept" the information he had developed and to have the plan approved on that basis. (N.T. 32.)

10. The first Planning Module for Section 6, comprising the original nine lots (Nos. 21, 23 and 70 in addition to those listed at Fact #4, above), was approved by the Township and was submitted to DER on or about July 29, 1980, and thereafter disapproved by DER.

11. Following a number of changes in the number and configuration of lots comprising Section 6, a "final" revision was submitted to relevant County and Township authority during late 1981 and early 1982, and to DER in March of 1982.

12. In November 1981, a Dauphin County Subdivision/Land Development Review Report noted general compliance of the plan with regulations, and in March 1982, the East Hanover Township Planning Commission recommended approval of the plan.

13. On May 7, 1982, Mr. Ferree wrote to the East Hanover Township Supervisors, setting forth various reasons why the Planning Module for Section 6 was unacceptable (Exhibit A-8); Ferree also suggested (at Paragraph 9 thereof) that additional soil tests should be conducted, in view of the marginal suitability for sewage disposal

of six of the original nine lots, and the unsuitability of the remaining three.

14. On May 20, 1982, Gerald R. Grove of Grove Associates, an engineering and surveying firm, responded to Ferree's objections, and submitted additional and revised information (Exhibit A-9); Grove acknowledged reduction of the original nine lots to six, as set forth at Fact #4, above.

15. Ferree's assertion, at Paragraph 7 of his May 7, 1982 letter (Fact #13), regarding the failure of Robert Sherrick, the current SEO, to have verified or approved, as of that date, the suitability of soils in Section 6 for on-lot sewage disposal, as one reason for his finding of unacceptability of the March 1982 "final" Planning Module for Section 6 (Fact #11) erroneously cited 25 Pa.Code §71.34(d) instead of 25 Pa.Code §71.15(c)(3) as authority for his finding; the required approval was not actually forthcoming until Sherrick's letter of July 6, 1982 (Exhibit C-1), which itself referenced a plan (Exhibit A-2) that had only been provided by Sussex on or about June 22, 1982; Ferree's code citation error was corrected in DER's Post-Hearing Brief (at 27).

16. On June 10, 1982 (Exhibit A-6), and again on November 3, 1982 (Exhibit A-10), the Section 6 sites were revisited and retested. Those present on the June date included Ferree (Exhibit C-2, N.T. 132-3), Grove, Merrill Kunkle (an independent consultant to Sherrick), Sherrick, and E.Lester Rothermel (Exhibits A-7, C-3) (a DER Soil Scientist). Those present on the November date included Ferree, Rothermel and William H. Farley, Ph.D. (Exhibit C-4), Chief of the Soil Science Section of DER's Division of Local Environmental Services.

17. The consensus among Grove (N.T. 88), Kunkle (N.T. 53), and Sherrick (N.T. 66) was that the six Section 6 sites were suitable for on-lot sewage disposal. The consensus among Farley (Exhibits A-10, C-4, N.T. 184-5), Ferree (Fact #16), and Rothermel (Exhibits A-7, C-3, N.T. 157-60) was that marginal to severe limitations existed regarding soil suitability for on-lot sewage disposal at the various sites, both as to depths to limiting zone and as to slopes.

18. On September 8, 1982, DER disapproved the plan (25 Pa.Code §71.15); this disapproval is the subject matter of the instant appeal. (Exhibit C-2.)

19. DER's disapproval was based generally on its finding of "inadequate suitable soils ... for the installation of on-lot sewage disposal systems" (Id.); this, plus the further factor of non-existent and unplanned-for public sewer and water facilities (Fact #5), led to the determination that "both the short- and long-term sewage needs have not been adequately addressed ..." (Exhibit C-2), and that therefore the plan was "not consistant (sic) with the purpose of (the Act)." (Id.)

20. More specifically, DER asserted (in its Pre-Hearing Memorandum filed January 27, 1983) as reasons for the inadequacy of the soils: preclusion of conventional subsurface systems on all lots owing to insufficient depths to limiting zone*; preclusion of alternate subsurface systems on Lots 21, 22 and 47, owing to slope restrictions and insufficient depths to limiting zone*; steep slopes or radically variant depths to limiting zone on Lots 46, 48, 69 and 71 necessitating multiple probing to ascertain even marginally acceptable profiles; and DER's belief that as to the latter four lots the feasibility of installation of elevated sand mound systems is so marginal as to be demonstrable only through specific identification of the system boundaries, both as to primary and replacement or repair systems, at the planning stage.

21. Alone among the experts testifying at the Hearing, Mr. Willman reported Comly and Brinkerton "to be the predominate (sic) soils from the soil profile descriptions that (he) evaluated" (N.T. 24), but these two were included among several soil types which Mr. Ferree had characterized as having "severe limitations for use of on-lot systems ..." (Exhibit A-8, Paragraph 10), the others including Atkins silt loam and Armagh. Appellant's own site map (Exhibit A-2), however, indicated the presence in Section 6 of all of the above except Comly, and included as well Weikert shaly silt loam the slope of which (25-40%) "would preclude any use for on-lot sewage disposal" (Exhibit A-8, Paragraph 10), plus Berks shaly silt loam of varying slope which, given "sufficient solid depth" would be "suitable for an elevated sand mound trench system or unsuitable for an on-lot sewage disposal system." (Id.)

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*The relevant Pa.Code sections cited at these points in DER's Pre-Hearing Memorandum are no longer operative; see Fact #25, infra, for the amended code citations now regulating depth to limiting zone and slope requirements for these subsurface systems. 25 Pa.Code Ch. 73; 13 Pa.Bull. 508 (January 22, 1983) at 518, 519.

22. Probe data developed by several investigators between August 1978 and November 1982 and offered in evidence (Exhibits A-2, A-10) indicate considerable variance in depths to limiting zone across most of Section 6, with many locations having depths less than the twenty inches required by the Code (Fact #25). Lots 22, 47 and 48 in particular featured depths to limiting zone varying both above and below twenty inches, not only between probe pits but also within individual pits. (See also Exhibit A-7, summary at page 6.)

23. Significant differences of opinion were expressed among the experts who testified, regarding the preferred mode of reporting depths to limiting zone in instances where the boundary being measured was describable as "wavy" or "irregular". Hence it became possible, depending on how one chose to interpret such data where the "waviness" or "irregularity" happened to fluctuate about the twenty-inch mark, to report depth to limiting zone as of its highest point, its lowest point, or its range of points. (N.T. 39-40, 57-8, 61, 153, 159.)

24. Most of the probe data referred to above (Fact #22) also included considerably variable slopes, with measurements at Lots 22, 46, 47 and 48 particularly prone to equalling or exceeding the maximum 12% slope permitted by the Code (Fact #25).

25. Owing to the marginal nature of the probe data relating to depths to limiting zone and slopes (Facts #22-24), the Planning Module for Section 6 can properly and does in fact contemplate <u>only</u> elevated sand mound systems for each lot. This is in accordance with the requirements of 25 Pa.Code §73.51(a)(2), wherever the depth to the top of the limiting zone is less than sixty inches, it being noted as well that 25 Pa.Code §73.51(a)(3) bars <u>any</u> system "where less than 20 inches of suitable undisturbed mineral soil exists". Further, it is required that for elevated sand mound trenches or beds, the maximum slope of undisturbed soil for such absorption areas be no more than 12% or 8%, respectively. 25 Pa.Code §73.55(a)(1),(2).

26. Elevated sand mound trenches require a larger absorption area than other types of on-lot septic systems. (N.T. 41.) For the homes contemplated in Section 6, Willman generally used a figure of 1000 square feet. (Exhibit A-2, N.T. 42.)

27. The evidence has been inconclusive in establishing that adequate areas exist on the Section 6 lots to provide for elevated sand mound trenches.

28. The existence of marginal and variable soil conditions in Section 6 raises a distinct possibility of malfunction of on-lot septic systems installed thereon.

29. Any malfunctions of on-lot septic systems in Section 6 would pose a distinct danger of contaminating the ground-water from which, according to the development plans (Exhibit A-2), each house would draw its water supply.

30. The evidence has been inconclusive in establishing that adequate areas exist on each lot in Section 6 to provide suitably for a replacement area in addition to the primary elevated sand mound system. Although such replacement areas are not explicitly required for elevated sand mound systems by the Code, Sussex recognized at least the desirability of including such areas and did, in fact, indicate proposed locations for them on its section map (Exhibit A-2).

31. The evidence has been inconclusive in establishing that the siting of elevated sand mound systems on each of the six lots of Section 6, as proposed (Id.), is feasible, and suggests rather that the soil conditions are at best marginal for the use contemplated.

32. The use of on-lot septic systems in Section 6 as proposed may not meet the short- and long-term sewage disposal needs of the development.

33. Sussex assertedly expended approximately $52,000 in expectation of DER approval of the Section 6 Planning Module. (N.T. 104-5.)

34. The evidence fails to establish that DER ever acted, whether by word or deed, in such a manner as to encourage Sussex in its expectations relative to DER approval of the Section 6 Planning Module.

35. Cancelled checks and paid invoices covering expenses assertedly incurred by Sussex in anticipation of DER approval of the Section 6 Planning Module (Sussex Pre-Hearing Memorandum, Supplement) clearly indicate that the bulk of such expenditures predated the submission of Sussex's first plan to DER in 1980 (Fact #10), with virtually all of them predating March 1982, when the "final" revision was submitted to DER (Fact #11).

DISCUSSION

A. Introduction

The issues to be faced in adjudicating this Act 537 appeal derive principally from bare marginality of agreement between the measured soil characteristics in Fairfield Section 6 and the legal criteria of suitability of these soils for their intended use as on-lot sewage disposal sites. The soil characteristics in question include soil types, depths to limiting zone and slopes (Facts #20-25). The factor of marginality of agreement between measurements and legal standards becomes all the more critical where, as here, the collective testimony of seven experts provides us with strongly conflicting interpretations of the data and their significance.

In view of the marginal data provided for its evaluation, DER's obligation* to make its own independent judgment on the development plan became even weightier than it might otherwise have been, inasmuch as the Act clearly authorizes DER "to approve or disapprove official plans for sewage systems" (35 P.S. §750.5(e)), and the Code mandates that DER "shall either approve or disapprove the plan or revision" (25 Pa.Code §71.16(c), emphasis added). Neither the Act nor the Code permits DER to equivocate when confronted with marginal field data or conflicting and perhaps ambiguous expert interpretations of the data.

DER being thus barred by law from fence-sitting on the matter, the principal issue then becomes whether DER's having come down on one side rather than the other - in having withheld approval of the development plan for Section 6, required additional testing as a prerequisite to reconsideration of the plan, and insisted that the plan provide adequately for both primary and replacement septic systems on each lot - was reasonable, was neither arbitrary nor capricious, and did not constitute an abuse of its discretion.

A secondary issue raised by Sussex concerns the question whether DER is estopped from withholding its approval of the proposed plan for Section 6 either by virtue of its prior grant of approval for Sections 1 through 4, and especially Section 5 where the same or similar marginal soil conditions assertedly prevailed as in Section 6, or because of Sussex's having expended substantial development

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*35 P.S. §750.5(d)(3),(e); 25 Pa.Code §§71.14(a)(6),(b) and 71.16; Township of Heidelberg v. DER, EHB Docket #76-150-D (issued October 21, 1977).

funds in asserted reliance upon the said approval, which it expected would be forthcoming.

Sussex's approach in addressing these issues is to argue, first, that "(e)ach of the six lots (in Section 6) contains on it a location that meets the standards and criteria of the (Code) for such (on-lot sewage treatment) system." (Sussex Post-Hearing Brief at 3.) Moreover, according to Sussex, estoppel lies against DER "in the absence of clear evidence that the soils were unsuitable." (Id. at 12.)

DER's response relies on its obligation (supra) to exercise its own independent judgment and, cognizant of both the marginal soil conditions and the contradictory interpretations of the field data, to adopt "a conservative and cautious view towards additional development by trying to assure that enough suitable soil is available to support one system per proposed lot, as well as a replacement area." (DER Post-Hearing Brief at 1.) Regarding Sussex's claim of estoppel, DER's position is that Sussex's line of argument based on prior approval of the earlier sections "negates the need for the planning approval process and would make (DER's) review of proposed developments a futile and useless exercise." (Id. at 2.) Further, the decisions to build Fairfield in sections and to offer them piecemeal for review, as well as to incur costs of infrastructure development in anticipation of approval of Section 6, were (in DER's view) independent business decisions of the developer, which cannot create an estoppel, nor "create any obligation in (DER) to disregard its duties of protecting the environment and ensuring that whatever sewage disposal method is chosen can be implemented and will provide a long-term solution to the needs of the development." (Id. at 2-3.)

We agree with DER, that its "decision in this matter represents an environmentally responsible balance between its statutory duties and (Sussex's) decision to further develop in an area of marginal suitability." (Id. at 3.)

B. The Principal Issue: Reasonableness of DER's Decision

The burden of proving that DER abused its discretion or exercised its duties or functions arbitrarily lies with Sussex as the appellant.*

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*25 Pa.Code §21.101(c)(1); Eagles' View Lake, Inc. v. DER, EHB Docket #76-086-W(issued April 4, 1978); Raymond E. Diehl v. DER, EHB Docket #78-037-B(issued May 14, 1979).

A mere difference of opinion, or even a demonstrable error in judgment, is insufficient under Pennsylvania decisional law to constitute an abuse of discretion; such abuse comes about only where manifestly unreasonable judgment, partiality, prejudice, bias, ill-will, misapplication or overriding of the law, or similarly egregious transgressions on the part of DER or other decision-making body can be shown to have occurred. (Garrett's Estate, 335 Pa. 287 (1939).) The most Sussex has been able to demonstrate in this case is a difference of honest opinion among honestly differing experts, an equally honest disagreement between the parties, and the existence of a more conservative approach by DER in 1982 than in 1979 to the discharge of its duties and functions vis-a-vis environmental regulation. At the very outset, then, it follows that Sussex has failed to meet its burden of proof against DER.

We have been at some pains, in introducing this Discussion, to stress the factor of marginality of agreement between field probe data relevant to soil conditions, and legal criteria for the intended use of the soils in Section 6. This factor, plus the high degree of variability of soil condition and quality throughout the area combined to militate strongly in favor of DER's insistence on "a conservative and cautious" (supra) approach in its evaluation of site suitability for the proposed development.

Given this combination of marginality and variability of soil parameters as attested to with particular regard to soil types, depths to limiting zone, and slopes (Facts # 20-25 and Exhibits and N.T. cited therein), and cognizant of the relevant Code requirements (Fact #25), it develops that the only type of on-lot septic systems which could legally be considered in Section 6 were elevated sand mounds. In several instances even these would necessarily have been limited to elevated sand mound trenches rather than elevated sand mound beds.

Moreover, such elevated sand mound systems typically require absorption bed areas (for homes as contemplated in Section 6) of the order of 1000 square feet (Fact #26). Areas of this magnitude, as laid out on the section map (Exhibit A-2), appear in several instances (but particularly as regards replacement areas for Lots 22, 69 and 71 and the primary area for Lot 69) to have necessarily infringed upon soils of objectionable types. (See Fact #21.) Yet

Sussex's attitude seems to have been typified by the following exchange which took place on Redirect Examination of Mr. Willman:

> Q. But your recommendation is that the lots have an area where soils are suitable and meet the requirements, and that give you enough confidence to make a recommendation as to the lot or as to the subdivision in general?
> A. That is correct, yes.
>
> N.T. 48 (Emphasis added)

In other words, the presence of an area - any area - where the legal requirements appeared to have been met, as via field data produced by any one probe yielding results favorable to Sussex's cause, seems in Sussex's opinion to have comprised sufficient compliance with the Code as to have justified DER's approval:

> Thus it can be seen that almost all of the evidence adduced at the hearing shows the soils to be suitable on each of the six lots. DER admits the suitability of four of the lots. As to the other two, it does not find them unsuitable, but only thinks more testing is called for.
>
> Sussex Post-Hearing Brief at 12 (Emphasis added)

Not only does Sussex's argument quoted immediately above tend to denigrate the validity of DER's call for additional testing, but it also misstates DER's position regarding the "suitability of four of the lots."

DER's actual position regarding the four "suitable" lots is to the effect

> that of six proposed lots covering a total of 13.5 acres (N.T. 109), four of the lots (Nos. 22, 48, 47, 46) are crowded into an area covering approximately one-third of the total acreage (Exhibit A-2). Each of these lots is further limited in terms of useable area by the existence of Weikert soils in their bottom quarter, a soil normally associated with shallow depth to bedrock and steep slopes. (Exhibit A-2, N.T. 183).
>
> DER Post-Hearing Brief at 11 (Emphasis added)

DER distinguishes its own view of the matter of suitability from that of Sussex by pointing out that the question

> is not whether there is one spot per lot where an acceptable soil profile can be found, but rather whether enough acceptable soil with uniformly acceptable depths to limiting zone exists over an area with acceptable slope that is large enough to accommodate the bed or trench of at least one elevated sand mound as a primary system, and one as a replacement system. The testimony as a whole does not resolve this issue.
>
> Id. (Emphasis in the original)

Further to this point is Sussex's misquotation (Sussex Post-Hearing Brief at 7) of Mr. Ferree's statements regarding suitability of the original nine lots, in his letter of May 7, 1982 (Exhibit A-8, Paragraph 9). Sussex quotes Ferree as having characterized the final six lots (Nos. 22, 46, 47, 48, 69, 71) as "suitable for elevated sand mound systems", omitting the qualifier in his actual statements as to each of the lots, where in each instance he wrote, "Lot X, if sufficient suitable area is available, is suitable for an elevated sand mound trench system." The emphasis we have here added stresses the portion of Ferree's statement which Sussex omitted in its brief, as to each of the named six lots, but which lies at the heart of Ferree's, and DER's, ultimate recommendation for more testing, viz., to determine "if sufficient suitable area is available" to support the designated systems.

Sussex goes on to insist (Sussex Post-Hearing Brief at 12) that "(m)ore testing, in light of the solid evidence already obtained, and especially at the planning stage, is not reasonable." But we think, to the contrary, that in light of Ferree's well-reasoned qualification regarding suitability (supra), more testing is eminently reasonable, and preferably at the planning stage rather than later on, "at the permitting stage, leaving open the possibility that no permit could be issued or that a malfunction would have to go uncorrected." (DER Post-Hearing Brief at 2.)

We therefore find that DER acted reasonably and neither abused its discretion, nor exercised its duties and functions arbitrarily or capriciously, in disapproving the proposed Plan Revision for Fairfield Section 6, requiring that additional testing be conducted as a prerequisite to reconsideration of the revision, and insisting that the plan provide adequately for both primary and replacement septic systems on each lot.

C. The Secondary Issue: Estoppel

Sussex argues that DER, having previously approved five other sections of the Fairfield Subdivision, one of which (Section 5) ostensibly contained soils "worse than those in Section 6" (Sussex Post-Hearing Brief at 13), thereby gave Sussex "good reason to believe that (Section 6) would be approved because of the prior approvals and the similarities of the soil", notwithstanding that "(a)ll of the systems in the prior subdivision are functioning

properly, except for one which has been repaired, that was installed in an area where the soils were unsuitable." (Id., emphasis added.) In addition, acting on the presumption thereby created, Sussex then went ahead and spent "at least $51,800.00 ... for improvements to Section 6 in anticipation of DER approving of the subdivision." (Id.)

Taking this argument at face value and interpreting it in the light most favorable to Sussex, what it amounts to is a line of reasoning which says that: (1) DER erred in its earlier actions, at least in regard to its approval of Section 5; (2) DER was therefore bound by its previous error to deliberately run the risk of repeating the mistake in spite of the prior experience and in spite of its negative findings regarding the suitability of soils in Section 6, for the sake of consistency if for no other reason; (3) Sussex was, by the same token, justified in gambling a substantial sum of money on the chance that DER would knowingly repeat its earlier error; (4) Sussex was equally justified in relying on DER to approve the plan for Section 6, in the face of its prior sad experience as to Section 5, and despite at least questionable findings as to Section 6; (5) DER was and is, therefore, estopped from carrying out its reasonably determined decision (Section B, supra), and may not fail to approve the proposed Plan Revision for Fairfield Section 6.

The troubles with this rationale are manifold: First and foremost is a ruling enunciated by the Commonwealth Court of Pennsylvania to the effect that, "in enforcing these environmental enactments DER is exercising a governmental function, so that even had its agents been mistakenly indulgent or lax in enforcing the laws, DER cannot now be prevented from performing its duty of enforcing the statutes." (Lackawanna Refuse Removal, Inc. v. DER, Pa. Cmwlth., 442 A.2d 423, 426 (1982).) Or as we wrote in an earlier case, "mistaken indulgence by, or errors of a commonwealth employee create no prescriptive rights in a regulatee." (Fossil Fuels, Inc. v. DER, EHB Docket #80-222-H (issued June 19, 1981), at 132.)

