

**ASTM INTERNATIONAL**

**COMMITTEE C26**

**NUCLEAR FUEL CYCLE**

**45 YEAR HISTORY**

**1969-2014**

**ASTM COMMITTEE C26**  
**NUCLEAR FUEL CYCLE**  
**FORTY-FIVE YEAR HISTORY – 1969 to 2014**

Early History

In the 1950s, the nuclear industry was growing and numbers of reactors were in the planning stage. The American Standards Association (ASA) studied the need for nuclear standards, decided that the time was right and formed committee N5.1. Several standards were written with the most widely distributed being a manual on test methods for uranium dioxide.

In 1962, ASTM became interested in these new articles of commerce. Its response was to form a subcommittee within Committee C21, Ceramic White-ware and Related Products, to study ceramic materials for nuclear applications. It began by reviewing private and government specifications for ceramic materials that were being used, or proposed for use, as nuclear fuels in thermal reactors. Working with ASA, four specifications and methods of test were developed and approved by the United States of America Standards Institute (USASI).

In 1967, the Nuclear Standards Board (NSB) of USASI assigned ASTM the responsibility for basic materials and materials testing involved in nuclear service. To better implement their responsibility in the area of nuclear fuel materials, the ASTM Board of Directors authorized an expansion of scope and full committee status for the ASTM-connected work on fuel materials.

As part of this expansion, Subcommittee C21.05 solicited former members from the ASA N5.1 committee and several new members from industry. In November 1968, the organizational meeting of this new committee (C26) was held. The name chosen was Committee on Fuel, Control, and Moderator Material for Nuclear Reactor Applications. The responsibilities of Committee C26 were for methods of test, definitions of terms, classifications, and specifications for fissionable and fertile materials and solid control and moderator materials, excluding graphite, intended for use in nuclear core components.

There were five working subcommittees within C26: C26.01, Nomenclature, defined terms used in C26 specifications and test methods; C26.02, Fuel Specifications, wrote specifications for materials such as uranium dioxide powder and pellets, mixed oxide, plutonium oxides, etc.; C26.03, Control Materials, wrote specifications for B<sub>4</sub>C, Ag-In-Cd, and Al<sub>2</sub>O<sub>3</sub>-B<sub>4</sub>C; C26.04 dealt with moderators such as beryllium oxide; and C26.05 developed test methods. The first annual report to ASTM noted that the membership was 59.

Charter Members

The charter members list in the Membership Handbook from January 1979 which recognized the first ten years of ASTM Committee C26 included the following:

|                |               |
|----------------|---------------|
| H. J. Anderson | W. A. Maxwell |
| M. H. Campbell | D. M. Noble   |
| J. M. Lclabby  | W. M. Pardue  |
| R. Cooperstein | G. K. Rhode   |

L. T. Corbin

J. H. Schemel

C. G. Goldbeck

J. F. Soppet

J. M. Kerr

W. N. Thomas

O. L. Kruger

This is the list of the attendees at the November 1968 organizing meeting held in Washington, DC.

The minutes of the subcommittee C26.05 from the meeting held on May 5-6, 1969 in New Orleans, listed 14 subcommittee attendees. Only four of the subcommittee attendees are on the charter member listing.

#### Growth of Members

The first annual report from C26 to ASTM in December 1969 indicated that there were 59 members. Membership remaining at this level through 1975 and then began to grow. One hundred members was reached in 1977 and increased to 150 members by 1982. By 1991, the membership had increased to 200 and has remained at this level to this date. The growth in membership came with the increase in the number of subcommittees and the push of C26 into these new areas. Foreign membership increased sharply during the development of specifications for uranium hexafluoride which was begun in the early 1990s. Attendance during this period typically exceeded one hundred. Although the C26 membership has stayed at about two hundred, the attendance has slowly decreased to where the current attendance is about sixty members. This decline is probably due to retirements and the inability to recruit new members.

#### C26 Leadership

C26 has been fortunate to have had excellent leadership throughout its history. The Chairman of C26 is limited to three consecutive two-year terms and most Chairmen have served three terms which resulted in significant longevity within the Chairman position. The Chairman, their affiliation, and term of office are listed below;

| Chairman         | Company                               | Term      |
|------------------|---------------------------------------|-----------|
| Harlan Anderson  | Westinghouse Hanford                  | 1969-1976 |
| Larry Corbin     | Oak Ridge National Laboratory         | 1976-1981 |
| Nancy Trahey     | New Brunswick Laboratory              | 1982-1987 |
| Bill Laing       | Oak Ridge National Laboratory         | 1988-1993 |
| Don Sandburg     | Westinghouse Hanford                  | 1994-1997 |
| Richard Blauvelt | Waste Policy Institute                | 1998-2003 |
| Gary Smith       | Pacific Northwest National Laboratory | 2004-2009 |
| Dale Wahlquist   | Idaho National Laboratory             | 2010-     |

Several C26 members served ASTM in various other capacities. Nancy Trahey was elected to the ASTM Board of Directors in 1983 and then advanced in office to Treasurer, Vice-Chairman of the Board, before becoming ASTM

Chairman in 1993. Bill Laing served a term on the ASTM Committee on Technical Committee Operations and chaired the Long-Range Planning Committee.

