COMMONWEALTH OF PENNSYLVANIA

A.G. CULLEN CONSTRUCTION, INC.	:	BEFORE THE BOARD OF CLAIMS
	:	
VS.	:	
	:	
COMMONWEALTH OF PENNSYLVANIA,	:	
STATE SYSTEM OF HIGHER EDUCATION	:	DOCKET NO. 3468 (ALL)

FINDINGS OF FACT

1. Plaintiff, A.G. Cullen Construction, Inc., is a Pennsylvania corporation with its principal place of business located at 18 First Street, Pittsburgh, Pennsylvania 15215-2102. Plaintiff is engaged in the business of general contracting and specializes in school construction. (N.T. 69; Complaints, No. 3468, para. 5; No. 3628, para. 6; No. 3629, para. 6; No. 3520, para. 5; admitted in Answers to Complaints)

2. Defendant, Commonwealth of Pennsylvania, State System of Higher Education, is an agency of the Commonwealth of Pennsylvania, providing post-secondary education with its principal office in Harrisburg, Pennsylvania. (Complaints, supra, at paras. 7, 7, 6 and 6, respectively; Answers thereto)

3. A.G. Cullen and the State System entered into a contract for the renovation of John Sutton Hall of the Indiana University of Pennsylvania in April, 2000, following a competitive bidding process as required by the Commonwealth Procurement Code, 62 P.S. §3931, et seq. (N.T. 73, 920-923; Joint Ex. 1)

4. As the low bidder, by a margin of $8,000, A.G. Cullen was awarded the general construction prime contract. (N.T. 73, 923)

5. John Sutton Hall, originally constructed in 1875, is the main administration building on the campus of the Indiana University of Pennsylvania and is valued as a historic building. (N.T. 1365, 1367-1368)

Windows

6. The John Sutton Hall project was initiated to address deterioration of the old building, primarily the replacement and restoration of existing wood framed windows, the replacement of plumbing and heating systems and the installation of ventilation and air-conditioning equipment, as well as other renovations. (N.T. 71, 1365-1366; Notice to Contractors, Joint Ex. 1)

7. Pursuant to its contract, A.G. Cullen's scope of work included coordinating and scheduling the work of the other contractors on the project (Joint Ex. 1, §01300) and the removal and replacement of the 550 wooden windows in the building (N.T. 74, 922; Joint Ex. 1, §08550) as well as other interior and exterior construction and renovation work.

8. The windows were original to the old building and varied widely in size and shape (N.T. 922). The window frames were elaborate, the shapes on the inside differed from those on the outside, and many of the frames were tied into the structure of the building itself, requiring painstaking restoration instead of replacement. (N.T. 1371–1373)

9. Using a comprehensive bidding process, the State System selected a project architect expert in the restoration of historic buildings to design the project. (N.T. 1365-1368)

10. The project specifications identified two window manufacturers by name to provide the windows required by the contract; Kolbe & Kolbe Millwork Company, Inc., and Weather Shield Manufacturing, Inc. (N.T. 74-75, 78, 84, 1369-1370; Joint Ex. 1, §08550(2)(a))

11. The specifications also provided for the use of other manufacturer's windows. (Joint Exhibit 1, §08850(1)(g)(iii)) Whether provided by the designated manufacturers, Kolbe & Kolbe or Weather Shield, or by another manufacturer, all windows for the project were required to comply with project specifications. (N.T. 239, 241)

12. In preparing its bid for the project, A.G. Cullen relied on price quotations from the suppliers for the two window manufacturers identified by name in the specifications. The bid documents show that the amount finally bid by A.G. Cullen was based in part on a price quotation for new Kolbe & Kolbe windows. (N.T. 78-79, 1245-1248)

13. The project got under way when the Notice to Proceed was issued on June 1, 2000. (N.T. 73, 83) A.G. Cullen immediately began negotiations with Cooper Trading, Inc., a supplier that in turn proposed to purchase new Weather Shield windows from McClure-Johnston Company, an authorized distributor, for resale to Plaintiff. Even before the contract with Cooper Trading was completed, plans to supply new Weather Shield windows according to the specifications had been initiated and shop drawings required by the contract were being prepared. (N.T. 83-87, 90-92, 95, 98, 247, 1104-1106)

14. A.G. Cullen and Cooper Trading entered into a purchase agreement dated June 20, 2000, pursuant to which Cooper Trading agreed to supply Weather Shield windows for the John Sutton Hall project according to the plans and specifications in the contract documents. (N.T. 90-95, 264-266; Plaintiff Ex. 20)

15. Throughout its negotiations with Cooper Trading, A.G. Cullen required that specific dates be met at each stage of the window production. All discussions, as well as the contract with Cooper Trading, were directed toward providing new windows and beginning installation in the late Summer of 2000. (N.T. 85-86, 93-95, 98-101, 1105-1106) It was important to A.G. Cullen to begin installation before the start of the school year, in order to maintain the schedule it had planned, avoid interference with other trades and accommodate the

contract contingency that the building remain occupied throughout construction. (N.T. 85, 1103-1104)

16. Cooper Trading, McClure-Johnston, and Weather Shield did not meet the production schedule and failed to provide any windows that met the project specifications. (N.T. 144-151, Plaintiff Ex. 35, 36, 37) Shop drawings that were due June 27, 2000, were a month late and did not arrive until July 26, 2000. (N.T. 93, 102) Those shop drawings were disapproved by the architect. (N.T. 102) Although the project was supposed to start in mid August, window mock-ups did not arrive until fall, and even then were not acceptable. (N.T. 101)

17. A.G. Cullen continued to work with its window supplier and with Weather Shield in an attempt to obtain conforming windows consistent with the project specifications. Despite correspondence, meetings, discussions and attempts to provide information to assist Weather Shield, Weather Shield did not correct the dimensions, radius points, and other details of the elaborate John Sutton Hall windows. (N.T. 101-126; Plaintiff Ex. 3, 23, 24-26)

18. A.G. Cullen persisted in its attempt to work with Weather Shield until November 8, 2000, when A.G. Cullen finally canceled its agreement with Cooper Trading to purchase Weather Shield windows. (N.T. 150-151; Plaintiff Ex. 37)

19. Prior to terminating its purchase agreement with Cooper Trading, A.G. Cullen sought a price quotation for windows manufactured by Kolbe & Kolbe. (N.T. 131-132, 152-153; Plaintiff Ex. 38)

20. A.G. Cullen had resisted terminating the Cooper Trading purchase agreement for Weather Shield windows because of the difference in price for the more expensive Kolbe & Kolbe windows and because A.G. Cullen continued to believe Weather Shield's assurances that conforming windows could be produced. It was not until October that A.G. Cullen's confidence in Weather Shield began to wane. (N.T. 131-132, 134, 139-140, 143)

21. On December 6, 2000, A.G. Cullen entered into a purchase agreement with Lezzer Lumber for the purchase of Kolbe & Kolbe windows for the John Sutton Hall project. (N.T. 159; Plaintiff Ex. 41)

22. Prior to the execution of the purchase agreement, Kolbe & Kolbe began work on the project, contacting the architect and preparing their required shop drawings. (N.T. 160)

23. Kolbe & Kolbe worked expeditiously and professionally to supply windows for the project as required by the contract specifications. (N.T. 160-162, 245)

24. As a result of Weather Shield's failure to perform, A.G. Cullen sought an increase in the amount it was to be paid under the contract by the State System. It also sought a six-month extension in the project completion date under the contract in recognition of all the delays that resulted from its inability to perform the window installations as scheduled. (N.T. 155-156;

Plaintiff Ex. 39) Both these requests were denied by the State System. (N.T. 156-158; Plaintiff Ex. 40)

25. The windows manufactured by Kolbe & Kolbe arrived at the project site in late April 2001. (N.T. 55, 297-300)

Lead Based Paint

26. The old wooden windows on John Sutton Hall that A.G. Cullen had contracted to remove and renovate were painted with old lead-based paint. (N.T. 395-396, 398-399, 421; Plaintiff Ex. 47)

27. The Indiana University of Pennsylvania was aware of the existence of lead paint on the windows due to toxicity characteristic leaking procedures (TCLP) testing of paint samples that had been done prior to the renovation project. These tests had demonstrated that lead, a hazardous material, was contained in the paint on the wooden portions of the windows. (N.T. 430-433, 1372; Plaintiff Ex. 76)

28. The contract provided that the wooden portions of the windows, which were painted, were to be removed and replaced in some cases, and in others were to be stripped of paint, restored and repainted. (N.T. 1365-1366, 1368-1373, 1378; Joint Ex. 1 section 08550) Both these processes are hazardous when lead-based paint is involved and can be dangerous to workers and to others in the vicinity. Lead contaminated material, including "sludge" remaining after stripping lead-based paint, must be disposed of safely. (N.T. 417-418, 424-425, 431-433, 1373; Plaintiff Ex. 75)

29. Compliance with Occupational Safety and Health Administration (OSHA) (29 U.S.C.A. section 651 et. seq.) standards requires specialized knowledge. Workers require protective clothing and must follow special safety procedures. Work areas containing hazardous materials must be ventilated and screened to protect the public. (N.T. 424, 434, 443, 453-457, 461-463; Plaintiff Ex. 74, 77, 79, 82)

30. The extra precautions and safety measures involved with managing hazardous material such as lead-based paint are time consuming and costly. (N.T. 444-445, 454-455, 457-463; Plaintiff Ex. 79, 84, 85, 86)

31. In large construction projects, it is the trade practice to include specifications detailing any lead-based paint abatement work that is required on the project. (N.T. 764-766, 783; Board finding)

32. Contractors working on projects, such as the John Sutton Hall renovation, rely on the specifications for the project to determine their scope of work and to prepare their bids. (N.T. 761-762, 783, 791-794; Board Finding)

33. It was reasonable for A.G. Cullen to expect that the State System would include specifications for performing the abatement of hazardous materials such as the lead paint on the

windows in the specifications presented to A.G. Cullen by the State System if such activity was to be within A.G. Cullen's scope of work on the project. Conversely, if such specifications were not included in those presented to A.G. Cullen, it was reasonable for A.G. Cullen to expect that this aspect of the project was not within its scope of work on the project. (N.T. 764-766, 783; Board finding)

34. The finding in Paragraph 33 (above) holds true even though John Sutton Hall was an old building and could be expected to contain hazardous materials such as lead paint. The issue is not the presence, absence or likelihood of lead paint on the windows, but rather whether or not lead paint abatement was originally within A.G. Cullen's scope of work. (N.T. 766-768, 771-774)

35. The specifications presented to A.G. Cullen for the John Sutton Hall renovation project did not include provisions for the abatement of lead-based paint. (N.T. 172-173, 399, 403, 764-765, 1374, 1377, 1386, 1389)

36. In contrast, the specifications for the John Sutton Hall project did include detailed specifications for the abatement of asbestos. (N.T. 164-169, 763-764; Joint Ex. 1 section 02080; Plaintiff Ex. 44 at 2, 45 at 3)

37. The absence of specifications pertaining to lead-based paint abatement was an oversight on the part of the State System. (N.T. 1374)

