

# **ASTM C26 LONG RANGE PLAN**

## **Committee on the Nuclear Fuel Cycle**

### **VISION STATEMENT**

ASTM C26 continues to be the Internationally-recognized leader in the development of consensus standards for the Nuclear Fuel Cycle.

To maintain C26 leadership and prominence, over the next 5 years, we will focus on consensus standards in support of:

- An international focus on the commercialization of nuclear materials
- Processing and safe interim storage of spent nuclear fuel and radioactive waste materials
- Practical and productive approaches to U.S. and international spent nuclear fuel disposal
- Nuclear disarmament and nonproliferation activities
- The application of nuclear materials (fuel and target) to the development of new/improved isotopes for nuclear medicine *and other applications*

Major Goals to achieve this vision include:

- \* Identify and define consensus standards needs in the Nuclear Fuel Cycle (Technological, Regulatory, Policy)
- \* Respond to international needs
- \* Apply Technical/Operational Expertise to Quality Standards Development
- \* Rigorously follow the consensus process

### **KEYS TO GOAL IMPLEMENTATION**

#### **EFFECTIVE ORGANIZATION**

Having the appropriate structure of subcommittees and task groups to effectively meet the scope.

#### **ACTIVE MEMBERSHIP/PARTICIPATION**

Recruiting and retaining individuals with the necessary expertise and experience.

Broadening the International Participation in C-26 Subcommittees (Belgium, UK, France, Germany, Japan, Russia, U.S.)

## EFFECTIVE COMMUNICATION

Providing appropriate and relevant information to our members, leaders and decision makers and *to* the public. Demonstrating the value added for DOE and other federal and commercial programs to assist in developing and sustaining financial support.

## CONTINUOUS PLANNING

*(Be Proactive/Dynamic) "Drive the system".  
Perform relevant activities.*

## **Committee Structure**

### **Scope**

To develop consensus standards for and promote commercialization of nuclear fuel cycle, materials, products and processes. The committee will provide internationally accepted standards which facilitate the commerce; worker safety; public and environmental health; and regulatory compliance within the nuclear fuel cycle. All aspects of the nuclear fuel cycle are included with emphasis on nuclear fuel and reactor materials processing, analysis and disposal/disposition technologies and applications. Nuclear fuel cycle activities of both the commercial nuclear industry and the defense community fall within the scope of this committee.

The work of the committee will be coordinated with other ASTM International committees and national and international organizations having mutual interest.

### **Members**

Committee members are classified as producers, users, or general interest members, according to the interest they represent. A balance of voting members in C-26 must be maintained, so that the producers do not outnumber the users and general interest representatives.

## **OFFICERS**

Committee C26 has the following slate of officers:

- |             |                        |                        |
|-------------|------------------------|------------------------|
| • Chairman  | • First Vice-Chairman  | • Second Vice-Chairman |
| • Secretary | • Membership Secretary |                        |

The first vice-chairman is also the chair of the long range planning subcommittee and is responsible for committee awards.

The second vice chairman has responsibility for international standards coordination activities.

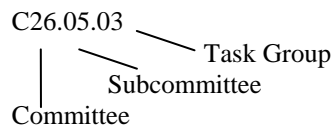
According to ASTM rules, a producer of nuclear materials cannot hold the chairmanship. A producer is defined within C26 as anyone associated with an organization or company division that sells, manufactures, or processes nuclear components. Any member of the committee may hold the other four positions.

Officers are elected for a two-year term on even numbered years, and may only serve three consecutive terms in any given office.

## **Subcommittees**

The subcommittees of C26 carry out the specific technical and administrative needs of the committee for the development of standards covered by the C26 scope. The Executive Subcommittee (administrative) consists of the main committee officers, the chairmen of the other subcommittees, and the liaison representatives of other ASTM Committees and standards organizations.

Each subcommittee forms task groups to accomplish specific jobs, such as to develop a test method, update a test method, or write a specification. *Subcommittees may opt to conduct all business except opening and closing sessions through task group meetings.* Committees, subcommittees, and task groups are numerically designated as follows:



## **Subcommittee Scope Statements**

### **C26.01 EDITORIAL AND TERMINOLOGY**

SCOPE: To ascertain ASTM editorial policies and to assist C26 in conforming in these policies when writing and submitting standards manuscripts. To establish and maintain C26 standard of definitions for nuclear and general science terms which are used frequently by C26 in its standards-writing activities.

### **C26.02 FUEL AND FERTILE MATERIAL SPECIFICATIONS**

SCOPE: To write Standard Guides and Specifications related to materials containing fissile or fertile atoms used in the nuclear materials processing and nuclear power industries. The materials covered include input raw materials for enrichment, intermediate materials for processing, and final product components for use in nuclear reactors or facilities.