Supporting the operations of C26 are several other elected officers. These include: the First Vice-Chairmen who is responsible for managing the awards process; the Second Vice-Chairman who is responsible for international affairs; the Recording Secretary who takes, records, and issues the meeting minutes; and the Membership Secretary who is responsible to track the status of the C26 membership. The Membership Secretary position was created in 1987. To recognize the outstanding service of these elected officers, with much of their work being conducted behind the scenes, an attempt was made to identify all of these elected officers and collect the names in the table below.

### **C26 ELECTED OFFICERS**

| Year | Chairman        | First Vice-Chairman | Second Vice-Chairman | Recording Secretary | Membership Secretary |
|------|-----------------|---------------------|----------------------|---------------------|----------------------|
| 1969 | Harlan Anderson | Larry Corbin        | R. Cooperstein       | Bill Pardue         |                      |
| 1970 | Harlan Anderson | Larry Corbin        | Vacant               | Bill Pardue         |                      |
| 1971 | Harlan Anderson | Larry Corbin        | Fred Miner           | Bill Pardue         |                      |
| 1972 | Harlan Anderson | Fred Miner          | Larry Corbin         | Bill Pardue         |                      |
| 1973 | Harlan Anderson | Larry Corbin        | Fred Miner           | Bill Pardue         |                      |
| 1974 | Harlan Anderson | Larry Corbin        | Fred Miner           | Bill Pardue         |                      |
| 1975 | Harlan Anderson | Larry Corbin        | Fred Miner           | Bill Pardue         |                      |
| 1976 | Larry Corbin    | Bill Pardue         | J. J. Stiglich       | G. R. Waterbury     |                      |
| 1977 | Larry Corbin    | Bill Pardue         | J. J. Stiglich       | W. B. Brown         |                      |
| 1978 | Larry Corbin    | Bill Pardue         | J. J. Stiglich       | W. B. Brown         |                      |
| 1979 | Larry Corbin    | Bill Pardue         | J. J. Stiglich       | W. B. Brown         |                      |
| 1980 | Larry Corbin    | Bill Pardue         | Nancy Trahey         | Bob Carpenter       |                      |
| 1981 | Larry Corbin    | Bill Pardue         | Nancy Trahey         | Bob Carpenter       |                      |
| 1982 | Nancy Trahey    | Sam Weaver          | Bill Laing           | Bob Carpenter       |                      |
| 1983 | Nancy Trahey    | Sam Weaver          | Bill Laing           | Bob Carpenter       |                      |
| 1984 | Nancy Trahey    | Sam Weaver          | Bill Laing           | Bob Carpenter       |                      |
| 1985 | Nancy Trahey    | Sam Weaver          | Bill Laing           | Bob Carpenter       |                      |