Thus DER is not bound to repeat past errors of enforcement, nor to run the risk of such repetition, simply for the sake of consistency of performance or to justify a developer's misplaced reliance.

Secondly, as DER correctly pointed out (in Fossil Fuels, supra), the establishment of an estoppel requires reasonable reliance, by the party seeking to estop, upon some statement of the party sought

to be estopped, to the detriment of the former. "The only 'statement' upon which (Sussex) ... relied was the fact that prior approvals had been given to Sections 1-5, and that (DER) failed to give (Sussex) 'notice' that Section 6 would be ... disapproved." (DER Post-Hearing Brief at 32.) In other words, Sussex relied not on a true "statement" but on an extrapolation from past conduct to future expectation, an expectation the failure of which to come to fruition was not heralded by some form of "notice". We cannot agree that this mere expectation constitutes a "statement" in the sense intended by any reasonable definition of estoppel. Nor do we see where any special form of "notice" of impending disapproval was required, since it was and is explicit in both the Act and the Code that the possibility of either approval or disapproval - and no other outcome - is inherent in the act of submitting the proposal to DER. (35 P.S. §750.5(e); 25 Pa. Code §71.16(c); Introduction supra.)

In addition, we have already pointed out that, to the extent that the element of "reliance" was based on Sussex's unreasonable assumption regarding DER's anticipated course of action regarding Section 6, such "reliance" was not "reasonable". This point is accented by the testimony of Mr. Purcell, Sussex's President:

> Q. ... (D)id you or did the corporation rely to any extent upon the fact that prior subdivisions had been approved, the planning had been approved by both the Township and DER?
>
> A. Oh, yes, absolutely. I think it is only reasonable to assume that when five previous plans of the same section are approved that there would be very little problem with the final plans. I mean, everything is the same. All the indications we were getting as we were going along that I could see was that everything was the same. There was no reason to believe it wouldn't be approved.
>
> N.T. 105-6

The trouble with Mr. Purcell's reasoning in thus answering his counsel's question is, in our view, that the assumption is not "reasonable" in that two (not five) previous submissions of plans had been made six years and three years prior to the instant submission, making it quite reasonable to assume - contrary to Mr. Purcell - the great likelihood that changes in DER standards, practices and procedures would have occurred during the intervening years, and experience with the prior sections would have accumulated likewise, so that everything might not be "the same." In fact, Fossil Fuels (supra) was adjudicated in 1981, prior to Sussex's submission

of its "final" plan for Section 6 in 1982, and the portion quoted above from that case ought certainly to have served as "notice" of a more conservative policy on the part of DER, backed up by this Board.

No evidence has been offered, in sum, regarding any statement or suggestion of DER or any of its agents or employees indicating that everything would or could be "the same" as it had been in 1979, or justifying in any way Sussex's asserted "reliance" on approval of the Section 6 plan by DER.

Finally, the monetary "detriment" asserted by Sussex appears, upon examination of various checks and invoices, copies of which were included in a Supplement to Sussex's Pre-Hearing Memorandum, to represent expenditures predating (by several years in many instances) the filing of the Plan Revision for Section 6. (Fact #35.) Indeed, construction of Red Fox Lane, the road traversing Sections 5 and 6, is itself covered by invoices included in the Supplement, and dating back to 1979, when (or possibly early in 1980) the road was completed. (N.T. 107.) Mr. Purcell testified that almost $41,500 was expended for the portion of the road attributable to Section 6. (N.T. 104.) That Sussex suffered financial losses is not in dispute, but

> (Sussex) apparently made ... business decisions to design and build the infrastructure (e.g., roads) for the entire subdivision prior to submission or approval of all sections. These business decisions ... on (Sussex's) part do not create an estoppel against (DER).
>
> DER, Post-Hearing Brief at 2

Thus, as DER correctly points out,

> the costs (Sussex) is complaining about were incurred approximately three years <u>prior to</u> submission of (sic) (DER) of the request for approval of Section 6. (Their) "reliance" on as-yet unrequested action can certainly not be viewed as reasonable or as forming any basis for an estoppel.
>
> <u>Id.</u> at 33
> (Emphasis in the original)

We hold, therefore, that estoppel does not lie against DER in this matter.

<u>D. Conclusion</u>

The foregoing considerations lead this Board to rule that DER neither abused its discretion nor arbitrarily exercised its powers or functions in this case. DER's refusal to approve the proposed Plan Revision for Fairfield Section 6 was based on reasonable grounds and

was in accordance with the relevant statutes and regulations. DER's requirements for further testing and for adequate provision in any future proposal for both primary and replacement septic systems on each lot are similarly based on reasonable grounds and in accordance with law.

Sussex's plea of estoppel, we hold is entirely without merit and is therefore summarily rejected.

CONCLUSIONS OF LAW

1. This Board has jurisdiction over the parties and the subject matter of this appeal.

2. The burden of proof in an appeal by a private party from a DER refusal to approve a proposed Act 537 Plan Revision is upon the appellant. (25 Pa. Code §21.101(c)(1)). This burden has not been carried by Sussex, the appellant in this matter.

3. This Board's review of a DER action is to determine whether DER committed an abuse of discretion or an arbitrary or capricious exercise of its duties or functions.

4. In the review of an Act 537 Plan Revision, DER must decide upon, inter alia, the adequacy of the proposed sewage disposal method and the suitability of the soils where on-lot sewage disposal is proposed.

5. DER must consider the immediate and long-range disposal needs of a development, including suitable replacement areas for on-lot sewage disposal systems.

6. DER did not act arbitrarily or capriciously in requiring appellant to verify the existence of adequate suitable areas for primary and replacement disposal systems on each proposed lot, in light of the marginality of the soils and the slopes thereof.

7. It was not an abuse of discretion, nor was it an arbitrary or capricious exercise of its duties and functions, for DER to disapprove the pro-

posed Plan Revision for Section 6 of the Fairfield Subdivision, or to require that additional testing be conducted as a prerequisite to reconsideration of the plan, or to insist that the plan provide adequately for both primary and replacement septic systems on each lot.

8. DER is not estopped from disapproving appellant's proposed Plan Revision for Section 6 by the virtue of prior approval of the other five (5) sections of the development.

9. Under the facts of this appeal, estoppel does not lie against DER on the basis of any statements made by DER or any of its agents or employees, nor does estoppel lie on account of expenditures of money by Sussex for the development of Section 6 prior to DER's decision in this matter, or in anticipation or expectation of approval of the proposed Plan Revision.

O R D E R

AND, NOW, this 27th day of JULY, 1984, the appeal of Sussex, Incorporated is hereby dismissed.

ENVIRONMENTAL HEARING BOARD

ANTHONY J. MAZULLO, JR.
Member

EDWARD GERJUOY
Member

DATED: July 27, 1984

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

221 NORTH SECOND STREET
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HARRISBURG, PENNSYLVANIA 17101
(717) 787-3483

CHESTER A. OGDEN, PRESIDENT
COAL HILL CONTRACTING COMPANY, INC. :

:

Docket No. 82-193-G

:

v. :

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

ADJUDICATION

By: Edward Gerjuoy, Member, August 6, 1984

Syllabus

In an appeal from the forfeiture of bonds under section 4(h) of the Surface Mining Conservation and Reclamation Act, 52 P.S. §1396.4(h), DER has the burden of proof 1) that the mine operator has failed to comply with the applicable law and 2) that the amount DER seeks to forfeit has been correctly computed from the acreage affected and unreclaimed. Where the evidence is not disputed with regard to these two requirements, the burden has clearly been met. Where, however, DER's witness states that the acreage covered by two permits has been restored, a forfeiture of any amount of the bond accompanying either permit is not justified, in the absence of a contrary showing. It is an abuse of discretion for DER to forfeit a bond covering a permitted area on the sole ground that mining operations were conducted on an adjacent unpermitted area.

ADJUDICATION

This matter comes before the Board as an appeal of DER's forfeiture of seven bonds pursuant to section 4(h) of the Surface Mining Conservation and Reclamation Act, 52 P.S. §1396.4(h). The bonds were submitted by Coal Hill as a condition of obtaining surface mining permits for two sites in Lawrence and Bradford Townships, Clearfield County, Pennsylvania.

Several months following the filing of the notice of appeal, Coal Hill's president, Chester Ogden, informed the Board that he intended to handle the appeal without the assistance of counsel. After repeated warnings by the Board that failure to file a pre-hearing memorandum would limit the presentation of his case, Mr. Ogden did file a pre-hearing memorandum, apparently drafted by himself. Counsel for DER states that he never received a copy of this memorandum. (DER post-hearing brief, page 8). No prejudice to DER has been occasioned by this failure of Coal Hill to supply a copy of the memorandum, however. The presentation of Coal Hill's case was essentially limited to evidence tending to refute the evidence presented by DER. Furthermore, the decision reached herein is based solely upon a determination of whether DER had met its initial burden of proof with regard to the forfeiture of each bond.

Coal Hill did not engage in discovery in the presentation of its case. It was, however, represented by counsel at the hearing.

Near the close of the hearing the parties entered into a stipulation concerning the number of acres affected, and in some cases, reclaimed in part, by Coal Hill. The board directed the parties to provide a written summarization of this stipulation. DER has provided the requested summarization, as well as a post-hearing brief. Coal Hill has provided neither and has informed the Board of

no circumstances justifying this failure. The summary supplied by DER accurately reflects the stipulation entered into on the record at the hearing. Where relevant, it has been relied upon in the determination reached herein.

FINDINGS OF FACT

1. Appellant is Coal Hill Contracting Company, a Pennsylvania corporation with mailing address P. O. Box 1001, Clearfield, Pennsylvania 16830.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources, which is empowered to administer the provisions of the Surface Mining Conservation and Reclamation Act (hereinafter "SMCRA"), Act of May 31, 1945, P.L. 1198, as amended, 52 P.S. §1396.1 et seq., The Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §691.1 et seq., and the rules and regulations promulgated thereunder by the Environmental Quality Board.

3. On August 7, 1974 C. A. Ogden Company executed and submitted to DER surety bond No. 217B6839 in the amount of $11,500 as a condition of obtaining mining permit 585-5A. On November 5, 1975, a change rider was submitted to DER changing the principal's name on the bond to Coal Hill. The bond was issued by Traveler's Indemnity Company.

4. On October 27, 1978 DER issued mining permit 1470-1 to Coal Hill; a special permit condition transferred the liability and obligation under surety bond No. 217B6839 which had been previously accrued by C. A. Ogden Company under mining permit 585-5A.

5. On October 25, 1974 C. A. Ogden Company executed and submitted to DER surety bond No. 218B2244 in the amount of $15,640 as a condition of obtaining mining permit 585-5(A2). On November 5, 1975 a change rider was submitted to DER changing the principal's name on the bond to Coal Hill. The bond was issued by Traveler's Indemnity Company.

6. On October 27, 1978 DER issued mining permit 1470-1A to Coal Hill; a special permit condition transferred the liability and obligation under surety bond No. 218B2244 which had been previously accrued by C. A. Ogden Company under mining permit 585-5(A2).

7. The terms of surety bond No. 217B6839 and surety bond No. 218B2244 provide that liability shall accrue in proportion to the area of land affected by surface mining at the rate of five hundred seventy-five ($575.00) dollars per acre or part thereof.

8. On October 14, 1975 Coal Hill assigned to DER savings certificate No. 977 in the amount of $2400 as a condition of obtaining mining permit 585-5(A3). The savings certificate was drawn on the Clearfield Bank and Trust Company.

9. On October 27, 1978 DER issued mining permit 1470-1(A2) to Coal Hill; a special permit condition transferred the liability and obligation under savings certificate No. 977 which had been previously accrued by C. A. Ogden Company under withdrawn mining permit 585-5(A3).

10. The terms of the collateral bond submitted as a condition of obtaining mining permit 585-5(A3) [now permit 1470-1(A2)] provide that liability shall accrue in proportion to the area of land affected by surface mining at the rate of five hundred ($500.00) dollars per acre or part thereof.

11. On March 17, 1976 Coal Hill assigned to DER savings certificate No. 879 in the amount of $23,000 as a condition of obtaining mining permit 585-6. The savings certificate was drawn on the Clearfield Bank and Trust Company.

12. On October 30, 1978 DER issued mining permits 1470-2 and 1470-2A to Coal Hill; a special condition of both permits transferred the liability and obligation under the bond associated with permit 585-6 which had been previously accrued by C. A. Ogden Company.

13. The terms of the collateral bond submitted as a condition of permit 585-6 (now permits 1470-2 and 1470-2A) provide that liability shall accrue in proportion to the area of land affected by surface mining at the rate of five hundred and seventy-five ($575.00) dollars per acre or part thereof.

14. On March 17, 1976 Coal Hill assigned to DER savings certificate No. 976 in the amount of $5000 as a condition of obtaining mining permit 585-6A. The savings certificate was drawn on the Clearfield Bank and Trust Company.

15. On October 30, 1978 DER issued mining permit 1470-2(A2) to Coal Hill; a special permit condition transferred the liability and obligation under the bond associated with permit 585-6A which had been previously accrued by C. A. Ogden Company.

16. The terms of the collateral bond submitted as a condition of permit 585-6A [now permit 1470-2(A2)] provide that liability shall accrue in proportion to the area of land affected by surface mining at the rate of five hundred ($500.00) dollars per acre or part thereof.

17. On December 22, 1977 Coal Hill executed and submitted to DER surety bond No. 558E2324 in the amount of $7100 as a condition of obtaining mining permit 1470-3. The bond was issued by the Traveler's Indemnity Company.

18. On March 14, 1978 DER issued mining permit 1470-3 to Coal Hill.

19. The terms of surety bond 558E2324 provide that liability shall accrue in proportion to the area of land affected by surface mining at the rate of one thousand ($1000.00) dollars per acre or part thereof.

20. All of the bonds provide that liability is conditioned upon the following:

> "The said surface mine operator shall faithfully perform all of the requirements of (1) Act 418, (2) the Act of Assembly approved June 22, 1937, as amended, known as "the Clean Streams Law"

> (Act 394), (3) the applicable rules and regulations promulgated thereunder, and (4) the provisions and conditions of the permits issued thereunder and designated in this bond (all of which are hereafter referred to as "law"), then this obligation shall be null and void, otherwise to be and remain in full force and effect in accordance with the provisions of the law."

21. All of the bonds provide that the accrual of liability shall be in proportion to the acreage affected and in no case shall such liability be for an amount less than five thousand ($5000.00) dollars.

22. Coal Hill ceased mining at the Lawrence Township site in 1976.

23. Coal Hill ceased mining at the Bradford Township site in 1979.

24. Mining permit 1470-1 was issued for 20 acres; 10.2 acres were affected by Coal Hill.

25. Coal Hill graded 6 acres on permit 1470-1 to approximate original contour and accomplished no reclamation of the remaining 4.2 affected acres.

26. Mining permit 1470-1A was issued for 27.2 acres; 17.3 were affected by Coal Hill.

27. Coal Hill graded 6 acres on permit 1470-1A to approximate original contour and accomplished no reclamation of the remaining 11.3 affected acres.

28. Mining permit 1470-1(A2) was issued for 4.8 acres; 0.5 acres were affected by Coal Hill.

29. No reclamation of the 0.5 affected acres on permit 1470-1(A2) was accomplished.

30. Mining permit 1470-2 was issued for 20 acres, all of which were affected by Coal Hill; no reclamation has been accomplished.

31. Mining permit 1470-2A was issued for 20 acres, all of which were affected by Coal Hill. These acres have been restored. (T. 88)

32. Mining permit 1470-2(A2) was issued for 10 acres, all of which

were affected by Coal Hill. These acres have been restored. (T. 88)

33. Mining permit 1470-3 was issued for 7.1 acres, all of which were affected by Coal Hill. No reclamation has been accomplished. (T. 103)

34. Coal Hill affected three acres not covered by a mining permit on the property of Real Estate Trade-In Company adjacent to the Bradford Township site. No reclamation of this affected area was accomplished.

35. The Travelers Indemnity Company was notified of DER's forfeiture action by a copy of the notice of forfeiture letter of J. Anthony Ercole dated July 9, 1982.

DISCUSSION

The Board's scope of review in this case is to determine whether DER has committed an abuse of discretion or an arbitrary exercise of its duties or functions. Warren Sand and Gravel Company, Inc. v. DER, 20 Pa. Cmwlth. 186, 341 A.2d 556 (1975).

In appeals from the forfeiture of surface mining bonds, DER has the burden of proof that it acted properly. Southwest Pennsylvania Natural Resources v. DER, 1982 EHB 48, Rockwood Insurance Company v. DER, 1981 EHB 424. This burden is set forth in section 4(h) of the Surface Mining Conservation and Reclamation Act, 52 P.S. §1396.4(h) as follows:

> If the operator fails or refuses to comply with the requirements of the act in any respect for which liability has been charged on the bond, the department shall declare such portion of the bond forfeited....

The bonds at issue here provide that liability shall accrue unless Coal Hill "faithfully perform(s) all the requirements of (1) Act 418, (2) the Act of Assembly approved June 22, 1937, as amended, known as "The Clean Streams Law" (Act 394),

(3) the applicable rules and regulations promulgated thereunder, and (4) the provisions of the permits issued thereunder and designated in this bond." The permits themselves are subject to "all requirements of the Surface Mining Conservation and Reclamation Act and all existing orders, rules, regulations, conditions and standards adopted or issued or hereafter issued or adopted by the Department under Act No. 394, Act No. 418 and Act No. 472 and amendments thereto."

Stated more simply, DER must demonstrate (1) that Coal Hill has failed to comply with the applicable statutes, rules or regulations and (2) that the dollar amount DER seeks to forfeit has been correctly computed from the acreage affected and unreclaimed. Where liability on a bond accrues in proportion to the area of land affected, as is the case with all of the bonds here, DER can forfeit only the amount corresponding to the number of acres affected multiplied by the per acre liability specified in the terms of the bond. Southwest Pennsylvania Natural Resources v. DER, supra.

The Lawrence Township Site

The parties stipulated that, of the 52 acres covered by permits 1470-1, 1470-1A and 1470-1(A2), 24 acres had not been affected by Coal Hill's surface mining operations. 4.3 of these 24 unaffected acres were included under permit 1470-1(A2). The remaining 19.7 unaffected acres were distributed equally between permits 1470-1 and 1470-1A, by agreement of the parties. This left 10.2 and 17.3 acres respectively, which had been affected by Coal Hill. The parties further agreed that six of those affected acres on each of permits 1470-1 and 1470-1A had been regraded to the approximate original contour (AOC). The remainder of the acreage covered by these two permits remains entirely unreclaimed, i.e., 4.2 acres on 1470-1 and 11.3 acres on 1470-1A. Furthermore, DER Mine Inspector McGinness

testified that large open pits remained on both sites. (T. 15, 16, 20, 21). This testimony was uncontradicted.

The foregoing establishes that Coal Hill has failed to comply with the applicable law. Specifically, there has been a failure to comply with the terms of 25 Pa. Code §87.140 which reads in pertinent part:

> §87.140. Contemporaneous reclamation.
>
> Reclamation efforts including, but not limited to, backfilling, grading, topsoil replacement, and revegetation of all land that is disturbed by surface mining activities shall occur in accordance with the provisions of §§87.141 - 87.148 (relating to backfilling and grading) and the approved reclamation plan.

§87.141 provides in part that "all disturbed acres shall be returned to their approximate original contour." To the extent that this has not been accomplished, Coal Hill is in non-compliance. Thus, the failure to take any steps to reclaim the 4.2 acres on permit 1470-1 and the 11.3 acres on permit 1470-1A justifies the forfeiture of the entire amount of bond liability which has accrued for those specific acres. Both permits provide that liability will accrue at the rate of $575 per acre or part thereof affected. Thus for the wholly unreclaimed acres under present discussion, a forfeiture of $2875 for permit 1470-1 and $6900 for permit 1470-1A is appropriate. Although the terms of permit 1470-1 require that liability shall not be less than $5000, this provision is not applicable here in light of the determination reached <u>infra</u> regarding Coal Hill's liability for the acres covered by that permit which were affected and only partially reclaimed.

With regard to the six acres on each of permits 1470-1 and 1470-1A which the parties agreed had been graded to AOC, the determination of liability is slightly more complex. Grading to AOC constitutes partial compliance with the applicable law. However, to the extent that further reclamation is required,

there is non-compliance. As noted above, 25 Pa. Code §87.140 requires more than grading to AOC. Section 4(h) of the SMCRA, 52 P.S. §1396.4(h), requires that DER forfeit the bond where the operator has failed to reclaim the site in accordance with the provisions of the law. Consequently, we cannot find that DER has abused its discretion in forfeiting the portion of the bond corresponding to the acres affected on permits 1470-1 and 1470-1A, despite the fact that partial reclamation was accomplished. For these affected and only partially reclaimed acres, therefore, an additional forfeiture of $3450 on each of permits 1470-1 and 1470-1A is sustained.

