

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

<b>QUADRANT EPP USA, INC., et al.,</b>	:	<b>CIVIL ACTION</b>
<b>Plaintiffs</b>	:	
	:	
v.	:	<b>NO. 06-356</b>
	:	
<b>MENASHA CORPORATION,</b>	:	
<b>Defendant</b>	:	

**MEMORANDUM**

**STENGEL, J.**

**September 30, 2010**

Quadrant EPP USA, Inc., acquired four manufacturing facilities from Menasha Corporation through a Stock Purchase Agreement in 2005. Shortly after closing on the Agreement, Quadrant received a notice of violation from the Occupational Safety and Health Administration regarding a potential dust explosion hazard at one of the sites. Quadrant paid a fine to OSHA and then took steps to remediate what it perceived to be dust explosion hazards at each of the four acquired facilities. In this action, Quadrant asserts a declaratory judgment claim, and seeks contractual indemnification from Menasha for the cost of remediating the dust hazard in the four facilities.

A bench trial was held and on the basis of the evidence presented at trial, the court makes the following:

**FINDINGS OF FACT**

1. The plaintiffs are Quadrant EPP USA, Inc., and Quadrant PHS, Inc.
2. Quadrant EPP USA is a corporation organized and existing under the laws of the Commonwealth of Pennsylvania with its principal place of business in Reading,

Pennsylvania.

3. Quadrant PHS is a corporation organized and existing under the laws of the State of Delaware with its principal place of business in Fort Wayne, Indiana.
4. Quadrant PHS was formerly known as Poly Hi Solidur, Inc., and is the successor to Poly Hi Solidur, Inc.
5. The defendant is Menasha Corporation.
6. Menasha is a corporation organized and existing under the laws of the State of Wisconsin with its principal place of business in Neenah, Wisconsin.
7. Pursuant to a Stock Purchase Agreement signed on June 25, 2005, Quadrant EPP purchased from Menasha all of the issued and outstanding shares of capital stock of Poly Hi for approximately \$84.5 million dollars.
8. Poly Hi was, and continues now as Quadrant PHS, to be engaged in the development, manufacture, conversion, fabrication, marketing and sale of ultra high molecular weight polyethylene, polypropylene, high and low density polyethylene, chlorinated polyvinyl chloride and polytetrafluorethylene products used in a wide variety of applications and in a wide variety of industries.
9. The Agreement involved the sale of four Poly Hi manufacturing facilities. Keyser Valley, Laurel Lines, and Delmont are all located in Pennsylvania. The fourth facility is located in Fort Wayne, Indiana.
10. The Agreement sets forth various express warranties made by Menasha.

11. Among those warranties were warranties concerning “environmental matters” set forth at Section 4.19 of the Agreement which provides, *inter alia*, that Menasha and each of the facilities acquired under the Agreement were at all times in material compliance with, were not in violation of, nor had any liability under any environmental laws and had received no written notices from any governmental authority of any alleged, actual, or potential violation or failure to comply with any environmental laws.
12. Attached to the Agreement is Schedule 4.19, a document related to Section 4.19, which contains, *inter alia*, a section entitled “Non-Compliance.”
13. The Agreement also sets forth provisions which provide indemnity by Menasha for any losses suffered by Quadrant as the result of any environmental condition which existed at the four facilities to the extent that the environmental condition was caused by or resulted from the operations of Menasha.
14. The Agreement defines “losses” as “any and all Liabilities, losses, costs, claims, damages, obligations, liens, judgments, taxes, fines, penalties, and expenses including interest and penalties imposed or assessed by any judicial or administrative body or other governmental authority or any arbitrator or arbitration panel.”
15. The Agreement also provides that Menasha shall be responsible for remediation costs, including the reasonable costs of satisfying the *then* applicable standards of

compliance with environmental laws in the applicable jurisdiction for manufacturing/industrial properties. (Emphasis added).

16. The Agreement defines “environmental condition” as “any violation of environmental law on or before the closing date, which results in an environmental liability.”
17. The Agreement defines “environmental liabilities” as “liabilities arising from or under any environmental law.”
18. The Agreement defines “environmental law” as “any other federal, state, foreign, or local law relating to the protection of the environment or human health and safety . . . any Order promulgated under any such law.”
19. Before the parties executed the Agreement on June 25, 2005, and continuing until the closing on the Agreement, Quadrant engaged in thorough due diligence.
20. As part of that due diligence, Quadrant personnel physically visited all four of the Poly Hi facilities to be purchased and performed detailed walk-through inspections.
21. James Bush was the North American Operations Manager for Quadrant prior to August 2005, and was one of four Quadrant representatives who conducted the inspections of those facilities. The others included Glen Steady, Quadrant’s President; Arno Schenk, a member of Quadrant’s Board of Directors; and Arie Zwep, Quadrant’s Operation Manager for Europe.