|      |                  |                             |                 |               |                     |
|------|------------------|-----------------------------|-----------------|---------------|---------------------|
| 1986 | Nancy Trahey     | Sam Weaver                  | Bill Laing      | Merril Hume   |                     |
| 1987 | Nancy Trahey     | Sam Weaver                  | Bill Laing      | Merril Hume   | Sandra Frattali     |
| 1988 | Bill Laing       | Milt Campbell               | G. Kilp         | Merril Hume   | Sandra Frattali     |
| 1989 | Bill Laing       | Milt Campbell               | G. Kilp         | Merril Hume   | Sandra Frattali     |
| 1990 | Bill Laing       | Milt Campbell               | G. Kilp         | Rodney Hand   | Sandra Frattali     |
| 1991 | Bill Laing       | Milt Campbell               | Don Sandburg    | Rodney Hand   | Sandra Frattali     |
| 1992 | Bill Laing       | Milt Campbell               | Don Sandburg    | Rodney Hand   | Sandra Frattali     |
| 1993 | Bill Laing       | Milt Campbell               | Don Sandburg    | Rodney Hand   | Sandra Frattali     |
| 1994 | Don Sandburg     | Richard Blauvelt            | Ann Gibbs       | Rodney Hand   | Wanda Mitchell      |
| 1995 | Don Sandburg     | Richard Blauvelt            | Ann Gibbs       | Rodney Hands  | Wanda Mitchell      |
| 1996 | Don Sandburg     | Richard Blauvelt            | Ann Gibbs       | Rodney Hand   | Wanda Mitchell      |
| 1997 | Don Sandburg     | Richard Blauvelt            | Ann Gibbs       | Vacent        | Wanda Mitchell      |
| 1998 | Richard Blauvelt | Ann Gibbs                   | John Renouf     | Pamela Howell | Wanda Mitchell      |
| 1999 | Richard Blauvelt | Ann Gibbs                   | John Renouf     | Pamela Howell | Wanda Mitchell      |
| 2000 | Richard Blauvelt | Ann Gibbs                   | John Renouf     | Pamela Howell | Bill Palmer         |
| 2001 | Richard Blauvelt | Ann Gibbs                   | John Renouf     | Pamela Howell | Bill Palmer         |
| 2002 | Richard Blauvelt | Ann Gibbs                   | John Renouf     | Donna Beals   | Marilyn Law         |
| 2003 | Richard Blauvelt | Ann Gibbs                   | John Renouf     | Donna Beals   | Marilyn Law         |
| 2004 | Gary Smith       | Wanda Mitchell              | Catherine Veyer | Donna Beals   | Marilyn Law         |
| 2005 | Gary Smith       | Wanda Mitchell              | Catherine Veyer | Donna Beals   | Marilyn Law         |
| 2006 | Gary Smith       | Tom Thornton                | Catherine Veyer | Donna Beals   | Michael Soriano     |
| 2007 | Gary Smith       | Tom Thornton                | Catherine Veyer | Donna Beals   | Michael Soriano     |
| 2008 | Gary Smith       | Tom Thornton/Dale Wahlquist | Catherine Veyer | Ron Jeffcoat  | Donivan Porterfield |
| 2009 | Gary Smith       | Dale Wahlquist              | Catherine Veyer | Ron Jeffcoat  | Donivan Porterfield |
| 2010 | Dale Wahlquist   | Donna Beals                 | Bertrand Morel  | Ron Jeffcoat  | Donivan Porterfield |
| 2011 | Dale Wahlquist   | Donna Beals                 | Bertrand Morel  | Ron Jeffcoat  | Donivan Porterfield |

|      |                |             |                |                |                     |
|------|----------------|-------------|----------------|----------------|---------------------|
| 2012 | Dale Wahlquist | Donna Beals | Bertrand Morel | Ron Jeffcoat   | Donivan Porterfield |
| 2013 | Dale Wahlquist | Donna Beals | Bertrand Morel | Ron Jeffcoat   | Donivan Porterfield |
| 2014 | Dale Wahlquist | Donna Beals | Bertrand Morel | Shane Robinson | Juergen Agreiter    |

The true backbone of the organization is the subcommittee chairman who ensures that the intent of the organization is translated into actions. In order to recognize their contributions, the following is a history of the subcommittee leadership.

### **C26 SUBCOMMITTEE LEADERSHIP**

|  |  |
|--|--|
| <b>C26.01 – Terminology</b><br><br>W. R. Laing - 1974-1975<br><br>Nancy Trahey - 1976-1980<br><br>Evan Morgan - 1981-1982<br><br>R. H. Kent - 1983-1987<br><br>Sandra Frattali - 1988-1999<br><br>Inactive - 2000-2003<br><br>Charles Interrante - 2004-2007<br><br>Donivan Porterfield - 2008 – present | <b>C26.09 – Nuclear Processing</b><br><br>R. E. Brooksbank - 1980-1987<br><br>Ken Plummer - 1988-1997<br><br>Frank Graham - 1998<br><br>Tracy Rudisill - 1999-present  |
| <b>C26.02 – Fuel and Fertile Material Specifications</b><br><br>F. J. Miner - 1969-1975<br><br>R. A. Nadler - 1976-1979<br><br>J. M. Kerr - 1980-1981<br><br>G. R. Kilp - 1982-1990<br><br>Tom Thornton - 1991-2008<br><br>Bertrand Morel - 2008-present   | <b>C26.10 - Non Destructive Assay</b><br><br>David McCue - 1980-1985<br><br>Inactive - 1986-1987<br><br>Ralph Gutmacher - 1988<br><br>Francis Haas - 1989-1993<br><br>John Fleissner - 1994-2003<br><br>David Bracken - 2004-2008<br><br>Ram Venkataraman - 2009-present |

