

## TESTING FORUM

### Update of the History of ASTM Committee D-18 on Soil and Rock (1987–1996)

*Richard Gray and Robert Stephenson*

ASTM Committee D-18 has been an active, innovative group and is one of the largest ASTM committees. In 1996 the Committee will celebrate its 60th year. The History of Committee D-18 was published in the *Geotechnical Testing Journal*, Vol. 1, No. 2, June 1978, pp. 65–71. An update was prepared in 1986 to commemorate the 50th Anniversary of the Committee by its Chairman, Woodland G. Shockley (*Geotechnical Testing Journal*, Vol. 9, No. 4, December 1986, pp. 228–231). The last 10 years have been productive for Committee D-18 in terms of new activities, new standards, membership growth, and publications. Much of this activity has been due to a need for environmental standards and D-18's willingness to accommodate new activities. This update is an extension of the Committee's history published in 1978 and the 1986 update, and the reader is referred to the *Journal* for earlier history of the Committee.

#### Committee Activities—1987–1996

In January 1987, Woodland G. Shockley continued as Chairman of Committee D-18. The *Geotechnical Testing Journal* was awarded ASTM's Dudley Metal. Ernest T. Selig, who started and served as the first Editor of the *Geotechnical Testing Journal*, received the Medal. A new Committee D-18 award, the Standards Development Award, was suggested by C. William Lovell and approved in June 1987. The Environmental Protection Agency (EPA) provided a small amount of funding to compile existing environmental standards on groundwater. Subcommittee D18.21, Ground Water and Vadose Zone Investigations, was established as a new subcommittee in June 1987.

Howard J. Pincus received the Frank W. Reinhart Award in 1987. This award is presented by the Society's Committee on Terminology to a technical committee, subcommittee, or ASTM member who has made an outstanding and unusual contribution to ASTM in the area of terminology.

In August 1986 Thomas H. Thornburn, 70, died. He had been a active member of Committee D-18 in the 1960s and 1970s. Ray Decker, another long-term contributor to the Committee's work, died in early 1987.

In January 1988, Ivan Johnson was honored by ASTM for his long career in international standards development by receiving the first William T. Cavanaugh Award. EPA contracted with ASTM for Subcommittee D18.21 to prepare draft standards needed in environmental work.

Subcommittee D18.21 presented a short course on Ground Water Monitoring and Sampling Technology, July 28–30, 1987. This course was repeated four times in 1988.

A task group on Long Range Planning (Adrian Pelzner, Richard Gray, and Howard Pincus) submitted a report to Committee D-18. They were asked to identify a procedure for implementing long-range planning in Committee D-18.

Robert C. Deen, Vice Chairman of the Committee, died on March 26, 1988. C. William Lovell was appointed to fill the vacancy.

The ASTM Dudley Medal for 1987 went to *STP 892, Consolidation of Soils: Testing and Evaluation*. Frank Townsend and Ray Yong, the editors, received the award.

Membership in Committee D-18 increased to 694.

Soil as a medium for plant growth was assigned to Subcommittee D18.06, Physical-Chemical Interactions of Soil and Rock, at the request of the Subcommittee Chairman Keith Hoddinott.

Earl B. Hall, former D-18 Chairman, died on October 12, 1988.

EPA and the United States Geological Survey (USGS) funded Phase 1 of a three-phase effort for development of standards for groundwater monitoring. This agreement was patterned after that of the Nuclear Regulatory Commission, which, when completed in 1986, had produced 30 draft standards on rock testing.

In January 1989, Committee D-18 had 714 members and was the second largest committee in ASTM.

Howard Pincus presented a proposal for an interlaboratory rock testing program for consideration by the Institute for Standards Research (ISR). Committee D-18 endorsed this proposal.

By June 1989, twelve draft standards on groundwater monitoring had been prepared under the ASTM/EPA/USGS cooperative agreement.

Paul Knodel replaced Vincent Drnevich as Editor of the *Geotechnical Testing Journal* in August 1989.

Robert T. Donaghe requested and received Committee D-18's endorsement of a proposal from Subcommittee D18.05, Strength and Compressibility of Soils, to the Institute for Standards Research to obtain "standard soils" for interlaboratory testing.

Norman W. McLeod, a Fellow of ASTM and an Honorary Member of Committees D-18 and D-4, died on December 12, 1989.

