

the news



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PHILADELPHIA SECTION
AMERICAN SOCIETY OF CIVIL ENGINEERS
1317 Spruce Street, Philadelphia, Pa. 19107

VOL. 53 - 3

OUR 68th YEAR

December, 1980

DECEMBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

TUESDAY, DECEMBER 9, 1980

Engineers' Club, 1317 Spruce Street

Cocktails — 5:30 P.M. Dinner — 6:30 P.M. Meeting — 7:30 P.M.
(Cocktails 2 for 1 — Downstairs Bar 4 - 6 P.M.)

SUBJECT:

INNOVATIVE DESIGN AND CONSTRUCTION OF PRECAST CONCRETE SEGMENTAL BRIDGES

SPEAKER:

JEAN M. MULLER, Chairman of the Board and Partner, Figg and Muller Engineers, Inc.

MODERATOR:

CHARLES C. ZOLLMAN, Director of Engineering, Urban Engineers of Maryland, Inc.



Properly designed Precast Segmental Bridges can save money and construction time for many of our new and replacement bridges.

This presentation will trace the history of prestressed concrete bridge design and construction from the early days, exemplified locally by the Walnut Lane Bridge, to the current state-of-the-art, segmental construction.

Jean M. Muller was born in France and received his Master's Degree in Engineering in 1947 from L'Ecole Centrale des Arts et Manufactures, Paris, France.

From 1947 to 1951 he worked under the direct supervision of Eugene Freyssinet, the grandfather of prestressed concrete, on many large projects including the concrete arches at Caracas, Venezuela.

Mr. Muller has over 34 years of engineering experience in the design and construction of major prestressed concrete structures in many parts of the world. He designed the first segmental bridge with match-marked joints in 1952 in the State of New York.

Mr. Muller has designed 18 bridges across France's Seine River, including the Choisy-le-Roi Bridge, the first precast, match-cast segmental bridge using epoxy joints.

Currently, Figg and Muller Engineers Inc., have bridge projects in 15 states with a construction value in excess of \$350 million.

SPECIAL FEATURE:

VILLANOVA NIGHT

The ASCE Student Chapter, Faculty and Alumni of the Civil Engineering Department of Villanova University will be honored at this meeting. All students, faculty and alumni are cordially invited to attend.

NEXT MONTH'S MEETING MARK YOUR CALENDAR

DINNER MEETING
PHILA. SECTION ASCE

Date: **Tuesday, January 13, 1981**
Engineers' Club—7:30 P.M.
Cocktails: 5:30 Dinner: 6:30

Subject: **Nuclear Energy. How Safe?
Point/Counter Point**

Speakers: Representatives from **PE-
CO** and the **Union of Concerned
Scientists.**

**Joint Meeting
with Women's Auxiliary
Drexel University Night**

READING BRANCH

The December meeting of the Reading Branch will be on **Thursday, December 11, 1980**, at Green Valley Country Club. **Richard P. Roe** will speak on **Non-Destructive Testing Methods**. Dinner will be at 7:00 P.M., the meeting at 8:00 P.M. Contact Ben Nacar, Program Chairman at Gilbert Associates, Inc., P. O. Box 1498, Reading, PA 19603 (775-2600, Ext. 3422) for reservations. **All Philadelphia Section members welcome!**

No Dinner Reservation Mailing Cards will be sent until further notice. Please call Mr. deKovacs at the Engineers' Club immediately. (215) 735-5234.

STUDENTS — Plan to attend for Dinner (Half Price) or meeting after Dinner.

Holiday Greetings

The Editor and Staff of THE NEWS, on behalf of the Officers and Board of Directors, extend to the Members of the Phila. Section, ASCE and their families, happiest thoughts of the Holiday Season and Best Wishes for a healthful and successful New Year.

IMPORTANT!!