|  |  |
|--|--|
| <b>C26.03 – Neutron Absorber Material Specifications</b><br><br>Frank Lewis - 1969<br><br>M. G. Andrews - 1970-1975<br><br>J. J. Stiglich Jr. - 1976-1979<br><br>S. C. Weaver - 1980-1982<br><br>Michael Bale - 1983-2001<br><br>Hemant Shah - 2002-present                | <b>C26.11 – Reprocessing</b><br><br>J. M. Scarborough - 1983-1985<br><br>Wayne Delvin - 1986-1993<br><br>Susan Flint - 1994-1996<br><br>Inactive 1997<br><br>Disbanded in 1999   |
| <b>C26.04 – Moderator Materials</b><br><br>Ray Cooperstein - 1969<br><br>K. Koyama - 1970-1973<br><br>Inactive in 1974<br><br>Disbanded in 1988  | <b>C26.12 – Safeguards</b><br><br>M. H. Campbell - 1985-1987<br><br>Ann Gibbs - 1988-1995<br><br>Debra Spencer - 1996-1998<br><br>Allan Frymire - 1999-2005<br><br>Joel Tingey - 2006-present  |
| <b>C26.05 – Methods of Test</b><br><br>L. T. Corbin - 1969-1975<br><br>W. R. Laing - 1976-1988<br><br>R. W. Morrow - 1989-1999<br><br>Wanda Mitchell - 2000-2005<br><br>Norbert Golchert - 2006-2012<br><br>Randy Blevins – 2012-2013<br><br>Mike Brisson – 2014 - present | <b>C26.13 – Spent Fuel and High level Waste</b><br><br>R. G. Spaunburgh - 1984<br><br>A. S. Jennings - 1985<br><br>Tom Thornton - 1986-1988<br><br>C. H. Peterson - 1989<br><br>Pedro Macedo - 1990-1995<br><br>Ned Bibler - 1996<br><br>Gary Smith - 1997-present |
| <b>C26.06 - Statistical Applications</b><br><br>J. A. Merrill - 1975-1980<br><br>J. A. Lechner - 1981-1982<br><br>M. W. Hume - 1983-1996<br><br>Larry Bruckner - 1997-2000<br><br>Combined with C26.08 in 2001   | <b>C26.14 - Remote Systems</b><br><br>Dale Wahlquist - 2000-present  |

|   |  |
|---|--|
| <b>C26.07 – Waste Materials</b><br><br>Thomas Keenan - 1980-1981<br><br>R. W. Chickering - 1982<br><br>W. P. Reed - 1983-1985<br><br>Richard Blauvelt - 1986-present  | <b>C26.91 – Long-Range Planning</b><br><br>S. C. Weaver - 1984-1987<br><br>Milton Campbell - 1988-1994<br><br>Richard Blauvelt - 1995-2013<br><br>Donna Beals – 2014 - present |
| <b>C26.08 – Quality Assurance Applications/Reference Material</b><br><br>M. H. Campbell - 1980-1984<br><br>Don Sandburg - 1985-1990<br><br>Clarence Homi - 1991-1996<br><br>Susan Flint - 1997-1998<br><br>Don Sandburg - 1999-2000<br><br>Bill Palmer - 2001<br><br>Michael Soriano - 2002-2008<br><br>Donivan Porterfield - 2009- 2011<br><br>Mike Brisson – 2011 - present |  |

#### ASTM Staff Managers

ASTM assigns a staff manager to each committee to provide guidance, support, and communication with ASTM to ensure that the ASTM operating rules and regulations are followed. In these past forty years, C26 has had ten staff managers. Their terms of service are collected below.

|                 |           |
|-----------------|-----------|
| Jack Bystrom    | 1969-1979 |
| Janet Schroeder | 1979-1981 |
| Ken Pearson     | 1982-1984 |
| Matt Lief       | 1985-1986 |
| Kathie Schaff   | 1987-1990 |
| Pat Barr        | 1991-1994 |
| Bill Brown      | 1995-1996 |



|                |              |
|----------------|--------------|
| Felicia Quinzi | 1997-2000    |
| Jeff Adkins    | 2000-2007    |
| Joe Koury      | 2007-present |

C26 has been a good training ground for up and coming ASTM staffers. After their indoctrination with C26, Ken Pearson is Vice-President of ASTM, Matt Lieff is Manager, Standards Technology Training, and Kathie Schaff is Director, Standards Development. Jack Bystrom, the first C26 staff manager has retired, lives in Stuart, Florida, and is still active in C26 and E10 projects.