22. After August 2005, Mr. Bush became Integration Projects Manager.
23. Mr. Bush obtained his professional engineering license in 1976 and has worked for Quadrant for over 30 years.
24. During his due diligence inspections, Mr. Bush noticed that there was a powder on the floor of each of the four facilities, and he described the conditions in each facility as “slippery,” noting that it was sometimes difficult to walk around because of the dust on the floor.
25. Before the Agreement, Quadrant’s process handled, with few exceptions, mostly resins which came in pellets rather than powder. Quadrant’s Reading facility had a compression molding area that used powder as a raw material.
26. None of Poly Hi’s representatives informed Mr. Bush during the inspections that dust at the facilities created a fire or explosion hazard.
27. After performing due diligence but before the closing, Mr. Bush and the other Quadrant representatives discussed the potential for a dust explosion at the Poly Hi facilities, and noted those concerns in their due diligence reports which they sent to Quadrant’s Board of Directors in Zurich.
28. All of the submitted due diligence reports identified the potential risk of a dust explosion as an existing hazard at the Poly Hi facilities.
29. One report specifically contemplated that capital expenditures by Quadrant might be necessary to address the dust explosion risk.

30. On June 27, 2005, two months after the initial due diligence inspections, and two days after the execution of the Agreement, an OSHA inspector visited the Keyser Valley facility in Scranton, Pennsylvania, to investigate a non-dust related employee complaint.
31. At the Keyser Valley facility, Poly Hi employed two processes, i.e., sheet pressing and extrusion, in its production of four foot by ten foot sheets of high density plastic. The raw material used to manufacture these sheets is a plastic powder, described at trial as “polypropylene resin,” notable for its ultra-high density. The material is mixed with additives and, during the pressing cycle, converted into sheets of plastic. The edges are trimmed by saws, with the removed material being recycled by pulverizing it into powder for further use in the manufacturing process. The extrusion process also involves the trimming of edges by the use of saws.
32. While investigating the complaint, the OSHA inspector noticed dust accumulation in the extrusion area of the plant.
33. The OSHA inspector noted the potential risk of harm from a dust explosion, took dust samples for testing, and suggested that, until testing is completed, employing simple housekeeping measures, i.e., more frequent and effective removal of the dust, would help reduce any risk.
34. In response, Poly Hi formed a Project Team, including several of its engineers, whose mission was to identify hazards and fugitive dust sources; to identify the

equipment that handled combustible dust; and to determine what steps to take to resolve those hazards.

35. Poly Hi also engaged an industrial cleaning firm to clean up the dust.
36. Poly Hi performed its own testing on the dust which confirmed that the dust could present an explosion risk and that some level of mitigation might be required.
37. A couple of days before closing, Menasha forwarded to Quadrant a supplemental Schedule 4.19 which added the following paragraph to the original:

In 2005, Company's Keyser Valley (Scranton) facility was the subject of a complaint to OSHA filed by a worker alleging chemical exposure in manufacturing operations. In the course of an investigation that occurred on Monday, June 27, 2005, an OSHA inspector concluded that the reported exposure issue had no merit. However, the OSHA inspector noted that Company was not in compliance with [National Fire Protection Association] explosion venting regulations with respect to dust collectors in extrusion operations. The OSHA inspector collected samples of dust from the dust collector equipment and will test it for explosive potential. Company engaged an industrial cleaning firm to clean the extrusion room of dust. Company has separately tested the dust, which test confirms that some level of mitigation may well be required. Company is not currently under notification by OSHA of violation.

38. In response, Quadrant sent a written notice to Menasha on the first day of closing informing Menasha that it considered the supplemental Schedule 4.19 to be for informational purposes only, and that the disclosures contained in that supplement did not modify in any respect any representations, warranties, covenants, or obligations of Menasha in the Agreement.

39. Quadrant also informed Menasha that all such matters disclosed in the supplement constituted seller identified pre-closing breaches pursuant to Section 13.14(c)(ii) of the Agreement, and that Quadrant's right of indemnification for those breaches would survive closing.

40. Section 13.14(c) is found in Article XIII of the Agreement entitled "Indemnification," and provides, in pertinent part:

Quadrant may send a written notice to Seller between the date hereof and the Closing that Quadrant has reason to believe that Seller or Company has breached one or more of its representations and warranties under this Agreement. Such Notice of Breach shall describe in reasonable detail the alleged breaches of representations or warranties and provide Quadrant's good faith estimate of the Losses that are reasonably expected to result from the Quadrant identified pre-closing breaches. In the event Quadrant's good faith estimate of such losses for (i) all Quadrant identified pre-closing breaches and (ii) all breaches of representations and warranties which Seller has disclosed to Quadrant in accordance with Section 15.18 is one million dollars or less in the aggregate, the parties hereto shall be required to close the transactions contemplated by this Agreement. . . . If Closing occurs, Quadrant's indemnification claims with respect to all pre-closing breaches shall survive the Closing. . . . If Quadrant's good faith estimate of losses that are reasonably expected to result from all pre-closing breaches exceeds One Million Dollars in the aggregate, either Quadrant or Seller may terminate this Agreement pursuant to Section 12.1(f). In the event the parties elect to close the transactions contemplated by this Agreement, notwithstanding such pre-closing breaches, Quadrant's claims for such pre-closing breaches shall survive Closing.

