Procedure Writing for MIL-STD-810G

Course No. 405

FOR WHOM INTENDED This course is for engineers, managers and technicians who are involved in the procurement, design, development and testing of military hardware governed by the provisions of MIL-STD-810G, "Environmental Engineering Considerations and Laboratory Tests," released 31 October, 2008.

This course is applicable to individuals from a wide range of activities such as defense contractors, aerospace, aviation, shipbuilding, weapons systems, land vehicles, and all branches of the US armed forces.

OBJECTIVES To provide a basic understanding of the environmental engineering tasks outlined in MIL-STD-810G and of how to write procedures for accomplishing each of these tasks.

BRIEF COURSE DESCRIPTION The course begins with an introduction to the tasks outlined in MIL-STD-810G, Part I, section 4. Procurement of military materiel requires careful consideration of the natural and man-made environments in which the materiel must be stored, transported and used. Tasks 401 through 406 are intended to guide the procurers and manufacturers of materiel through the process of designing, testing and delivering hardware that is ready to survive the rigors of field use, transportation and storage.

The process begins with Task 401, the Environmental Engineering Management Plan (EEMP), which covers the scheduling of Tasks 402-406, as well as preparation of cost/benefit analyses and consideration of alternatives to hardware testing. Next, the Environmental Test & Evaluation Master Plan (EEMP) is introduced. It covers tasks 402 through 404, moving from a generalized picture of the product's life cycle to a detailed, tailored list of environmental issues to be addressed by a testing program. This testing program is governed by task 405, and reports on the results of the program are governed by task 406.

Any writer of procedures must understand the important roles played throughout this process by Program Manager, Environmental Engineering Specialists, Design and Test Engineers and facility operators, all of whom have their part to play in the appropriate tailoring and successful completion of all needed environmental tests.

Students are expected to participate in classroom discussions, to work out classroom examples, to read the text and perform nightly review problems, and to undergo preliminary and final quizzes.

DIPLOMA PROGRAMS This course may be used as an elective for any TTi specialist diploma program.

PREREQUISITES Students should have taken TTi course 451, Understanding MIL-STD-810G or have equivalent experience.

TEXT Each student will receive 180 days access to the on-line electronic course workbook. Renewals and printed textbooks are available for an additional fee.

COURSE HOURS, CERTIFICATE, CEUs Class hours/days for on-site courses can vary from 14–35 hours over 2–5 days as requested by our clients. Upon successful course completion, each participant receives a certificate of completion and one Continuing Education Unit (CEU) for every ten class hours.

Course Outline

- Introduction
  - The Tasks of MIL-STD-810G
  - The procedure-writer's role
- Task 401: Environmental Engineering Management Plan (EEMP)
  - Schedule Tasks 402-406, plus task support
  - Consider alternatives to testing hardware
  - Prepare cost/benefit/risk analysis for alternative(s) to testing hardware
- Environmental Test & Evaluation Master Plan (ETEMP)
  - Task 402: Life Cycle Environmental Profile (LCEP)
    - Document applicable service use profile
    - Identify applicable environmental conditions
    - Consider storage, transit and operational environments
  - Task 403: Operational Environment Documentation (OED)
    - Document real-world platform characteristics
    - Obtain data from databases, models, simulations
    - Obtain remaining data by measuring realistic platform environments
  - Task 404: Environmental Issues/Criteria List (EICL)
    - Based on results from tasks 402 and 403
    - List all tailored issues and criteria
    - Provide rationale for derivations
- Task 405: Detailed Environmental Test Plans (DETP)
  - Laboratory test plans: Use methods in standard, selected and tailored to the specific test item
  - Field/fleet test plans: development/operational test agencies use their own plan requirements/formats, tailored to specific test item
  - Alternatives: explain methodology
- Task 406: Environmental Test Reports (ETR)
  - Laboratory test reports: use format in task 406
  - Field/fleet test reports: development/operational test agencies use their own test report requirements/formats
  - Alternative(s): appropriate report(s)
- Role of Program Manager
  - Mission need statement
  - Operational requirements document
  - System engineering management plan
  - Test & evaluation master plan
- Role of Environmental Engineering Specialist
  - Environmental engineering management plan
  - Life cycle environmental profile
  - Operational environmental design/test requirements
  - Environmental test plans/reports
- Role of Design/Test Engineers and Facility Operators
  - Engineering designs and specifications
  - MIL-STD-810G, part 2 laboratory test methods
  - Natural environment field/fleet test facilities and procedures
- Summary • Final Review
- Award of Certificates for successful completion

Technology Training, Inc.
(a tti group company)
Toll-free tel. 866-884-4338 (866-TTi-4edu)
805-845-5050 (International)
E-mail: Training@ttiedu.com
www.ttiedu.com