#### Meeting Locations

Since C26 members are principally DOE contractor, or organizations that support DOE contractors, their locations are spread from east to west and from north to south. Early in its life, C26 determined to move the meeting sites around the country to equalize the travel for its members and to meet in the south in the winter and the north in the summer. This remains the basic C26 strategy for meeting site selection. Up to about 1995, C26 met in the south in the winter as part of the ASTM Committee Week and meeting in the summer independently. Beginning in about 1995, hotels began to charge for meeting space and other services that had previously been provided for free if a minimum number of rooms were occupied. Meeting room charges ranged up to \$500 per day per meeting room. To meet independently, C26 would have to pay for these charges. Because of the economics of meeting independently were beyond the resources of C26, a determination was made, for the most part, to meet as part of the ASTM Committee Week.

Over the years, C26 has had an opportunity to meet in a variety of locations. Many of these locations provided opportunities for the attendees to see and visit many historical and interesting places. Below is a list of the locations where C26 has met. Reviewing the table below indicates that the most frequented cities where C26 met in its 45-year history are: New Orleans (8); San Diego (7); Reno (5); Denver (4); Atlanta (4); Washington DC (3); Fort Lauderdale (3); Las Vegas (3); Seattle (3); Colorado Springs (3); Tampa (3); San Antonio (3); and Houston (3).

| Year | Location                      | Location                   |
|------|-------------------------------|----------------------------|
| 1968 |                               | November – Washington, DC  |
| 1969 | May – New Orleans, LA         | October – Philadelphia, PA |
| 1970 | March – San Diego, CA         | October – Gatlinburg, TN   |
| 1971 | January – Fort Lauderdale, FL | July – Boulder, CO         |
| 1972 | January – New Orleans, LA     | July – San Francisco, CA   |
| 1973 | January – Fort Lauderdale, FL | July - San Diego, CA       |
| 1974 | January – New Orleans, LA     | July – Falmouth, MA        |
| 1975 | January – Las Vegas, NV       | July – Montreal, Canada    |
| 1976 | January – Fort Myers, FL      | July – Seattle, WA         |

|      |                                |                             |
|------|--------------------------------|-----------------------------|
| 1977 | January – Houston, TX          | July – Colorado Springs, CO |
| 1978 | January – Fort Lauderdale, FL  | July – Newport, RI          |
| 1979 | January – San Diego, CA        | July – Minneapolis, MN      |
| 1980 | January – New Orleans, LA      | July – Denver, CO           |
| 1981 | January – Fort Myers, FL       | July – Reno, NV             |
| 1982 | January – Houston, TX          | July – Knoxville, TN        |
| 1983 | January – Lake Buena Vista, FL | July – Quebec City, Canada  |
| 1984 | January – San Diego, CA        | July – Colorado Springs, CO |
| 1985 | January – Reno, NV             | July – Boston, MA           |
| 1986 | January – New Orleans, LA      | July – Seattle, WA          |
| 1987 | January – Tampa, FL            | July – Palo Alto, CA        |
| 1988 | January – Albuquerque, NM      | July – Toronto, Canada      |
| 1989 | January – Orlando, FL          | July – Washington, DC       |
| 1990 | January – Las Vegas, NV        | July – Williamsburg, VA     |
| 1991 | January – San Diego, CA        | July – Colorado Springs, CO |
| 1992 | January – New Orleans, LA      | July – Tacoma, WA           |
| 1993 | January – San Antonio, TX      | July – Toronto, Canada      |
| 1994 | January – San Francisco, CA    | July – Santa Fe, NM         |
| 1995 | January – Phoenix, AZ          | June – Denver, CO           |
| 1996 | January – Atlanta, GA          | July – Baltimore, MD        |
| 1997 | January – New Orleans, LA      | July – Arlington, VA        |
| 1998 | January – San Diego, CA        | July – Reno, NV             |
| 1999 | January – Memphis, TN          | June – Seattle, WA          |
| 2000 | January – New Orleans, LA      | June – Las Vegas, NV        |
| 2001 | January – Reno, NV             | June – Norfolk, VA          |
| 2002 | January – Dallas, TX           | June – Salt Lake City, UT   |
| 2003 | January – Albuquerque, NM      | June – Denver, CO           |

|      |                            |                         |
|------|----------------------------|-------------------------|
| 2004 | January – Tampa, FL        | June – Kansas City, MO  |
| 2005 | January – Atlanta, GA      | June – Reno, NV         |
| 2006 | January – Phoenix, AZ      | June – San Antonio, TX  |
| 2007 | January – Anaheim, CA      | June – Norfolk, VA      |
| 2008 | January – Tampa, FL        | June – Denver, CO       |
| 2009 | January – Atlanta, GA      | June – Oak Ridge, TN    |
| 2010 | January – San Antonio, TX  | June – St. Louis, MO    |
| 2011 | January – Baltimore, MD    | June – Anaheim, CA      |
| 2012 | January – Atlanta, GA      | June – San Diego, CA    |
| 2013 | January – Jacksonville, FL | June – Avignon, France  |
| 2014 | January – Houston, TX      | June – Jackson Hole, WY |