38. Prior to bidding on the John Sutton Hall renovation project, the State System issued Notice to Contractors, dated February 18, 2000. The Notice addressed the issue of hazardous materials on the project with the following language: "All asbestos and lead containing materials affected by the project will be addressed." (Joint Ex. 1, vol. I, Bidding Requirements, Appendix II-A at 1 of 4)

39. In bidding on the project, A.G. Cullen relied on the specifications, which did not contain any reference to lead-based paint abatement in its scope of work, and A.G. Cullen acted reasonably in presenting a total bid amount that did not include lead based paint abatement. (N.T. 1113, 1115, 1119, 1207)

40. A.G. Cullen relied on the specifications prepared by the State System, which did not contain any reference to lead-based paint abatement as one of A.G. Cullen's tasks, to conclude that it was not responsible for performing lead-based paint abatement at the price it bid for the contract. (N.T. 1142-1143, 1298-1302)

41. Prior to the awarding of the contract and the notice to proceed, the State System did not inform A.G. Cullen that it would be responsible for lead-based paint abatement. (N.T. 164-166, 173, 176)

42. A.G. Cullen intended to perform any paint removal that was required under its contract as a non-hazardous item. (N.T. 178, 192) Lead paint abatement respecting removal of

the windows at John Sutton Hall was not within A.G. Cullen's original scope of work. (F.O.F. 33, 34, 35; Board Finding)

43. In September, 2000, the State System requested that A.G. Cullen provide a quote for performing lead-based paint abatement work on the John Sutton Hall project. (N.T. 173-174; Plaintiff Ex. 47)

44. Through correspondence with A.G. Cullen, over several months, the State System requested information on the price for different methods of performing lead-based paint abatement work on the project. (N.T. 176, 180, 182-183, 186-189; Plaintiff Ex. 49, 51, 52)

45. Due to its realization that A.G. Cullen's contract did not provide for the removal of lead-based paint, the State System was prepared to pay A.G. Cullen costs reasonably incurred for lead-based paint abatement, recognizing that this work was outside the scope of work described in the contract. (N.T. 412-413, 438, 811-816, 1389-1390; Plaintiff Ex. 70)

46. From February until April, 2001, A.G. Cullen submitted written requests for payment to remove the lead-based paint found in the John Sutton Hall project. (N.T. 404-410; Plaintiff Ex. 68, 69)

47. The State System responded to A.G. Cullen's request by asking A.G. Cullen to credit the cost of non-hazardous paint removal included in A.G. Cullen's scope of work, against the cost of lead-based paint abatement. (N.T. 406-407, 1386-1391, 1395)

48. In a letter dated April 2, 2001, the State System denied any payment for additional costs associated with lead-based paint abatement. (N.T. 410-411, 413, 1397; Plaintiff Ex. 70)

49. By May 3, 2001, A.G. Cullen's project manager had learned that hazardous levels of lead were contained in the paint on the windows and other surfaces that had to be disposed of in the course of the project. The safety of workers, and others in the vicinity, demanded that an appropriate lead-based paint abatement program be implemented. (N.T. 394-396, 414-424, 431-435)

50. On May 4, 2001, A.G. Cullen stopped work on the window demolition portion of the project for the safety of its workers until it could implement a lead-based paint abatement program. (N.T. 394-395, 1414)

51. Work resumed after approximately one month, by June 4, 2001, with systems in place to protect workers and others against hazardous material. (N.T. 469, 1433; Plaintiff Ex. 99)

52. During the period that the window demolition work was suspended, A.G. Cullen arranged for the training of workers already on the project to conduct lead-based paint abatement and to work safely in a zone permeated with airborne hazardous material. (N.T. 453-457)

53. A.G. Cullen arranged to perform tests and monitoring of workers and their environment according to standards required to be observed where hazardous materials pose a danger to workers. (N.T. 458-461)

54. A.G. Cullen was required to provide workers with respirators, protective clothing, air-monitoring, protective enclosures, and blood tests to determine exposure to lead containing material. (N.T. 462-463, 465)

55. A.G. Cullen chose to implement the lead-based paint procedures by training its own workers, and workers of subcontractors already on the project, because the price quotations from outside contractors were high and were determined to be excessive by representatives of the State System. (N.T. 412, 466)

56. The total cost of performing the lead-based paint abatement was determined by each worker contemporaneously recording the time attributable to lead-based paint abatement, from which information a report was ultimately generated. That report, plus the cost of specific materials, provided the information from which A.G. Cullen determined its total costs. (N.T. 1298-1301, 1302-1304; Plaintiff Ex. 167)

57. The total cost to A.G. Cullen for lead-based paint removal, based on the contemporaneous report, was $63,713.75. (N.T. 1299, 1140-1142; Plaintiff Ex. 167)

Liquidated Damages

58. The contract provided for a project completion date of August 24, 2001. (N.T. 344, 606, 646; Joint Ex. 1 section 01010 II. L)

59. Neither A.G. Cullen nor the other prime contractors on the project had completed the work under their contracts by the contract completion date. (N.T. 512, 531-532, 1485, 1545-1546, 1577; Plaintiff Ex. 118)

60. A.G. Cullen's work schedule was disrupted and had to be redrawn when Weather Shield, the designated window manufacturer originally subcontracted to supply the project windows, failed to make timely delivery. (N.T. 511-512, 603-604; Plaintiff Ex. 39, 109)

61. The project was further delayed to perform lead-based paint abatement that had not been included in the project's design specifications and that had not been anticipated or scheduled by A.G. Cullen. (N.T. 511-512; Plaintiff Ex. 109)

62. The changes to the work schedule and the disruption to the sequencing of the work of the different trades employed on the project began an amplifying series of delays that carried the project past the scheduled completion date. (N.T. 603-610, 625, 1483-1485)

63. By December 19, 2001, A.G. Cullen considered its work to be substantially complete and sought a punchlist from the State System that would permit the plaintiff to wrap up minor incomplete items. (N.T. 536-538, 540-545; Plaintiff Ex. 115, 117)

64. In response, the State System directed A.G. Cullen to follow the procedures provided by the contract to seek a certificate of substantial completion. (N.T. 546-547; Plaintiff Ex. 122)

65. John Sutton Hall had remained in use by the University throughout the renovation project, although portions of the building had been vacated at various times to accommodate the project. (N.T. 1480, 1749)

66. By early January, 2002, the State System had moved into the spaces that had been renovated and John Sutton Hall was again fully occupied and in use. (N.T. 508-510, 551, 1481-1482, 1560)

67. On January 11, 2002, when the renovated portions of John Sutton Hall were back in use by the University, A.G. Cullen removed all its remaining workers from the job site. (N.T. 551, 554-555, 1586; Plaintiff Ex. 126)

68. Because A.G. Cullen had not requested a certificate of substantial completion from the project architect as provided for by the terms of the contract, the State System took the initiative to request such a certificate in late January, 2002. (N.T. 1567-1570, 1575-1577, 1579-1580; Defendant Ex. 30)

69. An inspection was performed in compliance with the terms of the contract on February 12 and 13, 2002. (N.T. 1581-1582, 1736-1740, 1750)

70. Pursuant to the inspection, a punchlist of items required to complete the project was prepared. The punchlist was extensive and numbered over 700 items. (N.T. 1096, 1737-1743; Plaintiff Ex. 129)

71. A certificate of substantial completion was issued for the project on March 18, 2002. (N.T. 1733-1734, 1747-1748; Plaintiff Ex. 127)

72. At the time the certificate was issued, a payment was made to A.G. Cullen which represented the contract balance, less an amount withheld as follows: $86,000 for liquidated damages; $245,898 for estimated cost of punchlist items; $122,949 additional 50% of punchlist items as provided under the contract. (N.T. 1580-1582; Defendant Ex. 32)

73. The contract provides for liquidated damages in the amount of $500 for each day after the project completion date of August 24, 2001, until the project is completed. (N.T. 1581-1582; Joint Ex. 1 section 01010 II. L)

74. The State System assessed liquidated damages at the contract rate from August 24, 2001 until February 12, 2002 (172 days). (N.T. 823-824, 1581-1582; Defendant Ex. 32; Board Finding)

75. The State System also assessed liquidated damages against the other prime contractors on the project. The State System ultimately completely abated these other contractors' liquidated damages, holding A.G. Cullen solely responsible for the project delay. (N.T. 1485)

76. The State System never extended the original project completion date of August 24, 2001, despite many requests by A.G. Cullen seeking additional time. (N.T. 495-496, 1542)

77. Since the contract did not include lead-based paint removal in the specifications, it did not make allowance for time required to plan, prepare for and execute appropriate lead-based paint abatement procedures, including taking safety precautions for workers. Although correspondence was initiated by the State System with A.G. Cullen in September, 2001, no progress was made in addressing the issue of lead-based paint abatement until A.G. Cullen took responsibility to implement appropriate safety procedures. (N.T. 398-399, 423-425, 489-490; Board Finding)

78. A.G. Cullen acted reasonably for the protection of its workers and others in the environment by stopping work from May 4 until June 4, 2001, a total of 31 days. (N.T. 394, 396, 423-425, 452; Board Finding)

79. A.G. Cullen resumed work only when it had appropriate protections in place to avoid any contamination by hazardous materials. (N.T. 465-466, 468-470; Plaintiff Ex. 89, 90; Board Finding)

80. The State System caused this 31-day delay as a result of the omission of lead-based paint abatement from the contract specifications and as a result of failing to address the matter despite its promise to do so in the Notice to Contractors. (Board Finding)

81. The necessity to replace Weather Shield as a manufacturer of windows for the project with Kolbe & Kolbe, the other window manufacturer identified in the specifications, also delayed A.G. Cullen in completing its contract obligations. (Plaintiff Ex. 39)

82. Other than the 31 days when window removal work ceased, the record in this matter does not supply sufficient evidence to allocate time attributable to hazardous material abatement from the time required to be spent on demolition work required under the contract and by delays imposed by the change of window manufacturers. (N.T. 1258-1260, 1389-1390; Plaintiff Ex. 39, 99)

83. No work was performed on the project after A.G. Cullen removed its workers from the site on January 11, 2002. The degree of completion of the project did not change between January 11, 2002; February 12, 2002, the date of the substantial completion inspection; and March 18, 2002, the date the certificate of substantial completion was issued. (N.T. 1736, 1577; F.O.F. 71)

84. The project was substantially complete on January 11, 2002. (Board Finding)

85. 140 days elapsed from the project completion date of August 24, 2001 until the date of substantial completion on January 11, 2002. The State System's failure to identify lead paint abatement as within A.G. Cullen's original scope of work caused 31 days of this delay. (Board Finding)

Contract Balance

86. Following the architect's prepration of the punchlist of minor incomplete items at the end of the project, A.G. Cullen sent workers to the job site to complete the items. (N.T. 1491-1492)

87. Disputes arose between the parties as to the degree to which the items listed in the punchlist had already been completed. Moreover, A.G. Cullen asserted that many of the items listed were beyond the scope of the contract. (N.T. 561-566, 568-569, 652-655; Plaintiff Ex. 132, 133)

88. When the parties were unable to resolve these disputes, A.G. Cullen again, and finally, removed its workers from the site. (N.T. 1492)