THE NEWS is now being mailed at Non-Profit Organization Bulk Rate. While this promises postage savings to the Section, it also runs the risk of much longer delivery time from your local post office to your mail box. Therefore, please refer to your 1980-1981 Section Meeting Program Schedule and mark your calendar for all meetings and social functions. Listed below is a summary of remaining meeting dates.

Tuesday, January 13, 1981 — Section Dinner Meeting, Engineers' Club
 Subject: "Nuclear Energy — How Safe? Point/Counterpoint"
 Speakers: Representatives from Phila. Electric Co. and the Union of Concerned Scientists. Drexel University Night.
 Joint Meeting with the Women's Auxiliary.

Tuesday, February 10, 1981 — Section Dinner Meeting, Engineers' Club
 Subject: "COGNAC — World's Tallest Offshore Oil Platform" (1980 Outstanding Civil Engineering Achievement Award)
 Speaker: Dan Godfrey, Shell Development Co., Houston, Texas
 Temple University Night.

Tuesday, March 10, 1981 — Section Dinner Meeting, Engineers' Club
 Subject: "Environmental and Geotechnical Considerations of the Alaskan Pipeline"
 Speaker: William Moore, Principal, Dames and Moore, San Francisco, CA
 University of Pennsylvania Night.

WEDNESDAY, April 8, 1981 — Joint Dinner Meeting with Philadelphia Post, Society of Military Engineers (SAME), at the PHILADELPHIA NAVAL BASE.

Saturday, May 9, 1981 — Annual Spring Social at the Engineers' Club.
 Note: This is a change from your Program Card.
 This Year's Social is NOT at Bala Golf Club.

TECHNICAL GROUP ACTIVITIES

GEOTECHNICAL

December Meeting

Date: **Tuesday, December 16, 1980**

7 P.M. — Engineers' Club

Subject: **Geotechnical Aspects of Underground Mining for Fuel.**

Speaker: **Dr. Thomas D. O'Rourke**, Assistant Professor, School of Civil and Environmental Engineering, Cornell University, Ithaca, NY

Program Host: **Dr. Ziyad I. Husami**
 Chairman, Geotechnical Group

Refreshments are served

The third lecture in the series on Geotechnical Aspects of Energy will compare and contrast underground construction for mining and civil engineering purposes. Special attention will be directed to the geotechnical problems of coal mining, although parallels will be drawn with mining for other fuel-related materials such as oil shale. Four areas will be treated: 1) mine access in the

form of shafts, tunnels, and adits; 2) geologic hazards such as unstable ground, methane gas, and ground water; 3) waste disposal in the form of spoil tips, slag heaps, and controlled fill; and 4) surface subsidence including subsidence effects on structures.

—o—

HYDRAULICS & SANITARY

December Luncheon Meeting

Date: **Wednesday, December 10, 1980**

Engineers' Club — 12:00 Noon

Subject: **Dewatering of Sludge from Water Treatment and Waste Water Treatment Plants.**

Speakers: **Dr. Carl Koch**, Greeley & Hansen, Engineers and **Thomas Lane**, Malcolm Pirnie, Inc., Consulting Environmental Engineers

Program Host: **Clyde S. Younkin**, Chairman, Hydraulics and Sanitary Group

For Luncheon reservations and information, please call Sec.-Treas. **Guru Bose**, (215) 686-1776, Ext. 47-511.

CLUB FACILITIES AVAILABLE

During the Holiday Season the Members of ASCE are cordially invited to use The Engineers' Club facilities on a cash basis. Guest cards can be picked up at the Club office.

Complete dinners including appetizer or soup, entree, family style vegetables, salad, beverage and dessert, \$5.50 to \$7.00. **Children's platters available at half price.**

—New Year's Day, Open House, Thursday, January 1, 1981, Buffet.

Call the Club office (215) 735-5234 and make your reservations.