#### Committee Name Change

By 1978, C26 was eight years old, membership had almost doubled and the number and focus of subcommittees had grown beyond the original scope. In July 1978, the committee name was changed to Nuclear Fuel Cycle and its scope updated to describe its new direction. In the years following these changes, subcommittees on waste materials, nuclear processing, non-destructive assay, reference materials, safeguards, waste packaging, and long-range planning were formed to pursue the goal to provide standards for the Nuclear Fuel Cycle.

#### Annual Book of ASTM Standards

In the early days of C26, specifications and methods of test were scattered through several volumes. In 1974, the Standards series was reorganized for a more logical grouping. All nuclear related methods developed by C26 and E10 were placed in a single volume. As the number of C26 and E10 standards increased, a further reorganization took place in 1983. At that time, C26 standards were placed in Volume 12.01, Nuclear Energy and the E10 standards placed in Volume 12.02. Currently there are 83 C26 standards in Volume 12.01. In recent years, C26 has averaged 30-35 ballot items between semi-annual meetings. Many of these ballot actions are to conduct the required five-year reviews.

#### Dudley Award

In 1981, C26 won the ASTM Dudley Award for publications. This award, presented annually, is named for Charles B. Dudley, the first President of ASTM. It is to recognize excellence in publication and is usually awarded for individual papers presented at a symposium or a series of papers. The 1981 Award to C26 was given for all the C26 standards in the Annual Book of ASTM Standards. This was the first time since the award's inception in 1927 that it had been presented for a committee's standards and it has never been done again. The award recognized both the quality and quantity of these standards. C26 was 12 years old at that time and published more standards than any other committee had in this length of time. The award consisted of an engraved plaque and a check for \$500.

### Energy Emphasis Seminars

After the Arab oil crisis in 1973-1974, America began to wrestle with the problem of uncertain energy supplies. The Atomic Energy Commission's name was changed to the Energy Research and Development Agency (ERDA) and its mission was expanded to include other forms of energy. Jack Bystrom, staff manager for C26 and E10, proposed that the two committees sponsor an Energy Emphasis Seminar to bring together speakers for alternate energy sources. The first such gathering was in 1978 and brought together experts from coal, solar, geothermal, nuclear, and energy planning. These seminars continued every two years until 1990 when lower oil prices and reduced funding for solar and geothermal research reduced interest and attendance. C26 was instrumental in providing a forum for alternate energy views when our nation was searching for answers.

### Recognition of the 50<sup>th</sup> Anniversary of the Manhattan Project

At the January 1993 San Antonio meeting, an afternoon seminar was presented to look back at the history of the nuclear age. Speakers described the early days at Argonne (Norbert Golchert), Hanford (Don Sandburg), Oak Ridge (Bill Laing), and Los Alamos (Larry Bruckner). The presentations reminded us of how much was accomplished in those days and how much it has changed.

### C26 Anniversary Events

The members of C26 have taken the opportunity to stop and reflect on the progress and events associated with the history of C26. The first anniversary to be celebrated was the tenth with a dinner at the Hilton Hotel in San Diego, California, in January 1979. Although no attendance was kept, it appears to have been well attended. The next anniversary was the 25<sup>th</sup> which was held at the Picacho Plaza Hotel in Santa Fe, New Mexico, in July 1994. There was an excellent attendance at this event with an estimated one hundred present. A 25-year history of C26 was prepared and distributed at this dinner. The 30<sup>th</sup> anniversary was held in Seattle, Washington, in June 1999, and was celebrated with a salmon bake on Blake Island. About 60 members attended this event. The 35<sup>th</sup> anniversary was held at the Hyatt Regency Crown Center in Kansas City, Missouri, in June 2004. About 50 members attended this event. The 40<sup>th</sup> anniversary dinner was held in Oak Ridge, Tennessee, in June 2009, at the Peerless restaurant with about 30 in attendance.

### Member Awards

ASTM has established a set of awards to recognize members for their accomplishments. These awards are presented to members, typically at one of the semi-annual meetings, after nomination by their peers. These awards are:

**Award of Merit** – The Award of Merit was established in 1949 by the ASTM International Board of Directors and is the highest society award granted to an individual member for distinguished service and outstanding participation in ASTM International committee activities. Recipients also receive the honorary title of Fellow.