89. The State System terminated its contract with A.G. Cullen on April 24, 2002, declaring A.G. Cullen in breach. (N.T. 1585-1586)

90. The State System began using its own employees gradually to complete the items listed on the punchlist. This process was slowly accomplished over a period of two years. (N.T. 1586, 1592-1593)

91. The Board cannot determine from the record whether the punchlist was ever fully completed. (N.T. 1593; Defendant Ex. 34; Board Finding)

92. The State System maintained a record of the hours expended on each item of the punchlist together with the cost of labor and materials expended in completing it. (N.T. 1587, 1599-1600; Defendant Ex. 34)

93. Over the nearly two-year period from the termination of the contract until the start of the hearing in this matter, as work on the punchlist continued, the State System made a number of payments to A.G. Cullen. Their final payment was made on March 4, 2004. (N.T. 1087, 1091-1096, 1591, 1593, 1630-1631; Plaintiff Ex. 146, 147, 148, 149, 150, 151)

94. The State System withheld $145,472.40 of the contract balance in accordance with its record of costs in completing the punchlist items. (N.T. 1096; Defendant Ex. 34)

95. The State System based its cost report on over 700 work orders which were completed contemporaneously by the maintenance personnel who performed the tasks and recorded their time and the materials they used. The State System charged at "in house" hourly rates for the workers' time and for materials at cost. The Board finds the State System's cost for

completing the items listed in the punchlist to be reasonable. (N.T. 1096, 1587, 1599-1600; Defendant Ex. 34; Board Finding)

96. The items listed on the State System report are not all the responsibility of A.G. Cullen. Some items included on the punchlist were not in A.G. Cullen's scope of work under the contract. Others were previously completed by A.G. Cullen, but became the responsibility of other trades that followed A.G. Cullen in the work area and failed to replace items, repaint surfaces, or clean the area upon leaving. (N.T. 926, 944-945, 952; Board finding)

97. Items on the punchlist which the Board finds were not the responsibility of A.G. Cullen fall into the following general categories:

1) Painting or repairing the windows that had been replaced. These windows were newly constructed, prepainted, maintenance free and under warranty from the manufacturer. They did not need paint and the manufacturer was obligated to replace or repair any damaged windows. (N.T. 938-939, 943-944, 953)

2) Adjusting and replacing ceiling tile. Contractors other than A.G. Cullen often moved or removed ceiling tile to gain access to their work area. It was their obligation, not A.G. Cullen's, to restore the area to a finished condition. (N.T. 962-963, 964-965)

3) Painting and patching in areas where A.G. Cullen was not performing any renovation work. A.G. Cullen was obligated to restore and repaint the area that was disturbed by its renovation work but was not required to paint beyond a reasonable break point. (N.T. 941-042, 966-968, 971-975)

4) Cleaning and repairing the carpet in the areas listed on the punchlist and in the State System report. (N.T. 1026, 1030, 1032-1036)

5) Insulating attic windows and vents. The attic was an unheated and unairconditioned space which did not require insulation in the jamb spaces around the windows and vents where it was recommended for the wood to be exposed to air. (N.T. 950-951)

6) Providing access panels for installation during bulkhead construction (N.T. 1081-1085)

7) Painting and adjustments on certain pre-existing doors, not included in A.J. Cullen's scope of work. (N.T. 952, 984-985)

8) Finishing work in inside rooms that had no windows or bulkheads and where A.G. Cullen was not required to perform renovation work. (N.T. 959-960)

9) Duplication of punchlist items. (N.T. 1032)

98. The State System withheld a total amount of $59,021.27 from A.G. Cullen for all the punchlist items in those categories of work, listed above, that were improperly assigned to A.G. Cullen. The $59,021.27 amount is the sum of the State System's own charges for the items improperly listed as the responsibility of A.G. Cullen on its report of the punchlist costs. (N.T. 1599-1600; Defendant Ex. 34; Board Finding)

Delay

99. Work on the project was delayed, and continued for months after the scheduled completion date of August 24, 2001, as a result of a combination of circumstances attributable primarily to the replacement of Weather Shield as the window manufacturer on the project, and the unanticipated lead-based paint abatement work. These two circumstances disrupted the original schedule for the project and caused a cascade of inefficiencies that affected the entire project. (N.T. 511-512, 603-610, 625, 1483-1485; Plaintiff Ex. 109)

100. The State System neglected to include specifications pertaining to lead-based paint abatement and failed to address the issue when it arose after construction had begun. As a result, window demolition work had to be halted while A.G. Cullen prepared and implemented a lead-based paint abatement plan. (Board findings of fact 34, 38, 42-50)

101. The State System caused the 31 day delay from May 4 to June 4, 2001 while the window demolition work was suspended. (Board findings of fact 74, 76)

102. A.G. Cullen was responsible for selecting a window manufacturer that could supply windows in accordance with specifications in a timely manner. (Joint Ex. 1 Section 08550 1.e.g.2.1)

103. Although Weather Shield was a recommended manufacturer under the terms of the specifications, it failed to perform in a timely manner according to its agreement with A.G. Cullen. (N.T. 101-126, 144-145, 151-152; Plaintiff Ex. 35)

104. A.G. Cullen was in the best position to control the impact of Weather Shield's failure to perform according to the project schedule. A.G. Cullen had the right to enforce its agreement with Weather Shield and either require timely performance or terminate the agreement and replace Weather Shield. (N.T. 147-151; Board finding)

105. By specifying Weather Shield as a recommended manufacturer in the contract, the State System did not cause the delays attributable to Weather Shield's failure to perform. (N.T. 244, 247-249; Board finding)

106. The State System was slow in responding to communications from A.G. Cullen regarding the lead-based paint issue and unhelpful in finding a resolution to this unanticipated matter. (N.T. 398-399, 411-412, 430-433)

107. The State System was slow in responding to A.G. Cullen's request for change orders. (N.T. 588-591)

108. The State System requested extra work from A.G. Cullen but refused to allow any extension of the project completion date. (N.T. 495, 1542)

109. Working relationships among representatives of the parties became testy, and impeded cooperation. (N.T. 411, 496, 499)

110. In one communication to A.G. Cullen, in response to a request to extend the contract deadline in consideration of the unanticipated hazardous material removal, the State System refused any additional time with the provoking words, "of course no extra time will be granted." (N.T. 496; Plaintiff Ex. 102)

111. As delays began to build and disputes rose between the parties, their cooperative working relationship began to deteriorate. (N.T. 609, 961)

112. The record does not provide sufficient evidence for this Board to attribute specific periods of delay to the State System beyond the 31-day period pertaining to lead-based paint abatement. (N.T. 1258-1260, 1389-1390; Plaintiff Ex. 39, 99; Board Finding; F.O.F. 100-101)

113. Mr. Paul Cullen is Vice-President of A.G. Cullen, has the primary responsibility of overseeing all building projects and is familiar with the cost records maintained in the course of the building project. (N.T. 918-919)

114. Mr. Cullen testified, credibly and convincingly, that A.G. Cullen's contemporaneously maintained cost records accurately reflected the costs incurred in separate categories of work on the John Sutton Hall project. (N.T. 1140, 1165-1166; Plaintiff Ex. 167, 168; Board Finding)

115. Mr. Cullen identified (1) categories of job transactions within the project that were subject to delay, and (2) additional costs that were incurred when the project ran beyond the deadline of August 24, 2001. (N.T. 1140-1177)

116. Mr. Cullen determined the extra cost to A.G. Cullen attributable to the project delay by determining the difference between the amount a delay category actually cost A.G. Cullen, and the amount budgeted to that category when the project was bid and expected to terminate on August 24, 2001. This Board finds that the difference so calculated is a reasonable method of determining the cost of the total project delay to A.G. Cullen. (N.T. 1142-1143; Board Finding)

117. Calculated as described above, the following are the costs to A.G. Cullen of delays in each of 14 specified categories:

1. Project Supervision (labor) $62,364.50 (N.T. 1142-1143)
2. Selective Demolition $5,473.99 (N.T. 1143-1145)
3. Scheduling $10,878 (N.T. 1145-1146)
4. Supervision (Expenses) $3,798.53 (N.T. 1146-1147)
5. Progress Photographs $69.02 (N.T. 1147, 1172)
6. Telephones $1,165.78 (N.T. 1166-1167)
7. Barriers and Enclosures $706.95 (N.T. 1167-1168)
8. Dumpsters $9,880 (N.T. 1168-1169)
9. Construction Aids $2,222.25 (N.T. 1169-1171)
10. First Aid $65.10 (N.T. 1171-1172)
11. Clean-up $25,252 (N.T. 1172-1174)
12. Port-O-Lets $164.78 (N.T. 1174-1175)
13. A.G. Cullen incurred additional costs over the period the project was delayed for car and truck expenses at the rate of $846 per month, which Mr. Cullen testified persisted over a period of seven months, resulting in a total of $5,922. (N.T. 1175-1176)
14. Finally, Mr. Cullen estimated an additional $3,000 of expenses for lawn maintenance over the period the project was delayed. (N.T. 1176-1177)

118. The Board finds Mr. Cullen's testimony with respect to these costs to be credible and the costs to be reasonable. (Board Finding)

119. Based on the foregoing figures, the total costs of delay to A.G. Cullen is $130,962.90. This Board has found that the project was delayed a total of 140 days past the project completion date of August 24, 2001. Thus, the per day delay cost to A.G. Cullen is $935.45. (Board finding)

120. This Board has found that 31 days of the total project delay can be attributed solely to the State System. Therefore, the cost of delay attributed to the State System is $28,998.95. (Board finding)

Interest

121. A total of seven payments were made on unscheduled dates during the two years following the completion of the project. The last payment was made on March 4, 2004, days before the hearing began in this matter before this Board. (N.T. 1087, 1091-1096, 1591, 1593, 1630-1631; Plaintiff Ex. 146, 147, 148, 149, 150, 151)

122. No explanation has been proffered for the timing of the payments. (N.T. 1591-1592)

123. This Board finds that the payment of amounts due to A.G. Cullen were made at arbitrary intervals as follows:

SUPPLEMENTAL PAYMENT NO.	AMOUNT	DATE	
1.	$16,823.13[1]	9/19/02	N.T. 1093; Plaintiff Ex. 148
2.	$46,595.37	4/16/03	N.T. 1087-1088; Plaintiff Ex. 146
3.	$20,668.79	5/22/03	N.T. 1091-1092; Plaintiff Ex.147
4.	$12,993.84	8/27/03	N.T. 1094-1095; Plaintiff Ex. 149
5.	$24,224.20	10/29/03	N.T. 1630-1631
6.	$16,843.20	10/30/03	N.T. 1095; Plaintiff Ex. 150
7.	$15,984.90	3/5/04	N.T. 1096-1097; Plaintiff Ex. 151

124. Because an excessive amount was withheld from A.G. Cullen for an unreasonable period of time, this Board finds that a total payment of $154,133.43, the sum of all the arbitrarily withheld payments, should have been made to A.G. Cullen on January 11, 2002.

CONCLUSIONS OF LAW

1. The Board of Claims has exclusive jurisdiction to hear and determine this matter as a claim against the Commonwealth of Pennsylvania arising from a contract entered into with the Commonwealth. 72 P.S. §4651-4.