41. Mr. Bush and the others at Quadrant knew about the combustible dust issue both

from their own due diligence and from Menasha's disclosures.

42. Mr. Bush and the others at Quadrant had actual knowledge pre-closing of "facts related" to the OSHA violation.
43. Despite this knowledge, Quadrant proceeded with the transaction.
44. The closing on the sale took place on August 2, 2005 and August 3, 2005.
45. On August 5, 2005, Quadrant retained the services of John P. Cholin as an independent consultant initially to evaluate whether OSHA's concerns were valid, to evaluate whether Quadrant would be fined, and to educate Quadrant on the subject of combustible dust.
46. No one from Quadrant informed Menasha that Quadrant had secured the services of Mr. Cholin.
47. Mr. Cholin is a professional engineer with over twenty years experience specializing in fire protection engineering, i.e., fire alarm systems and combustible dust. He is licensed in the State of Connecticut.
48. At trial, Mr. Cholin was offered and accepted as an expert without objection on what constitutes combustible dust hazards and how combustible dust hazards should be evaded.
49. When hired by Quadrant, Mr. Cholin had no experience in ultra high molecular weight polypropylene.
50. Fifty to seventy percent of Mr. Cholin's practice is in litigation support.

51. Upon inspection of the Keyser Valley facility on August 11, 2005, Mr. Cholin determined that OSHA's concerns were valid.
52. Quadrant thereafter immediately increased the scope of Mr. Cholin's services to perform an assessment of the corrective measures necessary to bring the Keyser Valley facility into compliance with the OSH Act, and to provide an estimate of costs for the implementation of such remedial measures.
53. Mr. Cholin recommended that Quadrant conduct testing at each of the four facilities.
54. No one at OSHA suggested to Quadrant that Quadrant: (a) hire someone with Mr. Cholin's background; (b) direct Mr. Cholin to inspect all four facilities; or (c) spend a certain amount of money in remediating Quadrant's hazards.
55. On September 13, 2005, Mr. Cholin submitted a report to Quadrant in which he concluded that all four of the facilities failed to comply with certain NFPA standards, and that the violating conditions existed as of the date of the Agreement and were caused by the operations of Menasha.
56. No one from Quadrant notified Menasha of Mr. Cholin's report.
57. At trial, Mr. Cholin testified at length that his analysis was an initial assessment that was qualitative in nature, and that he would have done a quantitative analysis if he had known the case would proceed to litigation.
58. After receiving Mr. Cholin's report, Quadrant prepared an abatement plan and

secured quotes for the cost of implementing the plan to remediate the violations.

59. OSHA never reviewed Quadrant's abatement plan.
60. Over the next couple of years, Quadrant purchased equipment, modified certain other equipment, and made other modifications to the facilities and to its housekeeping practices to reduce the emission and spread of fugitive dust.
61. On August 29, 2005, after the closing on the Agreement, OSHA issued a Citation and Notification of Penalty to Quadrant concerning its Keyser Valley manufacturing facility.
62. No one from Quadrant informed Menasha that Quadrant had received the OSHA Citation, or asked Menasha if Menasha wanted to defend the claim.
63. The Citation and Notification of Penalty informed Quadrant that OSHA made a determination that the Keyser Valley facility was not in compliance with the explosion venting standards of the NFPA in the extrusion areas.
64. The Citation indicated that the conditions at the facility violated Section 5(a)(1) of the OSH Act (the "general duty clause") because:

The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to severe burn injuries from a potential dust explosion due to the propagation of a fire and explosion in the dust collectors that were located inside the building structure.

65. The Citation indicated that "among other methods, one feasible and useful method

to correct this hazard is to comply with the provisions of NFPA 654-2000 and relocate the dust collection systems outside of the building in accordance with Section 3.13.1.1 of the standard.” With three exceptions, Section 3.13.1.1 of the standard provides that “where an explosion hazard exists, air-material separators shall be located outside of buildings.”