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PAST PRESIDENTS HONORED

At the November 12, 1980 Phila. Section Luncheon-Meeting, the spotlight shone on Past Presidents, who were invited by President Joseph R. Syrnick to be recognized. In Mr. Syrnick's words: "... It is important that we Phila. Section members take a moment to reflect on our organization and on the Past Presidents whose contributions of ideas, time and effort have helped keep the Philadelphia Section, ASCE active and thriving..."

Adler Cited

About fifteen Past Presidents attended and several others who have moved from the area sent letters thanking President Syrnick and the Section for the invitations. They expressed their continuing attachment to and affection for the Philadelphia Section and their many friends who are members. The attending Past Presidents were introduced for a bow and a round of applause.

Signal recognition was extended by President Syrnick to Past President **Julius Adler** (1942-1943), who was presented a specially engraved Liberty Bell paperweight commemorative of the 1976 Bicentennial Year ASCE National Convention hosted by the Philadelphia Section in September, 1976. The tribute on the souvenir bestows on Mr. Adler the honor of "Senior Past President Award, Philadelphia Section, ASCE." Mr. Syrnick displayed a convincing exercise in historical research by reciting City, National and worldwide events of preeminent significance and interest which occurred during Mr. Adler's tenure.

In acknowledging the special honor to him, Mr. Adler modestly stated that



Past Presidents: The About-Halfway Between; One of the Earliest; and the Latest

Left to Right: **Sidney Robin** (1962-1963); **Julius Adler** (1942-1943) who received "Senior Past-President Award"; and **Joseph R. Syrnick** (1980-1981). Three of the Past Presidents, Phila. Section, ASCE, honored at the November 12, 1980 Section Luncheon Meeting at the Engineers' Club.

because of the terrible constraints on ASCE and other professional engineering groups during World War II, much of the programs he espoused and promoted on behalf of the Phila. Section had to be deferred or cancelled. Those who remember Mr. Adler as President will take exception to his reservations about accomplishments. He was a progressive and conscientious worker for the betterment of our Section and Society in Local and National affairs. We are proud to honor him, and look forward to his continued attendance at meetings and participation in ASCE activities.

NOVEMBER MEETING

November 12, 1980 Engineers' Club

Hazardous Wastes and the Environment

by John E. Spitko, Jr.

THE NEWS Staff Writer

A gratifying turnout of over 100 members and guests attended the November regular Section Meeting, which was a Luncheon at the Engineers' Club. **Dr. Ernest A. Regna**, Chief, Solid Waste Branch, U. S. Environmental Protection Agency, Region II, was the Principal Speaker. Dr. Regna's topic was: "Love Canal—An Environmental Catastrophe."

Love Canal: The Development

Dr. Regna is responsible for hazardous wastes and solid waste programs under the Resource Conservation and Recovery Act of 1976 (RCRA) and has been intimately involved with attempts to mitigate the impact of toxic wastes upon the residents of the Love Canal area.

The early history of the Love Canal site, as told by Dr. Regna, was intriguing. In 1836, a U. S. government survey team was sent to search upper New York State for a canal route between Lake Erie and Lake Ontario. They selected a site on the Niagara River near Lewiston. The canal was never built, however. Much later, in 1894, a businessman named William Love was able to obtain financial backing to build the canal which would be used to divert Niagara River water to a proposed power generation and distribution facility. Cheap electricity would then be available adjacent to the plant. Love figured to profit by the sale of nearby land to new industries that he hoped would relocate there. Love convinced the state government in Albany to give him powers of condemnation and the right to divert water from the river.

Once underway, property was condemned and Love purchased the necessary rights-of-way. Then, two strokes

of history made the canal scheme obsolete. The first stroke fell upon Love in the form of a national economic depression. The second fell in the form of an invention by Nikola Tesla. Tesla's new Alternating Current made possible the transmission of electric power long distances, unlike Direct Current, and gave industry a new freedom to locate away from sources of electric power. No longer needed, Love's project died.