The record in this case contained some suggestion that a "completion report" had been filed by DER for the Lawrence Township site. (T. 40) However, such a report, if it in fact exists, was not produced at the hearing. (As noted, Coal Hill did not engage in discovery.) No evidence documenting the existence of this report was produced. In the absence of such evidence we must uphold DER's finding that no portion of the affected acreage at the Lawrence Township site has been adequately reclaimed.

The final issue that must be addressed with regard to the Lawrence Township site is the liability for the grading of one half an acre on permit 1470-1(A2). The parties stipulated that Coal Hill did not affect any of the acres covered by this permit by mining; it simply graded the half acre. The half acre was excluded from the acreage stipulated to have been returned to AOC. The fact that no mining was conducted on permit 1470-1(A2) is irrelevant since there clearly was mining on the immediately adjacent permit sites. 25 Pa. Code §86.1 defines "surface mining activities" to include "all activities in which the land surface has been or is disturbed as a result of or incidental to surface mining operations of the operator." Consequently, since the grading falls within the

regulatory definition of surface mining and since no reclamation of this half acre was accomplished, it follows that Coal Hill has failed to comply with the applicable law. Therefore, forfeiture of the portion of the bond corresponding to that half acre is appropriate. However, given the fact that the terms of the bond provide that in no event shall liability be for an amount less than $5000, a forfeiture of the entire amount of the bond ($2400) is warranted.

The Bradford Township Site

The parties stipulated that the entire area covered by permits 1470-2, 1470-2A, 1470-2(A2) and 1470-3 was affected by Coal Hill's mining operations. No stipulation was entered into with regard to the amount of this affected area which was reclaimed.

DER Mine Inspector Forcy testified that with regard to the acres covered under permits 1470-2 and 1470-3 no reclamation had been accomplished. (T. 103). Consequently, DER has clearly met its burden of proof regarding non-compliance with the applicable law. The forfeiture of the entire per acre liability on these bonds is justified, i.e., $11,500 for permit 1470-2 and $7100 for permit 1470-3.

However, we find it impossible to hold that DER has met its burden of proof with regard to the violations existing on the acres covered by permits 1470-2A and 1470-2(A2). DER must not only demonstrate that violations are present; it must demonstrate the number of acres which have not been restored in compliance with the applicable statutes, rules and regulations. It is not clear that either of these requirements has been met with regard to permits 1470-2A and 1470-2(A2). Inspector Forcy's report of January 8, 1980 (C.Ex.10) states that "the area of 1470-2A and 1470-2(A2) is restored and planted." His next report, dated April 29, 1980 (C.Ex.10) states that the "completed area is in good condition." No evidence

was introduced at the hearing to counter this suggestion that Coal Hill has fully complied with the requirements of the law on these two permit sites. Indeed, Mr. Forcy testified that "2A and 2A2, in particular have been restored." (T. 88). In the absence of evidence to the contrary, we are constrained to find that DER has abused its discretion by seeking forfeiture of the bonds associated with these two permit areas.

Counsel for DER argues in his post-hearing memorandum that, since permits 1470-2A and 1470-2(A2) are amendments to permit 1470-2, all three should be construed together as a single permit so that a violation on any portion of the acreage covered by the three will prevent release of liability accruing under the terms of any bond associated with the permit applications. We find this argument untenable.

First, permit 1470-2(A2) does not by its terms condition liability upon failure to comply with the terms of any other permit. In the absence of any indication that the intent of the parties was to the contrary, this permit must be construed as a separate and independent contract between Coal Hill and DER.

Second, permits 1470-2 and 1470-2A both provide that:

> The Permit No. 1470-2 and No. 1470-2(A) both issued for 20 acres each assumes all liability and obligation accrued under the Permit No. 585-6 issued July 16, 1975, to C. A. Ogden Co., for 40 acres.

Even assuming that this language requires the Board to treat permits 1470-2 and 1470-2A as one permit, our holding in Southwest Pennsylvania Natural Resources, discussed supra, precludes our adoption of the argument put forth by DER. DER is justified in forfeiting only that portion of a bond which corresponds to the number of acres affected and not reclaimed multiplied by the per acre liability specified in the terms of the bond.

One final issue requires attention. The parties agreed that Coal Hill affected three acres not covered by any mining permit. (T. 148). There was no evidence presented suggesting that any portion of these three acres has been reclaimed. DER argues that, since the terms of all the bonds in issue here provide that Coal Hill must abide by the terms of the applicable law, and since mining off a permit area is prohibited by law, a forfeiture is justified.

The flaw in this argument lies in the fact that the bonds by their terms apply only to specifically designated acres covered by existing mining permits. The bond and permit of which it forms a part are contracts between DER and the operator. Southwest Pennsylvania Natural Resources v. DER, supra. This Board cannot extend liability on the bond beyond the terms agreed upon by the parties. The proper remedy for mining without a permit is contained in section 18.4 of the SMCRA, 52 P.S. §1396.22, the assessment of a civil penalty. Forfeiture of a bond for a permitted area on the basis that there was mining in an adjacent unpermitted area constitutes an abuse of DER's discretion.

In summary, DER's forfeiture of the following amounts for the Lawrence Township site is sustained: for permit 1470-1, $6325 for 10.2 acres; for permit 1470-1A, $10,350 for 17.3 acres; for permit 1470-1(A2), $2400, the minimum liability under the terms of the bond. The forfeiture of the following amounts for the Bradford Township site is sustained: for permit 1470-2, $11,500 for 20 acres; for permit 1470-3, $7100 for 7.1 acres. No forfeiture of the bonds associated with permits 1470-2A and 1470-2(A2) is allowed. No portion of any of the bonds may be forfeited for the violations associated with Coal Hill's affecting of those acres not covered by an existing permit.

CONCLUSIONS OF LAW

1. The Board has jurisdiction over the parties and the subject matter of this appeal.

2. The burden of proving the facts that can justify forfeiture of the bonds which are the subject of this appeal falls on DER.

3. DER has met its burden of proof that Coal Hill failed to comply with the applicable statutes, rules or regulations with regard to all of the affected acreage covered by permits 1470-1, 1470-1A, 1470-1(A2), 1470-2 and 1470-3.

4. For each of the bonds associated with the permits specified in Conclusion of Law 3, with the exception of permit 1470-1(A2), forfeiture is appropriate in an amount equal to the number of acres affected and not reclaimed multiplied by the per acre liability specified in the applicable bonds.

5. Forfeiture of the entire amount of the bond associated with permit 1470-1(A2) is appropriate; the minimum liability condition of the bond is applicable where the forfeiture would otherwise be for an amount less than $5000.

6. DER has not abused its discretion or arbitrarily exercised its duties or functions in forfeiting the bond amounts specified in Conclusions of Law 4 and 5.

7. DER has not met its burden of proof that Coal Hill failed to comply with the applicable statutes, rules or regulations with regard to the acreage covered by permits 1470-2A and 1470-2(A2).

8. DER's forfeiture of the bonds associated with permits 1470-2A and 1470-2(A2) is an abuse of discretion and an arbitrary exercise of its duties or functions.

9. DER cannot forfeit any portion of any bond submitted as a condition of obtaining a mining permit where the forfeiture is for mining occurring off the permit area.

O R D E R

AND NOW, this 6th day of AUGUST, 1984, the above-captioned appeal is partially dismissed and partially sustained. In particular, it is ordered that:

1. DER's forfeiture of surety bond No. 217B6839, accompanying permit 1470-1, is sustained in the amount of $6325.00.

2. DER's forfeiture of surety bond No. 218B2244, accompanying permit 1470-1A, is sustained in the amount of $10,350.

3. DER's forfeiture of the collateral bond accompanying permit 1470-1(A2) is sustained in the amount of $2400.

4. DER's forfeiture of the collateral bond accompanying permit 1470-2 is sustained in the amount of $11,500.

5. DER's forfeiture of surety bond No. 558E2324, accompanying permit 1470-3, is sustained in the amount of $7100.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: August 6, 1984

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

221 NORTH SECOND STREET
THIRD FLOOR
HARRISBURG, PENNSYLVANIA 17101
(717) 787-3483

THADDEUS PSZOLKOWSKI :

:

Docket No. 82-256-G

:

v. :

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

ADJUDICATION

By Edward Gerjuoy, Member, August 21, 1984

Syllabus

An appeal was taken from the Department's denial of a requested exception to a sewer ban imposed pursuant to the Clean Streams Law, 35 P.S. §691.1 et seq., and 25 Pa. Code §94.31. Although appellant had obtained a building permit within one year prior to the date of the ban, he nevertheless was not entitled to an exception to the ban under 25 Pa. Code §94.55 because the permit was not a valid permit within the meaning of 25 Pa. Code, Chapter 94. Once the prohibition upon new sewerage connections mandated by 25 Pa. Code §94.21 has taken effect, a subsequently issued building permit cannot be a valid permit for the purposes of 25 Pa. Code §94.55. Therefore, the Department's denial did not constitute an abuse of discretion. In addition, appellant received notice of the prohibition upon connections sufficient to preclude a finding that his detrimental reliance upon the building permit was reasonable. Therefore, the Board did not address the possibility of creating an equitable exception to the operation of the ban.

INTRODUCTION

This matter comes before the Board as an appeal from the Department's denial of appellant's request for an exception to a sewer ban imposed on the North and South Shenango Joint Municipal Authority sanitary sewer system. The exception was requested pursuant to 25 Pa. Code §94.51 and §94.55.

FINDINGS OF FACT

1. Appellant is Thaddeus Pszolkowski of 205 Irwin Place, McKees Rocks, Pennsylvania.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources ("Department"), the agency of the Commonwealth authorized to administer the provisions of the Clean Streams Law, 35 P.S. §691.1 et seq., and the provisions of the regulations governing Municipal Wasteload Management, 25 Pa. Code, Chapter 94.

3. Appellant has owned a lot on Washington Street in the Village of Espyville, North Shenango Township, Crawford County, Pennsylvania (the "lot") at all times relevant to the issues presented in this appeal.

4. By letter dated February 20, 1981, DER notified the North and South Shenango Joint Municipal Authority ("Authority") that its sanitary sewerage system was hydraulically overloaded and that no building permits were to be issued which might result in a connection to the overloaded sewerage facilities. (Com. Exh. 1).

5. At least as early as March 9, 1981, the Township was aware of the prohibition upon new connections to its sewerage system, as indicated in the minutes of the meeting of the Township Board of Supervisors of that date. (Com. Exh. 7).

6. By a letter dated April 10, 1981 the Authority informed North Shenango Township ("Township") that the Township could issue building permits provided they were conditioned to prohibit connection to the sewerage system. (Com. Exh. 6).

7. The Township responded to the April 10th letter by issuing building permits and non-occupancy permits, thereby prohibiting occupancy of structures until the prohibition on sewerage connections was lifted. (T. 48).

8. By copy of a letter and order directed to the Authority dated June 24, 1981, DER informed the Township that its sewerage system was hydraulically overloaded. (Com. Exh. 9).

9. On May 1, 1981 appellant paid one thousand five hundred ($1500) dollars to the Township as a sewer tap-in fee. (T. 28).

10. At the time that appellant paid the $1500 fee he was advised by the Township that there was a problem with new connections to the sewerage system. (T. 22).

11. On November 7, 1981 the Township issued to appellant a building permit for the erection of a mobile home upon the lot. (Appellant Exh. 1).

12. The building permit did not make reference to a ban upon new connections to the Township's sewerage system: it did, however, contain the word "non-occupancy" upon its face. (App. Exh. 1).

13. At the time that appellant was issued the building permit he and the building inspector for the Township discussed the fact that appellant could not connect to the sewerage system. (T. 61).

14. On the same day that the building permit was issued, or shortly thereafter, appellant made arrangements for a downpayment on a mobile home to be placed upon the lot. (T. 19).

15. On December 4, 1981 the Township issued to appellant a certificate of non-occupancy for the lot. (Com. Exh. 8).

16. A cover letter accompanying the certificate of non-occupancy advised appellant that new sewer hook-ups had been banned and that he could not use his mobile home until a proper sewer hook-up could be made. (Com. Exh. 8).

17. Appellant placed the mobile home described in Finding of Fact 12, supra, on the lot in approximately May of 1982. (T. 20).

18. On July 14, 1982 the Department issued an order to the Authority prohibiting any further connections to the overloaded sewerage facilities. (Com. Exh. 5).

19. By letter dated August 16, 1982 the Authority wrote to the Department on appellant's behalf requesting an exception to the ban on connections to the sewerage system. The request was based upon the previously issued building permit. (Stipulation of fact No. 7).

20. By letter dated September 16, 1982 the Department denied the requested exception. (Stipulation of fact No. 8).

DISCUSSION

In proceedings before the Board, in general, the party asserting the affirmative of an issue bears the burden of proof. 25 Pa. Code §21.101(a). More particularly, it appears from 25 Pa. Code §21.101(c)(1) that in an appeal from a Department denial of an exception to a sewerage ban, the appellant bears the burden of proof. General Investment and Development Company v. DER, (EHB Docket No. 81-120-M, Adjudication of May 6, 1983); Lower Paxton Township Authority v. DER, Docket No. 80-205-W (Adjudication, 1982 EHB 111 at 134). The burden of proof in

the instant case requires that appellant demonstrate the denial of the exception to be an abuse of discretion. Appellant's contention in this regard is that he had received a valid building permit from the Township within one year of the imposition of the sewerage ban, and that therefore an exception was mandated by 25 Pa. Code §94.55. Although we recognize the substantial inconvenience and difficulty which the ban has caused appellant, we find that the Department's action was justified.

A restriction upon additional connections to an overloaded sewerage system can come about in two ways under Chapter 94 of Title 25, Pennsylvania Code. Pursuant to §94.31, the Department will impose a ban on connections whenever it determines that sewerage facilities are organically or hydraulically overloaded and that the permittee (herein the Authority) has failed to submit a satisfactory plan for the elimination of the overload. The Department made such a determination regarding the NSSJMA sewerage facilities and consequently imposed such a ban by an order dated July 14, 1982.

Additional connections to a sewerage system which the Department has found to be overloaded may also be prohibited by 25 Pa. Code §94.21 which provides, inter alia, that "(n)o building permit shall be issued by any governmental entity which may result in a connection to overloaded sewerage facilities." The Department determined that the Authority's sewerage system was hydraulically overloaded sometime prior to February 20, 1981. By a letter of that date it informed the Authority of that fact and advised it of the prohibition required by §94.21. The Authority in turn advised the Township of the prohibition by a letter dated April 10, 1981. (The Township in fact may have had notice at an earlier date. Finding of Fact 5, supra.)

The Township issued a building permit to appellant on November 7, 1981.

Appellant argues that this permit entitles him to an exception from that ban.

The complications which give rise to this appeal are the result of the following section of 25 Pa. Code:

> 94.55 Building permit issued prior to ban.
>
> Any discharge which the Department determines will result from a structure for which a valid building permit had been issued within one year prior to the date of imposition of the ban shall constitute an exception to the ban.

Appellant's entire argument rests upon the premise that his permit was a "valid" permit within the meaning of this section and that therefore, since it was issued within one year of the Department's ban, he was entitled to an exception from the ban's operation.

We find that the term "valid" must be defined by reference to §94.21. The prohibition contained in that Code provision contains no qualifications. The language is unequivocal. Once the Department has determined that the sewerage facilities are overloaded, no building permit which will result in a connection to those facilities may be issued. Therefore, a building permit issued after the provisions of §94.21 have taken effect cannot be a "valid" building permit within the meaning of §94.55. (The Department does not maintain that it may determine the validity of a building permit for purposes other than those of the statutes and regulations which it has the authority to administer. Department's post-hearing brief, p. 6.) It follows that the Department's denial of appellant's requested exception was consistent with the applicable regulations.

We recognize that under some circumstances this regulatory scheme may operate to produce a harsh result. Such would be the case, for instance, where a municipality issues a building permit without providing the permittee with notice of the prohibition upon sewerage connections. Given the unequivocal language

of §94.21, a permittee who expends considerable sums in reasonable reliance upon the facially unrestricted terms of the permit apparently nevertheless would be unable to connect his dwelling to the overloaded sewerage system. We are not convinced, however, that this scenario is presented in the instant appeal.

Appellant testified that he did not realize the "seriousness" of the situation with regard to the sewerage connections until after he had purchased his mobile home and placed it upon the lot for which he had obtained the building permit. (T. 14, 21). We have no doubt that this is the case. Nevertheless, we cannot hold that appellant did not have notice of the §94.21 prohibition sufficient to prompt a reasonable person to inquire further before expending substantial sums in reliance upon the building permit.

Appellant admitted that he knew that there were some problems with the sewerage connections at the time he paid the sewer tap-in fee to the Township on May 1, 1981. (T. 22). Although he subsequently qualified this statement somewhat, there was uncontradicted testimony of the Township's building inspector that the subject of the prohibition was discussed by appellant and another building inspector at the time the building permit was issued in November of 1981. (T. 61). We find that this discussion provided appellant with reasonable notice of the prohibition. This conclusion is reinforced by the fact that the building permit itself bears the word "non-occupancy" upon its face. (App. Exh. 1). Appellant made arrangements for the purchase of the mobile home on the same day that the permit was issued, or shortly thereafter. (T. 19). The Township had adopted the practice of issuing building permits and associated non-occupancy permits in response to an April 10, 1981 letter from the Authority informing the Township of the prohibition upon further sewerage connections. (T. 48).

Approximately one month after the issuance of the building permit on November 7, 1981, the Township issued a "Certificate of Non-Occupancy" to appellant. This certificate was accompanied by a cover letter dated December 9, 1981 which explained to appellant that new sewer connections had been banned and that he would not be able to use his mobile home until such a connection could be made. Even accepting as true appellant's assertion that he became irrevocably committed to the purchase of the mobile home before he received this certificate (a fact we cannot say was clearly established by the record), we find that sufficient notice was provided appellant from May 1, 1981 through November 7, 1981 to eliminate any necessity of our addressing the propriety of creating an equitable exception to the operation of the ban. Consequently, the Department's denial of the exception is sustained and appellant's appeal is dismissed.

CONCLUSIONS OF LAW

1. The Board has jurisdiction over the parties and subject matter of this appeal

2. Appellant has the burden of proof in this appeal.

3. Appellant has failed to meet its burden of proof.

4. The Department's action denying appellant's requested exception to the ban upon connections to the Authority's hydraulically overloaded sewerage facilities did not constitute an abuse of discretion.

5. Before appellant purchased his mobile home, he had received sufficient information from the Township regarding the prohibition upon connections to the sewerage system to put him on notice regarding that prohibition.

O R D E R

AND NOW, this 21st day of AUGUST, 1984, appellant's appeal is dismissed.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: August 21, 1984

cc: Bureau of Litigation
Richard S. Ehmann, Esquire, for DER
Dennis A. Uram, Esquire, McKees Rocks, for Appellant

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

EDWARD F. REESER, d/b/a REESER'S LANDFILL, INC., Appellant v. COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES Appellee	:	EHB DOCKET NO. 81-022-M Pennsylvania Solid Waste Management Act 35 P.S. §§6018.101 et seq. 25 Pa. Code Chapter 75

A D J U D I C A T I O N

By the Board: This adjudication was originally drafted by Theodore Baurer, Examiner, from the record, and issued after the Board's review, with modification

Dated: August 27, 1984

Syllabus

DER's order to complete closure procedures on a solid waste landfill located on previously leased property, promulgated pursuant to the Solid Waste Management Act, 35 P.S. §6018.101 et seq., did not constitute an abuse of discretion where appellant, the former lessee, operated the landfill in an individual capacity in such a manner as to create a public nuisance.

The Board holds that appellant is responsible for the conditions on the site and is estopped from arguing that an alleged corporation operated the landfill. Because appellant withdrew an appeal from an earlier DER closure order, the Board's discontinuation of that earlier appeal made binding DER's determination that appellan operated the landfill in an individual, as opposed to corporate capacity.

The Board also holds that appellant, as a former lessee of the leased property where the landfill is located, can be ordered to reenter the property to effectuate closure. Because the Board holds that conditions at the site constitute a public nuisance, the Board cited appropriate precedent in holding that a former lessee may be ordered to reenter previously leased property for the purpose of abating a public nuisance resulting from conditions created by the former lessee.

Accordingly, the Board dismisses appellant Edward F. Reeser's appeal of DER's closure order.

INTRODUCTION

This matter arises from an appeal of an Order of the Department of Environmental Resources ("DER") dated February 3, 1981. Prior to June 22, 1979, appellant Edward F. Reeser ("Reeser") had operated an unpermitted solid waste disposal facility located in Upper Macungie Township, Lehigh County, on land leased from Mrs. Arlene Schucker.

On June 22, 1979, Reeser was ordered by DER to cease operations and close the landfill; his appeal of this earlier Order was shortly withdrawn by Reeser and the relevant docket was subsequently (on February 19, 1980) closed and discontinued by this Board. On or about July 3, 1980, Reeser and DER reached agreement on a plan of closure of the landfill, which Reeser never completed or effectuated.