2. The Board of Claims has jurisdiction over the parties as well as the subject matter of the claim asserted by the Plaintiff. 72 P.S. §4651-1, et seq.

3. Under the terms of its contract with the State System, A.G. Cullen was obligated to install windows in John Sutton Hall that met the contract specifications by the date provided under the contract.

4. Identification of the names of two window manufacturers in the State System's contract with A.G. Cullen did not constitute an implied warranty of those manufacturers' performance on the project.

5. A.G. Cullen assumed the risk of Weather Shield's defective performance in providing windows that complied with the specifications of the contract within the time constraints specified in the contract.

6. By the terms of the contract, A.G. Cullen retained discretion to select a window manufacturer from a list of two identified in the contract or, alternatively, to identify any manufacturer that could produce substantially similar windows, and had further discretion to set

[1] The amount actually paid on this date was $102,887.43. This amount included $86,064.30, which represented a reduction of the 1.5 multiplier, that was provided for under the contract, to 1.15. Because the State System was contractually entitled to retain an amount increased by the 1.5 multiplier to complete minor unfinished items for a reasonable time, the Board has excluded the amount attributed to the multiplier, i.e. the $86,064.30 from the interest calculation above. The remaining amount of $16, 823.13, a belated payment for work performed, has been included.

the exact terms, including schedules and penalties for non-performance, to ensure the windows were supplied.

7. The State System is not liable for Weather Shield's failure to produce windows that conform to the contract specifications according to the schedule A.G. Cullen established in order to meet the time constraints of the contract.

8. The contract between A.G. Cullen and the State System did not provide specifications for lead-based paint abatement.

9. The Notice to Contractors dated February 18, 2000, which was included as a component of the State System's contracting documents, contained a commitment by the State System to address lead containing materials found on the project.

10. A.G. Cullen was not required by the terms of the contract with the State System to perform lead-based paint abatement on the John Sutton Hall project.

11. A contractor who performs work and incurs costs beyond the scope of the contract is entitled to compensation for the additional work and costs.

12. The State System is liable in the amount of Sixty-Three Thousand Seven Hundred Thirteen Dollars and Seventy-Five Cents ($63,713.75) for A.G. Cullen's costs in abating lead-based paint on the project.

13. The contract provides for liquidated damages in the amount of $500 per day from August 24, 2001 until work on the contract is substantially completed.

14. Liquidated damages cannot be assessed against A.G. Cullen as a result of delays caused by the State System, including requiring work outside the contract's scope.

15. Liquidated damages must be reduced to account for time A.G. Cullen devoted to lead-based paint abatement, which work was outside the scope of its contract. A total of 31 days, the period of time demolition work on the project's windows was halted, is attributable to removal of lead containing material. This 31 day delay was caused by the State System and must be deducted from the period for which liquidated damages are assessed against A.G. Cullen. Other than this delay of 31 days, A.G. Cullen did not otherwise adequately establish that the State System's actions or inactions caused any specific amount of delay on the project.

16. Liquidated damages are appropriately assessed from the contract termination date until January 11, 2002, the date when the project was substantially complete. After deducting the 31 days found by the Board to be attributable to the State System, the period for which liquidated damages are assessed totals 109 days.

17. The State System is entitled to retain Fifty-Four Thousand Five Hundred Dollars ($54,500.00) of the contract balance as liquidated damages (109 days at $500 per day.) Because the State System has improperly withheld a total of Eighty-Six Thousand Dollars ($86,000.00) as

liquidated damages, it must pay Plaintiff the additional Thirty-One Thousand Five Hundred Dollars ($31,500.00), with interest, from January 11, 2002.

18. The State System is entitled to withhold a reasonable amount of the contract balance to complete minor work after the contract was substantially complete.

19. The amount withheld from A.G. Cullen may not include the costs of performing work that is outside the scope of A.G. Cullen's contract or work that had been completed by A.G. Cullen before it left the job.

20. The State System withheld a total of One Hundred Forty-Five Thousand Four Hundred Seventy-Two Dollars and Forty Cents ($145,472.40) from A.G. Cullen's contract balance. Of this amount, Fifty-Nine Thousand Twenty-One Dollars and Twenty-Seven Cents ($59,021.27) was improperly charged for work that was outside the scope of A.G. Cullen's contract, or had been properly completed by A.G. Cullen, and therefore should have been paid to A.G. Cullen at least by the conclusion of the contract. Consequently, the State System shall pay $59,021.27 to A.G. Cullen with interest from January 11, 2002.

21. The remaining amount of $86,451.13 was reasonably withheld by the State System to cover the costs of completing minor contract work using its own personnel.

22. The State System is liable in damages to A.G. Cullen for delaying the performance of the contract by requiring the removal of lead-based paint.

23. The period of delay attributable to lead-based paint abatement and no other concurrent cause is the 31 day period from May 4 to June 4, 2001, when work was halted as a precaution against hazardous material.

24. The State System is not liable for delays caused by Weather Shield's failure to meet the construction schedule or other circumstances that were not the result of the State System's conduct.

25. A.G. Cullen is not required to prove damages to a mathematical certainty, but may recover damages that are demonstrated with reasonable certainty.

26. A.G. Cullen’s method for determining delay damages in this case was to total the costs recorded contemporaneously in 14 specific categories of work that were affected by delays in the project and to find the difference between that total and the amount budgeted for those categories. We find this method to produce a reasonably certain measure of delay damages in this case.

27. The total cost of delay thus determined is divided by the total length of time that the contract was delayed: 140 days. The result is that each day of delay cost A.G. Cullen Nine Hundred Thirty-Five Dollars and Forty-Five Cents ($935.45). A.G. Cullen shall therefore recover Twenty-Eight Thousand Nine Hundred Ninety-Eight Dollars and Ninety-Five Cents ($28,998.95) for the 31 day period of delay caused by the State System.

28. The State System is not liable for other delays as a result of change orders, requests for extension of time or requests for a punchlist. Except for the 31 days of delay attributable to the State System noted above, this Board is without proof of a definable period of delay attributable solely to the State System.

29. An award of a penalty and attorneys' fees is permitted where payment has been withheld in bad faith, or is arbitrary and vexatious. 62 Pa. C.S.A. §3935. A.G. Cullen has not established that the State System's actions in withholding payment were done in bad faith so as to warrant an award of a penalty or attorneys' fees to A.G. Cullen.

30. The State System incorrectly delayed payment of the contract balance to A.G. Cullen, distributing payments at intervals over a period of two years from the end of work on the contract until the beginning of the hearing in this matter.

31. Interest is awarded to A.G. Cullen from January 11, 2002, on the amounts of the contract balance that were incorrectly withheld by the State System.

32. Interest on delayed payments is due to A.G. Cullen at the rate of six percent (6%) per year as follows:

Supplemental Payment No.	Amount	Date	Days of delay	Interest
1.	$16,823.13[2]	9/19/02	251	$696.48
2.	$46,595.37	4/16/03	460	$3,522.61
3.	$20,668.79	5/22/03	496	$1,686.57
4.	$12,993.84	8/27/03	584	$1,247.41
5.	$24,224.20	10/29/03	645	$2,572.61
6.	$16,843.20	10/30/03	644	$1,778.64
7.	$15,984.90	3/5/04	709	$1,860.64
Total	$154,133.43			$13,364.96

33. Plaintiff is entitled to an award in the sum of sixty-three thousand seven hundred thirteen dollars and seventy-five cents ($63,713.75) for the extra cost of lead based paint abatement, with interest thereon at the rate of six percent (6%) per year from January 11, 2002.

[2] See Footnote 1

34. Plaintiff is entitled to an award in the sum of thirty-one thousand five hundred dollars ($31,500) for liquidated damages rebate, with interest thereon at the rate of six percent (6%) per year from January 11, 2002.

35. Plaintiff is entitled to an award in the sum of fifty-nine thousand twenty-one dollars and twenty-seven cents ($59,021.27) for the contract balance which the State System has improperly failed to pay A.G. Cullen, with interest thereon at the rate of six percent (6%) per year from January 11, 2002.

36. Plaintiff is entitled to an award in the sum of twenty-eight thousand nine hundred ninety-eight dollars and ninety-five cents ($28,998.95) for delay in project completion occasioned by the defendant, with interest thereon at the rate of six percent (6%) per year from January 11, 2002.

37. Plaintiff is entitled to an award in the sum of thirteen thousand, three hundred sixty-four dollars and ninety-six cents ($13,364.96) of additional interest for delayed payments of contract balance amounts due Plaintiff upon substantial completion of the project on January 11, 2002.

OPINION

Plaintiff A.G. Cullen Construction, Inc. ("A.G. Cullen") has brought four complaints against defendant, Commonwealth of Pennsylvania, Pennsylvania State System of Higher Education (the "State System") that have been consolidated into the present action. The claims arise from the contract between the parties for the renovation of John Sutton Hall, the administrative building at the Indiana University of Pennsylvania ("IUP"). This building, originally constructed in 1875, is noted as a centerpiece of the IUP campus and is valued as a historic structure. Pursuant to its contract, A.G. Cullen was to perform as the prime general contractor for the renovation and restoration of Sutton Hall, coordinating and scheduling the work of the other contractors on the project. More importantly to the present action, A.G. Cullen's scope of work included removal and replacement of about 500 original, 125 year old wooden windows, as well as other interior renovations of the old building. These windows were of differing sizes and shapes, unique and intricate, set in masonry, and outsized, all of which characteristics presented challenges to the renovation and restoration project.

The project was put out to bid pursuant to detailed specifications in April 2000. A.G. Cullen's bid was successful and the contractor was issued a notice to proceed with the project on June 1, 2000. The project completion date was August 24, 2001. That date was not met by any of the contractors working on the project. The State System's architect finally issued A.G. Cullen a substantial completion certificate as of February 12, 2002 and a lengthy, detailed list of all the remaining items still requiring completion was prepared and presented to A.G. Cullen. Payment due to A.G. Cullen under the contract was substantially reduced pursuant to clauses in the contract providing for liquidated damages and application of a formula based on the estimated cost of completing the remaining unfinished elements of the project.

A.G. Cullen's original four complaints, now consolidated in the present action, seek damages resulting from the following alleged breaches of its contract with the State System: 1. failure of Weather Shield, a manufacturer specified in the contract, to produce windows conforming to contractual requirements; 2. failure of the contract specifications to include provision for the abatement of lead-based paint that was present on the old windows; 3. withholding payment of the contract balance to A.G. Cullen upon substantial completion of the project and assessment of liquidated damages; and 4. changes in A.G. Cullen's scope of work and other acts and omissions by the State System that delayed A.G. Cullen's completion of the project, all of which resulted in increasing costs to A.G. Cullen.[3] In addition to contract damages, A.G. Cullen seeks payment of interest, penalties and attorney's fees. Each claim is discussed separately herein.

[3] In a prior decision in this matter, in ruling on the State System's motion for sanctions, this Board precluded A.G. Cullen from presenting any evidence respecting unabsorbed home office overhead, lost bonding capacity or delay damages and other costs pertaining to the redesign of certain structures and conditions as claimed in A.G. Cullen's fourth complaint herein. A.G. Cullen, Inc. v. Commonwealth State System of Higher Education, Pa. Bd. Claims, March 4, 2004.