Richard Ladd became Chairman of Committee D-18 in January 1990.

The proposal for interlaboratory testing of rock to develop precision statements for several standards was approved by ISR.

At the start of the second year of the ASTM/EPA/USGS cooperative agreement, twenty-five draft standards had been developed on groundwater monitoring.

Subcommittee D18.01's name was changed to Surface and Subsurface Characteristics.

A change in Committee D-18's scope was proposed to emphasize the committee's interest in both physical and chemical properties of soil, rock, and the fluids contained therein. This change was approved by the ASTM Board of Directors in May 1991.

Committee D-18's membership was 779 in January 1991.

A revised scope of D18.06, Physical-Chemical Properties of Soils and Rock, was adopted to recognize their work on soil as a medium for plant growth.

A Technical Editor's Award was approved in principal and the

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Awards Subcommittee was asked to develop criteria and guidelines for this award. These were adopted in June 1991.

In June 1991 Woodland G. Shockley received the ASTM William T. Cavanaugh Award.

Subcommittee D18.22, Soil as a Medium for Plant Growth, was established.

With 801 members, Committee D-18 is the third largest committee in ASTM.

The proposal to ISR involving obtaining data on twelve D-18 standards prepared by Subcommittee D18.05, Strength and Compressibility of Soils, was approved by Committee D-18.

The criteria for the D-18 Outstanding Achievement Award was modified to include long-time, significant contributions to the work of the Committee.

Past Chairman Woodland G. Shockley died on August 2, 1991. Edward Abdun-Nur, an Honorary Member of D-18 and an ASTM member for 51 years, died in October 1991.

Subcommittee D18.04, Hydrologic Properties of Soil and Rock, submitted a proposal to ISR on hydraulic conductivity testing, which was approved by Committee D-18.

Committee D-18 adopted criteria for a new award for participation in "Round Robin" testing.

The title of Subcommittee D18.13 was changed to Marine and Coastal Geotechnics.

A revised scope for the *Geotechnical Testing Journal*, permitting Committees D4, D34, and D35 to participate in the Journal, was adopted.

A new Subcommittee, D18.23, Field Instrumentation, was approved in principal.

Criteria for Honorary Membership in Committee D-18 was modified and renamed the Woodland G. Shockley Memorial Award to recognize Mr. Shockley's many contributions to Committee D-18.

In June 1992 Howard Pincus was appointed to a three-year term as Editor of the *Geotechnical Testing Journal* beginning in January 1993.

D-18 Chairman, Richard Ladd, was elected to the ASTM Board of Directors.

Committee D-18 had 848 members in January 1993.

The title of Subcommittee D18.13 was changed to Marine and Freshwater Geotechnics.

The ASTM Board of Directors approved the Woodland G. Shockley Memorial Award as an ASTM recognized award.

The size of the Committee D-18 Executive Subcommittee, D18.90, was increased from 14 to 16 by adding two Members-at-Large.

Committee D-18's membership in June 1993 was 905.

The ASTM Dudley Medal for 1993 went to *STP 977, Advanced Triaxial Testing of Soil and Rock*. The editors, Ronald Chaney, Robert Donaghe, and Marshall Silver, received the award.

Committee D-18 adopted a procedure for recognizing support of the Committee by non-ASTM members who volunteer their time over a substantial period or for a unique effort.

The title of Subcommittee D18.06 was changed to Physical-Chemical Interactions of Soil and Rock. The title of Subcommittee D18.05 was changed to Strength and Compressibility of Soils.

Robert E. Legget, former Chairman of the Board of ASTM and Committee D-18 Honorary Member, died April 17, 1994.

W. G. Holtz died in June 1994 at age 83. He was Chairman of Committee D-18 (1961-63) and an Honorary Member.

Subcommittee D18.24, Characterization for Handling Powders and Bulk Solids, was established in June 1994.

The ISR/D-18 Rock Testing program was completed in 1994.

In January 1995 Robert T. Donaghe resigned from the D-18 Executive Subcommittee upon his retirement from the U.S. Army Corps of Engineers Waterways Experiment Station. Gary H. Durham was appointed to fill this vacancy.

The ASTM Committee on Publications (COP) 1994 Award for Excellence in Symposium and Publication Management was presented to Charles H. McElroy and David A. Lienhart in January 1995 for their work which resulted in *STP 1177, Rock for Erosion Control*.

