

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

DONALD AMBROISE, )  
 )  
 Petitioner, )  
 )  
 vs. ) Case No. 99-2529  
 )  
 FLORIDA ENGINEERS MANAGEMENT )  
 CORPORATION, )  
 )  
 Respondent. )  
 \_\_\_\_\_ )

RECOMMENDED ORDER

Pursuant to notice, a hearing was held in this case in accordance with Section 120.57(1), Florida Statutes, on August 25, 1999, by video teleconference at sites in Fort Lauderdale and Tallahassee, Florida, before Stuart M. Lerner, a duly-designated Administrative Law Judge of the Division of Administrative Hearings.

APPEARANCES

For Petitioner: Donald Ambroise, pro se  
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For Respondent: William H. Hollimon, Esquire  
Ausley & McMullen  
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STATEMENT OF THE ISSUE

Whether Petitioner is entitled to additional credit for his solutions to Problems 124 and 222 of the Principles and Practice of Engineering portion of the engineering licensure examination

administered on October 30, 1998, by the National Council of Examiners for Engineers and Surveyors.

PRELIMINARY STATEMENT

By letter dated June 2, 1999, Petitioner requested a "formal administrative hearing" on his challenge to the failing score he received on the October 30, 1998, Principles and Practice of Engineering portion of the engineering licensure examination administered by the National Council of Examiners for Engineers and Surveyors. On June 8, 1999, the matter was referred to the Division of Administrative Hearings (Division) for the assignment of an Administrative Law Judge to conduct the hearing Petitioner had requested.

As noted above, the hearing was held on August 25, 1999. At the hearing, Petitioner testified on his own behalf, and Clayton Campbell, P.E., testified (as an expert) on behalf of Respondent. No other witnesses testified. In addition to the testimony of Petitioner and Mr. Campbell, a total of 17 exhibits (Petitioner's Exhibit 1 and Respondent's Exhibits 1 through 16) were offered and received into evidence.

At the conclusion of the evidentiary portion of the hearing, the undersigned announced, on the record, that proposed recommended orders had to be filed no later than 14 days after the close of the hearing. Petitioner and Respondent filed their Proposed Recommended Orders on September 3, 1999, and

September 7, 1999, respectively. These post-hearing submittals have been carefully considered by the undersigned.

#### FINDINGS OF FACT

Based upon the evidence adduced at hearing, and the record as a whole, the following findings of fact are made:

1. On October 30, 1998, as part of his effort to obtain a Florida engineering license, Petitioner sat for the Principles and Practice of Engineering Examination (Examination). This is a national examination developed and administered by the National Council of Examiners for Engineers and Surveyors (NCEES). Petitioner chose to be tested in civil engineering.

2. Petitioner received a raw score of 47 on the Examination. For the civil engineering specialization, a raw score of 47 converts to a score of 69. To pass the Examination, a converted score of 70 is needed.

3. Petitioner formally requested the NCEES to rescore his solutions to Problems 124, 125, and 222 on the Examination. At the time he made this request, Petitioner was aware that rescoring could result in the candidate's score being lowered (although he believed that, in his case, the outcome would be a higher, not a lower, score).

4. Petitioner was wrong. The rescoring he requested resulted in his receiving a raw score of 43 (or a converted score of 65, 5 points less than he needed to pass the Examination).

5. After being notified of the outcome of the rescoring, Petitioner requested the Florida Board of Professional Engineers to grant him a "formal administrative hearing" on the matter.

6. Petitioner's request was granted.

7. At hearing, Petitioner advised that he was challenging only the grading of his solutions to Problems 124 and 222 of the Examination, and that he was not pursuing his challenge to the score he had received for his solution to Problem 125.

8. Problems 124 and 222 were worth ten (raw) points each.

9. Problem 124 contained four subparts (or requirements).

10. Petitioner received two (raw) points for his solution to Problem 124. Rescoring did not result in any change to this score.

11. Due to mathematical errors that he made, Petitioner did not solve any of the subparts of Problem 124 correctly. Accordingly, in accordance with the requirements and guidelines of the NCEES scoring plan for this problem, the highest (raw) score that he could have received for his solution to this problem was a two, which is the score he received.