### **C26.03 NEUTRON ABSORBER MATERIALS SPECIFICATIONS**

SCOPE: To develop standards, specifications and analytical methods for neutron absorbing materials as used in a variety of nuclear applications, including structural applications. Standards and specifications for insulator materials used in nuclear fuel rods are also developed.

### **C26.05 ANALYTICAL TEST METHODS**

SCOPE: To develop and maintain analytical chemistry test standards supporting the nuclear fuel cycle and related activities. These standards will directly support the material and performance specification standards for nuclear fuels and materials, uranium processing, and nuclear waste forms that are under the jurisdiction of other C26 subcommittees. C26.05 will also write and manage certain standards meeting the needs of related nuclear fuel cycle processes including mixed waste management, environmental monitoring, *and worker health protection* for both stable and radionuclide concentrations.

## **C26.07 WASTE MATERIALS**

SCOPE: To develop appropriate standards for management (including characterization, treatment, packaging, handling, storage, transport and disposal) of nuclear fuel cycle waste and other low level and TRU radioactive and mixed waste materials. All radioactive waste categories with the exception of high level waste (HLW) are covered by this scope. This subcommittee will maintain a close liaison with subcommittee C26.13, Spent Fuel and High Level Waste. Standards dealing with low level waste fractions derived from the processing of high level waste will be addressed by C26.07 and C26.13 jointly. Spent nuclear fuel is also outside of this scope and is part of the scope of C26.13.

## **C26.08 QUALITY ASSURANCE, STATISTICAL APPLICATIONS AND REFERENCE MATERIALS**

SCOPE: To develop standards for the nuclear fuel cycle related to the interpretation and practical application of quality assurance principles, regulations and guidelines. The standards developed will include the training and qualification of nuclear fuel cycle personnel. The subcommittee will promote essential knowledge of reference materials, calibration methodologies, measurement protocols and statistical concepts. The subcommittee will respond to identified needs from all phases of the nuclear fuel cycle exclusive of the design, construction, and operations of nuclear power plants. Consultation and guidance will be provided to other C26 subcommittees regarding quality assurance, quality control, statistical applications, and reference materials in standards under their jurisdiction. C26.08 will ensure that C26 test methods meet the essential criteria for data quality, and use a compatible and rigorous set of statistical concepts.

## **C26.09 NUCLEAR PROCESSING**

SCOPE: To establish or identify standards applicable to the design, construction, and operations of nuclear processing facilities. Although general standards and criteria exist, specific standards are needed for much of the equipment, practices, and operations used in nuclear processing. Needed standards are to be established which set forth the procedures, minimum requirements, and criteria to be used. The scope of this subcommittee includes, but is not restricted to, the following areas of nuclear processing: fuel receipt and storage, decladding, separation, purification, product conversion, waste handling, fixation and storage, containment, decontamination, and decommissioning.

## **C26.10 NON DESTRUCTIVE ASSAY**

SCOPE: To develop standard test methods and guides that involve measurements using gamma rays, neutrons, alpha particles or x-ray absorption (or the effects of these radiations), and that include passive and active modes of analysis. The methods and guides will apply to materials encountered in the nuclear fuel cycle, such as product and process materials, scrap and waste, and may be used in materials control and *accountability*, process control, and waste management.

## **C26.12 SAFEGUARD APPLICATIONS**

SCOPE: To develop standard test methods and guides for the evaluation, implementation, operation, and maintenance of monitoring systems intended to safeguard special nuclear materials, in order to provide assistance to the international community in their efforts to deter proliferation of weapons-useable nuclear materials and illicit trafficking in other radioactive materials.

### **C26.13 SPENT FUEL AND HIGH LEVEL WASTE**

Scope: To develop consensus standards in support of the interim storage, transportation, and disposal in a geologic repository of spent (used) nuclear fuel and high level waste. Standards activities include the development of test methods, guides, and practices for the characterization, performance testing, and materials behavior modeling for these waste forms, and the waste package structural and backfill materials into which they are emplaced. Also included are the development of guides and practices for waste package testing approaches in support of the licensing process for both interim storage and disposal facilities.

### **C26.14 REMOTE SYSTEMS**

Scope: To develop specifications, guides, and practices for the design and modification of equipment used in remotely operated facilities. The standards developed by this subcommittee will identify and describe desirable and essential features necessary for the remote operation and maintenance of equipment for handling, processing, viewing, examination, and/or testing of highly radioactive materials.

### **C26.90 EXECUTIVE**

SCOPE: To provide executive direction to the Committee. This subcommittee will meet at each C26 meeting, providing leadership to the Committee and assuring that the standards development process is conducted in accordance with ASTM rules and C26 bylaws

### **C26.91 LONG RANGE PLANNING**

SCOPE: To develop and maintain a long range plan for Committee C26 and its respective subcommittees that will assist in projecting future standards needs, activities and requisite expertise. The long range planning subcommittee will advise the executive subcommittee on administrative changes needed to facilitate implementation of the long range plan