In June 1995 Committee D-18 membership was 1041.

The title of Subcommittee D18.93 was changed to Terminology for Committee D-18 Standards.

Based on a Task Group study of the responsibilities of the Committee's First Vice Chairman, the office of Second Vice Chairman was proposed to assume some of the duties of the First Vice Chairman. The proposal was approved in late 1995.

Committee D-18's Outstanding Achievement Award was renamed the A. Ivan Johnson Outstanding Achievement Award in June 1995. The newly named award was recognized by the ASTM Board of Directors and the first recipient was A. Ivan Johnson for over 50 years of outstanding service to Committee D-18.

James F. Quinlan, an internationally recognized expert on karst and long-term member of ASTM, died in July 1995.

Richard S. Ladd ended six years of service as Chairman of Committee D-18 in December 1995.

In January 1996, Terry S. Hawk became Chairman of Committee D-18.

## APPENDIX I

### Officers and Executive Committee Members (1986-1995)

#### 1986-1987

The officers elected for this term are listed in the update (1977-1986) prepared by W. Shockley in 1986.

#### 1988-1989

Chairman: W. G. Shockley

First Vice Chairman: R. E. Gray

Vice Chairmen: J. R. Talbot, R. S. Ladd, H. J. Pincus,  
R. C. Deen/C. W. Lovell

Secretary: R. J. Stephenson

Membership Secretary: J. F. Christiansen

Members-at-Large: R. T. Donaghe, V. P. Drnevich, H. F. Hanson,  
T. S. Hawk, C. W. Lovell/W. G. Austin, C.  
H. McElroy

(Note: When R. C. Deen died (3/26/88), C. W. Lovell was appointed as Vice Chairman and W. Austin was appointed to D18.90 as Member-at-Large.)

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## 1990–1991

Chairman: R. S. Ladd  
First Vice Chairman: R. J. Stephenson  
Vice Chairmen: J. R. Talbot, C. W. Lovell, H. J. Pincus,  
T. S. Hawk  
Secretary: C. H. McElroy  
Membership Secretary: J. F. Christiansen  
Members-at-Large: R. T. Donaghe, V. P. Drnevich, H. F. Hanson,  
and D. N. Nielsen (J. T. Mickam appointed  
to replace Nielsen, June 1991) W. G. Austin,  
R. C. Chaney

## 1992–1993

Chairman: R. S. Ladd  
First Vice Chairman: R. J. Stephenson  
Vice Chairmen: J. R. Talbot, C. W. Lovell, T. S. Hawk, W.  
G. Austin  
Secretary: C. H. McElroy  
Membership Secretary: R. T. Donaghe  
Members-at-Large: R. C. Chaney, G. N. Durham, J. T. Germaine,  
J. T. Mickam, K. R. Rademacher, P. A.  
Spellerberg

(Note: Donaghe and Spellerberg replaced each other March 1993.)

## 1994–1995

Chairman: R. S. Ladd  
First Vice Chairman: R. J. Stephenson  
Vice Chairmen: T. S. Hawk, R. C. Chaney, W. G. Austin, J.  
T. Germaine  
Secretary: C. H. McElroy  
Membership Secretary: P. A. Spellerberg  
Members-at-Large: W. S. Adaska, J. T. Mickam, R. T. Donaghe,  
K. R. Rademacher, R. J. Ebelhar, J. D.  
Ritchey

(Note: By-laws ballot in December 1993 approved increasing Members-at-Large to eight and GTJ editor an ex-officio member of D18.90. These changes were implemented in January 1994 when J. C. Wildman and K. B. Hoddinott were appointed Members-at-Large and H. J. Pincus, GTJ Editor, assumed ex-officio position.)

## 1996–1997 (elected in May 1995)

Chairman: T. S. Hawk  
First Vice Chairman: C. H. McElroy  
New Second Vice Chairman: R. E. Gray (appointed 1/96)  
Vice Chairmen: W. G. Austin, R. C. Chaney, J. R. Germaine,  
K. R. Rademacher  
Secretary: J. C. Wildman  
Membership Secretary: P. A. Spellerberg  
Members-at-Large: W. S. Adaska, G. N. Durham, R. J. Ebelhar,  
K. B. Hoddinott, J. T. Mickam, J. D. Ritchey,  
M. N. Sara, M. A. WaseMiller