**Harlan J. Anderson Award** – This award, established in 1978, honors Harlan J. Anderson, a Fellow of the Society and the first Chairman of ASTM Committee C26. It is presented to a member of C26 who has made outstanding contributions toward the successful operation of the Committee for a number of years.

**Don Sandburg Award** – This award, established in 2002, honors Donald Sandburg, a Fellow of the Society and the former Chairman of ASTM Committee C26. It is presented to a former Chairman of C26 who has made outstanding contributions toward the successful operation of the Committee for a number of years.

**Achievement Award** – This award is provided in recognition of outstanding service to the committee or subcommittee or contribution to the development of a standard or group of standards.

The following is listings of C26 members who have received one or more of the above awards.

**AWARD OF MERIT AND SOCIETY FELLOW**

| Name                | Year |
|---------------------|------|
| Lawrence T. Corbin  | 1974 |
| Harlan J. Anderson  | 1976 |
| Carleton Bingham    | 1979 |
| Glenn Waterbury     | 1981 |
| William R. Laing    | 1982 |
| Samuel C. Weaver    | 1983 |
| Robert C. Carpenter | 1984 |
| Milton H. Campbell  | 1985 |
| Gerald R. Klip      | 1986 |
| Nancy M. Trahey     | 1987 |
| Wayne L. Delvin     | 1989 |
| Merril W. Hume      | 1990 |
| Michael G. Bale     | 1991 |
| Ann Gibbs           | 1992 |
| Don Sandburg        | 1993 |
| Roy Morrow          | 1994 |
| Tom Thornton        | 1995 |
| Richard Blauvelt    | 1996 |
| Norbert Golchert    | 1997 |
| Larry Bruckner      | 1998 |
| Reed Durham         | 1999 |
| Charles Interrante  | 2000 |
| Gary Smith          | 2001 |
| Wanda Mitchell      | 2002 |

|                     |      |
|---------------------|------|
| John Fleissner      | 2003 |
| Paul Fehlau         | 2004 |
| Donna Beals         | 2012 |
| Donivan Porterfield | 2013 |

### **HARLAN J. ANDERSON AWARD**

| Name  | Year |
|---|------|
| Frend John Miner<br>Richard Spaunbaugh  | 1979 |
| William Pardue  | 1980 |
| Glenn R. Waterbury<br>Lawrence T. Corbin<br>John M. Kerr<br>Joe H. Stewart, Jr. | 1981 |
| Milton Campbell   | 1982 |
| Robert Carpenter  | 1983 |
| Gerald Kilp   | 1984 |
| Michael Bale  | 1985 |
| Wayne Delvin  | 1986 |
| Merril Hume   | 1987 |
| Tom J. Hayes  | 1988 |
| Ralph G. Gutmacher<br>Donald Sandburg   | 1989 |
| Nathan Furman   | 1990 |

|                     |      |
|---------------------|------|
| Alain Sarda         |      |
| Sandra Fratalli     | 1991 |
| Richard Blauvelt    |      |
| Roy Morrow          | 1992 |
| Tom Thornton        |      |
| Rondey Hand         | 1993 |
| Norbert Golchert    |      |
| Francis Haas        | 1994 |
| Ken Plummer         |      |
| Joel Dahlby         | 1995 |
| Larry Bruckner      |      |
| Reed Durham         | 1996 |
| Paul Fehlau         |      |
| Nancy Trahey        | 1997 |
| Alan Gethin         |      |
| Wanda Mitchell      | 1998 |
| Danielle Cangiano   |      |
| John Fleissner      | 1999 |
| Gary Smith          | 2000 |
| Pam Howell          |      |
| Jim Sprinkle        | 2001 |
| John Renouf         | 2002 |
| Stephen Lee         | 2003 |
| Catherine Veyer     | 2004 |
| Donna Beals         | 2007 |
| Dale Wahlquist      | 2009 |
| Donivan Porterfield | 2010 |

|                |      |
|----------------|------|
| Bertrand Morel | 2011 |
| Hemant Shah    | 2012 |

#### **DONALD SANDBURG AWARD**

| Name                 | Year |
|----------------------|------|
| Mrs. Donald Sandburg | 2002 |
| Richard Blauvelt     | 2004 |