12. Problem 222 contained five subparts (or requirements).

13. Petitioner originally received a (raw) score of six for his solution to Problem 222. Upon rescoring, his (raw) score was reduced to two.

14. In attempting to solve Problem 222, Petitioner overestimated the lateral earth pressure due to his

misunderstanding of the term "equivalent fluid pressure" used in the problem. In addition, in his solution to subpart (a), he did not properly specify the appropriate bar size and spacing.

15. Giving Petitioner a (raw) score of two for his solution to Problem 222 was consistent with the requirements and guidelines of the NCEES scoring plan for this problem.

#### CONCLUSIONS OF LAW

16. A person seeking to become licensed by the Department of Business and Professional Regulation (Department) to practice engineering in the State of Florida must take and pass a licensure examination (provided that person is not entitled to licensure by endorsement). Sections 471.013 and 471.015, Florida Statutes.

17. The required examination is described in the Board of Professional Engineer's (Board's) Rules 61G15-21.001 and 61G15-21.002, Florida Administrative Code, which provide, in pertinent part, as follows:

61G15-21.001 Written Examination Designated;  
General Requirements.

(1) The Florida Board of [Professional] Engineers hereby determines that a written examination shall be given and passed prior to any applicant receiving a license to practice as a professional engineer . . . . The examination shall be provided by the National Council of Examiners for Engineers and Surveyors (NCEES). 1/ The examination consists of two parts, each of eight hours. Candidates are permitted to bring certain reference materials, slide rules and certain calculators. A list of approved reference materials and calculators will be provided to

all candidates prior to each examination. All materials including pens and pencils are to be furnished by the applicant. National examination security requirements as set forth by the NCEES shall be followed throughout the administration of the examination. . . .

61G15-21.002 Areas of Competency and Grading Criteria.

(1) The Engineering Fundamentals Examination shall include all questions and problems on subjects normally connected with the basic fundamentals of engineering education. The topics which will usually be treated in this section are as follows: mathematics, mathematical modeling of engineering systems, nucleonics and wave phenomena, chemistry, statistics, dynamics, mechanics of materials, fluid mechanics, thermodynamics/heat transfer, computer programming, electrical circuits, statics, structure of matter, engineering mechanics, electronics and electrical machinery.

(2) Part two of the examination shall be based on Professional Practice and Principles and shall be devoted primarily to the field of the applicant's finding solutions to problems designed to test the applicant's ability to apply acceptable engineering practice to problems which are representative of his discipline. Applicants for registration must select one of the listed specializations in which to be examined. The Board may also authorize examinations in other engineering disciplines when the Board determines that such disciplines warrant the giving of a separate examination in terms of cost effectiveness and acceptability in the profession of engineering.

(3) In Part Two of the examination the applicant will usually be required to solve from seven to ten problems which the applicant may choose from approximately twenty problems drawn from a test pattern generally set forth as follows: . . .

(b) Civil/Sanitary -- Highway, Structural, Sanitary Planning, Fluids, Soils, Economics, Water Control and Resources, Treatment Facility Design, Fluid Flow Hydraulics, Planning Analysis, System Design, Chemical-Bio Problems, Materials Sections, and Economics. . . .

18. The Board's Rules 61G15-21.003 and 61G15-21.004, Florida Administrative Code, address the grading of the licensure examination. These rules provide, in pertinent part, as follows:

61G15-21.003 Grading Criteria for the Essay Portion of Examination.

(1) Insofar as the essay portion of the examination is not machine graded the Board deems it necessary to set forth the following guidelines upon which grades for the essay portion shall be based. Grades on the essay portion of the examination will be based upon the application of good engineering judgment, the selection and evaluation of pertinent information and the demonstration of the ability to make reasonable assumptions when necessary. Answers may vary due to assumptions made. Partial credit will normally be given if correct fundamental engineering principles are used, even though the answer may be incorrect. All grading will be done by an expert committee provided by the national testing service supplying the examination. 2/

(2) An applicant must follow all pertinent instructions on the examination booklet and the solution pamphlet. The applicant shall indicate which problems he has solved and is submitting for credit in the designated boxes on the front cover of the solution pamphlet. If an applicant fails to indicate which problems he is submitting for credit in the designated boxes, only the first four problems worked in said pamphlet shall be graded.