## APPENDIX II

### Committee D-18 Special Technical Publications (1987–1995)

- 923 Marine Geotechnology and Nearshore/Offshore Structures (Shanghai, China) (1984)
- 963 Field Methods for Groundwater Contamination Studies and Their Standardizations (also D-19) (1986)
- 967 International Geotechnical Applications of Remote Sensing and Remote Data Transmissions (also International Committee on Remote Sensing and Data Transmission of International Association of Hydrological Sciences) (1988)
- 977 Advanced Triaxial Testing of Soil and Rock (1986) (1993 Dudley Medal Award)
- 984 Rock Classification for Engineering Purposes (1987)
- 1014 Vane Shear Strength Testing in Soils: Field and Laboratory Studies (1987)
- 1026 Non-Destructive Testing of Pavements and Backcalculation of Moduli (co-sponsor D-4) (1988)
- 1053 Ground Water and Vadose Zone Monitoring (1988)
- 1070 Geotechnics of Waste Fills—Theory and Practice (1989)
- 1087 Geotechnical Engineering of Ocean Waste Disposal (1989)
- 1089 Deep Foundation Improvements: Design, Construction and Testing (1990)
- 1095 Physico-Chemical Aspects of Soil and Related Materials (1989)
- 1101 Geophysical Applications for Geotechnical Investigations (1989)
- 1118 Current Practices in Ground Water and Vadose Zone Investigations (1991)
- 1126 Geographic Information Systems (GIS) and Mapping (1990)
- 1129 Slurry Walls: Design/Construction/Quality Control (1991)
- 1142 Hydraulic Conductivity and Waste Contaminant Transport in Soils (1993)
- 1158 Superfund Risk Assessment in Soil Contamination Studies (1991)
- 1162 Application of Agricultural Analysis in Environmental Studies (1991)
- 1177 Rock for Erosion Control (1994 COP Award for Excellence in Symposium and Publication Management) (1992)
- 1198 2nd Nondestructive Testing of Pavements and Backcalculation of Moduli (co-sponsor D-4) (1993)
- 1213 Dynamic Geotechnical Testing II (1994)
- 1221 Analysis of Soil Contaminated with Petroleum Constituents (1993)
- 1264 Superfund Risk Assessment for Soil Contamination Studies II (1995)
- 1279 Remote Sensing and GIS for Site Characterization: Applications and Standards (1994)
- 1283 Geostatistics for Environmental and Geotechnical Applications (1995)
- 1288 Subsurface Fluid-Flow (Ground-Water) Modeling (1995)
- 1293 Dredging, Remediation, and Containment of Contaminated Sediments (1994)

(Note: Year in parenthesis indicates date of symposium.)

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## APPENDIX III

### Papers Selected for the C. A. Hogentogler Award (1987–1995)

1987

R. E. Olson, "State of the Art: Consolidation Testing"

1988

R. C. Chaney, H. Y. Fang, "Static and Dynamic Properties of Marine Sediments: A State of the Art"

1989

P. A. Ruygrok, "Evaluation of the Gamma and Neutron Radiation Scattering and Transmission Methods for Soil Density and Moisture Determination"

1990

J. T. Germaine, C. C. Ladd, "Triaxial Testing of Cohesive Soils"

1991

D. I. Stannard, "Tensiometers—Theory, Construction, and Use"

1992

B. L. Kutter, N. Sathialingam, L. R. Herrmann, "Effects of Arching on Response Time of Miniature Pore Pressure Transducer in Clay"

1993

A. J. Bond, R. J. Jardine, C. P. Dalton, "Design and Performance of the Imperial College Instrumented Pile"

1994

R. A. Millet, J.-Y. Perez, R. R. Davidson, "USA Practice Slurry Wall Specifications, 10 Years Later"

1995

F. Tatsuoka, S. Teachavorasinskun, J. Dong, Y. Kohata, T. Sato, "Importance of Measuring Local Strains in Cyclic Triaxial Tests on Granular Materials"