On or about January 28, 1981, the site caught fire, and on February 3, 1981 the Order which is the subject of the instant appeal was promulgated. This Order required Reeser: (a) to extinguish the fire within 48 hours; (b) to complete closure of the landfill in accordance with the requirements of the Pennsylvania Solid Waste Management Act, 35 P.S. §6018.101 et seq., and the applicable DER Rules and Regulations, 25 Pa. Code Chapter 75; (c) to notify DER of the completion of the above; and (d) to cease further deposition of solid waste at the site.

Reeser appealed the Order on or about February 25, 1981, seeking a review thereof and asserting that DER's action was arbitrary, capricious, without legal authority, and in contravention of Reeser's rights. Reeser further asserted that far from "doing business as" Reeser's Landfill, Inc. (as captioned in the Order), he was merely an employee of the corporation and that, having ceased operations and left the site in conformity with DER's earlier Order of June 22, 1979, neither he nor the corporation was any longer obliged to perform as ordered, nor yet legally entitled to enter upon the site, still the property of Mrs. Schucker.

Hearings on this matter were held on January 29 and February 17, 1982 before Anthony J. Mazullo, Jr., and DER's Post-Hearing Brief was duly filed May 20, 1982. Ap-

pellant Reeser has never filed a Post-Hearing Brief. On or about May 10, 1984 the record was transmitted to the Board-appointed Hearing Examiner, Theodore Baurer, for adjudication. 71 P.S. §510-21(f).

FINDINGS OF FACT

1. Appellant is Edward F. Reeser ("Reeser") of R.D. #1, Emmaus, Pennsylvania.

2. Appellant does business, or has been active in a business sense, variously as Reeser's Landfill, Inc. (so captioned in the instant appeal filed February 26, 1981 and the Pre-Hearing Memorandum filed April 10, 1981), Reeser's Automated Refuse Systems (letterhead in Exhibits DER-14, 21), Reeser's Hauling Service (Exhibit DER-7), and Reeser's Disposal Site (Exhibit DER-8), from an office address at 3644 MacArthur Road, Whitehall, Pennsylvania 18052 and an operational address at Fogelsville Landfill, R.D. #1, Fogelsville, Upper Macungie Township, Lehigh County, Pennsylvania.

3. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources ("DER"), which is the state agency charged with the duty and responsibility of administering the Pennsylvania Solid Waste Management Act, 35 P.S. §6018.101 et seq., and the supporting Regulations, 25 Pa. Code Chapter 75, promulgated thereunder, as hereinafter cited.

4. Reeser operated a solid waste disposal facility known as the Reeser Landfill, located at R.D. #1, Fogelsville, Upper Macungie Township, Leghigh County, Pennsylvania, on property owned by and leased from Mrs. Arlene Schucker, from 1971 until 1981, approximately the first eight years of this period as an individual and the balance under various corporate names. (Fact #2; Exhibit DER-9; N.T. 15, 21, 299, 300, 330, 334).

5. Reeser never obtained a permit from DER authorizing him to operate the Reeser Landfill solid waste disposal facility. (N.T. 16, 22).

6. On March 5, 1975 and again on October 17, 1977 DER notified Reeser that he must obtain a permit for the operation of the Reeser Landfill or else cease operations and close the facility. (Exhibits DER-7, 8; N.T. 17-20).

7. On June 5, 1978, Reeser submitted an application, which he signed as an individual applicant and which indicated that the owner of the property in question was Mrs. Arlene Schucker, seeking a DER permit for the operation of a landfill at the same landfill site which he had leased and operated as a landfill since approximately 1971. (Fact #4; Exhibit DER-9; N.T. 21, 22).

8. On April 30, 1979, Reeser, acting as President of Reeser's Automated Refuse Systems, informed DER that he would abandon his application for a landfill at the Reeser Landfill site, owing to DER's having returned his module for the site as incomplete, and would instead submit a final closure plan for the site. (Exhibit DER-14; N.T. 33).

9. On May 8, 1979, Reeser, acting as a private individual, submitted to DER a final closure plan for the site, duly executed by Reeser before a notary; the plan was filed on May 9, 1979. (Exhibit DER-15; N.T. 33-35).

10. On June 11, 1979, DER informed Reeser by letter of the existence in his proposed closure plan of several deficiencies. (Exhibit DER-16; N.T. 35).

11. On June 22, 1979, DER ordered Reeser (doing business as Reeser's Automated Refuse Systems - see Fact #2) to terminate solid waste disposal operations at the site in question and to commence actions consistent with closure by July 13, 1979, in accordance with requirements of the DER Regulations. (Exhibit DER-17, N.T. 37).

12. On or about July 16, 1979, Reeser appealed DER's Order of June 22, 1979. (Exhibit DER-18; N.T. 38-39).

13. Subsequently, Reeser withdrew his appeal (on February 14, 1980) and DER

marked the docket in this matter as "closed and discontinued" (on February 19, 1980). (Exhibits DER-19, 20; N.T. 40).

14. Inspections by DER personnel on May 22, June 16, and June 26, 1980 revealed non-compliance with the Order of June 22, 1979, in that the landfill had not been, and was not being, closed pursuant thereto; in addition, various violations of the Regulations were noted and reported, including excessive and improper slopes, exposed wastes, inadequate surface water management, severe erosion, inadequate cover, inadequate vegetation, and unsuitable access road barriers. (Exhibits DER-2(C,D,E); N.T. 180-188.)

15. On July 2, 1980, employees of DER visited the Reeser Landfill site and discussed with a Mr. Neil Lichtenwalner or Lichtenwalter, Reeser's employee, a proposal to close the landfill in accordance with Regulations of DER. This proposal involved using a large pit or excavation which existed at that time and was located in the northeastern corner of the landfill site, and which was open and partially filled with exposed and combustible solid wastes. The proposal was to fill the pit with material taken from an adjacent portion of the landfill area where the slopes were excessive and improper, and use that material to bring the pit up to satisfactory grade. Stockpiled soil and other soil contained in an on-site erosion and sedimentation control pond were to be used as final cover for the landfill site. The following day, July 3, 1980, Mr. Leon Kuchinski, DER's Regional Solid Waste Manager, discussed and confirmed this proposal with Reeser, adding the further provisions that only Class I demolition wastes would be deposited on areas adjacent to the pit, that no demolition wastes would be placed into the large pit itself, and that Reeser would comply with DER Regulations. DER authorized additional deposits of Class I demolition wastes because these posed minimal threat to groundwaters in the vicinity of the landfill site. Subject to the latter qualifications, DER verbally approved this proposal for final closure. (N.T. 41,47-53, 141-148,172-173,304-306,336-339.)

16. DER inspections at the Reeser Landfill site on July 16, July 30, August 5, and August 26, 1980, revealed that the landfill was not closed pursuant to DER's Order of June 22, 1979, the closure proposal agreed to on July 3, 1980, or DER Regulations, and that the same violations noted earlier (see Fact #14) persisted at the site. In addition, DER determined that Reeser was depositing demolition

wastes directly into the pit in the northeastern portion of the landfill, contrary to the closure proposal agreed to on July 3, 1980, and contrary also to DER Regulations. (Exhibits DER-2(F,G,H,I); N. T. 188-195.)

17. On October 9, 1980, DER again inspected the landfill site and determined that the site was non-compliant with DER's Order of June 22, 1979, the closure agreement of July 3, 1980, and DER Regulations. While some improvement since the prior inspection was noted, the pit was neither filled nor covered, exposed solid wastes were present, inadequate surface water management persisted on areas of the landfill, the landfill was inadequately revegetated, and no barriers controlled access to the site. (Exhibit DER-2(J); N.T. 196-198,219-222.)

18. In January of 1981, DER again visited the Reeser Landfill site and determined that no further closure work had been performed on the landfill site since the inspection of October 9, 1980. (N.T. 199.)

19. On January 28, 1981, fire was discovered at the landfill site, in the area of the pit located in the northeastern corner thereof. (Exhibit DER-4(B); N.T. 149-150,165,199-200,252.)

20. DER contacted Reeser on January 28, 1981 and instructed him to extinguish the fire at the landfill site and to complete the closure thereof. Reeser's attempts to extinguish the fire were ineffectual and as a result the fire burned out of control for many weeks during the early months of 1981. (Exhibit DER-21; N.T. 149-153,314-315,320-327.)

21. On February 3, 1981, DER formally ordered Reeser to extinguish the fire and close the site in accordance with DER Regulations. It is this Order which is the subject matter of the instant Appeal. (Exhibit DER-1; N.T. 150,201.)

22. Despite various measures attempted in order to extinguish the fire, it continued to burn and was, in fact, still burning at the time of the hearings (January 29 and February 17, 1982) conducted in this matter. (Exhibits DER-2(O,P,S,T,V,W,X,Y,Z,AA,BB,CC,DD,EE,FF,GG, HH), 4(C,D,F,G,H,I,J); N.T. 60,69-78,118,202-208,253-296.)

23. DER's inspections indicate that no further remedial activitie regarding the fire occurred on the landfill site after June of 1981. (N.T. 289.)

24. Reeser left the site on or about May 29, 1981, and did not thereafter return in any further attempt to comply with DER's Order of February 3, 1981. (N.T. 329-330.)

25. Reeser never distinguished, in his correspondence with DER during April and May of 1979, between his actions as an alleged President of a corporation and as an individual; nor did he notify DER that the formation of any corporation was intended to continue or to substitute for his business operations as a private individual at the Reeser Landfill; nor did the existence of any such alleged corporation hinder his access to the landfill site during the period between February 3 and May 29, 1981, when he was involved in attempts to extinguish the fire. (N.T. 157,245,349.)

26. It was stipulated by Reeser's counsel that "Mrs. Schucker (the landowner) owns that real estate and through her attorney stated that Mr. Reeser had the right to go on the property and to conduct remedial work." (N.T. 157,245.)

DISCUSSION

A. Introduction

Edward F. Reeser operated an unpermitted solid waste disposal facility known as the Reeser Landfill, on a site leased from its owner, Mrs. Arlene Schucker, in Upper Macungie Township, Lehigh County, from 1971 until 1981. During most of this period, i.e., until some time in early 1979, Reeser operated the site as an individual, and during the balance of the period he operated it interchangeably, both as an individual and as the President of an alleged corporation.

DER issued several notices of violation to Reeser over a period of years, none of which were fully complied with. On June 22, 1979, DER issued an Order which, inter alia, required Reeser to cease depositing wastes at the site immediately, to separate wastes already on the site into layers or cells of required dimensions, and to cover, grade and revegetate the site. These actions were necessary to prevent continuing and future water pollution in the area of the site, to protect drinking water supplies, to prevent the spread of disease by vectors, and in general to protect the public health and the environment and to avoid and abate a public nuisance.

Reeser initially appealed the June 22, 1979 Order (EHB Docket

#79-096-W) but subsequently agreed to terminate the disposal of solid wastes at the site and comply with the terms of the June 22, 1979 Order. The appeal at EHB Docket #79-096-W was discontinued by this Board on February 19, 1980, but Reeser subsequently failed to comply with the terms of the June 22, 1979 Order.

In 1980, a pit existed on the northeastern corner of the disposal site, which had been created as a result of earlier disposal activitie Reeser asserted he could not fill the depression using only those quantities of soils available at the site. Therefore, on or about July 3, 1980, Reeser and DER agreed that Reeser would fill the existing pit with soil and other material then present at the site in an area which had improper and excessive slopes and grades. Reeser was also to excavate a limited amount of previously undisturbed and unaffected soils on the site, for the purpose of providing adequate cover material for the on-site material to be disposed of in the pit and other areas of the landfill. DER allowed Reeser to deposit only such quantities of on-site materials into the pit as were necessary to fill the pit in order to equal surrounding disposal site grades and slopes, promote adequate surface water management, and properly close the site. In addition, Reeser was also given leave to dispose of limited additional quantities of Class I demolition wastes specifically in the area of unaffected soils to be excavated for cover material. DER allowed Reeser to deposit only such quantities of demolition wastes into the projected soil excavation area as were necessary to bring the excavation area up to existing and surrounding disposal site grades, promote adequate surface water management, and properly close the site.

During this period of limited operation, Reeser was obligated to comply with DER Regulations and the laws of the Commonwealth. At such time as the depression and projected soil excavation area would have been properly filled in accordance with the agreement, Reeser was obligated to terminate all disposal operations and cover and close the site in accordance with the Order of June 22, 1979, the Pennsylvania Solid Waste Management Act, and the supporting DER Regulations.

Reeser failed to comply with these obligations, in that he continued to deposit or allow the deposition of demolition and other solid wastes into the pit in the northeastern section of the

disposal site, failed to provide adequate interim and final cover for the landfill, failed to provide proper grades and slopes on the site, failed to provide adequate surface water management and control erosion, and failed to revegetate the entire site.

In addition, on or about January 28, 1981, solid wastes which had, contrary to agreement, been deposited in the pit in the northeastern corner of the site, began to burn, and the fire has created a public nuisance pursuant to the provisions of Section 601 of the Act aforesaid (35 P.S. §6018.601).

On February 3, 1981, DER issued an Order, which is the subject of this Appeal, requiring Reeser, inter alia, to extinguish the burning solid wastes, comply with the Regulations of DER and the Solid Waste Management Act, properly terminate operations at the site, and close the site according to DER standards. The landowner has given permission for Reeser to enter upon the property in order to comply with the terms of the Order, and has at no time prevented Reeser from going upon the property for such purpose.

Reeser has failed to comply with the February 3, 1981 Order, compliance with which is necessary to prevent air and water pollution, avoid a public nuisance associated with improper management, and achieve safe and stable closure of the solid waste disposal site.

B. Reeser Operated the Landfill as an Individual

Reeser admitted that he operated the Reeser Landfill as an individual from 1971 until at least April of 1979. Reeser alleged without proof that he formed and presided over a corporation on or about April 18, 1979, which corporation assertedly then assumed the operation of the landfill. (Fact #4.) In fact, no proofs, none of the usual indicia of corporate existence, were offered in evidence to identify the alleged corporation or to prove that it had been formed to take over operation of the Reeser Landfill. Reeser failed to introduce articles of incorporation, or to specify the date of incorporation, or to introduce documents proving that the alleged corporation actually operated the landfill. Reeser also failed to produce evidence of any agreement between himself and the landowner showing that Reeser's interests in the landfill or the site lease had been transferred to the alleged corporation. Reeser's only support for his assertion that a corporation was formed and took over

operation of the site in April of 1979 was his own statement to that effect, and the appearance of a corporate-appearing name on his letterhead. (Fact #2.)

To the contrary, Reeser acknowledged that he operated the landfill as an individual for about eight years (Fact #4), after which he never informed DER that an alleged corporation had taken over the site and the operation (Fact #25). Evidence is also to the effect that Reeser submitted an application for the Reeser Landfill as an individual on June 5, 1978 (Fact #7), and submitted a closure plan for the site, again as an individual, on May 8, 1979 (Fact #9), subsequent to the date of formation of the alleged corporation. The evidence reveals in addition that DER's Order of June 22, 1979, by its terms, addressed and treated Reeser as an individual operator although "doing business as" Reeser's Automated Refuse Systems (Fact #11), and thereby found and determined that Reeser in fact operated the landfill as an individual. Subsequently this Order was appealed, citing as one basis for the Appeal the same contention that we treat here, viz., that the individual and the alleged corporation are two separate entities, Reeser (or Reeser doing business as Reeser's Automated Refuse Systems) having acted merely as an employee of Reeser's Landfill, Inc. (Exhibit DER-18.) But the subsequent withdrawal of that appeal (Exhibit DER-19), followed by this Board's closure and discontinuation of EHB Docket #79-096-W (Exhibit DER-20), has caused the issue to revert to the status of having never been appealed, and has thereby made final and binding as of February 19, 1980 DER's thus-unappealed conclusion of June 22, 1979, that "Mr. Edward F. Reeser" operates the facility, is in violation of the Act, and so forth (as set forth in Exhibit DER-17). Therefore Reeser may no longer attack DER's determination that he acted as an individual at all times. This conclusion follows the rule enunciated again in DER v. Williams, Pa.Cmwlth., 425 A.2d 871 (1981):

> It is clear that if (the parties) had filed a timely appeal from the orders, all challenges raised in their answer and new matter could have been fully litigated before an administrative body having expertise in the area in question. The failure of (the parties) to appeal the DER orders has made those orders final and has foreclosed any attack on their content or validity in the enforcement proceeding. Id. at 873. (Citation omitted.)

In summary, the weight of evidence is to the effect that Reeser always operated the landfill site as an individual, and is therefore responsible for the current conditions there. DER is statutorily empowered to issue an Order against Reeser under Sections 602(a) and 104(7) of the Act.

C. Reeser's Operation Created a Public Nuisance

Reeser failed to operate the unpermitted landfill in compliance with the Pennsylvania Solid Waste Management Act and DER's Regulations and Orders, thereby leading to hazardous conditions on the site, and thereby creating or directly causing a public nuisance in violation of law. 35 P.S. §6018.601.

Reeser's disposal operations were carried out in such a manner as to have caused the creation of a large pit on the northeastern portion of the landfill site. The formation of this pit was such as to preclude its readily being filled to the surrounding grade and slopes. (Fact #15). In violation of DER's order of June 22, 1979 and the agreement of July 3, 1980, Reeser dumped or permitted the dumping of combustible demolition wastes directly into the pit, and failed to properly compact and cover such combustible wastes in accordance with DER standards. (Fact #16). The conditions thus created (open deposits of combustible materials) being highly conducive to ignition by any of a broad variety of mechanisms (Facts #17, 18), what was perhaps inevitable under the circumstances finally came to pass on or about January 28, 1981 when fire broke out in the area of the pit. (Fact #19). Notwithstanding that DER, on being informed of the existence of this fire, immediately so informed Reeser and ordered him to extinguish it and close the site, Reeser failed to take effective action and the fire subsequently burned literally out of control throughout February and March of 1981. (Fact #20).

Reeser's later attempts to extinguish the fire were ineffectual, and were terminated after a few months. (Facts #22, 23, 24). DER's Order of February 3, 1981, the subject of the instant appeal, has not been obeyed (Fact #21), and in fact the fire was still burning one year after it was first discovered, i.e., at the time of the EHB hearing in this matter in early 1982 (Fact #22). At that time, the

overall condition of the site was continuing to deteriorate, manifesting the effects of serious erosion, exposure of solid wastes, inadequate surface water management, and inadequate revegetation of large areas, in addition to the fire.

Section 602 of the Act authorizes DER to issue orders which it deems necessary to aid in the enforcement of the provisions of the act. Specifically, section 602(b) provides that if DER finds that storage of solid waste is creating a public nuisance it may order the person charged with creating the nuisance to take action to abate the same. 35 P.S. 6018.602(b). The foregoing recital of the factual record established in this case clearly establishes the existence of a public nuisance. Consequently, the issuance of the order which forms the basis of this appeal was within the power of the Department. The Board is not persuaded by appellant's arguments to the contrary. Reeser's justifications for the situation are insufficiently supported by the evidence and cannot overcome the weight of the DER's case. Consequently, we find that the issuance of the order was not an abuse of discretion.

D. Reeser May Properly Be Ordered to Abate the Nuisance

That a former tenant and lessee may be ordered by DER to return to a landfill and correct and abate a nuisance created by or resulting from conditions created by the former lessee, has been established by the Board and upheld in Commonwealth Court:

> The sole issue in this case is whether the (DER) has the power to order John T. Ryan to enter land he previously leased, in order to correct conditions he created during the lease. We hold that DER is so empowered.
>
> Ryan v. DER, Pa. Cmwlth., 373 A.2d 475, 476 (1977); aff'g. EHB Docket No. 75-183-D (issued May 28, 1976).

Reeser argues, that as one who is not the owner of the property he lacks authority to enter. The Ryan court, supra, addressed this argument by citing a century-old case:

> Our Supreme Court has held that where there is statutory authority to order abatement of a nuisance, the fact that the nuisance is on the land of a stranger is no reason

> for not abating it. Delaware Division Canal Co. v. Commonwealth, 60 Pa. 367, 374 (1869). Thus where the defendant operated its canal in such a manner as to create stagnant, miasmic pools on land it neither owner nor occupied, a court was nevertheless empowered to order abatement by the defendant. The Court noted that "(t)he owner of the soil where the nuisance is must not be allowed to control the public right to have it abated; and what the law commands to be done for the benefit of the public an individual may not resist." Id. This principle applies a fortiori to the present case where the owner of the land has consented to Ryan's entry for abatement purposes. Under these circumstances Ryan could not be heard to complain that he had no rights to enter upon the land in question. Id. at 478.

Thus also may Reeser not be heard to complain that he has no right to enter the Schucker property as ordered, especially having stipulated (Fact #26) to Schucker's grant of entry for the purpose of complying with DER's Orders, and having failed to introduce any evidence to show that Reeser's access had been hindered in any way.