61G15-21.004 Passing Grade. . . .

(2) A passing grade on Part Two of the examination is defined as a grade of 70 or better. The grades are determined by a group of knowledgeable professional engineers, who are familiar with engineering practice and with what is required for an applicable engineering practice and with what is required for an applicable engineering task. These professional engineers will establish a minimum passing score on each individual test item (i.e., examination problem). An Item Specific Scoring Plan (ISSP) will be prepared for each examination item based upon the NCEES standard scoring plan outline form. An ISSP will be developed by persons who are familiar with each discipline including the item author, the item scorer, and other NCEES experts. On a scale of 0-10, six (6) will be a minimum passing standard and scores between six (6) and ten (10) will be considered to be passing scores for each examination item. A score of five (5) or lower will be considered an unsatisfactory score for that item and the examinee will be considered to have failed that item. To pass, an examinee must average six (6) or greater on his/her choice of eight (8) exam items, that is, the raw score must be forty-eight (48) or greater based on a scale of eighty (80). This raw score is then converted to a base 100 on which, as is noted above, a passing grade will be seventy (70).

19. The Board's Rule 61G15-21.006, Florida Administrative Code, provides that "[e]xam review procedures are governed by rule 61-11.017, F.A.C." and that "[a]ll reviews of answers, questions, papers, grades, and grading key shall be at a mutually convenient time and subject to national testing security requirements in order to insure the integrity of the examination."

20. Rule 61.017, Florida Administrative Code, is a Department rule which provides, in pertinent part, that "[r]eview

of examinations developed by or for a national council, association, society (herein after referred as national organization) shall be conducted in accordance with national examination security guidelines."

21. In the instant case, after receiving a failing score on the Principles and Practice of Engineering portion of the NCEES-administered and graded engineering licensure examination and receiving an even lower score upon subsequent review and rescoring, Petitioner requested a "formal administrative hearing" to contest his failing score.

22. The Board (acting through the Florida Engineers Management Corporation, a Florida not-for-profit corporation created pursuant to Section 471.038, Florida Statutes, "to provide administrative, investigative, and prosecutorial services" to the Board) granted Petitioner's request for a hearing and referred the matter to the Division of Administrative Hearings for hearing.

23. In those instances where a State of Florida licensing board or agency is empowered to alter a candidate's failing examination score, the candidate is entitled to a hearing, pursuant to Chapter 120, Florida Statutes, to contest his or her failing score. At the hearing, the candidate bears the burden of establishing, by a preponderance of the evidence, that his or her failing score was the product of arbitrary or otherwise improper or erroneous grading. See Harac v. Department of Professional

Regulation, Board of Architecture, 484 So. 2d 1333, 1338 (Fla. 3d DCA 1986)("Ordinarily one who fails a licensure examination would shoulder a heavy burden in proving that a subjective evaluation by an expert is arbitrary."); Florida Department of Health and Rehabilitative Services v. Career Service Commission, 289 So. 2d 412, 414 (Fla. 4th DCA 1974)( 1974)("[T]he burden of proof is on the party asserting the affirmative on an issue before an administrative tribunal.' . . . . 'As a general rule the comparative degree of proof by which a case must be established is the same before an administrative tribunal as in a judicial proceeding--that is, [a] preponderance of the evidence. It is not satisfied by proof creating an equipoise, but it does not require proof beyond a reasonable doubt.'"); Section 120.57(1)(j), Florida Statutes ("Findings of fact shall be based upon a preponderance of the evidence, except in penal or licensure disciplinary proceedings or except as otherwise provided by statute, and shall be based exclusively on the evidence of record and on matters officially recognized.").