66. On September 21, 2005, Quadrant entered into an informal settlement agreement with OSHA by which Quadrant agreed to pay a penalty of \$2,400, and agreed to abate the violations by certain dates.
67. No one from Quadrant informed Menasha about Quadrant’s settlement with OSHA.
68. Mr. Bush had the authority to decide which of Mr. Cholin’s suggested measures to implement, and how much money would be spent.
69. Mr. Bush’s intention was to follow Mr. Cholin’s advice as closely as possible as to the measures required by NFPA 654.
70. NFPA 654 allows for alternative designs or performance equivalents to reduce the chances a spark would ignite the dust.
71. Quadrant did not follow all of Mr. Cholin’s advice completely:
  - (a) Although Mr. Cholin advised that Quadrant’s silos must be vented, Quadrant chose a less costly, less complicated measure to reduce the risk of explosion in its silos, such that it was still compliant with NFPA 654.

- (b) Instead of following Mr. Cholin's advice that its mixers be equipped with deflagration suppression, Quadrant abated the hazard by controlling the ignition sources.
  - (c) Instead of installing two central vacuums in its Fort Wayne facility as was found necessary by Mr. Cholin, Quadrant installed only one.
  - (d) Quadrant chose not to install C2D2 upgrades in RAM extrusion area at Fort Wayne even though Mr. Cholin advised to do so.
72. Mr. Bush never told Mr. Cholin that he had decided not to follow all of Mr. Cholin's advice.
73. Quadrant purchased three or four new C2D2 rated forklifts, and five new C2D2 rated man lifts, rather than upgrading its existing lifts to be C2D2 compliant.
74. The actual and estimated costs of abatement approached four million dollars.
75. Menasha first learned of Quadrant's dust issue and the OSHA Citation when Quadrant submitted a Supplemental Claim Notice to Menasha dated December 29, 2005, containing information about Quadrant's claim for indemnification. By then, Quadrant had already begun to implement Mr. Cholin's recommendations, and spent over two hundred thousand dollars in doing so.
76. The core of this case is Quadrant's contention that Menasha breached its warranty that the Poly Hi facilities were in compliance with environmental laws by violating the general duty clause of the Occupational Safety and Health Act, 29 U.S.C.

§ 654(a)(1). The relevant language of the Stock Purchase Agreement is found in Section 4.19(a):

To Seller's knowledge, Seller and each member of the Acquired Group is, and at all times prior to the date hereof has been, in material compliance with, and has not been and is not in violation of, nor has any Liability under, any Environmental Laws. Neither Seller nor any member of the Acquired Group has received during the Relevant Period, any written notice (including any written Order, communication, inquiry, warning, citation, summons, directive or any other indication from (i) any governmental authority; (ii) the current or former owner or operator of any of the Real Property; or (iii) any other Person of (A) any alleged, actual or potential violation or failure to comply with Environmental Laws, (B) any act alleged, actual or threatened obligation to undertake or bear the cost of any Environmental Liabilities with respect to the Business, any of the Real Property, or with respect to any property or facility at, to or from which Hazardous Substances generated, manufactured, refined, transferred, imported, used or processed by Company or any subsidiary or by any other person for whose conduct Company or any subsidiary is or may be held responsible . . . .

77. There was a sharp disagreement at trial between Quadrant's expert and Menasha's expert as to whether the dust in the Poly Hi facilities constituted a dangerous hazard, specifically a "dust deflagration hazard."
78. The parties do not dispute that certain dust can be combustible in certain circumstances, and that the presence of dust accumulations sometimes can be hazardous.
79. To determine whether a dust deflagration hazard exists, one must ascertain whether the dust at issue is combustible, and if so, whether the existing safety

measures sufficiently abate the risk of explosion.

80. In determining whether dust is combustible, Mr. Cholin's assessment was based largely on his experience. According to Mr. Cholin's method, dust is combustible if more than one percent of the dust by weight is smaller than 420 microns in diameter. He did not test the dust that fell below the 420 micron diameter threshold to determine whether it actually would ignite. In his view, if a portion of the dust in the Poly Hi facility were smaller than 420 microns in diameter, as measured in a sieve test, there existed, without regard for any other factors, a combustible dust hazard.
81. Mr. Cholin conceded that his method for determining whether dust is combustible has not been peer reviewed or accepted by anyone in the scientific community. In fact, it contradicts the professional literature published on the subject, and the text of NFPA 654, which defines combustible dust as "any finely divided solid material that is 420 microns or smaller in diameter . . . *and* presents a fire or explosion hazard when dispersed and ignited in air." See NFPA 654 § 1.5.6 (emphasis added).
82. NFPA 654 also recognizes that not all dusts are equally combustible and that abatement measures are necessary only where the dusts are tested and are shown to ignite.
83. Section A.1.5.6 of NFPA 654 provides that "Evaluation of the hazard of a

combustible dust should be determined by the means of actual test data. Each situation should be evaluated and applicable tests selected.”