E. Conclusion

Reeser has created a public nuisance on the Reeser Landfill site. DER has ordered Reeser to abate the nuisance and close the landfill site in accordance with Commonwealth law and the applicable DER Regulations. Accordingly, this Board will dismiss Reeser's appeal from the DER Order of February 3, 1981.

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the parties and the subject matter of this appeal.

2. The Department of Environmental Resources (DER) is the Commonwealth administrative agency responsible for administering the Solid Waste Management Act of 1980 (35 P.S. §6018.101 et seq.) and the Regulations (25 Pa. Code Chapter 75) promulgated thereunder.

3. DER is responsible for regulating disposal of solid wastes and management of landfills in Pennsylvania.

4. Edward F. Reeser (Reeser) operated the Reeser Landfill as an individual or sole proprietor from 1971 to 1981.

5. Reeser unlawfully operated the Reeser Landfill without a permit.

6. Reeser unlawfully operated the Reeser Landfill in such a manner as to create health hazards and environmental degradation.

7. Reeser's violations of the Solid Waste Management Act of 1980, DER Regulations, and DER Orders are unlawful and constitute a public nuisance.

8. DER's Order of February 3, 1981 was properly issued, and was not unreasonable, arbitrary, capricious, nor an abuse of discretion.

9. This Board must sustain an action of DER if the action does not constitute an abuse of discretion or an arbitrary and capricious exercise of power.

10. The last known condition of the Reeser's Landfill site constituted, and if unchanged still constitutes, a public nuisance which Reeser caused.

11. DER properly ordered Reeser, a former tenant who had leased and operated the Reeser Landfill on land owned by another person, to re-enter that land in order to correct conditions constituting a public nuisance, the said conditions having been created during the tenure of the lease, or which occurred subsequently to that tenure but as a result of Reeser's operations.

O R D E R

AND, NOW, this 27th day of AUGUST, 1984, it is hereby ordered that the appeal of Edward F. Reeser from the Order of the Department of Environmental Resources of February 3, 1981 is dismissed.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: August 27, 1984

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

REITZ COAL COMPANY Appellant v. COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES Appellee	:	EHB DOCKET NO. 82-032-M Coal Refuse Disposal Act 52 P.S. §30.51, et seq.

A D J U D I C A T I O N

By: Anthony J. Mazullo, Jr., Member, October 5, 1984

Syllabus

Appellant, Reitz Coal Company, appealed DER's order requiring appellant to reclaim an abandoned coal refuse disposal area. Appellant's appeal is granted.

Deposition and removal for sale of coal slurry from a previously abandoned coal refuse disposal area does not constitute "operation" of such an area under the provisions of the Coal Refuse Disposal Act, 52 P.S. §30.53 (7). The Act only applies to "coal refuse material", 52 P.S. §30.51 (1); coal refuse does not include both product (coal) and non-product (waste materials). Therefore, because deposition and removal for sale of coal slurry involves a coal product rather than non-product, there was no activity by appellant involving coal refuse and no operation of the site within the meaning of the Act. Thus, DER had no authority to order reclamation of the site under the Act.

INTRODUCTION

On January 28, 1982, the Department of Environmental Resources (DER), through John E. Moore, District Mining Manager, issued an Order (Order) directed to Reitz Coal Company (Reitz).

Reitz received the Order on January 29, 1982, and timely filed this appeal on February 5, 1982. Concurrent with the filing of the notice of appeal, Reitz filed a Petition for Supersedeas with the Environmental Hearing Board (EHB), and DER filed an Answer thereto.

A hearing on Reitz Petition for Supersedeas was held on February 16, 1982 in Harrisburg, Pennsylvania. After hearing, and submission of briefs by counsel for the parties hereto, Board Member Anthony J. Mazullo, Jr., issued an Order, dated May 21, 1982, denying Reitz' Petition for Supersedeas.

On July 13, 1982, a hearing on the merits of the appeal was held, and, upon stipulation of counsel filed with the Board, testimony taken and evidence received by the Board "for purposes of not only deciding the issue of supersedeas but also deciding the Notice of Appeal on its merits". Appellant filed a Petition to Reconsider Supersedeas Order, and DER filed a Motion to Dismiss appellant's Petition to Reconsider Supersedeas Order.

After hearing on July 13, 1982, briefs were submitted to the Board, and a view was conducted of the sites in question by Board Member Mazullo.

The appeal is ready for final adjudication by the Board.

FINDINGS OF FACT

1. The appellant is Reitz Coal Company, a corporation whose address is 509 15th Street Windber, Pennsylvania.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources, the administrative agency of the Commonwealth of Pennsylvania

charged with the responsibility of administering the provisions of the Clean Streams Law, Act Of June 22, 1937, P.L. 1987, as amended, 35 P.S.§691 et seq., the Coal Refuse Disposal and Control Act, Act of September 24, 1968, P.L. 1040, as amended, 52 P.S. §30.51 et seq. and the Surface Mining Conservation and Reclamation Act, Act of May 31, 1945, P.L. 1198, as amended, 52 P.S. §1396.1 et seq.

3. The parties agreed to waive any hearsay objections as to the validity of chemical analyses, and also agreed that no chemists be required to testify to attest to the validity of chemical analyses.

4. Reitz owns and controls the sites of Reitz No. 4 and Reitz No. 11, which are coal cleaning facilities.

5. Old Reitz No. 3 is a coal refuse area.

6. Reitz No. 4 comprises approximately 15 to 20 acres located in the Borough of Central City, Stode Township, Somerset County, Pennsylvania.

7. At Reitz No. 4 raw coal extracted from deep and strip coal mines is received, stockpiled, processed to remove impurities, and thereafter shipped from the site.

8. Between the period March 30, 1981 and June 12, 1981, Reitz covered certain areas of Reitz No. 4 with foundry sand in an effort to provide vegatative cover for these areas.

9. Before application, the sand was separated from waste objects which were mixed in the sand.

10. After application to a depth of three to four inches Reitz harrowed and seeded the areas.

11. The seeding consisted of redtop tall fescue and another grass mix, as well as the planting of seed for oats and Black Locust trees, as well as red pine seedlings.

12. Red pine seedlings were planted in areas other than those planted in the areas covered with foundry sand.

13. The red pine seedlings were doing well in all areas except those planted in the foundry sand-covered areas.

14. The grasses showed an approximate 50% growth in the planted areas; as of February, 1982.

15. The placement of the sand, and the subsequent seeding was done to minimize the exposed areas of the site.

16. In the spring of 1982 Reitz intended to reseed any areas not taking very well.

17. Reitz was not required to plant any grass or trees at the site.

18. The best results of the revegetation project occurred in the southern and eastern portions of the site.

19. The foundry sand used as cover material at Reitz No. 4 site is a viable element for cover material, and will support vegetative cover.

20. A July, 1981 report of inspection by DER noted that the placement of the foundry sand was an improvement and that the seed mixture applied by Reitz "has taken hold fairly well".

21. Some erosion was present at the site after the foundry sand had been applied and grass had begun to grow, however, no erosion problem was observed to be present as of July, 1982, and the planting was considered to be adequate to control erosion and resulting sedimentations.

22. In case of erosion from a site, the degree of erosion determines whether or not DER will issue an order to abate the problem.

23. In matters of erosion DER's responsibility is to order the abatement of the erosion, but the manner of correcting the erosion problem is left to the party charged.

24. The provisions of DER's order of January 28, 1982, specifically parts 2 and 4 relating to Reitz' No. 11 cleaning plant, were withdrawn by DER during the hearing conducted on February 16, 1982.

25. Old Reitz No. 3 refuse area is located approximately 2,000 feet from the Reitz No. 4 plant, almost due south therefrom.

26. The refuse placed in the No. 3 area was placed thereat in the period 1950 and early 1960's.

27. In 1976 Reitz received a permit to deposit coal refuse on the old Reitz No. 3 site, and was dormant from that time until 1978.

28. From the time of the issuance of the refuse deposition permit in 1976 until the time of the hearing before the Board in February 1982, Reitz did not place any coal refuse upon the site.

29. During the period 1978, 1979, and early 1980, Reitz deposited coal fine material at the site (Old Reitz No. 3) which coal fine material was taken from ponds at Reitz No. 4.

30. The material from Reitz No. 4 was transported from the No. 4 plant to settling ponds, went through the water in the ponds, and then transported to the Old Reitz No. 3 site to dry prior to sale.

31. Reitz' intent in placing the coal fines on the refuse pile at the Old Reitz No. 3 site was to dry the material prior to sale of the material.

32. Approximately 45,000 tons of the fine material was placed on the Old Reitz No. 3 refuse pile, and all of the material has been removed from the site and sold.

33. The refuse pile at Old Reitz No. 3 was not disturbed in the placement and removal of the coal fine material at the Old Reitz No. 3 site.

34. The last of the coal fine material deposited on the Old Reitz No. 3 site was removed by appellant as of September 18, 1981.

35. Reitz did not change the shape or the contour of the refuse pile at Old Reitz No. 3 in the deposition and removal of coal fines at the site.

36. Reitz did not grade the roads or the site (at Old Reitz No. 3) in order to deposit or remove the coal fines placed at the site.

37. Roads present at Old Reitz No. 3 were routinely maintained by Reitz.

38. As of September 18, 1980 a DER inspector noted that the site (Old Reitz No. 3) contained inadequate erosion and sedimentation controls; that the slopes

of the pile were in excess of the maximum allowed; that there were no collection and treatment facilities present on the site.

39. As of December 3, 1980, one of the ponds located on Old Reitz No. 3 had overflowed its banks and eroded a section of the bank of the pond, causing a discharge from the site onto a township road.

40. The site (Old Reitz No. 3) looked substantially the same in 1980 as it had looked in 1976 or 1977, according to a DER employee.

41. As of May 20, 1982 a DER inspection report noted that "there were no noticeable changes or improvements" at the site.

42. Field tests of the water in the ponds taken on May 20, 1982 revealed the pH levels to be 2.2, 1.9, and 2.3.

43. A DER employee, Wilson Kreitz, observed that coal fines or coal silt had been deposited at Old Reitz No. 3 at some time in the past (prior to July 13, 1982)

DISCUSSION

By agreement of the parties, subsequent to hearings, one issue remains to be decided by the Board in this appeal.

While the central issue is the reasonableness of DER's order of January 28, 1982, the determination of that issue requires an analysis of the action of appellant in depositing coal fines upon a coal refuse pile, and the requirements of the Coal Refuse Disposal Control Act (Act), Act of September 24, 1968, P.L. 1040, 52 P.S. §3.

There is no disagreement as to the facts in this appeal. Appellant, in and during the years 1978, 1979 and 1980, deposited coal fines upon a coal refuse pile, known as Reitz No. 3 area. The total amount of coal deposited thereupon was approximately 45,000 tons, and the last of the fines was removed by September, 1981. The placement and removal of the coal fines did not disturb the surface nor the slopes of the pile, as revealed in a view of the site by the examiner. The coal fines were transported to the site for drying, and eventual sale.

Since this appeal is one from an order of DER, the appellant bears the burden of proof. The burden is to prove by a preponderance of the evidence that DER's order of January 28, 1982 was arbitrary and capricious and an abuse of discretion.

DER's order was grounded upon pertinent provisions of the permit (No. 500131),[1] Section 30.54 of the "Act",[2] and definitions as contained in the "Act".[3]

---

1. 1. This permit is granted for the disposal of coal refuse....

   2. The coal refuse disposal operation shall be conducted in accordance with...

2. 52 P.S. §30.54:

   > No person shall establish or operate a coal refuse disposal are or enter upon an inactive coal refuse disposal area or reactivate an inactive operation for the purpose of coal refuse disposal without first having obtained a permit from the department.

3. 52 P.S. §30.53(7):

   > "Operate" means to enter upon a coal refuse disposal area for the purpose of disposing, storage or dumping coal refuse..."

At the hearings, and in the briefs submitted to the Board by counsel after the hearings, much was made of the nature of the material deposited upon the site by appellant. Depending upon whose position was being advanced, the material has been referred to as "coal slurry", "coal fines" and "coal silt".

There is no question but that the material was coal, intended to be sold and in fact sold. There is also no question but that the material was not processed at the site. Rather, it was merely stored at the site. The sole activity at the site was the placement of the material upon the surface of the pile, and the subsequent removal of the same material from the site.

In order for the "Act" to apply, the material which is the subject of regulation must be "coal refuse material".[4] Since it is clear from the "Act" that the Legislature found coal refuse material to be a problem where accumulated and stored, we have no authority to extend the class of material intended to be place under regulation.

Appellant has produced evidence that the material was coal, a product intended for sale. It also produced evidence that the material was sold. It further produced evidence that an opinion was sought from DER regarding rules and regulations

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3. Continued. 52 P.S. §30.53 (2):

> "Coal refuse" means any waste coal, rock, shole, slurry, culm, gob, boney, slate, clay and related materials, associated with or near a coal seam, which are either brought above ground or otherwise removed from a coal mine in the process of mining coal or which are separated from coal during the cleaning or preparation operations. Coal refuse shall not mean overburden from surface mining operations.

4. 52 P.S. §30.51 Findings and declaration of policy.

> It is hereby determined by the General Assembly of Pennsylvania and declared as a matter of legislative finding that:
>
> (1) The accumulation and storage of <u>coal refuse material</u> can cause a condition which fails to comply with the established rules, regulations or quality standards adapted to avoid air or water pollution.... (emphasis supplied).

for the storage of coal fines for drying purposes, and DER replied that there were no rules or regulations regarding the storage of coal fines for drying purposes.

In addition to this testimony, we note that DER proposed a finding of fact that coal fines and coal slurry are interchangeable terms used to describe "a mixture of coal and water:. (Commonwealth's Post-Hearing Brief, P. 3, Proposed Findings of Fact, No. 10). Further, DER recognized that the material was placed on the pile for the purpose of drying with the intent of selling it thereafter. (Commonwealth's Post Hearing Brief, p. 4, Proposed Finding of Fact, No. 13). The only evidence offered by DER to refute appellant's assertion, that the material was wet coal and not coal refuse, was testimony by a DER inspector was based upon his interpretation of the "Act". Beyond the inspector's interpretation of the "Act", DER's claim that the material is coal refuse is the legal argument contained in DER's post-hearing brief. We cannot accept DER's assertion that coal refuse includes both product and non-product materials. A logical extension of DER's argument that coal refuse includes product (coal), and non-product (waste materials) would require permits to store coal, for instance, at distributor and retail locations, and at railway sidings, which is not the situation in DER's regulatory scheme.

We believe, and so find, that the material placed at the site was a coal product, not coal refuse. There being no activity involving coal refuse by appellant, the site of placement of the material was not operated within the meaning of the "Act:. Since appellant did not operate the site in the placement and removal of the material thereupon, DER had no authority to order reclamation of the site under the "Act". The reclamation order issued by DER to appellant was an abuse of discretion in that no statutory or regulatiory authority formed the basis of the order appealed from.

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the parties and the subject matter of this appeal.

2. The Department of Environmental Resources has the authority and responsibility to enforce the provisions of the Coal Refuse Disposal and Control Act, and the regulations promulgated pursuant thereto.

3. The Coal Refuse Disposal and Control Act encompasses enforcement of, and regulation of, activities involving coal refuse materials.

4. Coal fines, composed of coal and water only, are not coal refuse.

5. The placement of coal fines at the Old Reitz No. 3 site by appellant did not constitute operation of the site within the meaning of the Coal Refuse Disposal Act.

6. DER had no authority under the Coal Refuse Disposal and Control Act to order reclamation of the site by appellant.

7. The issuance of the January 28, 1982 order by DER was an abuse of discretion.

O R D E R

AND, NOW, this 5th day of OCTOBER, 1984, the DER Order of January 28, 1982, is hereby vacated insofar as it requires corrective action by appellant, Reitz Coal Company, on Permit 500131 at Old Reitz No. 3 site.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo Jr.

ANTHONY J. MAZULLO, JR.
Member

Edward Gerjuoy

EDWARD GERJUOY
Member

DATED: October 5, 1984

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

221 NORTH SECOND STREET
THIRD FLOOR
HARRISBURG, PENNSYLVANIA 17101
(717) 787-3483

STRASBURG ASSOCIATES, Appellant v. COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES Appellee	:	Docket No. 83-097-M -Clean Streams Law, 35 P.S. §691.1 et seq. -Solid Waste Management Act, 35 P.S. §6018.101 et seq. -Civil Penalties

A D J U D I C A T I O N

By: Anthony J. Mazullo, Jr., Member, October 30, 1984

Appellant, Strasburg Associates, appeals two actions of the Department of Environmental Resources (DER), to wit, 1)a Civil Penalty Assessment issued April 19, 1983 in the amount of fifty three thousand, twenty five dollars ($53,025.00) for conditions at appellant's Strasburg Landfill, located in Newlin and West Bradford Townships, Chester County, Pennsylvania, which constituted violations of the Solid Waste Management Act, 35 P.S. §6018.101 et seq.; and, 2)the suspension of Strasburg Landfill's Solid Waste Permit No. 101038 by DER order dated May 11, 1983.

Appellant also appealed, EHB Docket No. 83-237-M, a DER order, dated September 21, 1983, which required appellant to undertake pollution monitoring and abatement measures at Strasburg

Landfill. After the filing of Pre-Hearing Memorandums by both DER and appellant in the present appeal, both appeals were consolidated for the purpose of settlement negotiations; however, upon breakdown of those negotiations, the appeals docketed at EHB docket nos. 83-097-M and 83-237-M were severed at a pretrial conference conducted by Board Member Anthony J. Mazullo, Jr. on April 9, 1984. Thus, the September 21, 1983 order is not at issue in the present appeal.

Also, on April 9, 1984, the Board granted leave to withdraw as counsel for appellant in the present appeal to appellant's co-counsel, Hershel J. Richman and John C. Snyder. On the same day, the Board caused notices to be sent to appellant and also directed counsel to notify appellant that a hearing of appellant's appeal would be held on April 19, 1984. Thereafter, counsel certified to the Board that such notice was sent to appellant.

On April 19, 1984, after failing to hear from appellant or anyone representing appellant, the Board conducted a hearing of appellant's appeal. Appellant, or anyone representing appellant, did not appear at the hearing and appellant has not offered any excuse for such non-appearance. Thereafter, DER filed a Post-Hearing Memorandum; appellant failed to do likewise and the schedule last day for receiving appellant's Post-Hearing Memorandum has passed. Thus, this adjudication is based upon the evidence introduced by DER at the April 19, 1984 hearing. Because appellant failed to appear or to introduce evidence, appellant's allegations of fact set forth in its Notice of Appeal and Pre-Hearing Memorandum, remain

unsupported, except to the extent that exhibits introduced at the May 27, 1983 deposition of Wayne L. Lynn, a Regional Solid Waste Manager employed by DER, can be viewed as support for such allegations. In addition, despite appellant's non-appearance at the hearing and non-communication with the Board, we have endeavored to pay close attention to appellant's contentions which are set forth in its Notice of Appeal and Pre-Hearing Memorandum.

FINDINGS OF FACT

1. Appellant, Strasburg Associates, is a joint venture comprised of two partnerships, Strasburg Associates I and Strasburg Associates II, both having Earle R. Hart as their general partner.

2. Strasburg Associates (hereinafter: Strasburg) holds Solid Waste Management Permit No. 101038 for the operation of a sanitary landfill on a three hundred (300) acre tract located in Newlin and West Bradford Townships, Chester County, Pennsylvania.

3. Appellee, Commonwealth of Pennsylvania, Department of Environmental Resources (DER), is the administrative agency of the Commonwealth of Pennsylvania which has the duty and responsibility of administering the Clean Streams Law, 35 P.S. §691.1 *et seq.*, the Solid Waste Management Act, 35 P.S. §6018.101 *et seq.*, and DER Rules and Regulations promulgated thereunder, 25 Pa. Code §75.

4. James Stuehling is employed by DER's Bureau of Solid Waste Management as a Solid Waste Specialist for Southern Chester County.

5. In the course of carrying out his duties for DER, Mr. Stuehling has become familiar with Strasburg Landfill's operations and conditions.

6. Since 1980, Mr. Stuehling has visited Strasburg Landfill on the average of one or two times a month.

7. In the course of carrying out his duties for DER, Mr. Stuehling has had occasion to observe instances of leachate run-off at other landfills.

8. Leachate is a liquid contaminant which drains from a landfill, either to the side of a landfill or at its base, which a landfill generates when rainfall mixes with the fill.

9. Mr. Stuehling is capable of recognizing leachate.

10. Mr. Stuehling recognizes leachate by observing its reddish or blackish color, characteristic odor and metallic sheen.

11. David Jackson is employed by the Chester County Health Department as Director of the Bureau of Environmental Health Protection.

12. Mr. Jackson's duties include administering a variety of solid waste programs.

13. Mr. Jackson has fifteen years of experience in inspecting landfills throughout Chester County, as a former employee of the Pennsylvania Department of Health, Environmental Sanitation Program.