Window Replacement

The contract for the Sutton Hall renovation project was painstakingly developed by experienced architects including specialists in the restoration of historic buildings. For the difficult window replacement component of the job, the contract specified two window manufacturers, providing as follows: "(2) Subject to compliance with requirements, provide window units by one of the following: (1) Prefinished Wood Window Units: (a) Kolbe & Kolbe Millwork Company, Inc. (b) Weather Shield Mfg., Inc." Section 08550(2) General Construction Contract. Another provision of the contract allowed for the use of other window manufacturers: "Other manufacturers' products with equal performance characteristics may be considered provided deviations in size, profile, and dimensions are minor and do not alter the aesthetic effect." Section 08550(1)(g)(iii).

In preparing its bid as general contractor for the project, A.G. Cullen solicited bids from representatives of both of the specified manufacturers. A.G. Cullen based its own bid on the price quote for the Kolbe & Kolbe windows, although this price turned out to be the higher of the two bids. Because Weather Shield windows were bid at a lower price, A.G. Cullen ultimately negotiated a purchase agreement for these windows. The purchase agreement was with Cooper Trading, Inc., which in turn contracted with McClure-Johnston Company, a distributor for Weather Shield. A.G. Cullen was careful to assure that Cooper Trading's proposal was consistent with the contract plans and specifications for the window portion of the project. Moreover, A.G. Cullen's agreement with Cooper Trading specified the dates by which A.G. Cullen required delivery of the completed windows in order to meet its and the other contractors' construction schedules.

On June 1, 2000, the State System issued the notice to proceed with the project to A.G. Cullen. The project completion date specified in the contract was August 24, 2001. Promptly upon receiving the notice to proceed, A.G. Cullen began working with Cooper Trading to execute a final purchase agreement and begin the process of preparing plans and manufacturing windows that would conform to the contract specifications. By June 20, 2000 the purchase contract, which included dates for submitting the necessary shop drawings, was executed. Time frames for the delivery and approval of the shop drawings, and for the completed windows, were short because A.G. Cullen wanted to begin installing the windows in the Summer of 2000.

From the very first date specified in the agreement between A.G. Cullen and Cooper Trading, the deadlines A.G. Cullen had required were not met. The first shop drawings arrived a month late and were unacceptable. Disputes arose over who was responsible for taking necessary measurements and whether the manufacturer could produce conforming windows. By early November 2000, A.G. Cullen still did not have shop drawings, the first step in the window replacement portion of the project. A.G. Cullen finally terminated its contract for Weather Shield windows on November 8, 2000 and arranged to purchase windows manufactured by Kolbe & Kolbe at a higher price. Kolbe & Kolbe produced the windows according to specifications in a professional, efficient manner and they were installed without incident several months later. As a result of the experience with Weather Shield and the delay involved in changing window manufacturers, A.G. Cullen sought an increase from the State System in the amount it would be paid under its contract. The State System denied this request and A.G. Cullen challenges that decision here.

A.G. Cullen argues that by specifying the names of window manufacturers, the State System was impliedly warranting those manufacturers' performance on the project. According

to this argument, the State System must assume financial responsibility for all costs resulting from Weather Shield's failure to perform its contract with A.G. Cullen. This argument is reflected in a line of federal court cases beginning with United States v. Spearin, 248 U.S. 132 (1918). Spearin holds that where a "contractor is bound to build according to plans and specifications prepared by the owner, the contractor will not be responsible for the consequences of defects in the plans and specifications . . . . This responsibility of the owner is not overcome by the usual clauses requiring builders to visit the site, to check the plans, and to inform themselves of the requirements of the work . . . ." Id. at 136. The Spearin case presents a classic set of facts to support this holding. There, a contractor building a dry dock for the United States followed specific plans for moving a sewer line. Nevertheless, in a heavy rain the sewer line broke and flooded the construction site. The government was held liable for breaching the implied warranty that the plans for moving the sewer line were free from defect.

Differing fact situations in construction contract cases generated a refinement to Spearin that distinguished design specifications from performance specifications. The former describes a purely Spearin-type case where the contractor is bound to build according to design specifications contained in the contract and is thereby protected by an implied warranty that the specifications are free from design defects. Performance specifications, however, set forth an objective but leave it up to the contractor to determine how to achieve the specified results. Where the court finds merely performance specifications, the government does not warrant accuracy or adequacy and is not liable for delays or defects in the result. See Spearin at 136 ("Where one agrees to do, for a fixed sum, a thing possible to be performed, he will not be excused or become entitled to additional compensation, because unforeseen difficulties are encountered."); An example of performance specification is found in Stuyvesant Dredging

Company v. United States, 834 F.2d 1576 (Fed. Cir. 1987) where technical provisions in a dredging contract did not instruct contractor how to perform but specified only that the channel was to be dredged to its acceptable prism. The contractor had complete discretion how to conduct the work; thus, the government was not responsible for the costs related to problems encountered in accomplishing the designated result. Cf. White v. Edsall Construction Company, Inc., 296 F.3d 1081 (Fed. Cir. 2002) (illustrates design specifications where the contractor was expected to follow particular design features in constructing a canopy door).

Pennsylvania has an equivocal relationship with Spearin and its progeny. The Commonwealth Court has found that "Spearin is not binding on this court." Stabler Construction, Inc. v. Commonwealth Department of Transportation, 692 A.2d 1150, 1153 (Pa. Cmwlth. 1997). Without relying on Spearin, however, Pennsylvania's appellate courts have independently reached similar results by applying the same reasoning as the U.S. Supreme Court.

In Commonwealth Department of Transportation v. W.P. Dickerson & Son, Inc, 42 Pa. Cmwlth. 359, 362, 400 A.2d 930, 932 (1979) the Commonwealth Court observed, "[i]t is well established that a contractor who performs according to detailed plans and specifications is not responsible for defects in the result." In that case, a contractor manufactured beams for highway bridges according to design specifications provided by PennDOT. The Court found that defects in the beams and delays in the project that resulted when installed beams cracked were attributable to PennDOT. The contractor had fully satisfied its obligation by constructing the beams according to design specifications and was entitled to compensation for extra work in replacing the beams. Similarly, this Board has reasoned that a contractor must be compensated for expenses, as well as the costs of delay, resulting from design defects contained in specifications followed by the contractor and upon which it relied. See also, Paliotta v.

Commonwealth Department of Transportation, 1999 WL 212254 (Board of Claims, 1999); See also I.A. Construction Corp. v. Commonwealth Department of Transportation, 139 Pa. Cmwlth. 509, 591 A.2d 1146 (1991); Rhone Poulenc Rorer Pharmaceuticals Inc. v. Newman Glass Works, 112 F.3d 695 (3rd Cir. 1997) (the Third Circuit, applying Pennsylvania law, stated that Pennsylvania law is in accord with Spearin.)

Like the federal courts, Pennsylvania courts also recognize that the contractor assumes the risk of defects and delays in performance when the contract by its terms allocates accountability to the contractor. Without using the terms "design specification" or "performance specification" coined by the federal courts, the Commonwealth Court in Stabler Construction, Inc. v. Commonwealth Department of Transportation, supra., distinguished between contracts where the state exercised control over the materials and methods of performance, similar to the federal design specification, and those contracts that specified a result to be achieved, like performance specifications. In Stabler, the contract specified concrete that met certain minimum compressive strength standards. The risk of defective performance remained on the contractor in this case, pursuant to the terms of the contract.

In a case decided under Pennsylvania law, the Third Circuit held that an express warranty accepted by a subcontractor allocated the risk of defective performance to the subcontractor even when the specifications were met and proved faulty. Rhone Poulenc Rorer Pharmaceuticals Inc. v. Newman Glass Works, supra., 112 F.3d 695 (3rd Cir. 1997). In this case, the plaintiff, like A.G. Cullen, selected a supplier from an approved list contained in the contract. When the supplier's product proved defective, the subcontractor argued the defendant was liable for specifying the list of suppliers upon which the plaintiff relied. This argument failed when the

court found the plaintiff had warranted the result and could exercise discretion in accomplishing the objective.

Applying the reasoning in these cases to the matter at hand, the Board concludes that A.G. Cullen's contract, which allowed for the exercise of plaintiff's discretion in selecting a window supplier , does not relieve the contractor of the risk of nonperformance of the window portion of the contract. The contract identified two alternative manufacturers to produce prefinished wooden windows and also permitted the contractor to identify any other manufacturer that could produce substantially similar windows. The manufacturer selected had to produce the windows specified in the contract that would fit into the masonry openings of the historic Sutton Hall and had to perform within the time constraints of the restoration project. Under the contract, A.G. Cullen retained discretion not only in selecting the manufacturer but also in contracting with the distributor and supplier of its choosing. In other words, the specifications detailed the exact windows that were required but allowed A.G. Cullen to determine how to provide them.

By providing a selection of two acceptable manufacturers in the contract specifications, the State System did not guarantee that the subcontractor chosen would perform properly or on time. On the contrary, A.G. Cullen retained the responsibility to negotiate a subcontract that would provide the specified windows in the time frame of the project. Although the rule of implied warranty of contract specifications shifts the risk of defective design from the contractor to the government, "it does not relieve the contractor of any of the usual risks of non-performance stemming from the contractor's relationship with the subcontractors." Edward M. Crough, Inc. v. Commonwealth Department of General Services, 572 A.2d 457 (D.C. App. 1990).

A.G. Cullen entered into a subcontract, establishing and accepting the terms by which the supplier, Cooper Trading Company, the distributor, McClure-Johnson, and the manufacturer, Weather Shield, were to perform. As the general contractor, A.G. Cullen was in the best position to provide for whatever measure of protection it found necessary in its subcontract. The contractor had complete discretion to set the terms, including production schedules and penalties for non-performance, with its subcontractor. Under these facts, A.G. Cullen is not entitled to be compensated for any failure of performance by a manufacturer identified by the State System.

Federal and state courts considering similar facts have reached the same conclusion. See eg., Edward M. Crough, Inc. v. Commonwealth Department of General Services, supra; W.G. Yates & Sons Construction Co., Inc. v. United States, 53 Fed. Cl. 83 (2002), (the government's contract specifications required that an approved manufacturer of motorized cable reels be selected from a list of three manufacturers or an approved equal. When the manufacturer selected by the plaintiff contractor failed to produce the required reels, the court declined to hold the government liable); Wunderlich Contracting Co. v. United States, 351 F.2d 956 (Ct.Cl. 1965) (where the contract specified cinderblock or tile, contractor not relieved of extra expense associated with choice of cinderblock); Universal Contracting and Brick Pointing Co., Inc. v. United States, 19 Cl. Ct.785 (1990) (specification of name brands of chemical stripper to be used found to be performance specification that allowed contractor to exercise discretion and provided no basis for compensation when product failed.)