84. While Mr. Cholin cited explosion test results in his report, with a mistaken footnote citation to the wrong lab test report, those results did not factor into Mr. Cholin’s conclusion whether the dust at issue were combustible.
85. On cross-examination, Mr. Cholin conceded that a complete hazard analysis should involve actual testing, and explained that his analysis was only an “initial assessment.”
86. Timothy Myers, Ph.D., testified on behalf of the defendant.
87. Dr. Myers has a Ph.D. in chemical engineering from the University of California at Berkeley. He has been a consulting engineer with Exponent, Inc., for eleven years specializing in the investigation of fires and explosions, and in assisting his clients prevent fires and explosions. Dr. Myers is a licensed professional engineer in four states.
88. At trial, Dr. Myers was offered and accepted as an expert without objection: (a) in combustible dust and its properties; (b) on how to analyze combustible dust; (c) to analyze the cost items or fixes that Quadrant has presented in this case; and (d) to testify about which of those fixes in his view are required by OSHA regulations, state fire codes, and NFPA standards.
89. The defendant retained Dr. Myers: (a) to visit the four facilities that were sold by

Menasha; (b) to analyze dust explosion hazards at those facilities; (c) to review the recommendations that were made by Mr. Cholin; (d) to review the modifications made by Quadrant; and (e) to determine which he felt were required by government regulations and the retroactive requirements of the NFPA.

90. In fulfilling this mission, Dr. Myers used actual test data and established methods of scientific analysis to reach his conclusions. He studied explosion testing results for factors widely accepted as relevant to deflagration analysis.
91. To determine whether the dusts should be classified as Class II dusts, requiring the use of Class II electrical equipment, Dr. Myers input the test data into formulas for determining ignition sensitivity and explosion severity.
92. Dr. Myers testified that although some scientists have challenged the use of these equations, they remain the accepted methodology for electrical classification and are still codified as OSHA regulations.
93. Dr. Myers plotted the test data and resulting values as a function of particle size, and determined that when the weighted average diameter of dust particles was less than 290 microns, the dust was combustible, and when the weighted average diameter of dust particles was less than 120 microns, it was subject to Class II Division 2 classification, such that only special electrical equipment could be used when dust was present. In contrast, Mr. Cholin deemed all samples in which more than one percent by weight was below 420 microns in diameter to be combustible

- dust requiring electrical classification and constituting a deflagration hazard.
94. Dr. Myers also tested a sample of particles which were all smaller than 420 microns. None of these particles propagated an explosion.
  95. At trial, Dr. Myers presented studies and test data which compared ignition sensitivity, explosion severity, and particle size. His analysis and testimony demonstrated that certain samples which met Mr. Cholin's criterion for a deflagration hazard would not cause an explosion.
  96. In analyzing dust samples of varying particle size, Dr. Myers determined that only one or two of the samples contained "Class II dust," which requires a conversion to or use of Class II electrical equipment, and that less than half of the samples tested contained combustible dust. This analysis showed that when subject to actual testing, many of the samples deemed by Mr. Cholin to present deflagration hazards would not propagate an explosion.
  97. Dr. Myers testified that he is familiar with the literature on dust hazard analysis and has never seen such an approach taken other than by Mr. Cholin.
  98. On the other hand, Dr. Myers testified that his findings were consistent with data in published scientific literature for dust explosion properties of polyethylene.
  99. Dr. Myers opined that Quadrant's modifications were based on an incorrect assessment of the hazard of the dust, and that many modifications made were not required by the standards, or were not done cost effectively.

100. When asked why he believed that some of Quadrant's modifications were unnecessary, Dr. Myers testified:

- (a) Dust in some of the equipment was so large in particle size that it was not combustible, or it was not an explosive dust, and the equipment did not require explosion protection.
- (b) Dust in some of the areas was sufficiently large and was not a Class II combustible dust, so that it did not require specialized electrical equipment in that area.
- (c) There existed more cost-effective alternatives for some of the modifications.
- (d) In some of the modifications, there was not a requirement by law, by regulations, or by the retroactive portions of NFPA 654 to make the modifications. In others, the requirements were found only in the non-retroactive portions of NFPA 654.
- (e) Some of the cleaning that Quadrant was charging to Menasha was for cleaning conducted a year or two years after the closing on the Agreement. That would have been for dust which was not generated by Menasha.

101. When touring the facilities, Dr. Myers noticed that some areas were very clean. In other areas, housekeeping was not sufficient. Even after costly expenditures were put in place, some of the facilities had not developed housekeeping plans or

frequencies for cleaning the facilities.