14. Mr. Jackson has also worked with various groups in establishing landfills.

15. One such group referred to in Finding of Fact No. 14 is the Southern Chester County Landfill Authority, for which Mr. Jackson helped in setting up the authority and in establishing a landfill located near Kennett Square, Pennsylvania.

16. As part of his duties for the Chester County Health Department, Mr. Jackson reviews landfill permit applications for landfills located in Chester County.

17. Mr. Jackson visited Strasburg Landfill on April 10, 1983, in response to a telephone call from an unidentified township official regarding his concern about contamination of Briar Run, a stream which flows alongside Strasburg Landfill.

18. Briar Run, a small tributary of the Brandywine Creek, is located to the east of Strasburg Landfill and flows by the site at approximately fifty (50) feet from the eastern sedimentation basin at the site.

19. On April 10, 1983, Mr. Jackson observed large amounts of surface water flowing off Strasburg Landfill into the woods at the eastern portion of the site and into Briar Run.

20. Mr. Jackson is capable of recognizing leachate.

21. On April 10, 1983, Mr. Jackson observed two separate areas where leachate was flowing off Strasburg Landfill. In one area, leachate was flowing into the eastern sedimentation basin; in the other area, leachate was flowing into the basin which surrounds the leachate collection tanks.

22. Mr. Jackson's conclusion that the flowing liquid he observed on April 10, 1983 was in fact leachate was based upon the

liquid's dark color and strong chemical odor.

23. The leachate flows observed by Mr. Jackson on April 10, 1983 occurred off the landfill liner, along ditches at the site.

24. The environmental implications of leachate flowing off a lined area onto an unlined area include possible contamination of the ground water system and certain contamination of the surface water system.

25. During his visit to Strasburg Landfill on April 10, 1983, Mr. Jackson observed that there was no terracing in the southeastern portion of the site, and only minimal terracing in the northern portion.

26. "Terracing" refers to that process whereby horizontal terraces ten feet in minimum width are constructed on a landfill slope for every twenty feet maximum rise in vertical elevation of the slope whenever final grade exceeds fifteen percent. 25 Pa. Code, §75.24(c)(2)(iii). The purpose of terracing is to assure adequate control of surface water drainage.

27. On his visit to Strasburg Landfitl on April 10, 1983, Mr. Jackson also observed that the slopes at the site were extremely steep, approximately sixty to seventy percent.

28. Mr. Jackson also observed that the cover at the site was very minimal, at most six inches, with waste being exposed in many areas of the landfill.

29. DER Rules and Regulations require a minimum of two feet of compacted soil for final cover. 25 Pa. Code, §75.24(c)(2)(xxi).

30. Photographs of Strasburg Landfill taken by Mr. Jackson on April 10, 1983 show the following conditions existed at the site: minimal terracing; large unterraced areas; areas with exposed waste; extremely steep slopes; exposed liner; and leachate runoff.

31. Bruce Beitler is employed by DER's Bureau of Solid Waste Management as an Operations Supervisor for Solid Waste Management for the Norristown region of Pennsylvania.

32. Mr. Beitler's responsibilities include supervising a staff of field supervisors and field inspectors and carrying out inspection enforcement programs pursuant to the Solid Waste Management Act, 35 P.S. §6018.101 et seq.

33. Mr. Beitler is familiar with the various statutes and regulations which cover solid waste management procedures in Pennsylvania.

34. Mr. Beitler has extensive experience in inspecting landfills, having been employed previously as a field specialist in the Bureau of Solid Waste with duties that included conducting inspections and investigations of solid waste facilities.

35. Mr. Beitler is familiar with Strasburg Landfill's operations and conditions.

36. Mr. Beitler has visited Strasburg Landfill on approximately seventy (70) to one hundred (100) occasions.

37. Mr. Beitler's curriculum vitae includes the following: Bachelor's Degree in biology from Kutztown State College (graduated 1970); ten credits toward a Master's Degree in Environmental Protection (Pennsylvania State University, attended fall of 1970); and numerous training courses given by DER, the federal government

and by various consulting firms in a variety of aspects of solid waste management.

38. Since 1979, when he became Operations Supervisor, Mr. Beitler has conducted and been involved in ongoing field visits and investigations of solid waste facilities.

39. Mr. Beitler has had extensive experience in identifying leachate contamination at landfill sites.

40. Mr. Beitler is able to identify leachate by its characteristic odor and color.

41. Mr. Beitler visited Strasburg Landfill on April 10, 1983, and he agrees with Mr. Jackson's observations concerning conditions at the site on that day, specifically with regard to leachate runoff. (see Findings of Fact Nos. 19, 21, 22, and 23), with the exception that Mr. Beitler only observed leachate flowing into the basin surrounding the leachate collection tanks.

42. Mr. Beitler's observations with regard to leachate runoff at the site on April 10, 1983 were based on the liquid's dark color, distinctive odor and point of origin.

43. Briar Run is a high quality stream, with substantial varieti of aquatic life and evidence of natural reproduction of trout.

44. During his inspection of Strasburg Landfill on April 10, 1983, Mr. Beitler walked around the entire perimeter of the site as well as to the plateau of the landfill.

45. The maximum permissible landfill slope is thirty three (33) percent, according to DER Rules and Regulations. 25 Pa. Code, §75.24 (c)(2)(iii).

46. During his April 10, 1983 inspection of Strasburg Landfill,

Mr. Beitler estimated the grade of the site's most severe slopes to be approximately seventy (70) percent.

47. There are excessive slopes of varying degrees of elevation throughout Strasburg Landfill.

48. There are no terraces whatsoever in the entire southern portion of Strasburg Landfill.

49. There are some terraces in the eastern and northern portions of Strasburg Landfill.

50. There are no terraces whatsoever in the entire upper portion-- approximately the top thirty (30) to forty (40) feet-- of Strasburg Landfill.

51. The degree of slope around the entire circumference of Strasburg Landfill, at the upper portion, is approximately seventy (70) percent.

52. The environmental impact of excessive landfill slopes includes the following: inability to get cover to remain on the slopes and the increased probability of leachate flowing out of the landfill.

53. One of the functions that final cover performs on an exterior landfill slope is to help contain leachate flows which occur within the landfill itself. In addition, final cover promotes the controlled flow of rain water off the landfill, thereby preventing infiltration down into the landfill and preventing the production of leachate.

54. In addition to the major leachate flows observed by Mr. Jackson and Mr. Beitler on April 10, 1983 (see Findings of Fact Nos. 19, 21, 22, 23 and 41), there were a number of seeps

and minor leachate flows throughout the entire side slopes at the site.

55. It is impossible to place and compact final cover on excessive landfill slopes, due to the inability to run equipment on the slopes for the purpose of compacting the cover.

56. It is impossible to revegetate excessive landfill slopes of the magnitude existing at Strasburg Landfill.

57. Large areas of Strasburg Landfill do not contain any evidence of the required soil cover, with exposed trash in evidence at these areas.

58. The existence of exposed trash at a landfill has the following effects: attraction of rodents; increased probability of fly breeding; increased probability of trash being blown or washed off the site and increased odor generation and release.

59. During his inspection on April 10, 1983, Mr. Stuehling informed John Hoffman, an employee at Strasburg Landfill, that slopes in the southeastern portion of the site were too steep.

60. Conditions at Strasburg Landfill remained unchanged during the period of April 10 through April 12, 1983.

61. Dennis Orenshaw is employed by DER's Bureau of Solid Waste Management as a Regional Solid Waste Engineer for the Norristown region, which encompasses Chester County.

62. Mr. Orenshaw is familiar with Strasburg Landfill's operations and conditions, and he has visited approximately twenty-five landfills in the course of his employment.

63. On April 12, 1983, Mr. Orenshaw visited Strasburg Landfill and observed that the following conditions were not in compliance with statutory regulations: inadequate or non-existent terraces; excessive slopes; inadequate quality and quantity of final cover; and inadequate stabilization and revegetation.

64. On April 12, 1983, Mr. Orenshaw observed that exposed trash was evident in many areas of Strasburg Landfill.

65. Inadequate stabilization efforts at Strasburg Landfill contributed to the formation of erosion gullies which caused surface water runoff to carry away excessive amounts of cover.

66. On an April 22, 1983 visit to Strasburg Landfill, Mr. Orenshaw used an Abney hand level to measure the steepness of the slopes at the site. An Abney hand level is an engineering instrument commonly used to measure the steepness of slopes, by determining the angle between the line of sight and the horizontal.

67. There was no change in the excessive steepness of the slopes at Strasburg Landfill from April 10 to April 22, 1983.

68. An Abney hand level provides measurements which have a margin of error of plus or minus five percent.

69. On April 22, 1983, the steepness of the slopes in the areas adjacent to the access road at Strasburg Landfill was approximately fifty (50) to seventy (70) percent.

70. On April 22, 1983, the steepness of the slopes in the eastern portion of Strasburg Landfill was between thirty (30) and fifty (50) percent.

71. On April 22, 1983, the steepness of the slopes on the upper one quarter (1/4) of Strasburg Landfill was approximately seventy

(70) percent.

72. On April 22, 1983, the steepness of the slopes in the southern portion of Strasburg Landfill was approximately thirty five (35) percent.

73. On April 22, 1983, the steepness of the slopes in the southwest portion of Strasburg Landfill was approximately seventy (70) percent. There was no evidence of terraces; revegetation; sufficient cover in terms of both quality and quantity; stabilization or compaction in this area.

74. Mr. Beitler participated in the formation of the Civil Penalty Assessment at issue in the present appeal.

75. The Civil Penalty Assessment issued by DER to Strasburg Landfill on April 19, 1983, stated:

> For violations of the Solid Waste Act [sic] described in Paragraph "4" observed on April 10, 1983, Strasburg Associates is assessed the following Civil Penalty:
>
> | | |
> |---|---|
> | For leachate discharges: | $ 5,000.00 |
> | For excessive grades: | 13,500.00 |
> | For inadequate final cover: | 1,500.00 |
> | Total: | $20,000.00 |
>
> For violations of the Solid Waste Act [sic] described in Paragraph "4" observed on April 11, 1983, Strasburg Associates is assessed the following Civil Penalty:
>
> | | |
> |---|---|
> | For leachate discharges: | $ 0 |
> | For excessive grades: | 13,500.00 |
> | For inadequate final cover: | 1,500.00 |
> | Total: | $15,000.00 |
>
> For violations of the Solid Waste Act [sic] described in Paragraph "4" observed on April 12, 1983, Strasburg Associates is assessed the following civil penalty:

For leachate discharges:	$ 0
For excessive grades:	13,500.00
For inadequate final cover:	1,500.00
Total:	$15,000.00

For Commonwealth costs to investigate the violations observed on April 10, 11 and 12, 1983, Strasburg Associates is assessed a Civil Penalty of $500.00.

For previous violations of the Solid Waste Act [sic] and the Clean Streams Law, Strasburg Associates is assessed a Civil Penalty of five percent of $50,500.00 or $2,525.00.

This results in a total Civil Penalty for violations of the Solid Waste Act [sic] observed on April 10, 11 and 12, 1983 of $53,025.00.

76. The Solid Waste Management Act provides for a maximum Civil Penalty of twenty five thousand dollars ($25,000.00) for each violation for each day the violation continues. 35 P.S. §6018.605.

77. Each violation for which Strasburg Associates was assessed a Civil Penalty-- uncontrolled leachate discharges, excessive grades and inadequate final cover-- had a potential maximum Civil Penalty of twenty five thousand dollars ($25,000.00).

78. The total maximum Civil Penalty DER could have lawfully assessed against Strasburg Landfill for the nine violations which were observed at the site on April 10, 11 and 12, 1983, was two hundred twenty five thousand dollars ($225,000.00). 35 P.S. §6018.605.

79. DER considers the following factors in calculating and issuing Civil Penalty Assessments for landfills found to be in violation of the Solid Waste Management Act, 35 P.S. §6018.101 et seq.: degree of severity of each violation; each violation's impact or potential impact on the environment and the public; the willfulness of each

violation; costs incurred by the Commonwealth in investigating the violations; the compliance history of the landfill operator; and, whether the landfill operator reaped monetary savings by virtue of the violations.

80. All of the factors referred to in Finding of Fact No. 79 are considered by DER as part of a statewide DER policy which establishes the procedures and criteria upon which Civil Penalties are based. These factors are not set forth in the Solid Waste Management Act.

81. All of the factors referred to in Finding of Fact No. 79 were considered by DER when it calculated and assessed the Civil Penalty at issue in the present appeal against Strasburg Landfill for violations which were present at the site on April 10, 11 and 12, 1983.

82. The DER policy referred to in Finding of Fact No. 80 has been in effect since shortly after repassage of the Solid Waste Management Act in 1980.

83. That portion of DER's Civil Penalty Assessment totaling two thousand five hundred and twenty five dollars ($2,525.00) was based upon Strasburg Landfill's previous violations of the Solid Waste Management Act and the Clean Streams Law. These violations occurred in 1979 and were as follows: discharges of a high volume of silt into Briar Run, in violation of the Clean Streams Law; and, two violations of the cover requirements of the Solid Waste Management Act.

84. The Solid Waste Management Act sets forth the following factors which DER must consider in calculating and assessing Civil Penalties pursuant to the Act: the willfulness of each violation; damage to air, water, land or other natural resources of the Commonwealth or their uses; cost of restoration and abatement; savings resulting to the person in consequence of such violations; and, any other relevant factors. 35 P.S. §6018.605.

85. In calculating and assessing the Civil Penalty at issue in the present appeal, DER considered all of the statutorily mandated factors referred to in Finding of Fact No. 84.

86. The "Suspension Order" issued by DER to Strasburg Landfill on May 11, 1983, ordered that, inter alia:

> The Solid Waste Management Permit No. 101038 for the Strasburg Landfill is hereby suspended for the period beginning 12:01 A.M. Saturday May 14, 1983, and continuing until further notice from the Department. During the period of suspension of Permit No. 101038, Strasburg Landfill and Strasburg Associates shall cease depositing and prevent others from depositing any solid waste at Strasburg Landfill.

87. DER's Civil Penalty Assessment of April 19, 1983 and DER's "Suspension Order" of May 11, 1983, were based upon the same violations of the Solid Waste Management Act-- namely, uncontrolled leachate discharges, excessive grades and inadequate final cover.

88. DER's "Suspension Order" of May 11, 1983, is a "cessation order" for purposes of Section 605 of the Solid Waste Management Act. 35 P.S. §6018.605.

89. During the course of the presentation of the Commonwealth's case in the present appeal, neither the appellant nor anyone repre-

senting appellant appeared at the hearing conducted by Board Member Anthony J. Mazullo, Jr. on April 19, 1984.

90. Appellant was afforded sufficient advance notice of the hearing conducted by Board Member Anthony J. Mazullo, Jr. on April 19, 1984.

91. Earle R. Hart, general partner in the two partnerships which comprise Strasburg Associates, was afforded sufficient advance notice of the hearing conducted by Board Member Anthony J. Mazullo, Jr. on April 19, 1984.

DISCUSSION

The Board's responsibility when reviewing orders issued by DER is to determine whether or not such issuance constituted an abuse of discretion or amounted to arbitrary or capricious action. Morcoal Company v. DER, 74 Pa.Cmwlth. 108,116, 459 A.2d 1303,1307 (1983); Warren Sand and Gravel Company, Inc. v. DER, 20 Pa.Cmwlth. 186,203-4, 341 A.2d 556,565 (1975); Chester A. Ogden, President, Coal Hill Contracting Company v. DER, EHB Docket No. 82-193-G (issued August 6, 1984); Bethlehem Mines Corporation v. DER and United Mine Workers of America, EHB Docket No. 82-067-G (issued April 25, 1984); Township of Indiana and Concerned Citizens of Rural Ridge v. DER and Dusquesne Light Company, EHB Docket Nos. 82-099-G and 82-100-G (issued January 1, 1984); Coolspring Township et al. v. DER, EHB Docket No. 81-134-G (issued August 8, 1983); Western Hickory Coal Company v. DER, EHB Docket No. 82-141-G (issued June 2, 1983); General Investment and Development Company, Inc., et al. v. DER, EHB Docket No. 81-120-M (issued May 6, 1983), 26 D.&C.3d 271,284 (1983); Cambria Coal Company v. DER, EHB Docket No. 82-071-H (issued March 11, 1983); Southwest Pennsylvania Natural Resources, Inc. v. DER, EHB Docket No. 81-001-H, 1982 EHB 48,50-51; Apollo Corp. v. DER, EHB Docket No. 81-130-G, 1982 EHB 57,61; Swatara Contractors, Inc. v. DER, EHB Docket No. 81-037-H, 1982 EHB 75,79; Lower Paxton Township Authority v. DER, EHB Docket No. 80-205-W, 1982 EHB 111,131; Melvin D. Reiner v. DER, EHB Docket No. 81-133-G, 1982 EHB 183,205; Pennsylvania Mines Corp. v. DER and Barry D. Einsig; EHB Docket No. 82-176-G, 1982 EHB 215,228; Donald T. Cooper

and Kathleen Cooper v. DER and Graham K. Shaddick, Successor to Heirs of Clarence Mercatoris, EHB Docket No. 81-032-G, 1982 EHB 250,257; Ohio Farmers Insurance Company v. DER, EHB Docket No. 80-041-G, 1981 EHB 384,388 aff'd. 73 Pa.Cmwlth 18, 457 A.2d 1004 (1983); R. Czambel, Sr. v. DER and Independent Enterprises, EHB Docket No. 80-152-G, 1981 EHB 88,93; Lackawanna Refuse Removal, Inc. et al. v. DER, EHB Docket No. 79-024-B, 1981 EHB 195,214; Doris J. Baughman, et al. v. DER and Bradford Coal Company, EHB Docket No. 77-180-B, 1979 EHB 1,9; Newlin Township v. DER and Strasburg Associates, EHB Docket No. 78-127-D, 1979 EHB 33,69; Raymond E. Diehl v. DER, EHB Docket No. 78-037-B, 1979 EHB 105,108; Milan Melvin Sabock and Concerned Citizens of Garlow Heights Area Association v. DER and Plum Borough and Toro Development Company, EHB Docket No. 78-085-B, 1979 EHB 229,238; Harmon Coal Company v. DER and Borough of Brookville, EHB Docket No. 75-034-C, 1977 EHB 1,9-10.

The burden of proof in the present appeal rests upon DER to demonstrate the reasonableness of its Civil Penalty Assessment of April 19, 1983. 25 Pa. Code §21.101(b)(1). In addition, the Board hereby places the burden of proof upon DER to demonstrate the reasonableness of its "Suspension Order" of May 11, 1983. 25 Pa. Code §21.101(b)(2). It should be noted that, although Section 21.101(b)(2) places the burden of proof upon DER only when it revokes a license or permit for cause, the Board construes DER's "Suspension Order" as a revocation. This is due to the fact that the effect of DER's order was a revocation of the permit for cause because DER suspended

appellant's solid waste permit for an indefinite period of time and also ordered the immediate cessation of any solid waste deposition at Strasburg Landfill. See, Clymar Sanitary Landfill v. DER and North Branch Concerned Citizens, EHB Docket No. 81-185-M (issued September 22, 1983). The Board believes that such a construction with regard to the burden of proof is reasonable under the instant facts, However, the Board emphasizes that our construction of the burden of proof with regard to DER's "Suspension Order" is limited to the facts of this case; the Board can conceive of situations where a suspension order may not rise to the level of a revocation order, for example, in cases where the suspension is for a stated period of time as opposed to an indefinite period of time.

In addition, our construction of the burden of proof places no additional burden upon DER because DER can only demonstrate the reasonableness of its "Suspension Order" by establishing the reasonableness of DER's findings of the violations which served as the basis for its "Suspension Order," which were the same violations which served as the basis for DER's Civil Penalty Assessment. (See Finding of Fact No. 87). Of course, DER has the burden of proof with regard to Civil Penalty Assessments. 25 Pa. Code §21.101(b)(1); Western Hickory Coal Company v. DER, EHB Docket No. 82-141-G (issued June 2, 1983).

Also, despite DER's failure to address in its Post-Hearing Memorandum the issue of the reasonableness of its "Suspension Order" of May 11, 1983, and because appellant's Notice of Appeal specifically appealed said "Suspension Order" as well as DER's Civil Penalty Assessment, the Board notes that the reasonableness of DER's "Suspension

Order" remains at issue in the present appeal.

First, with regard to DER's Civil Penalty Assessment, the Board holds that DER has met its burden of proving the reasonableness of its findings of the violations which supported the assessment, as well as proving the reasonableness of the assessment itself. The record is replete with substantial credible, corroborated and uncontroverted evidence which establishes that conditions at Strasburg Landfill on April 10, 11 and 12, 1983, constituted violations of the Solid Waste Management Act. 35 P.S. §6018.101 et seq. (See Findings of Fact Nos. 19,21,22,23,24,25,27,28,30,41,42,46,47,48,50,51,54,57, 60,63,64,65,67,69,70,71 and 73). In addition, the Board notes that a Civil Penalty in the amount of fifty three thousand and twenty-five dollars ($53,025.00) assessed against appellant for the aforementioned violations was well within the maximum potential penalty of two hundred twenty five thousand dollars ($225,000.00) which DER could have lawfully assessed against appellant. (See Finding of Fact No. 78).