These cases compel the conclusion that the State System is not liable for costs resulting from Weather Shield's failure to perform. Listing Weather Shield as one of two approved manufacturers did not constitute an implied warranty that it would perform without defect, on time, or at all. The window specifications in this contract are similar to the performance

specifications described in federal case law. In meeting them, A.G. Cullen retained responsibility for its decisions and discretion in the methods it chose. This responsibility included negotiating with the representatives of the manufacturer it chose, setting the terms and penalties for its own protection, and enforcing its agreement. The facts of this case reveal A.G. Cullen's control over the window project and the opportunities it had to complete the contract whether by enforcing its subcontract or changing direction. Therefore, A.G. Cullen cannot recover against the State System for defects or delay in installing windows under the contract.

Lead based paint

The State System admits that its contract with A.G. Cullen did not contain any reference to lead based paint. There is also no dispute that the frames and sashes of the old windows that A.G. Cullen was obligated to restore or replace were covered with hazardous lead based paint. The State System was aware of the presence of lead based paint on the windows and, in fact, an earlier plan for the renovation of Sutton Hall provided for lead based paint abatement. That early plan was revised, however, and the contract that A.G. Cullen bid on did not mention lead based paint.

A reference to lead based paint did appear in the State System's notice to contractors when it was soliciting bids for the project. The notice, dated February 18, 2000, included this statement in the project description: "All asbestos and lead containing materials affected by the project will be addressed." Subsequently, asbestos was addressed in the specifications, in meetings and in other documents and communications, and responsibility for asbestos abatement was assigned. In contrast, the lead containing materials referred to in the notice to contractors were never addressed.

Witnesses experienced in the construction trades, or expert in fields related to remediation of hazardous materials, testified at the hearing regarding trade practices in specifying lead based paint abatement. According to their testimony, contractors rely on owners to include the matter of lead based paint abatement in the contract and provide specifications for handling any lead containing material. When the contract is silent with respect to lead based paint, contractors are not expected to determine if lead based paint is present on the site, to inform themselves if abatement has already been accomplished in older buildings where the presence of lead based paint might be expected, or to assume whose job it will be to deal with any lead based paint abatement. This practice is reasonable since, without specifications detailing lead abatement in the scope of work, a contractor would not only be uninformed as to the presence of lead, but also would not know what areas of the building the owner wanted abated, the manner in which the remediation was to be accomplished or who among the contractors and the owner is responsible for this abatement. A contractor bids a project based on the plans and specifications as they are provided by the owner. If lead based paint abatement is not included in the specifications, it simply will not be included in the bid.

A.G. Cullen's bid did not include any amount for lead based paint abatement, and when it began work, plaintiff did not anticipate that it would be responsible for removal or disposal of lead containing material. Nevertheless, in September 2000, when the project was underway, representatives of the State System notified A.G. Cullen that lead based paint abatement was required. Months of communications followed involving the number and location of the windows and doors involved, the question of stripping the paint or removing and replacing the painted items, and the price for removal and disposal of the lead containing material as well as the protection of the workers.

After reviewing several estimates for lead based paint abatement work, A.G. Cullen determined that it was more economical to train workers already on the project to perform the work. Additional costs included protective clothing, air monitors, respirators and erection of protective enclosures surrounding the work site. Moreover, these preparations forced A.G. Cullen to cease work on the window project for approximately one month, from May to June 2001. The State System did not make any additional payments to A.G. Cullen for this additional work nor did it approve any extension of overall time to complete the project.

A.G. Cullen argues that the removal of lead based paint was not within the scope of its contract with the State System and that it is entitled to additional compensation for its unanticipated costs. The State System disputes this claim, pointing to the contract terms pertaining to additional compensation for unforeseen site conditions. The contract provision cited by the State System provides as follows:

> If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the Contractor shall be given to the System promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions.

Contract, Rider B, Article 4.1.100.

The State System argues that A.G. Cullen has failed to demonstrate that the presence of lead based paint on the 125 year old windows was either unforeseen or unusual under the two prongs of this contract provision. The first subsection of the provision requires that the condition must be not only "concealed" but must differ from conditions indicated in the contract. In support of its argument, the State System points to decisions of Pennsylvania courts holding that

"[a] contractor seeking recovery for work performed as a result of site conditions that differ from specified conditions must show, inter alia, that the contracting agency made a positive representation of work specifications and that the contractor, either by time or cost constraints, had no reasonable means of making an independent investigation of the representation. Acchione and Canuso, Inc. v. Commonwealth Department of Transportation, 501 Pa. 337, 461 A.2d 765 (1983) . . . ." Thomas M. Durkin & Sons, Inc. v. Commonwealth Department of Transportation, 742 A.2d 233, 238 (Cmwlth. Ct. 1999).

Because the contract was silent on the subject of lead based paint, the argument goes, the presence of lead based paint on the project cannot possibly differ from the conditions indicated in the contract. This position suggests that the contract would have to contain a positive statement that lead would not be found on the site for A.G. Cullen to recover. Pennsylvania law, however, as applied to the facts of this case, does not support this result.

Here, the State System represented in its notice to contractors that lead containing materials would be addressed. A.G. Cullen reasonably relied on this positive statement to mean, at the least, that the contract specifications were intentionally silent on the subject of lead, and provisions for any required abatement would be drawn up later. In spite of this statement, when A.G. Cullen encountered lead containing material, the State System did not address it and A.G. Cullen found it could not proceed with its project until it had itself abated the lead. A.G. Culllen performed this work even though its contract did not specify lead based paint abatement and it had not anticipated this additional cost.

The courts have held that where the government makes a positive representation that is relied upon by the contractor to its detriment, the contractor can recover its resulting costs. United States v. Atlantic Dredging Co., 253 U.S. 1 (1920); George B. Christie v. United States,

237 U.S. 234 (1915); Acchione Hollerbach v. United States, 233 U.S. 165 (1914); Thomas M. Durkin & Sons, Inc. v. Commonwealth Department of Transportation, supra.; H.B. Alexander & Son, Inc. v. Commonwealth Department of General Services, 65 Pa. Cmwlth. 558, 443 A.2d 424 (1982). The Pennsylvania Supreme Court has made it clear that it is not necessary to prove that the government agency had actual knowledge of the misrepresented site conditions. Acchione Hollerbach v. United States, supra. It is sufficient to show that the information conveyed was false or misleading, whether it was mistakenly so or due to arbitrary action or intentional subterfuge. In the present case, the State System knew of the lead based paint problem and had previously included its remediation in contract specifications but simply failed to incorporate those terms in A.G. Cullen's contract, possibly inadvertently due to an oversight. This compelling evidence is more than sufficient to demonstrate, under the contract, an unforeseen condition for which A.G. Cullen is entitled to recover.

Even if the State System had not misled A.G. Cullen with respect to the lead based paint abatement, the contractor could recover under the second prong of the contract test for unforeseen conditions. That provision allows additional payment for site conditions which are unusual and which differ from those ordinarily found in construction activities. The State System argues that lead based paint is not unusual in old buildings and that A.G. Cullen should have known, and in fact, did know, of its presence here. But simply knowing of the possibility, or the certainty, of a condition does not make it the job of the contractor when that party's specifications do not address it. The evidence here shows that the practice of the trade is to address hazardous material abatement in specifications. Experts and experienced contractors testified that contractors prepare bids according to the specifications provided them and if lead based paint remediation is not included in the specifications, it is not part of the job. There could

be many reasons the State System omitted lead based paint from its specifications and A.G. Cullen had no contractual obligation to take responsibility for it. Therefore, with no provision for abatement in the specifications, lead based paint was an unforeseen condition in the context of this contract. See G.M. McCrossin, Inc. v. Commonwealth Department of General Services, 2002 WL 448677 (Pa. Bd. Claims 2002).

A.G. Cullen's work in abating lead based paint was in addition to its contractual obligations and it is entitled to compensation. Pennsylvania courts and this Board have made it clear that a contractor who performs work and incurs costs beyond the scope of its contract is entitled to additional compensation. Commonwealth Department of Transportation v. Gramar Construction Co., 71 Pa. Cmwlth. 481, 454 A.2d 1205 (1983); Commonwealth Department of Transportation v. Paoli Construction Co., 35 Pa. Cmwlth. 390, 386 A.2d 173 (1978); Mergentime Corporation v. Commonwealth Department of Transportation, 2000 WL 1481522 (Pa. Bd. Claims 2000); PMC Mechanical Contractors, Inc. v. Commonwealth Department of General Services, 1999 WL 33119574 (Pa. Bd. Claims 1999); Gannett Fleming Inc. v. Commonwealth Department of Transportation, 1997 WL 615084 (Pa. Bd. Claims 1997). Moreover, where the contract specifications are faulty, as they are here with respect to lead based paint abatement, the contractor's right to compensation will not be defeated by any requirement to inspect the premises. United States v. Atlantic Dredging Co., 253 U.S. 1 (1920); Manuel Bros.; Inc. v. United States, 55 Fed.Cl. 8 (2002). A.G. Cullen demonstrated that additional work occasioned by the necessity of abating lead based paint, together with certain expenses, totaled $63,713.75. This Board finds plaintiff's evidence, submitted in this regard, to be credible. Plaintiff is therefore entitled to compensation in this amount as reimbursement for the direct costs of performing work outside the scope of the contract.

Liquidated Damages

Although the contract provided for a completion date of August 24, 2001, the project was beset with numerous delays and that deadline passed with the job still incomplete. Both the failure of Weather Shield to make timely delivery of conforming windows and the extra work A.G. Cullen took on as a result of the lead based paint contributed to the overall time deficit that accumulated. Delays in one area of work created other delays and inefficiencies compounded. Because of the failure to meet the project completion date, the State System assessed liquidated damages at the rate of $500 per day against A.G. Cullen in accordance with the contract provisions.

On January 11, 2002, A.G. Cullen removed its workers from the job without having properly requested a substantial completion certificate. By then the building was occupied and in use by the university. The State System took the initiative to request the certificate from the project architect in late January, 2002, and an inspection was eventually performed on February 12 and 13, 2002. A punchlist of minor incomplete items was prepared at that time. The substantial completion certificate was finally issued in March 2002. The State System withheld payment of a contract balance of $587,188.54 which number included $86,000 in liquidated damages and an amount equaling the estimated costs to complete the punchlist work, together with a multiplier to insure performance of the punchlist. Although the State System made payments of the greater part of the contract balance over the ensuing two years, it continues to insist that liquidated damages were appropriately withheld under the contract. A.G. Cullen asserts that the project was delayed past the completion date as a result of the conduct of the State System and plaintiff is therefore entitled to payment of the $86,000 withheld as liquidated damages.

The contract between the parties provides for liquidated damages in the amount of $500 for each day the project remains incomplete beyond the scheduled completion date of August 24, 2001. Contract, Section 01010, at 3, paragraph II (L). Using this provision, the State System assessed liquidated damages against A.G. Cullen from the completion date specified in the contract, August 24, 2001, until the substantial completion inspection date of February 12, 2002, a total of 172 days. This assessment fails to take account of project delays that were out of the control of A.G. Cullen or were due to the acts or omissions of the State System.