102. At trial, Mr. Cholin discounted housekeeping measures in favor of capital expenditures, claiming that “there is no future in chasing dust” because people are “inherently inattentive, unruly, and lazy.”
103. Nevertheless, Richard L. Frey, Quadrant’s North American Safety Health and Environmental Manager, testified that since Dr. Myers’ inspection in 2007, Quadrant has successfully established a housekeeping practice and policy, such that dust accumulations are cleaned up before they reached 1/32 of an inch, or before the color of the surfaces below the dust becomes indiscernible.
104. Mr. Frey rejected the notion that he and his staff are too inattentive, unruly, or lazy to implement the housekeeping program effectively.
105. Dr. Myers testified that housekeeping is an integral and mandatory part of an overall dust safety program.
106. Dr. Myers testified that the following modifications were required by Quadrant:
  - (a) Pressurizing electrical panels so dust would not enter them.
  - (b) Making modifications or improvements to equipment to reduce releases of fugitive dust.
  - (c) Cleaning existing dust accumulations and adding some dust collectors to help reduce the amount of dust being released.
  - (d) Adding explosive protection to some equipment to ensure it is safely vented

or suppressed by a chemical suppression system.

- (e) Improving the grounding and bonding of equipment so that it would be less likely to have static electricity build up on equipment and serve as an ignition source.
  - (f) Adding magnetic separators to some equipment which is used to prevent metals from getting into equipment which handles dust. Metal inside of dust handlers can create sparks.
  - (g) Buying dust compliant vacuum cleaners.
107. Dr. Myers determined that it would have cost \$637,000 to bring the four facilities into compliance with existing state and OSHA regulations which applied to the facilities.
108. Dr. Myers also determined that it would have cost \$721,000 to bring the four facilities into compliance with existing state and OSHA regulations and with the retroactive requirements of NFPA 654.
109. Many provisions of the 2000 edition of NFPA 654 do not apply to the four facilities, all of which were constructed before the year 2000.
110. In recent years, both Pennsylvania and Indiana adopted regulations which provide that a building code inspector could require compliance with NFPA 654, but those regulations only apply to new facilities.
111. The non-retroactive provisions of NFPA 654 include requirements that are not

- feasible to apply to existing facilities.
112. On the other hand, the provisions of NFPA 654 specified as retroactive could be implemented through management and procedural measures such as housekeeping, prohibitions on smoking, and inspection and maintenance programs.
  113. Nevertheless, many of Mr. Cholin's abatement measures were based on non-retroactive portions of NFPA 654, including his suggestions for explosion protection on dust collectors, day bins, and return air diversion.
  114. Mr. Cholin attempted to explain this by suggesting that it has been the "tacit" understanding of NFPA 654's technical committee that the entire standard applies retroactively except for purposes of building code enforcement.
  115. This suggestion is inconsistent with Mr. Cholin's consistent attempts to change the standard to make the entire standard apply retroactively other than for code enforcement purposes.
  116. Three of Quadrant's witnesses testified that they had no previous knowledge of NFPA 654 despite their long careers in that industry.
  117. Mr. Cholin's testimony demonstrated that most professionals in the field of fire safety are unaware of hazardous dust, and that one of his professional goals is to increase awareness of the risks of combustible dust.
  118. The Chemical Safety Board's report of November 2006 reviewed several dust explosions and emphasized the absence of awareness of hazardous dust. The

report indicated that “workers and managers were often unaware of dust explosion hazards, or failed to recognize the serious nature of dust explosion hazards.”

119. In October 2007, OSHA began its National Emphasis Program on dust hazards specifically because of a lack of awareness of the problems of hazardous dust.
120. Mr. Cholin testified that following the commencement of OSHA’s National Emphasis Program, approximately eighty percent of employers who were inspected for hazardous dust were cited for dust violations.
121. In 2008, OSHA sent employers a letter informing them of the National Emphasis Program and the risks of combustible dust.
122. Notwithstanding all of the remediation performed at the four facilities and all of the money spent, there remains a dust explosion hazard at each of those facilities because that hazard can only be minimized, not totally eliminated.

### **CONCLUSIONS OF LAW**

1. The United States District Court has original jurisdiction over civil actions that, among other requirements, are between citizens of different states. 28 U.S.C. § 1332(a)(1).
2. Plaintiff Quadrant EPP USA is a citizen of Pennsylvania.
3. Plaintiff Quadrant PHS is a citizen of both Delaware and Indiana.
4. Defendant Menasha is a citizen of Wisconsin.
5. The parties are therefore citizens of different states, fulfilling the diversity of

citizenship required to vest this court with subject matter jurisdiction under 28 U.S.C. § 1332. The amount in controversy requirement has also been satisfied.