Second, because the same violations of the Solid Waste Management Act served as the basis for both the "Suspension Order" and the Civil Penalty Assessment, the Board holds that DER's issuance of said "Suspension Order" constituted a reasonable exercise of DER's discretion under the Solid Waste Management Act. 35 P.S. §§6018.502(d), 6018.602(a). Suspension of landfilling operations was warranted where the existence of manifestly excessive slopes and inadequate final cover contributed to the production and runoff of leachate with concomitant damage to the water, land and other natural resources of the Commonwealth.

Finally, with regard to DER's Civil Penalty Assessment, DER contends that such assessment was mandated by the Solid Waste Management Act since Section 605 states that: "[i]f the violation leads to the issuance of a cessation order or occurs after the release of security for performance, a civil penalty shall be assessed." 35 P.S. §6018.605 (emphasis added). However, DER is incorrect in this matter. The mandatory language of Section 605 covers the situation where a Civil Penalty must be assessed after the issuance of a cessation order. See, Kerry Coal Company v. DER, EHB Docket No. 82-142-G (issued June 4, 1984) citing Western Hickory Coal Company v. DER, EHB Docket No. 82-141-G (issued June 2, 1983) (construing Section 1396.22 of the Surface Mining Conservation and Reclamation Act, 52 P.S. §1396.22, whose language with regard to the mandatory assessment of civil penalties following the issuance of cessation orders is identical to Section 605 of the Solid Waste Management Act).

In the present appeal, DER's Civil Penalty was assessed prior to the issuance of the cessation order (referred to herein as a "Suspension Order"); therefore, the Board holds that the portion of Section 605 which mandates the assessment of a Civil Penalty is not applicable to the present case. As a result, DER's assessment of a Civil Penalty was based upon DER's discretionary authority pursuant to that portion of Section 605 which states that DER may assess a Civil Penalty for violations of the Solid Waste Management Act. Accordingly, the Board is free to substitute its discretion for DER's in such a situation. Warren Sand and Gravel Company, supra,

20 Pa.Cmwlth. at 203-4, 341 A.2d at 565; Clymar Sanitary Landfill, supra.

Due to the continuing nature and extent of appellant's violations-- the manifestly excessive slopes (see Findings of Fact Nos. 27,30,46,47,51,52,55,56,57,67,69,71 and 73); the inadequate final cover (see Findings of Fact Nos. 28,53,57,63 and 64); the leachate production and runoff (see Findings of Fact Nos. 19,21,23,24,30 and 41); and the inadequate or non-existent terraces (see Findings of Fact Nos. 30,41,48,50 and 63)-- the Board believes that a greater Civil Penalty than DER assessed against appellant could be warranted by the conditions which existed at the site and the factors set forth in Section 605 of the Solid Waste Management Act. (See Finding of Fact No. 84). Appellant's neglect with regard to conditions at Strasburg Landfill amounted to deliberate misconduct on appellant's part. This is especially distressing to the Board when one considers that appellant failed to undertake affirmative measures to protect Briar Run, a high quality stream which runs adjacent to Strasburg Landfill. (See Finding of Fact No. 43). Appellant has offered no excuse for its failure to abide by the duly enacted laws of the Commonwealth, which place a high priority on the protection of the Commonwealth's natural resources. Nevertheless, due to the circumstances of this case, the Board declines to substitute its discretion for DER's. Accordingly, the Board affirms as reasonable DER's assessment of a Civil Penalty against appellant in the amount of fifty three thousand and twenty-five dollars ($53,025.00).

Finally, the Board takes pains to emphasize that despite and because of appellant's non-appearance at the hearing and non-communication with the Board, we have given full and fair consideration to the allegations raised in appellant's Notice of Appeal and Pre-Hearing Memorandum and we find them wholly without merit and unsupported by any evidence whatsoever. The Board notes that such behavior on appellant's part is a disservice to the Commonwealth, its citizens and the Board.

It should be noted that DER contends that appellant's failure to appear at the hearing may serve as the sole basis for the Board's affirmance of DER's actions and dismissal of the present appeal. The Board can find no case support for such a contention and we decline the opportunity to hold otherwise, although our power to impose sanctions pursuant to 25 Pa. Code §21.124 could arguably support such a holding.

Nonetheless, in accordance with the preceding Findings of Fact and succeeding Conclusions of Law, appellant's appeal is hereby dismissed.

CONCLUSIONS OF LAW

1. The Environmental Hearing Board has jurisdiction over the persons and subject matter of this appeal.

2. Appellee, Commonwealth of Pennsylvania, Department of Enviro mental Resources (DER), has the duty and responsibility of administe ing the Clean Streams Law, 35 P.S. §691.1 et seq., the Solid Waste Management Act, 35 P.S. §6018.101 et seq., and DER Rules and Regulations promulgated thereunder, 25 Pa. Code §75.

3. "Terracing" refers to that process whereby horizontal terrac ten feet in minimum width must be constructed on a landfill slope fo every twenty feet maximum rise in vertical elevation of the slope whenever final grade exceeds fifteen percent. 25 Pa. Code §75.24 (c)(2)(iii).

4. DER Rules and Regulations require a minimum of two feet of compacted soil for final cover. 25 Pa. Code §75.24(c)(2)(xxi).

5. The maximum permissible landfill slope is thirty three (33) percent, accoring to DER Rules and Regulations. 25 Pa. Code §75.24 (c)(2)(iii).

6. The Solid Waste Management Act provides for a maximum Civil Penalty of twenty five thousand dollars ($25,000.00) for each violation for each day the violation continues. 35 P.S. §6018.605.

7. Each violation for which Strasburg Associates was assessed a Civil Penalty-- uncontrolled leachate discharges, excessive grades and inadequate final cover-- had a potential maximum Civil Penalty c twenty five thousand dollars ($25,000.00). 35 P.S. §6018.605.

8. The total maximum Civil Penalty that could be assessed against Strasburg Associates for the nine violations which were observed on April 10, 11 and 12, 1983, is two hundred twenty five thousand dollars ($225,000.00). 35 P.S. §6018.605.

9. The Solid Waste Management Act sets forth the following factors which DER must consider in calculating and assessing Civil Penalties pursuant to the Act: the willfulness of each violation; damage to air, water, land or other natural resources of the Commonwealth or their uses; costs of restoration and abatement; savings resulting to the person in consequence of such violations; and, any other relevant factors. 35 P.S. §6018.605.

10. In calculating and assessing the Civil Penalty at issue in the present appeal, DER considered all of the statutorily mandated factors of the Solid Waste Management Act. 35 P.S. §6018.605.

11. DER's Civil Penalty Assessment of April 19, 1983 and DER's "Suspension Order" of May 11, 1983, were based upon the same violations of the Solid Waste Management Act-- namely, uncontrolled leachate discharges, excessive grades and inadequate final cover.

12. DER's "Suspension Order" of May 11, 1983, is a "cessation order" under Section 605 of the Solid Waste Management Act. 35 P.S. §6018.605.

13. Appellant was afforded sufficient advance notice of the hearing conducted by Board Member Anthony J. Mazullo, Jr. on April 19, 1984.

14. Earle R. Hart, general partner in the two partnerships which comprise Strasburg Associates, was afforded sufficient advance notice of the hearing conducted by Board Member Anthony J. Mazullo, Jr. on April 19, 1984.

15. DER met its burden of proving the reasonableness of DER's Civil Penalty Assessment of April 19, 1983, and of DER's "Suspension Order" of May 11, 1983.

16. DER's issuance of its Civil Penalty Assessment of April 19, 1983 and of its "Suspension Order" of May 11, 1983 did not involve an abuse of discretion or amount to arbitrary and capricious action.

17. A "Suspension Order" which orders a landfill operator to suspend all landfilling operations for an indefinite period of time and which orders the immediate cessation of all landfilling operations is a revocation of a solid waste management permit for purposes of 25 Pa. Code, §21.101(b)(2).

18. Conditions at Strasburg Landfill on April 10, 11 and 12, 1983, constituted violations of the Solid Waste Management Act. 35 P.S. §6018.101 et seq.

19. That portion of Section 605 of the Solid Waste Management Ac which mandates the assessment of a Civil Penalty whenever a violation of the Act leads to the issuance of a cessation order does not apply to the situation where a civil penalty is assessed prior to the issuance of a cessation order.

20. DER's assessment of a Civil Penalty in the present appeal was based upon DER's discretionary authority to assess Civil Penalt: pursuant to the Solid Waste Management Act. 35 P.S. §6018.605.

ORDER

AND NOW, this 30th day of October, 1984, in consideration of the within Findings of Fact and Conclusions of Law, the appeal of appellant Strasburg Associates, EHB Docket No. 83-097-M, is hereby dismissed. DER's assessment of a Civil Penalty in the amount of fifty three thousand and twenty five dollars ($53,025.00) is hereby affirmed.

The aforementioned Civil Penalty is due and payable into the Solid Waste Abatement Fund pursuant to 35 P.S. §6018.701 upon issuance of this Order.

Any and all prothonotaries in the Commonwealth of Pennsylvania are hereby ordered to enter these penalties as liens against any of the property of Strasburg Associates or its general partner, Earle R. Hart, with interest at the rate of six percent per annum from the date of this Order. No costs may be assessed against the Commonwealth for entry of any liens upon the docket.

ENVIRONMENTAL HEARING BOARD

Anthony J. Mazullo, Jr.
Member

Edward Gerjuoy
Member

DATED: October 30, 1984

For Appellant: Hershel J. Richman, Esquire
Martha Swartz, Esquire of Cohen, Shapiro, Polisher, et al.
For Commonwealth of Pennsylvania,
Department of Environmental Resources:
Kenneth A. Gelburd, Assistant Counsel

COMMONWEALTH OF PENNSYLVANIA

BEFORE THE

ENVIRONMENTAL HEARING BOARD

HARVEYS LAKE BOROUGH TAXPAYERS ASSOCIATION	:	DOCKET NO. 81-062-M
v.	:	
COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES and ADAM BURICK, Permittee	:	

ADJUDICATION

By: Anthony J. Mazullo, Jr., Member, November 7, 1984

SYLLABUS

Appellant, Harveys Lake Borough Taxpayers Association, has appealed the issuance by the Department of Environmental Resources (DER), of a permit to Adam Burick to construct and maintain an encroachment in the nature of a retaining wall and dock or pier along Harveys Lake. The appeal of Harveys Lake Borough Taxpayers Association is hereby dismissed.

Appellant, in contesting the grant of a permit by DER to a third party, has the burden of proof. 25 Pa. Code §21.101 (c)(3). This Board's scope of review of this permit approval is to determine whether DER has acted arbitrarily and capriciously or in violation of law in granting the permit.

The issuance by DER of the permit to Adam Burick did not violate Section 301 of the Flood Plain Management Act, 32 P.S. §679.301. This statute provides that a special exception is required to permit the construction in a flood plain of a structure which is deemed to be a "special hazard" by departmental regulations. This requirement is not applicable to the Burick structure, a retain-

ing wall and dock, because this structure does not fall within any of the specifically enumerated categories of "special hazards" under 32 P.S. §679.301(a).

Also, the issuance by DER of the permit to Adam Burick was not in violation of 32 P.S. §679.302 and 32 P.S. §693.6, which are the statutes which require permits under the Flood Plain Management Act, 32 P.S. §679.101 et seq., and the Dam Safety and Encroachments Act, 32 P.S. §693.1 et seq., respectively. A permit is required for Burick's structure under the Dam Safety and Encroachments Act because it is an encroachment and a water obstruction as those terms are defined under 32 P.S. §693.3. A permit is required for Burick's structure under the Flood Plain Management Act because it is constructed in a flood plain. 32 P.S. §679.302. Although Burick did not obtain the requisite permit prior to construction of the retaining wall and dock, he was not acting in bad faith, and the subsequent review by DER found that the Burick structure was in compliance with the Dam Safety and Encroachments Act and the Flood Plain Management Act, and the rules and regulations promulgated under these acts.

Finally, DER did not abuse its discretion in issuing this permit to Burick. Although appellant's allege that the structure will have a detrimental impact on Harveys Lake, the evidence of record does not even establish that the structure will have a discernible impact on Harveys Lake. Thus, appellants did not sustain their burden of proof on this issue.

INTRODUCTION

Harveys Lake Borough Taxpayers Association (a non-profit corporation), filed this appeal on April 28, 1981, protesting the issuance by the Department of Environmental Resources (DER), Bureau of Dams and Waterway Management, of a permit to Adam Burick to construct and maintain an encroachment in the nature of a retaining wall and dock or pier along Harveys Lake between Pole 110 and Pole 111, Harveys Lake Borough, Luzerne County, Pennsylvania. Evidentiary hearings were held in this matter for two days, and post-hearing memoranda of law were submitted by the parties.

FINDINGS OF FACT

1. Appellant is Harveys Lake Borough Taxpayers Association, a Pennsylvania non-profit corporation, whose principal place of business is P.O. Box 112, Harveys Lake Borough, PA 18618.

2. Permittee is Adam Burick, an individual who resides at 188 South Mountain Boulevard, Mountaintop, Pennsylvania; and who owns property along the the northern shore of Harveys Lake between Pole 110 and Pole 111 in the Borough of Harveys Lake, Luzerne County, Pennsylvania.

3. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources (DER), the agency of the Commonwealth authorized to administer the provisions of the Dam Safety and Encroachments Act, 32 P.S. §693.1 et seq., and the Flood Plain Management Act, 32 P.S. §679.101 et seq.

4. On July 10, 1980, Adam Burick applied to the Borough of Harveys Lake for a building permit and a zoning permit to construct a boathouse and dock at Pole 111, Harveys Lake.

5. The Borough of Harveys Lake issued building permit number 657 and zoning permit number 657 in the summer of 1980 to Adam Burick, permitting the construction of the above-mentioned boathouse and dock. Both of these permits were signed by Richard Boice, the building inspector and zoning officer for Harveys Lake Borough.

6. In the late summer and early fall of 1980, Adam Burick constructed a concrete retaining wall along the shoreline of Harveys Lake between Pole 110 and Pole 111, which retaining wall extends approximately ten feet into the body of Harveys Lake

7. In October of 1980, John Chernesky, a regional hydraulic engineer for the Wilkes-Barre Regional Office, Bureau of Dams and Waterway Management, Department c Environmental Resources, observed Burick's retaining wall, dock and boathouse at Harveys Lake.

8. After checking with DER's Central Office in Harrisburg, Mr. Chernesky found that a permit had never been issued to Adam Burick for the retaining wall and

dock, and therefore sent Adam Burick a violation letter which stated that he had observed the encroachment of Harveys Lake, no permit had been issued for it, and under Section 6 of the Dam Safety and Encroachments Act, a permit was required.

9. Adam Burick did not act in bad faith with respect to his failure to obtain a permit from DER prior to the construction of the retaining wall, dock and boathouse. He has made an effort to comply with all requirements in this regard, and the only reason he did not obtain a permit from DER prior to commencing construction was that he was not aware that a permit was required.

10. On February 18, 1981, Adam Burick submitted to DER an application for a dam or water obstruction permit for the retaining wall along Harveys Lake for the purpose of constructing a bathhouse, deck and dock.

11. On March 24, 1981, DER, through its Division of Obstructions and Flood Plain Management, issued Water Obstruction and Encroachment Permit No. 40-19 to Adam Burick, permitting him to construct and maintain a dock twenty feet by twenty feet, and to maintain the existing concrete retaining wall along Harveys Lake between Pole 110 and Pole 111.

12. One of the special conditions of the above-mentioned Water Obstruction and Encroachment Permit was a requirement that Adam Burick contact the District Engineer, U.S. Army Corps of Engineers, in order for the District Engineer to make a determination as to the need for a permit pursuant to Section 404 of the Clean Water Act of 1977. 33 U.S.C. §1344.

13. Irwin Garskof, an ecologist with the U.S. Army Corps of Engineers, Enforcement Section, observed the Burick structure on March 18, 1981.

14. Mr. Garskof stated that the Burick structure could be brought into compliance with Section 404 of the Clean Water Act, 33 U.S.C. §1344, by the placement of large stones around the perimeter of the retaining wall.

15. Rugh Ann Balla, Conservation District Manager for the Luzerne County Conservation District, was contacted by Burick, and advised Burick that it would not be necessary for the Conservation District to review his plans because no earth moving

would be involved. The Conservation District never received any complaints concerning Burick's property at Harveys Lake.

16. DER received a comment from a Fish Commission representative indicating that the Fish Commission had no objection to Burick's project on Harveys Lake.

17. Harveys Lake is eutrophic. Eutrophication is an excess of nutrients, such as phosphorus or nitrogen, in a body of water, which cause an excessive bloom of algae. This causes a depletion of the oxygen supply in the waters, which would be detrimental to the fish population.

18. The exact cause of the eutrophication problem in Harveys Lake is not known. However, some possible causes are: gypsy moth fecal deposits washed into the lake, leaking of raw sewage into the lake, and use of fertilizers by residents of Harveys Lake on their lawns.

19. The sewage system of the Burick structure is connected with the Harveys Lake Borough Sanitary Authority sewer system, and is not leaking raw sewage into Harveys Lake.

20. The only possible problem which was posited by appellants, with the Burick structure in regard to eutrophication, is the fact that building structures which extend into the lake could interrupt the surface flow characteristics of the lake and thereby interfere with the natural flushing of the lake.

21. The only other negative impact of the Burick structure on Harveys Lake posited by appellants is the elimination of a portion of the littoral zone or the shallow water area.

22. The littoral zone usually contains a variety of aquatic plants which provide shelter for small animals, small fish, and crustaceans, and is generally the nursery grounds for small fish.

23. The placing of large rocks around the perimeter of the retaining wall would mitigate the impact on the littoral zone. In any event, a single encroachment would have no measurable impact on the fisheries.

DISCUSSION

Appellant, in contesting the grant of a permit by DER to a third party, has the burden of proof. 25 Pa. Code §21.101(c)(3).[1] Board of Supervisors of Springfield Township v. DER and Peter S. Monzino, 1982 EHB 104; Czambel v. DER and Independent Enterprises, 1981 EHB 88; Milan Melvin Sabock and Concerned Citizens of Garlow Heights Area Association v. DER, Plum Borough, and Toro Development Co., 1979 EHB 229, rev'd on other grounds sub nom Toro Development Co. v. DER, et al., 56 Pa. Cmwlth. 471, 425 A.2d 1163 (1981). This Board's scope of review of this permit approval is to determine whether DER has acted arbitrarily and capriciously or in violation of law in granting the permit. Warren Sand & Gravel Co. v. DER, 20 Pa. Cmwlth. 186, 341 A.2d 556 (1975); Board of Supervisors of Springfield Township v. DER and Peter S. Monzino, 1982 EHB 104; Czambel v. DER and Independent Enterprises, 1981 EHB 88; Milan Melvin Sabock and Concerned Citizens of Garlow Heights Area Association v. DER, Plum Borough and Toro Development Co., 1979 EHB 229, rev'd on other grounds sub nom. Toro Develop- Co. v. DER, et al., 56 Pa. Cmwlth. 471, 425 A.2d 1163 (1981).

There are essentially two grounds on which appellant has based this appeal. First, appellant asserts that the Burick structure is in violation of applicable statutes, specifically, the Flood Plain Management Act, 32 P.S. §679.101 et seq., and the Dam Safety and Encroachments Act, 32 P.S. §693.1 et seq. Second, appellant states that DER abused its discretion in issuing the permit in question because the permitted structure will have a detrimental impact on Harveys Lake.

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1. 25 Pa. Code §21.101(c): A party appealing an action of the Department shall have the burden of proof and burden of proceeding in the following cases unless otherwise ordered by the Board:

> (3) where a party who is not the applicant or holder of a license or permit from the Department protests its issuance or continuation.

The specific provisions of the Flood Plain Management Act and the Dam Safety and Encroachments Act of which appellants allege the Burick structure is in violation are 32 P.S. §§679.301, 679.302, and 693.6. As for the alleged violation of Section 301 of the Flood Plain Management Act, 32 P. S. §679.301, this statute provides that a special exception is required to permit the construction in a flood plain of a structure which is deemed to be a "special hazard", by departmental regulations. Section 679.301(a) states that the obstructions which are "special hazards" are limited to: hospitals, nursing homes, jails, new mobile home parks, new subdivisions, and substantial additions to mobile home parks or subdivisions. Since the Burick structure, a retaining wall and dock, does not fall within the category of "special hazards", 32 P.S. §679.301 is not applicable, and therefore has not been violated.

