

Appendix B
**Coding Six-Minute Items
(Environmental PE)**

For each item, decide on the primary subject tested (e.g., “Water” or “Solid and Hazardous Waste”), then assign the item a code from the item classification codes provided in App. C.

Insert the code for the item directly after the item number, using the following format. Use all uppercase letters. Start with EN for “Environmental,” followed by the primary subject code, followed by the item classification code. Surround the entire code expression in square brackets. For example,

PROBLEM 3 [EN WT WTPL] or PROBLEM 21 [EN SW SWOP]

Appendix C
**Item Classification Codes
 (Environmental PE)**

WATER (WT)

Planning	WTPL
Research	WTRE
Development	WTDV
Project implementation	WTPI
Operations	WTOP
Monitoring of waste, wastewater, storm water, and natural water systems	WTMO
Other	WTOT

SOLID AND HAZARDOUS WASTE (SW)

Planning	SWPL
Research	SWRE
Development	SWDV
Project implementation	SWPI
Operations	SWOP
Monitoring of solid and hazardous waste systems	SWMO
Other	SWOT

AIR (AR)

Planning	ARPL
Research	ARRE
Development	ARDV
Project implementation	ARPI
Operations	AROP
Monitoring of air systems	ARMO
Other	AROT

ENVIRONMENTAL HEALTH, SAFETY, AND WELFARE (HS)

Research	HSRE
Development	HSDV
Project implementation	HSPI
Operations	HSOP
Monitoring of environmental health, safety, and welfare	HSMO
Other	HSOT

Appendix D
**Description of Exam Format
and Subjects
(Chemical PE)**

The NCEES Professional Engineering examination in environmental engineering consists of two four-hour sessions separated by a one-hour lunch period. Both sessions are taken by all examinees.

Both the morning and afternoon session contain 50 questions in multiple-choice (i.e., “objective”) format. As this is a “no-choice” exam, the examinee must answer all questions in each session correctly to receive full credit. There are no optional questions.

Exam Subjects

NCEES has published a description of the examination subjects. Regardless of the published examination structure, the exact number of questions that will appear in each subject area cannot be predicted reliably. There is no guarantee that any single subject will occur in any quantity. One reason for this is that some of the questions span several disciplines. The examinee might consider a pump selection question to come from the subject of fluids, while someone else might categorize it as engineering economics.

Table 1 is the official NCEES listing of the exam format, while Table 2 describes the subjects in detail. Most examinees find the list of subjects to be formidable in appearance. The percentage breakdowns given in Table 1 are according to NCEES, but these percentages are approximate. NCEES adds, “The examination is developed with questions that require a variety of approaches and methodologies including design, analysis, application, and operations. Some questions may require knowledge of engineering economics. These areas are examples of the kinds of knowledge that will be tested but are not exclusive or exhaustive categories.”

Table 1
Subjects on the Exam and
Approximate Percentages of Questions^a
(Environmental PE)

Exam Topic	Approx. %
Water	
Wastewater/Storm Water	14%
Water	13%
Natural Water Systems	7%
Solid and Hazardous Waste	
Solid/Hazardous Waste	21%
Air	
Pollution Source	6%
Pollution Control Processes	9%
Ambient Air Quality	6%
Environmental Health, Safety, and Welfare	
Risk Assessment	5%
Occupational and Radiological Health	7%
Fate and Transport	6%
Public Health	6%

^a Percentages of questions may be adjusted slightly in order to round the number of questions to whole numbers.

Note: The exam is developed with problems that will require a variety of approaches and methodologies including design, analysis, application and operations. Some problems may require knowledge of engineering economics.

Table 2
Detailed Analysis of Tested Subjects
(Environmental PE)

Water

Planning, research, development, project implementation, operations, and monitoring of waste, wastewater, storm water, and natural water systems

Solid and Hazardous Waste

Planning, research, development, project implementation, operations, and monitoring of solid and hazardous waste systems

Air

Planning, research, development, project implementation, operations, and monitoring of air systems

Environmental Health, Safety, and Welfare

Research, development, project implementation, operations, and monitoring of environmental health, safety, and welfare