6. The parties made an agreement, and reduced it to a writing entitled Stock Purchase Agreement. The terms of the Agreement are clear and unambiguous, and the obligations of the parties are specifically stated. My interpretation of the Agreement must be confined to the document's "four corners."
7. The Agreement was properly executed by both sides on June 25, 2005.
8. The Agreement includes consideration running from one side to the other.
9. Delaware law applies to this case, by agreement of the parties.
10. In its post-trial brief, Quadrant contends that "the sole issue for this court to determine is the amount it incurred in remediation costs for which it is entitled to indemnification from Menasha Corporation pursuant to the terms of the Agreement between the parties." This is an overly simplified and incorrect characterization. At this stage of the proceedings, it is evident that the parties diverge in somewhat more involved ways: (1) under what circumstances dust presents a hazard; (2) whether non-compliance with NFPA 654 was "recognized" as a hazard in 2005 for purposes of the general duty clause; (3) what measures were necessary to abate any hazardous conditions at the former Poly Hi facilities so as to bring them into compliance with environmental laws; and (4) whether Menasha had any contractual obligation to indemnify Quadrant for the cost of any

necessary abatement measures.

11. The approaches of the parties to determining under what circumstances dust presents a hazard are quite distinct. Mr. Cholin's analysis of whether the dust was combustible was inconsistent with applicable standards, and lacked scientific foundation or corroboration through methodologies accepted in the scientific community. Furthermore, Mr. Cholin did not provide written validation for his theories and thus they could not be tested by Dr. Myers. Mr. Cholin explained that his method was based largely on his own experience as to what constitutes a hazard, aided by microscopic analyses that were not documented and ullage calculations that were not committed to writing or otherwise disclosed to Menasha. Accordingly, I reject this portion of Mr. Cholin's testimony and find that his method for determining under what circumstances dust presents a hazard is unsupported and not credible.
12. Using objective science, Dr. Myers based his analysis on actual test results procured through scientifically accepted methodologies, and he explained the testing process, the test results, and the relevant criteria used to analyze that data. His deflagrability analysis was based on widely accepted scientific methodologies, and his inquiry into abatement measures was based on a practical approach to reducing hazards as cost effectively as possible. Accordingly, I accept Dr. Myers' testimony regarding his method of determining combustible dust hazards, and find

that Quadrant has not met its burden of showing the presence of a dust hazard at the Poly Hi Facilities.

13. Quadrant's case is centered on a breach of Menasha's warranty that its facilities were not in violation of an environmental law. The parties do not disagree that the OSH Act is an environmental law for purposes of the Agreement.
14. Quadrant insists that Menasha violated the general duty clause of the OSH Act, a violation evidenced by Menasha's alleged failure to comply with NFPA 654. Quadrant improperly characterizes NFPA 654 as a national consensus standard. The OSH Act defines a national consensus standard as "any occupational safety and health standard or modification thereof which: (1) has been adopted and promulgated by a nationally recognized standards-producing organization under procedures whereby it can be determined by the Secretary that persons interested and affected by the scope or provisions of the standard have reached substantial agreement on its adoption; (2) was formulated in a manner which afforded an opportunity for diverse views to be considered; and (3) has been designated as such a standard by the Secretary, after consultation with other appropriate Federal agencies." See 29 U.S.C. § 652(9). It is undisputed that NFPA 654 has not been adopted by the Congress or the Secretary of Labor and has not been promulgated as a standard for OSHA enforcement. It is a voluntary, private standard. Because it has not been promulgated or adopted by the Department of Labor or by

Congress, NFPA 654 does not have the force of law. See Marshall v. Pittsburgh-Des Moines Steel Company, 584 F.2d 638 (3d Cir. 1978) (“OSHA could not enforce a privately created advisory standard as a mandatory federal rule or regulation unless the Secretary had promulgated it as a rule or regulation during either the two-year window or in accordance with the Administrative Procedure Act following the two-year period.”) Accordingly, NFPA 654 is not a national consensus standard, and Quadrant’s reliance on it is misplaced.

15. Nevertheless, to prove any violation of the general duty clause, Quadrant would have had to establish that the facilities were not free from “recognized hazards” that were causing or likely to cause death or serious physical harm to the employees. 29 U.S.C. § 654(a)(1). The overwhelming evidence of record demonstrated that the potential for dust explosions resulting from non-compliance with NFPA 654 was not a hazard “recognized” by the plastics manufacturing industry in 2005. Three of Quadrant’s four witnesses had no knowledge of NFPA 654 before this case began. In fact, according to Mr. Cholin, most professionals in the field of fire safety are unaware of hazardous dust. Through conducting nationwide training seminars, Mr. Cholin pursues one of his professional goals of increasing the awareness of the risks of combustible dust. The Chemical Safety Board published reports emphasizing the absence of awareness of hazardous dust. One report indicated that “workers and managers were often unaware of dust

explosion hazards, or failed to recognize the serious nature of dust explosion hazards.” In 2008, OSHA instituted a National Emphasis Program geared toward increasing awareness of the problems of dust hazards, and has sent employers a letter informing them of the National Emphasis Program and the risks of combustible dust.