## APPENDIX IV

### Honors to D-18 Members (1987–1995)

*ASTM Honorary Member (W. T. Cavanaugh Memorial Award Since 1987)*

A. Ivan Johnson (1987)  
W. G. Shockley (1991)

#### ASTM Award of Merit

A. Pelzner (1987)  
C. W. Britzius (1989)  
H. J. Pincus (1989)  
R. E. Gray (1991)  
V. P. Drnevich (1993)

R. J. Stephenson (1993)  
C. W. Lovell (1994)  
R. C. Chaney (1995)  
R. S. Ladd (1996)  
C. H. McElroy (1996)

#### Committee D-18 Honorary Membership (W. G. Shockley Memorial Award Since 1992)

R. C. Deen (1987)  
R. G. Packard (1989)  
R. J. Stephenson (1989)  
H. J. Pincus (1990)  
J. H. Schmertmann (1990)  
C. W. Lovell (1992)  
E. T. Selig (1993)  
R. E. Gray (1994)  
R. T. Donaghe (1995)  
R. S. Ladd (1995)  
V. P. Drnevich (1996)

#### D-18 Outstanding Achievement Award (A. Ivan Johnson Outstanding Achievement Award Since 1995)

R. E. Gray (1988)  
V. P. Drnevich (1991)  
T. S. Hawk (1991)  
W. G. Austin (1992)  
R. C. Chaney (1993)  
K. R. Demars (1993)  
R. T. Donaghe (1993)  
C. H. McElroy (1993)  
D. M. Nielsen (1994)  
K. B. Hoddinott (1995)  
A. I. Johnson (1996)  
H. J. Pincus (1996)

#### D-18 Special Service Awards

J. M. E. Audibert (1987)  
J. Briaud (1987)  
R. C. Chaney (1987, 88, 90, 91)  
K. R. Demars (1987, 91)  
R. T. Donaghe (1987, 90, 91)  
R. J. Stephenson (1987, 96)  
W. G. Austin (1988)  
L. L. Beratan (1988)  
H. Y. Fang (1988)  
T. S. Hawk (1988)  
R. C. Horz (1988)  
E. Hoskins (1988)  
A. I. Johnson (1989, 89, 91, 91, 93)  
J. Langer (1988)  
E. T. Mosely (1988)  
H. J. Pincus (1988)  
K. R. Rademacher (1988, 95)  
C. D. Thompson (1988)  
F. C. Townsend (1988)

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R. N. Yong (1988)  
G. Collins (1989)  
D. G. Fohs (1989)  
L. Kirkaldie (1989)  
R. J. Morgan (1989)  
C. B. Pettersson (1989, 91, 93)  
G. Y. Baladi (1990, 96)  
A. J. Bush, III (1990, 96)  
D. M. Nielsen (1990, 91, 93)  
A. F. Richards (1990)  
M. L. Silver (1990)  
K. Hoddinott (1991)  
G. D. Knowles (1991, 94)  
R. O. Lamb (1991)  
A. Landva (1991)  
R. G. Packard (1991)  
F. Paillet (1991)  
W. Saunders (1991)  
J. C. Wildman (1991)  
R. C. Bachus (1992)  
M. I. Esrig (1992)  
P. A. Spellerberg (1992, 95)  
AASHTO Materials Reference Lab (1993)  
M. C. Anday (1993)  
J. F. Christiansen (1993)  
R. J. Ebelhar (1993)  
J. L. Fulton (1993)  
M. N. Sara (1993)  
N. J. Cavalli (1994)  
D. E. Daniel (1994, 95)

R. R. Davidson (1994)  
D. B. Paul (1994)  
M. S. D. Bedinger (1995)  
W. S. Adaska (1995)  
S. J. Trautwein (1995)  
H. L. Van Quintus (1996)

### Technical Editor's Award

K. Hoddinott/T. O'Shea (1993)—*STP 1162, Application of Agricultural Analysis in Environmental Studies*

K. Hoddinott (1994)—*STP 1158, Superfund Risk Assessment in Soil Contamination Studies*

C. McElroy/D. Lienhart (1994)—*STP 1177, Rock for Erosion Control*

T. O'Shea/K. Hoddinott (1995)—*STP 1221, Analysis of Soils Contaminated with Petroleum Constituents*

R. Ebelhar/V. Drnevich/B. Kutter (1995)—*STP 1213, Dynamic Geotechnical Testing II*

R. Chaney/K. DeMars/G. Richardson/R. Yong (1996)—*STP 1293, Dredging, Remediation, and Containment of Contaminated Sediments*

### Committee on Publications Award for Excellence in Symposium and Publication Management

C. H. McElroy/D. Lienhart (1994)—*STP 1177, Rock for Erosion Control*