Liquidated damages cannot be charged to a contractor as a result of delays caused by unforeseeable conditions. United States v. Brooks-Callaway Co., 318 U.S. 120 (1943). Moreover, where one party to a contract is the cause of another's failure to perform, it cannot assert that failure against the other. "It is particularly well settled that a party may not retain liquidated damages for the amount of delay caused by its own actions." Commonwealth Department of Transportation v. W.P. Dickerson & Son, Inc, 42 Pa. Cmwlth. 359, 364, 400 A.2d 930, 933 (1979). In this case, no claim for liquidated damages can be made for delay caused by the State System.

The project completion date of August 24, 2001 was established before the contract was bid in April, 2000, and was never extended. As bid, however, the contract did not account for the extra time that would be required to perform lead based paint abatement since that item was wholly absent from the project specifications. A.G. Cullen was necessarily delayed when it learned well after it had begun work that it would be responsible for the abatement. Work could not proceed as planned because A.G. Cullen had to determine how to conduct the remediation, whether to subcontract or to train employees. The slow responses from the State System to A.G. Cullen's requests added to the inefficiencies created by this unanticipated complication.

Work on the window portion of the contract was suspended for the protection of workers on May 4, 2001 and did not resume until June 4, 2001, a total of 31 days. Thus, for a minimum period of 31 days, the project was delayed due to the State System's failure to address lead based paint abatement in the design specifications.. That amount of time must be deducted from the 172 day period during which liquidated damages were assessed against A.G.Cullen. The State System cannot assess liquidated damages for periods of delay that were the result of its own actions. Commonwealth Department of Transportation v. W.P. Dickerson & Son, Inc, supra; James Julian, Inc. v. Commonwealth Department of Transportation, 2003 WL 23358060 (Pa. Bd. Claims. 2003). Moreover, liquidated damages are appropriately assessed only until January 11, 2002. On that date, A.G. Cullen removed its workers from the project site. No further work was performed from that date until the substantial completion inspection began on February 12, 2002. The State System counted the days up to February 12, 2002 to calculate liquidated damages even though there was no change in the degree to which the project had been completed since January 11, 2002 when A.G. Cullen stopped work. Therefore, the 32 days between January 11 and February 12 must also be deducted from the State System's liquidated damages calculation, reducing the total days assessed by 63. M & K Electrical Co., Inc. v. Commonwealth Department of Transportation, 1994 WL 757782 (Pa. Bd. Claims 1994); see also G.M. McCrossin, Inc. v. Commonwealth Department of General Services, 2002 WL 448677 (Pa. Bd. Claims 2002).

After deducting 63 days from the 172 day period claimed by the State System, 109 days remain for which liquidated damages are appropriately assessed. This Board consistently enforces liquidated damage clauses in Commonwealth contracts where the delay is not the result of actions by the Commonwealth itself or conditions that do not conform to the specifications. Jay R. Reynolds, Inc. v. Commonwealth Department of General Services, et al., 1996 WL

520401 (Pa. Bd. Claims 1996)(where plaintiff argued liquidated damages constituted a penalty, the Board held that, pursuant to the Commonwealth Court, we are required to enforce such clauses in Commonwealth contracts.) citing Commonwealth Department of Transportation v. Interstate Contractors Supply Co., 130 Pa. Cmwlth. 334, 568 A.2d 294 (1990). In enforcing liquidated damage clauses, the Commonwealth Court has held that "unless the parties by contract have indicated otherwise, the contractor is presumed to undertake the burden of unanticipated happenings. . . ." Commonwealth Department of Transportation v. Interstate Contractors Supply Co., supra., at 338, 568 A.2d at 294, (where the Commonwealth Court held that liquidated damages did not amount to a penalty when assessed against an experienced contractor that encountered weather related delays) citing Commonwealth General State Authority v. Osage Co., 24 Pa. Cmwlth. 276, 355 A.2d 845 (1976).

The evidence in the present case describes many instances of delay, including the multiple problems with the Weather Shield windows, the implementation of OSHA requirements in removing lead containing materials, and the "trade stacking" that resulted from scheduling changes. In light of our holding today, A.G. Cullen cannot attribute to the State System time lost in identifying a satisfactory window supplier. To the extent the remaining delays were caused by either party, plaintiff has not provided us with a method of apportioning responsibility. The State System may have contributed to the events that caused the project to run past August 24, 2001, but plaintiff has not been able to identify any specific days during which the State System was responsible for delay, other than those described above. Robinson v. United States, 261 U.S. 486 (1923). Like the contractor in Interstate Contractors Supply, supra., A.G. Cullen is an experienced contractor that agreed to a liquidated damage clause in a project where delay was a risk and damages were difficult to prove. A.G. Cullen has assumed the risk and is liable for the

remaining liquidated damages, but only in the amount of $54,500, the result of 109 days at $500 per day. The State System must remit to plaintiff the additional $31,500 improperly withheld as liquidated damages for the 63 days of delay for which plaintiff is not responsible.

Contract Balance

By early December 2001, A.G. Cullen believed the project to be substantially complete and sought a punchlist so it could close out the project. The State System responded that A.G. Cullen had not followed the contract procedures to obtain a substantial completion certificate. Thereafter, disputes developed between the parties regarding the details of remaining work to be done and payments that were to be made under the contract. A.G. Cullen contested the punchlist items, many of which it asserted had already been completed or were outside the scope of the contract and virtually all of which were estimated at an unreasonably inflated cost.

Unable to reach a satisfactory resolution, A.G. Cullen ceased work on the punchlist items. The State System declared A.G. Cullen in breach and terminated the contract on April 24, 2002. The State System then began to complete the items on the punchlist using its own staff, a process that took the better part of two years. As the items were completed, the State System calculated the actual cost incurred in labor and materials, deducted that cost from the much higher estimated cost and paid 90% of the difference to A.G. Cullen. These supplemental payments were made at unscheduled intervals that were not related to the completion of the work. In March, 2004, the State System made a final payment of the remaining amount it determined to be due to A.G. Cullen on the contract. In making this last payment, the State System withheld $86,000 in liquidated damages together with $145,472.40 of the contract balance. The State System maintains that $145,472.40 equals its costs in completing the punchlist work that A.G. Cullen had not performed when the contract was terminated. A.G.

Cullen now demands an award of the contract balance, interest and penalties based on the inflated costs attributed to the punchlist and delayed payments of the contract balance.

The State System is entitled to withhold a reasonable amount necessary to complete the contract. ATAP Construction, Inc. v. Liberty Mutual Ins. Co.,1998 WL 341931 (E.D.Pa 1998). Its punchlist of incomplete items when A.G. Cullen left the project included about 700 minor jobs. Although the amounts originally estimated for these items may have been inflated, as the work progressed the amounts the State System recorded as actual costs were generally somewhat much lower and A.G. Cullen received all but $145,472.40 of the contract balance in supplemental payments.

In A.G. Cullen's view this total amount is still excessive mostly because the work that it represents was not within A.G. Cullen's scope of work or was already completed before it left the job. A.G. Cullen presented extensive testimony and voluminous supporting documentation disputing the items included on the list and the amounts attributed to completing them. This Board finds this evidence convincing and agrees that some categories of items that the State System charged to A.G. Cullen were not its responsibility. We do not agree, however, that the amounts finally attributed to each item appropriately remaining on the punchlist were inflated or excessive.

The testimony of Mr. Paul Cullen, Vice President and Secretary of A.G. Cullen, addressed the individual items on the punchlist in great detail, reviewing room by room and item by item what work was to be performed and the extent to which it was within the scope of work assigned to A.G. Cullen. Many of the items detailed involved cleaning up and leaving a location in finished condition. According to Mr. Cullen's credible explanation, much of this clean-up work was the responsibility of other trades that followed A.G. Cullen in certain locations. A

recurring problem reflected in the punchlist concerned ceiling tiles that were removed, damaged, absent or simply left askew by other contractors' workers after A.G. Cullen had completed its work in an area. Similarly, carpet cleaning and repair was included on A.G. Cullen's punchlist for areas where A.G. Cullen was not working or where other trades had specific instructions to restore carpeting.

Mr. Cullen also testified that the windows and doors supplied to the project were under warranty from the manufacturers. Much of the damage, breakage or missing components would be restored at no additional cost by these suppliers. The Board concludes that A.G. Cullen was improperly charged for broken safety glass, damaged window screens and warped doors that should have been obtained from the manufacturers under warranty. In the same vein, the punchlist improperly included the cost of access panels for electric and plumbing fixtures. Access panels were to be supplied by the other contractors but they were improperly charged to A.G. Cullen. Other items that the Board finds were outside A.G. Cullen's scope of work include some painting and touch-up work outside A.G. Cullen's work area and finishing details on certain doors in the stair towers.

The State System maintained a record of work orders specifying time and materials for completing most of the punchlist. In most cases, the total cost for each item was significantly lower than the estimate on the original punchlist that A.G. Cullen objected to so vehemently. Although A.G. Cullen presented an estimate of costs for these items that is lower still, there is no evidence that A.G. Cullen's low estimates are any more reliable than the initial high estimates assigned by the State System. This Board finds that the values recorded by the State System from its actual work orders are reasonable. Myer Feinstein Co. v. DeVincent, 151 Pa. Super 254, 30 A.2d 221 (1943). Based on this work order list of jobs completed by the State System and the

actual cost of each job, this Board finds that of the total $145,472.40 contract balance withheld from A.G. Cullen, $59,021.27 was improperly charged. This amount shall be paid to A.G. Cullen with interest at the statutory rate from the date the project was substantially complete.

Delay

A.G. Cullen has pointed to a pattern occurring throughout the course of this project of interference, errors and non-responsiveness by the State System that resulted in delay and increased expenses for A.G. Cullen. The pattern asserted itself in connection with each of the disputes that are the subject of this claim: in the identification of Weather Shield as a manufacturer of windows, in the failure to include lead based paint abatement in the specifications, and in the lengthy and overpriced punchlist. With each of these issues the State System responded slowly and unwillingly, delayed considering change order requests and other communications from A.G. Cullen and refused to approve change orders for additional work or to extend time to accommodate the circumstances. Exchanges between the parties revealed strained relations that restricted communication. This conduct often interfered with A.G. Cullen's ability to perform its contract obligations, caused inefficiency and produced chains of delay where the inability to complete one job produced delays in the next job and interfered with the work of the other contractors.

A.G. Cullen argues that it should be compensated in damages for the extra work this interference and delay caused. It is true that every contract contains the implied obligation that neither party will do anything to prevent, hinder or delay performance. ILM Systems, Inc. v. Suffolk Construction Co., Inc., 252 F. Supp.2d 151 (E.D. Pa. 2002); Mega Construction Co., Inc. v. United States, 29 Fed. Cl. 396 (1993). This Board has held "[w]hen one party to a contract introduces disruptive changes to the contract, the changes amount to a breach of contract

entitling the disrupted party to damages flowing from that breach." Gannett Fleming Inc. v. Commonwealth Department of Transportation, 1997 WL 615084, at 25 (Pa. Bd. Claims 1997). To recover, however, the contractor must show an unreasonable period of delay attributable only to the other party's conduct and that damages ensued. Mega Construction Co., Inc. v. United States, supra. The evidence must establish that the defendant caused the delay, and if there are concurrent causes of delay, the effect of the delay specifically attributable to the defendant must be clear.