The other two statutes which appellant alleges have been violated, 32 P.S. §679.302[2] and 32 P.S. §693.6,[3] are the statutes which require permits under the Flood Plain Management Act and the Dam Safety and Encroachments Act respectively. Section 693.6 of the Dam Safety and Encroachments Act requires a permit from DER for a water obstruction or encroachment. An encroachment is defined by 32 P.S. §693.3 as, "Any structure or activity which in any matter changes, expands or diminishes the course, current or cross-section of any watercourse, floodway or body of water".

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2. 32 P.S. §679.302(b) states that, "No person shall construct, modify, remove, abandon, or destroy any structure or engage in any activity specified in subsection (a) in the 100-year flood plain unless such person has first applied for and obtained a permit from the Department of Environmental Resources". Subsection (a) includes obstructions regulated under the Dam Safety and Encroachments Act. 32 P.S. §679.302(a)(1).

3. 32 P.S. §693.6(a) states that, "No person shall construct, operate, maintain, modify, enlarge or abandon any dam, water obstruction or encroachment without the prior written permit of the department".

A water obstruction is defined by 32 P.S. §693.3 as including, "any dike, bridge, culvert, wall, wing wall, fill, pier, wharf, embankment, abutment or other structure located in, along, across or projecting into any watercourse, floodway or body of water". It is not contested that the Burick structure is an encroachment and a water obstruction as those terms are defined by 32 P.S. §693.3. For a case holding that a structure similar to Burick's structure is an encroachment and a water obstruction as defined by 32 P.S. §693.3, and therefore requires a permit under 32 P.S. §693.6, see Donald T. Cooper v. DER and Heirs of Clarence Mercatoris, 1981 EHB 78.

Although the Dam Safety and Encroachments Act does not prohibit an encroachment per se, it does require a permit from DER for an encroachment pursuant to 32 P.S. §693.6. Section 679.302 of the Flood Plain Management Act requires a permit from DER for structures constructed in a flood plain.

Burick's Water Obstruction and Encroachment Permit was issued in accordance with both the Dam Safety and Encroachment Act and the Flood Plain Management Act. It is not contested that the Burick structure was constructed prior to Burick's obtaining this permit from DER. However, this does not mean that DER cannot subsequently issue a permit for the structure if it should find that the structure is in compliance with the Dam Safety and Encroachments Act and the Flood Plain Management Act, and the rules and regulations promulgated under these acts.

In this case, Adam Burick testified, and there was no evidence to the contrary, that in effect, he had made a good faith effort to comply with all requirements in regard to the construction of the structure along Harveys Lake, and that the only reason he did not obtain a permit from DER prior to the construction of this structure was that he was not aware that one was required. This Board finds that Burick was not acting in bad faith in his failure to obtain a permit from DER prior to construction of this structure. After the Burick structure came to the attention of a DER engineer and Burick was notified that he was in violation of 32 P.S. §693.6 because he did not have a permit, Burick applied for a permit. DER

then issued one after reviewing Burick's plans, and contacting the Luzerne County Conservation District Manager, and the Fish Commission. Since Burick now has a properly issued Water Obstruction and Encroachment Permit for his structure along Harveys Lake, he is no longer in violation of 32 P.S. §679.302 or 32 P.S. §693.6.

The remaining legal basis for this appeal is that DER abused its discretion in issuing the permit for the Burick structure because the structure will have a detrimental impact on Harveys Lake. As previously noted, appellant has the burden of proving that the issuance of this permit was an abuse of discretion by DER. 25 Pa. Code §21.101(c)(3).

Appellant's expert witness testified that the Burick structure could contribute to the eutrophication problem at Harveys Lake in that it would interrupt the surface flow of the lake and thereby interfere with the natural flushing of the lake. The only other impact alleged is the elimination of a portion of the littoral zone or shallow water area which is a nursery grounds for small fish. As for the eutrophication problem at Harveys Lake, there are several possible factors which could be contributing to it and no one cause has been pinpointed. Since the testimony established that it was speculative, at best, whether encroachments of the type here in question contributed to eutrophication in Harveys Lake, appellant has not produced sufficient evidence to sustain its burden of proof on this issue.

As for the elimination of the littoral zone, there was testimony that the placement of large rocks around the perimeter of the structure would mitigate this. Moreover, with regard to both the eutrophication problem and the elimination of the littoral zone, it was established that a single encroachment on the lake, as the Burick structure, would not have any discernible impact. A detrimental impact would result if an "excessive" number of these structures were built along the lake, but it was not established what amount constituted an "excessive" amount. In any event, given the fact that the Burick structure had no measurable impact on Harveys Lake, appellant has not met its burden of proof in establishing that DER abused its discretion in issuing a Water Obstruction and Encroachment Permit for Burick's retaining wall and dock along Harveys Lake.

CONCLUSIONS OF LAW

1. This Board has jurisdiction over the persons and subject matter of this appeal.

2. Adam Burick's retaining wall and dock along Harveys Lake is in compliance with all applicable provisions of the Dam Safety and Encroachments Act, 32 P.S. §693.1 et seq., and the Flood Plain Management Act 32 P.S. §679.101 et seq.

3. DER did not abuse its discretion in granting Water Obstruction and Encroachments Permit No. 40-19 to Adam Burick, for the construction and maintenance of a dock and the maintenance of an existing concrete retaining wall along Harveys Lake.

4. Water Obstruction and Encroachment Permit No. 40-19 was properly granted by DER to Adam Burick.

5. Pursuant to 25 Pa. Code §21.101(c)(3), appellant, Harveys Lake Borough Taxpayers Association, has the burden of proof in its appeal of the issuance by DER of Water Obstruction and Encroachment Permit No. 40-19 to Adam Burick.

6. Appellant did not produce sufficient evidence to sustain its burden of proof.

O R D E R

AND, NOW, this 7th day of NOVEMBER, 1984, upon consideration of the findings of fact and conclusions of law, found by the Board, the appeal of Harveys Lake Borough Taxpayers Association at EHB Docket No. 81-062-M, is hereby dismissed.

ENVIRONMENTAL HEARING BOARD

ANTHONY J. MAZULLO, JR.
Member

EDWARD GERJUOY
Member

DATED: November 7, 1984

cc: Bureau of Litigation
James F. Geddes, Jr., Esquire, Silverblatt & Townend, for Appellant
Lynn Wright, Esquire, for DER
Joseph L. Persico, Esquire, Rosenn, Jenkins & Greenwald, for Permittee

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL HEARING BOARD

221 NORTH SECOND STREET
THIRD FLOOR
HARRISBURG, PENNSYLVANIA 17101
(717) 787-3483

CHARLES M. McCARTHY :

:

Docket No. 84-014-G

:

v. :

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
and PENN HILLS, Permittee
and PENN ARBORS ASSOCIATES, PENNSYLVANIA HOUSING FINANCE AGENCY, CROSSGATES, INC., and ALLEGHENY COUNTY HOUSING AUTHORITY, Intervenors

ADJUDICATION

By Edward Gerjuoy, Member, October 29, 1984

Syllabus

Appellant seeks to challenge DER's approval of a corrective action plan for a municipality's sewage system. The plan permits the connection of two senior citizen high-rise dwellings to the sewage system. Appellant contends that the additional flow through the system generated by these high-rise structures will result in an increased incidence of sewage overflows into his home, a problem he has experienced on several occasions in the past. The Board provided Appellant with an opportunity to present evidence demonstrating that DER's approval of the plan--and the consequent increased flow in the system--is likely to cause him an injury which is substantial, immediate and direct, thereby conferring standing upon him. At the close of the hearing the Board provisionally ruled that Appellant

lacked standing (because he had failed to show that his sewage back-up problems were related to overflows in the sewage system) but permitted him an opportunity to submit a memorandum of law opposing this ruling. No memorandum was filed. Accordingly, after review of Appellant's evidence, the Board's provisional ruling is finalized. The appeal is dismissed for lack of standing.

INTRODUCTION

This matter has become ripe for adjudication after a hearing on the merits, September 12-13, 1984, and under the following circumstances. McCarthy has appealed the Department of Environmental Resources' ("DER") approval of Penn Hills' Corrective Action Plan to correct deficiencies in portions of Penn Hills' sewage system associated with its Long Road sewage treatment plant. The Corrective Action Plan included the intended connection--to the Long Branch system--of two newly built, heretofore unconnected high rise multi-family dwellings. McCarthy claimed these new connections would increase the overloading of the allegedly already overloaded Long Branch system, and would cause increased flooding of McCarthy's already subject-to-flooding residence.

These claims produced Petitions to Intervene in this matter from numerous would-be intervenors with financial and other interests in the aforementioned high rises (see Findings of Fact 4-7 infra). The Board granted all the Petitions to Intervene, over McCarthy's objections. On June 25, 1984 the Board also rejected a motion by Penn Hills to dismiss this appeal for lack of standing. However, McCarthy was warned that "at the forthcoming hearing on the merits McCarthy will be expected to present evidence justifying his sole basis for standing, namely that approval of the correction plan realistically--not fancifully--provides a flooding threat to his home" sufficient to confer standing.

At the hearing on the merits, after McCarthy had concluded his case-in-chief in support of his standing, the Board member conducting the hearing granted Penn Hills' motion to dismiss the appeal for lack of standing, with the reservation that the ruling was provisional pending receipt of a written memorandum of law from McCarthy opposing the dismissal. McCarthy's counsel, at his own request, was given two weeks to file such a memorandum. As of this date, McCarthy's aforesaid memorandum of law, due September 28, 1984, has not been filed. This adjudication therefore affirms the Board's provisional ruling.

FINDINGS OF FACT

1. Appellant Charles M. McCarthy resides at 429 Long Road, in the Municipality of Penn Hills, Allegheny County, Pennsylvania.

2. Appellee is the Commonwealth of Pennsylvania, Department of Environmental Resources, which has the duty and responsibility of administering the Pennsylvania Sewage Facilities Act, 35 P.S. §750.1 et seq., and the regulations duly promulgated thereunder, notably 25 Pa. Code, Chapter 94.

3. Permittee is the Municipality of Penn Hills, which operates the Long Road Sewage Treatment Plant (the "Plant"); the Plant handles sanitary sewer flow from the area of Penn Hills wherein the appellant resides.

4. Intervenor Penn Arbors Associates, whose address is P. O. Box 558, Route 18 South, Washington, Pa. 15301, is a Pennsylvania Limited Partnership, organized and existing under the laws of the Commonwealth of Pennsylvania, and authorized to do business in Pennsylvania.

5. Intervenor Crossgates, Inc., whose address is 410 North Washington Road, McMurray, Pa. 15317, is a Pennsylvania corporation.

6. Intervenor Pennsylvania Housing Finance Agency, whose address is P. O. Box 8029, Harrisburg, Pennsylvania 17105, is a public corporation and government instrumentality of the Commonwealth of Pennsylvania.

7. Intervenor Allegheny County Housing Authority, whose address is 10th Floor, West Penn Building, 14 Wood Street, Pittsburgh, Pennsylvania 15222 is a public body organized under the Pennsylvania Housing Authorities Law, 35 P.S. §1541 et seq.

8. Intervenor Penn Arbors Associates is a developer and owner of Penn Arbors multi-family high rise senior citizen housing development, presently under construction.

9. Penn Arbors is a joint financial undertaking by Penn Arbors Associates and Intervenor Pennsylvania Housing Finance Agency, along with the United States Department of Housing and Urban Development.

10. Intervenor Crossgates, Inc. is the owner of property on which, under a "turnkey contract" with Intervenor Allegheny County Housing Authority, Crossgates has commenced construction of the multi-family high rise senior citizen housing development known as Jefferson Manor.

11. Intervenor Allegheny County Housing Authority will be the owner of Jefferson Manor after Crossgates, Inc. completes construction.

12. DER has approved a Corrective Action Plan and Schedule for the Long Road sewage treatment plant (the "Plan"), submitted by Penn Hills.

13. This Plan includes provisions for new sewage connections adding sewage flows of 31,150 gallons per day (gpd), presumably to accommodate connecting the new Penn Arbors and Jefferson Manor housing developments to the Long Road sewage system.

14. McCarthy has appealed DER's approval of the Plan.

15. McCarthy's house, where he resides with his wife and son, is located about 600 yards from the Plant; McCarthy has resided in this house for 19 years.

16. McCarthy's house is located about 90 feet from Long Road.

17. A sewer line heading toward the Plant runs underneath Long Road, along that segment of Long Road where McCarthy resides.

18. This sewer line runs downhill to the Plant from its location in front of McCarthy's house.

19. McCarthy's house is connected to this sewer line; in other words, McCarthy's sewage should be carried by this sewer line to the Plant.

20. In 1966 or 1967, about a year after McCarthy first occupied his house, there was a backup of raw sewage into his garage, through a drain built into the floor of his garage.

21. Backups of this kind have occurred frequently between 1966-67 and June 1981, certainly at least as often as every two years.

22. The garage floor is two to three inches below the basement floor of McCarthy's house.

23. Some of the sewage backups mentioned in Finding of Fact 21 were high enough to spill over into McCarthy's basement.

24. On some of these sewage backup occasions, there has been direct backup into basement floor drains, and into stationary tubs located in the basement.

25. On some of these sewage backup occasions, toilet paper and other evidence of human waste could be seen in the backup material.

26. McCarthy experienced no sewage backups during the period June 1981 through July 9, 1984.

27. On July 10, 1984, McCarthy again suffered a sewage backup into his garage.

28. Backups also occurred on August 4, 1984 and August 11, 1984.

29. It rained on July 10, August 4 and August 11, 1984.

30. The backups on August 4 and August 11 were extensive, and were accompanied by a foul odor and other evidence of fecal matter.

31. About a year ago McCarthy drilled holes through his garage and basement floors, and discovered that directly underneath large portions of his garage and basement there was a space, or "void", which no longer contained the solid ground on which he had expected his house would rest.

32. In some places, this void was over 30 inches deep.

33. On July 29, 1984, McCarthy drilled a new one-inch hole through his garage floor into this void.

34. At this location and time (July 29, 1984) the void was about a foot deep.

35. On July 29, 1984, McCarthy was able to extract water samples from this "void" space beneath his garage.

36. The water samples were tested by Microbac Laboratories, a testing laboratory located in Allegheny County, specializing in water analysis.

37. The samples were taken by McCarthy, and transported to Microbac Laboratories by McCarthy's son Robert, in plastic bags furnished by Microbac and in accordance with Microbac's instructions.

38. Microbac found over 2400 fecal coliform bacteria per 100 milliliters (i.e., per one tenth of a liter) in the samples received from McCarthy.

39. The concentration of fecal coliform bacteria is very high, and indicates contamination by mammalian waste.

40. McCarthy also recalls experiencing sewage backups during June-July of 1979, 1980 and 1981.

41. McCarthy put into evidence summaries of the average daily flows into the Long Road sewage plant during the period January 1979 through August 1984.

42. McCarthy presented no statistical analyses of this average daily flow data.

43. Although McCarthy's counsel argued to the contrary, the Board could discern no correlation between these flow records and McCarthy's sewage backup experiences during 1979-1984.

44. McCarthy offered no direct link of any kind between his sewage backup experiences and the flow levels in the Long Branch sewer line near his house.

45. McCarthy offered no evidence, and no arguments beyond speculation, in support of his thesis that the additional 31,150 gpd the Plan allows would exacerbate his sewage backup problems.

46. On July 10, 1984, Ronald Young, Director of Penn Hills Water Pollution Control Department, raised manhole covers on Long Road above McCarthy's house and observed normal flow, without surcharging or other evidence of overflow.

47. Between July 1981 and July 10, 1984 there were no complaints about sewage backup problems by residents on Long Road in McCarthy's neighborhood.

48. An August 24, 1984 survey of McCarthy's neighbors on Long Road, with addresses between 400 and 437 (which puts these addresses both above and below Mr. McCarthy at 429), showed no reported problems of sewage backup during rain events.

49. The Jefferson Manor development will connect to the Long Road sewer line at a point 900 feet from McCarthy's property, and downstream from McCarthy's property.

50. DER estimated that Jefferson Manor, when fully occupied, will account for a sewage flow of about 12,000 gpd.

51. Penn Arbors will connect to the Long Road sewage plant system at a point upstream of McCarthy's property.

52. DER estimated that Penn Arbors, when fully occupied, will account for a sewage flow of about 19,000 gpd.

53. The permitted flow into the Plant, which it presumably can handle without overloading, is 1.12 million gpd.

DISCUSSION

Appellant's pre-hearing memorandum challenged DER's approval of the Plan on a very wide variety of grounds, including, e.g., allegations that Penn Hills won't receive the federal fund support on which the Plan allegedly is based. The Board saw no reason to open up the hearing on the merits of this matter to such far ranging and potentially very time-consuming subjects without the assurance that McCarthy had standing to raise such topics. Therefore McCarthy's presentation initially was limited to evidence in support of his claimed standing to pursue this appeal, under the standard of William Penn Parking Garage v. City of Pittsburgh, 464 Pa. 168, 346 A.2d 269 (1965). Under this standard, McCarthy must show that he will suffer (or at the very least is likely to suffer) a "substantial, immediate and direct" injury resulting from DER's approval of the Plan.

McCarthy utterly failed to meet this burden. In particular, McCarthy utterly failed to show that implementation of the Plan was likely to injure him in any way which conceivably could be termed either substantial, or immediate or direct. There is no doubt that McCarthy has had sewage backup problems for years,

most recently during July-August of 1984. These sewage backups have been extremely unpleasant; the Board has every sympathy with McCarthy's desire to be forever rid of such incidents. Moreover, there is reason to believe that the serious erosion of the ground under McCarthy's house is related to the sewage backups; the water samples taken from the void under McCarthy's house were contaminated with bacteria associated with mammalian waste.

However, McCarthy did not produce any evidence that his sewage backup problems were related to overflows in the Long Branch line to the Plant, or that these problems will be exacerbated by the extra 31,150 gpd flow the Plan allows. Similarly, McCarthy offered no credible theories justifying his claim that the extra 31,150 gpd flow would significantly increase the likelihood of sewage backups into his garage. Of course, any increased flow in the Long Road sewer line running by McCarthy's house does increase somewhat the probability of backup into any home on the line, including McCarthy's. But without additional evidence or convincing arguments, this generalized vague threat to the entire community along the Long Branch sewer line cannot satisfy the William Penn standard vis-a-vis McCarthy.

In the first place, the Plan will add only about 19,000 gpd to the flow potentially threatening McCarthy, to be compared with a total permitted flow of 1.12 million gpd; the 12,000 gpd produced by Jefferson Manor will connect to the Long Branch sewer line too far below McCarthy's house to have any reasonable expectation of causing backup into his home. Secondly, there has been no discernible correlation between McCarthy's sewage backup and monthly average daily flows through the system (see McCarthy Exhibit 9, which clearly shows the highest average daily flows occur during the spring months, not during July-August). Indeed, in July and August of 1984, when McCarthy suffered his recent sewage backups, the average daily flows were .773 and .805 million gpd respectively, whereas the average

daily flow during every month from January through May 1984 exceeded one million gpd (McCarthy Exhibit 11). The Board recognizes that average daily flows can be misleading; overflows and backups are determined by sharp spikes in the flow, as might occur during a rainstorm if storm water is entering the sanitary sewer system; rain does seem to be correlated with Mr. McCarthy's backups (see Finding of Fact 29). On the other hand, on July 10, 1984, the very day that McCarthy experienced one of his recent backups, Ronald Young, Director of Penn Hills Water Pollution Control Department, observed normal (not overloaded) flow through the Long Road sewer line near McCarthy's house. Furthermore, there have been no complaints from McCarthy's neighbors during the past three years, including the July-August 1984 period when McCarthy suffered his three recent backups; the record offers no grounds whatsoever for believing that overflow in the Long Road sewer line could cause sewage backup into McCarthy's garage, yet not affect any of his Long Road neighbors, below or above him on the sewer line.

For these reasons, after McCarthy had concluded his case-in-chief in support of his standing, the Board member conducting the hearing ruled provisionally that McCarthy did not have standing to prosecute this appeal, under the William Penn, supra standard. As has been explained, McCarthy has not taken advantage of the opportunity given him to file a memorandum of law seeking to alter the aforesaid provisional ruling. The Board sees no basis for revising its originally negative view of McCarthy's standing, which the foregoing review of the evidence fully confirms.

CONCLUSIONS OF LAW

1. In order to have standing to prosecute his appeal, the Appellant first must show the appealed-from DER action is likely to cause him an injury

satisfying the "substantial, immediate and direct" standard of William Penn Parking Garage v. City of Pittsburgh, 464 Pa 168, 346 A.2d 269 (1965).

2. On the evidence presented, Appellant did not meet this burden, and thus does not have standing to appeal DER's approval of Penn Hills' Corrective Action Plan for portions of the Penn Hills sewage system.

O R D E R

WHEREFORE, this 29th day of OCTOBER, 1984, this appeal is dismissed.

ENVIRONMENTAL HEARING BOARD

ANTHONY J. MAZULLO, JR.
Member

EDWARD GERJUOY
Member

DATED: October 29, 1984

cc: Bureau of Litigation
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