24. Petitioner failed to submit such proof in the instant case.

25. In attempting to demonstrate that he should have received higher scores for his solutions to Problems 124 and 222 of the Examination, Petitioner did not present the testimony of any independent expert witness. Instead, he relied exclusively on his own testimony, which he was free to do notwithstanding his

interest in the outcome of the case. See Martuccio v. Department of Professional Regulation, 622 So. 2d 607, 609-10 (Fla. 1st DCA 1993). Respondent countered Petitioner's testimony with the expert testimony of an experienced and knowledgeable Florida-licensed engineer, Clayton Campbell, P.E. Given Mr. Campbell's impressive credentials and qualifications, and his apparent candor and lack of bias, the undersigned has credited his (Mr. Campbell's) expert testimony (concerning the scoring of Petitioner's solutions to Problems 124 and 222) over Petitioner's testimony to the contrary, and he has determined that the scores Petitioner received for his solutions to these problems were not, given the requirements and guidelines of the NCEES scoring plan for these problems, undeservingly low.

26. Moreover, even if Petitioner had persuaded the undersigned that he (Petitioner) should have received higher scores for these solutions, the undersigned would still not recommend that the Board grant Petitioner the relief he is seeking in this case. This is because the Examination is "an examination developed by or for a national board, council, association, or society," within the meaning of the Department's Rule 61-11.012(1), Florida Administrative Code, and, pursuant to that rule provision, the Board must "accept the development and grading of such [an] examination without modification." See also Department Rule 61-11.010(1)(a), Florida Administrative Code ("National Examinations shall be graded solely and exclusively by

the National examination provider or its designee. National examinations shall include those developed by or for national boards, councils, associations or societies."); Board Rule 61G15-21.003(1), Florida Administrative Code ("All grading will be done by an expert committee provided by the national testing service supplying the examination.").

27. In view of the foregoing, Petitioner's challenge to the scores he received from the NCEES for his solutions to Problems 124 and 222 of the Principles and Practice of Engineering portion of the October 30, 1998, engineering licensure examination should be rejected.

#### RECOMMENDATION

Based on the foregoing Findings of Fact and Conclusions of Law, it is

RECOMMENDED that a final order be entered rejecting Petitioner's challenge to the failing score he received from the NCEES on the Principles and Practice of Engineering portion of the October 30, 1998, engineering licensure examination.

DONE AND ENTERED this 4th day of October, 1999, in Tallahassee, Leon County, Florida.

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STUART M. LERNER  
Administrative Law Judge  
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Filed with the Clerk of the  
Division of Administrative Hearings  
this 4th day of October, 1999.

ENDNOTES

1/ A licensing board within the Department of Business and Professional Regulation, such as the Board of Professional Engineers, is authorized by Section 455.217(1)(d), Florida Statutes, to "approve by rule the use of any national examination which the department has certified as meeting requirements of national examinations and generally accepted testing standards pursuant to department rules." A "national examination," as that term is used in Section 455.217, Florida Statutes, is defined in Rule 61-11.015, Florida Administrative Code, as follows:

(1) . . . . . To ensure compliance, the following definition of a national examination shall be applied when using a national examination.

(2) A national examination is an examination developed by or for a national professional association, board, council or society (hereinafter referred to as organization) and administered for the purpose of assessing entry level skills necessary to protect the health, safety and welfare of the public from incompetent practice.

(a) The purpose of the examination shall be to establish entry level standards of practice that shall be common to all practitioners.

(b) The practice of the profession at the national level must be defined through an occupational survey with a representative sample of all practitioners and professional practices.

(c) The examination for licensure must assess the scope of practice and the entry skills defined by the national occupational survey.

(3) The national organization must be generally recognized by practitioners across

the nation in the form of representatives from the State Boards or shall have membership representing a substantial number of the nation's practitioners who have been licensed through the national organization examination.

(4) The national organization shall be the responsible body for overseeing the development and scoring of the national examination.

(5) The national organization shall provide security guidelines for the development and grading of the national examination and shall oversee the enforcement of these guidelines.

2/ Pursuant to the Department's Rule 61-11.010(1)(a), Florida Administrative Code, "National Examinations shall be graded solely and exclusively by the National examination provider or its designee."

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NOTICE OF RIGHT TO SUBMIT EXCEPTIONS

All parties have the right to submit written exceptions within 15 days from the date of this recommended order. Any exceptions to this recommended order should be filed with the agency that will issue the final order in this case.