In the present case, the project was delayed four and a half months past its scheduled completion date. As discussed above, 31 days of that delay clearly resulted from the unforeseen necessity to implement a lead based paint abatement program. This period of time was specifically defined when A.G. Cullen stopped all work on the windows to address the OSHA requirements and other problems associated with remediation of hazardous materials. A.G. Cullen was unable to plan for this work because the State System failed to include design specifications for lead based paint abatement in the contract. Therefore, this period of delay was specifically attributable to the State System.

Pennsylvania law does not require proof of damages to a mathematical certainty. Evidence of damages may consist of probabilities and inferences as long as the amount is demonstrated with reasonable certainty. E. C. Ernst, Inc. v. Koppers Co., Inc., 626 F.2d 324 (3rd Cir. 1980) To prove damages, however, a plaintiff must introduce sufficient evidence for the trier-of-fact to make an intelligent estimation, without conjecture, of the amount to be awarded. Delahanty v. First Pennsylvania Bank, N.A., 464 A.2d 1243 (Pa. Super. 1983); Andrew Hreha & Sons, Inc. v. Commonwealth Department of General Services, 1904 WL 262083 (Pa. Bd. Claims, 1904). Moreover, it is incumbent on the contractor not only to quantify the damages but

also to connect the losses alleged to the particular incident of delay. Where, as here, each party bears responsibility for a portion of the total project delay, the plaintiff must demonstrate how the lump sum of extra cost can be broken down and assigned to the responsible party. Wunderlich Contracting Co., v. United States, 351 F.2d 956 (Ct. Cl. 1965); Lichter v. Mellon-Stuart Co., 305 F.2d 216 (3rd Cir. 1962).

A.G. Cullen has demonstrated that it incurred costs in specified categories of work as a result of the total project delay. Mr. Paul Cullen, vice president of A.G. Cullen, whose primary responsibility is to oversee all building projects, testified that A.G. Cullen recorded the costs incurred in fourteen categories that were affected by delays in the project. The contemporaneously prepared report detailed each transaction that occurred in the project and specified its cost. In order to demonstrate its damages for delay, A.G. Cullen compared the costs actually incurred over the period of time that the project actually ran with the amount budgeted for the period that the project was supposed to run. The positive difference of these two totals equals a total amount that A.G. Cullen advances as its delay costs. The Board finds this a reasonably certain method for determining damages consistently with Pennsylvania law. Using this calculation, the Board finds that A.G. Cullen's total costs attributable to total project delay equal $130,962.90. Using the 140 day period that this Board has previously found constituted the total time the project was delayed, we determine that the per day cost of delay to A.G. Cullen equals $935.45. The total cost that A.G. Cullen can therefore recover for the 31 day period of delay it has shown was the responsibility of the State System equals $28,998.95. That amount is awarded to A.G. Cullen with interest from January 11, 2002, when the project was substantially complete.

With respect to the remaining allegations of damages, the Board has been unable to extract from the evidence a method of connecting any portion of A.G. Cullen's increased costs to any period of delay that can be solely attributable to the State System.

Without evidence of the extent to which the acts or omissions of the State System increased A.G. Cullen's costs, no basis appears for even an educated guess as to the amount of damages to which the plaintiff may be entitled. A.G. Cullen has not distinguished, perhaps cannot distinguish, any specifically quantifiable cost suffered as a result of delays caused by the State System from losses that are due to A.G. Cullen's own performance problems, or even to other trades or suppliers. This Board simply cannot award damages for any additional periods of delay based on this record.

A.G. Cullen has also generally alleged lost productivity and other costs due to the State System's long periods of delay in responding to the contractor for such things as change orders, requested extensions of time, and provision of the punchlist. As we stated in G.M. McCrossin, Inc. v. Commonwealth Department of General Services, 2002 WL 448677 (Pa. Bd. Claims 2002), at 36, "[t]he failure of DGS to process change orders in a timely matter no doubt did create a scheduling and sequencing work problem for [the contractor.] . . . However, the record simply does not bare out the 'all-encompassing-inefficiency' disruption and delay claim tendered by [the contractor] irrespective of the change order issue." The federal courts have also considered how to determine if changes in the work schedule cause lost productivity resulting in damages:

> . . . [I]t is well-settled that neither the mere issuance of change orders nor the number of change orders establishes a viable claim for losses due to disruption . . . .Although recognizing that changes can, in theory, disrupt work, courts require that the fundamental elements of liability and causation be proven before sustaining a lost productivity claim. . . . General unsupported statements that the

> change orders impacted the work do not substitute for proof of actual disruption. Rather there must be evidence as to the effect the changes had on the job. . . . A claimant must show not only that the disruption resulted solely from the defendant's actions, but claimant must also show the extent of the disruption and the harm it caused.

Citations omitted, Aetna Casualty and Surety Co. v. The George Hyman Const. Co., 1998 LEXIS 22627 (E.D. Pa. 1998).

A.G. Cullen maintains that the State System's delays resulted in, among other things, duplicating work, inefficient use of employees, trade stacking and missing the project deadline, all of which were costly outcomes. It has not shown how the change orders specifically, apart from other causes, created a disruptive effect on the project. These general allegations of numerous, overlapping actions by the State System as the cause of undifferentiated periods of delay in completing the contract are not sufficient to sustain an award of damages. As in McCrossin, supra., this Board will not find the defendant liable for cost of the delays experienced by the contractor beyond the 31 day period for lead based paint abatement.

Interest, Penalties and Attorney's Fees

A.G. Cullen has asserted a claim for interest, penalties and attorney's fees against the State System for withholding payment it knew was owing to the contractor pursuant to the terms of the contract and the applicable statute. Penalty and attorney fees are provided for in the Procurement Code, 62 Pa. C.S.A. Section 3935(a), (b) which provide that an award may be made to a prevailing party if the government agency is determined to have withheld payment in bad faith. Another section of the Procurement Code provides for withholding payment for good faith claims, allowing the government agency to withhold payment for deficiency items pursuant to the terms of the contract.

The standard for finding an action was in bad faith is whether it can be considered "arbitrary and vexatious." 62 Pa. C.S.A. Section 3935. Bowser v. Blom, 569 Pa. 609, 807 A.2d 830 (2002); Thunberg v. Strause, 545 Pa. 607, 682 A.2d 295 (1996); Cummins v. Atlas Railroad Const. Co., 2002 Pa. Super. 418, 814 A.2d 742 (2002); Dome Corp. of N. America v. Commonwealth Department of Transportation, 2003 WL 23358059 (Pa. Bd. Claims 2003). The trier-of-fact has great latitude and discretion in awarding a penalty or attorney fees when authorized by contract or statute. Cummins v. Atlas Railroad Const. Co., supra. Examples of conduct that courts have recognized as bad faith include lawsuits filed, or defenses mounted, for purposes of fraud, dishonesty or corruption; or denial of payment to a contractor when the government agency knew the payment to be authorized for work that was performed satisfactorily. Thunberg v. Strause, supra.; Dome Corp. of N. America v. Commonwealth Department of Transportation, supra. In Cummins, the court upheld a finding of good faith withholding even though the defendant lost on every issue. The fact that the jury found against the defendant on all the charges did not require a finding that the withholding was in bad faith.

In the present case, we have found in favor of A.G. Cullen on some issues and in favor of the State System on others. In our view, the parties' positions on the payments represented a good faith dispute. The State System offered a reasonable defense, grounded in law and in fact, in support of its position. There is no basis here for a finding of arbitrary, vexatious or capricious conduct that would support a finding of bad faith and an award of penalty and attorney's fees.

A.G. Cullen has, however, made a compelling argument that interest is owed on the payments of amounts due under the contract that were unreasonably delayed by the State System during the completion of the punchlist. The Board agrees. Pennsylvania law permits interest at

the legal rate, 6% per year, to parties with a right to payment under a contract. Dome Corp. of North America v. Commonwealth Department of Transportation, supra., Paliotta v. Commonwealth Department of Transportation, 1999 WL 212254 (Pa. Bd. Claims 1999); Ernest Bock & Sons, Inc. v. Commonwealth Department of General Services, 1998 WL 901890 (Pa. Bd. Claims 1998). Although A.G. Cullen brought the project to substantial completion by January 11, 2002, and the State System issued its substantial completion certificate in March of that year, no further payments were made of any amount still due under the contract until September 19, 2002. In fact, the State System withheld $368,847 of contract payments, based on the inflated values for work identified on the punchlist, enlarged further by the multiplier provided for under the contract. The remaining six payments were advanced to A.G. Cullen at random intervals that appear to be arbitrary and for which no reason has ever been offered. The final payment was not made until almost the date of trial of this matter. This Board finds that the delays in payment of certain amounts due A.G. Cullen is unjustified and that interest is owed on these payments. The interest payments are to be calculated from the date when the Commonwealth's duty to pay arose, in this case January 11, 2002, when the project was substantially complete. Accordingly, the Board awards interest as follows:

Supplemental Payment No.	Amount	Date	Days of delay	Interest
1.	$16,823.13[4]	9/19/02	251	$696.48
2.	$46,595.37	4/16/03	460	$3,522.61
3.	$20,668.79	5/22/03	496	$1,686.57
4.	$12,993.84	8/27/03	584	$1,247.41
5.	$24,224.20	10/29/03	645	$2,572.61
6.	$16,843.20	10/30/03	644	$1,778.64
7.	$15,984.90	3/5/04	709	$1,860.64
Total	$154,133.43			$13,364.96

ORDER

AND NOW, this 4th day of March 2005, after a hearing, **IT IS ORDERED** and **DECREED** that judgment be entered in favor of plaintiff, A.G. Cullen Construction, Inc. and against defendant, Commonwealth of Pennsylvania, State System of Higher Education, as follows:

1. in the sum of sixty-three thousand seven hundred thirteen dollars and seventy-five cents ($63,713.75) for the extra cost of lead based paint abatement, with interest thereon at the rate of six percent (6%) per year from January 11, 2002;
2. in the sum of thirty-one thousand five hundred dollars ($31,500) for liquidated damages rebate, with interest thereon at the rate of six percent (6%) per year from January 11, 2002;

[4] See Footnote 1

3. in the sum of fifty-nine thousand twenty-one dollars and twenty-seven cents ($59,021.27) for the contract balance improperly withheld, with interest thereon at the rate of six percent (6%) per year from January 11, 2002.
4. in the sum of twenty-eight thousand nine hundred ninety-eight dollars and ninety-five cents ($28,998.95) for project delay occasioned by the defendant, with interest thereon at the rate of six percent (6%) per year from January 11, 2002; and
5. in the sum of thirteen thousand three hundred sixty-four dollars and ninety-six cents ($13,364.96) of additional interest for unjustified late payment of certain contract balance amounts.

IT IS FURTHER ORDERED that plaintiff's petition for an award of penalty and attorneys' fees is **DENIED**. Each party herein to bear its own costs and attorneys' fees.

BOARD OF CLAIMS

_____
Jeffrey F. Smith
Chief Administrative Judge

_____
Ronald L. Soder, P.E.
Engineer Member

_____
John R. McCarty
Citizen Member