16. Given its lackluster expert testimony, Quadrant has not met its burden of showing either the presence of a dust hazard at the Poly Hi Facilities or recognition by the plastics industry of the potential for dust explosions as alleged. Accordingly, because Quadrant did not establish that non-compliance with NFPA 654 was a recognized hazard in 2005, Menasha cannot be held to have violated the general duty clause of the OSH Act. There being no violation of an environmental law, I further find that Menasha has neither breached its warranty nor the Agreement.
17. Even in the alternative, Quadrant’s claim for indemnification would fail.
18. Quadrant contends that, once it was put on notice by OSHA, it was duty-bound to bring all four facilities into complete compliance with NFPA 654, notwithstanding its mostly non-retroactive provisions. The Citation, however, required Quadrant to eliminate known hazards at that facility, but never suggested to apply all provisions of NFPA 654 retroactively. In fact, the OSHA Citation only related to two of the fourteen dust collectors in the extrusion area at the Keyser Valley facility.

19. Section 1.4 of the NFPA 654 provides that, “Unless otherwise specified, the provisions of this standard shall not apply to facilities . . . that existed or were approved for construction or installation prior to the effective date of the standard [i.e., August 18, 2000]. At trial, this provision was conceded by Mr. Cholin.
20. Each of the four facilities purchased by Quadrant were constructed long before 2000. Recent relevant state regulations provide that a building code inspector require compliance with NFPA 654 but specifically limit that requirement to new construction. The retroactive provisions of the standard are implemented through management and procedural measures. The non-retroactive provisions typically require “bricks and mortar,” i.e., construction of buildings, and are not feasible for existing facilities.
21. Many of Mr. Cholin’s abatement measures were based on non-retroactive portions of NFPA 654, and as a result, his abatement measures were overreaching. Quadrant itself decided which measures to implement and how much money to spend. It did so without including Menasha in the process, and therefore at its own risk.
22. Furthermore, § 13.13(e) of the Agreement provides:

The parties agree that the remediation standard that will be required for remediation of environmental conditions by Seller pursuant to Section 13.13(a) shall be limited to the *reasonable* costs of satisfying the then applicable standards of compliance with Environmental Laws in the applicable jurisdiction . . . (Emphasis added).

For Quadrant to have spent several million dollars on unnecessary remediation measures, and then expect Menasha to pay the bill is more than unreasonable.

23. Menasha offered credible testimony that many of the abatement measures implemented by Quadrant were unnecessary and without regard to cost effectiveness. Further testimony showed that even including implementation of the retroactive provisions of NFPA 654, it would have cost \$721,000 to bring the four facilities into compliance with existing state and OSHA regulations. I accept that testimony as credible and supported by the evidence, and note that, had this case been decided in favor of Quadrant, Menasha would still not be liable for indemnification under § 13.4(a) of the Agreement which provides:

Seller shall not have any liability pursuant to Section 13.2(a), Section 13.2(k), or Section 13.13, unless and until (i) the amount of Losses incurred or suffered by any of the Purchaser Indemnified Persons from any single breach or inaccuracy exceeds Sixty-Five Thousand Dollars, and (ii) the aggregate amount of Losses incurred or suffered by the Purchaser Indemnified Persons from all such breaches and inaccuracies resulting in Losses in excess of Sixty-five Thousand Dollars *exceeds One Million Dollars*, in which case the Purchaser Indemnified Persons shall be entitled to recover all such Losses in excess of Five Hundred Thousand Dollars thereof. In addition, Seller's aggregate liability pursuant to Section 13.2(a), Section 13.2(k), and Section 13.13 . . . for all such Losses shall not exceed Nineteen Million Dollars. (Emphasis added).

Because the costs of reasonable remediation would not have exceeded \$1 Million, this provision would have shielded Menasha from liability.

24. In conclusion, after careful review of the evidence presented at trial, counsel's arguments, and the post-trial briefs of the parties, I find that Menasha has no contractual obligation to indemnify Quadrant for the cost of any of the abatement measures taken.

An appropriate Order follows.

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

<b>QUADRANT EPP USA, INC., et al.,</b>	:	<b>CIVIL ACTION</b>
<b>Plaintiffs</b>	:	
	:	
<b>v.</b>	:	<b>NO. 06-356</b>
	:	
<b>MENASHA CORPORATION,</b>	:	
<b>Defendant</b>	:	

**ORDER**

**AND NOW**, this 30th day of September, 2010, after a bench trial in this action and careful review of the transcripts and the briefs of the parties, and in accordance with my findings of fact and conclusions of law, judgment is hereby entered on behalf of the defendant and against the plaintiffs.

BY THE COURT:

/s/ Lawrence F. Stengel  
LAWRENCE F. STENGEL, J.