#### **ACHIEVEMENT AWARD**

| Name              | Year |
|-------------------|------|
| Michael G. Bale   | 1978 |
| William R. Laing  |      |
| Nancy Trahey      | 1979 |
| Wayne Delvin      | 1980 |
| John Limpert      | 1981 |
| Charles Pepper    |      |
| W. B. Brown       |      |
| Peter M. French   |      |
| Evan Morgan       |      |
| Sam C. Weaver     |      |
| Robert Brooksbank | 1983 |
| H. G. Tepp        |      |
| William Hogg      | 1984 |
| Tom Thornton      | 1985 |
| Louis Cox         |      |



|   |      |
|---|------|
| Lawrence Macklin<br>Ralph Kent  | 1986 |
| Mick Marlowe<br>Ralph Gutmacher   | 1987 |
| Robert Faron<br>Dan Merz<br>Larry Bruckner<br>Norbert Golchert                        | 1988 |
| Roy Morrow<br>Tom Thornton<br>Jim Bradbury  | 1989 |
| Clarence Homi<br>Ollie Vita<br>Joel Dahlby<br>Rod Hand<br>Mick Marlowe<br>Joe Goleb   | 1990 |
| Carl Sutter<br>Martin Edelson<br>Fran Haas<br>Bill Riedeman                           | 1991 |
| Richard Hamilton<br>John Fleissner<br>John McGowan<br>Ken Plummer<br>Christoph Forsey | 1992 |
| Reed Durham   | 1993 |

|   |      |
|---|------|
| Carol Jantzen<br><br>John Bates<br><br>Robert Pollard<br><br>Jim Sprinkle<br><br>Wanda Mitchell |      |
| Roy Swank<br><br>Paul Closeener<br><br>Isabel Fisenne   | 1994 |
| Alan Gethin<br><br>Don Temer<br><br>Danielle Cangiano<br><br>Stephen Lee<br><br>Walt Wolf       | 1995 |
| Delbert Bowers<br><br>Pamela Howell<br><br>Larry Addington<br><br>Tsutomu Sato                  | 1996 |
| Marilyn Law<br><br>Susan Flint<br><br>Rob Henry   | 1997 |
| Gary Smith<br><br>Jeff Crain<br><br>John Renouf<br><br>Mark Hollenbeck                          | 1998 |
| Deborah Andrews<br><br>Robert Bolin<br><br>Charles Interrante                                   | 1999 |

|  |      |
|--|------|
| Robert Baschwitz<br>Chris Gassiot<br>George Westsik<br>Bertrand Morel<br>All Frymire<br>Catherine Veyer<br>Donna Beals                             | 2000 |
| Tony Aldridge<br>Hemant Shah<br>Mark Dubecky<br>Irene Spaletto<br>Tracy Rudisill   | 2001 |
| Mikael Pellfolk<br>Bill Palmer<br>Michael Soriano<br>Bill Ebert<br>Joe Watcher<br>Clyde Ward   | 2002 |
| Chuck Interrante<br>Efrem Schwartz<br>Rich Mayer<br>Donivan Porterfield<br>Raymond Rutitis<br>Dale Wahlquist<br>Chuck Kalkwarf<br>Richard Thomason | 2003 |
| Norbert Ensslin  | 2004 |

|   |      |
|---|------|
| Michael Fern<br>Scott Nagley<br>Randy Blevins   |      |
| Ed Kuhn   | 2005 |
| Bill Bracey<br>Chris Brown<br>Frank Heckendorn<br>Jim Hobbs<br>Jonathan Quartly   | 2007 |
| George Belev<br>John Abrefah<br>Bill Ebert<br>Eric Shaber<br>Tom Thornton   | 2008 |
| Koen Vanaken<br>Maarten Van Winjkoop  | 2009 |
| Richard Hagenauer<br>Kim Davies   | 2010 |
| Kim Davis<br>John Vienna<br>Brian Riley<br>Tom Thornton<br>Randy Blevins<br>Mike Brisson<br>Ray Rutitus<br>Peter Barth<br>Joel Tingey | 2011 |

|                     |      |
|---------------------|------|
| Bill Ebert          |      |
| Mike Brisson        | 2012 |
| Dean Kurath         |      |
| Matthew S. Fountain |      |
| Joel Tingey         |      |
| Alexander Sapygin   |      |
| Jeff Wilkes         | 2014 |

## APPRECIATION AWARDS

| Name             | Year |
|------------------|------|
| James Sprinkle   | 2011 |
| Peter Mason      |      |
| Shane Robinson   |      |
| Ram Venkataraman |      |
| Stephen Lee      | 2012 |
| Stephen Croft    |      |
| Ron Jeffcoat     |      |
| Markku Koskelo   |      |
| Norbert Golchert |      |
| Mike Holland     | 2014 |
| Dale Wahlquist   |      |
| Stephen Croft    |      |
| Thomas Sampson   |      |
| Bertrand Morel   |      |
| Mike Brisson     |      |

|                  |  |
|------------------|--|
| Frank Hechendorf |  |
| Joseph Ryan      |  |
| Spephane Gin     |  |
| Brandy Hanson    |  |

June 13, 2014