In 1910, the Property was put up for sale at public auction. The Southeast portion of the site was bought by the City of Niagara Falls which, in 1920, began using it as a town dump. Local chemical companies were also invited to discard chemicals having no further use there.

Enter Hooker Chemical

In the early 1950's, the dump was closed. Earlier, Hooker Chemical had purchased part of the property from the City. This company disposed of its own chemicals on the site, and, after placing a clay cap on it, returned the property to the City of Niagara Falls. In returning the property to the City, Hooker had placed a legally nonbinding "advisory clause" in the deed stating that the City would not build on the property.

This clause notwithstanding, the City removed the clay cap and did build a school and several blocks of homes. A few years later, an abnormally high rainfall and a heavy blizzard occurred. Percolation of the runoff and snowmelt into the old dump site carried chemicals close to and around the homes nearest the site. In some cases, contaminated groundwater was able to move fairly long distances through buried, former streambeds and then into the homes. Basements of some of the homes began to fill with high levels of organic vapors, and pools of highly contaminated water.

In 1978, the New York State's Departments of Health (NYDEH) and Environmental Conservation (NYDEC) began an investigation and found in the contaminated water 80 organic chemicals in relatively high concentrations. Of these 80, 11 are known carcinogens in either humans or animals. Birth defects and miscarriages statistically occurred more frequently in areas around the old dump site, than in control populations.

Tragic Impact

The impact upon people has been tragic, as documented by "60 Minutes" and other television news features. Many of the original owners have moved away

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NOVEMBER MEETING

(continued from page 3)

and either have sold their houses to the State and Federal Governments or have abandoned them outright. A giant "french drain" has been built around the site in an effort to intercept contaminated groundwater. A new clay cap and a leachate treatment system have been built.

Even more impressive is the amount of litigation arising from this disaster. The U. S. government is suing Hooker Chemical and the City of Niagara Falls for \$125 million. NY DEC is suing Hooker for \$600 million, and individual citizens' suits in amounts totalling \$2 billion have been brought against Hooker.

After recounting the chilling tale of Love Canal, Dr. Regna summarized the US EPA's current approach to hazardous waste transport, storage, and disposal. He gave details on the Resource Conservation and Recovery Act of 1976, which applies to ongoing disposal, but not to abandoned dump sites. Dr. Regna called this an unfortunate "loophole" and then reviewed current "Superfund" legislation that would pay for cleanup of such abandoned sites.

Enlightening Discussion

A penetrating discussion period of questions and comments from members in the audience followed Dr. Regna's formal presentation. Our speaker responded with his typical expertise.

Section President Syrnick presented Dr. Regna the Section's Certificate of Appreciation and a copy of the 1976 Bicentennial ASCE Annual ASCE Convention Commemorative Book published by the Phila. Section: "The History of Civil Engineering and Construction in the Delaware Valley."

NATIONAL PUBLIC WORKS WEEK

Once again, the Phila. Section, ASCE is cooperating with the American Public Works Association (APWA) in National Public Works Week, May 17 - 23, 1981; the "Top-Ten Public Works Leaders-of-the-Year Award Program."

The Top Ten program was established in 1960 to inspire excellence and dedication in public service by recognizing the outstanding achievements of individual public works officials. The deadline for nominations is December 15, 1980.

Eligibility. Any non-elective, full-time employee of a federal, state, provincial, county, or municipal govern-

ment, who is responsible for one or more major subdivisions of a governmental agency, is eligible for selection, provided that most of the individual's time and efforts are devoted to the design, construction, maintenance, and/or operation of a street or highway system, water supply (treatment or distribution) system, sewage or refuse collection or disposal system, public building, drainage or flood control facility, airport, harbor, or any other type of public works installation. **The individual must still be in active service as of National Public Works Week, May 17-23, 1981.**

For further information about National Public Works Week, or for copies of a special brochure which describes career opportunities for young people in public works, write:

National Public Works Week
1313 East 60th Street
Chicago, IL 60637

Phila. Section members who wish to submit nominations may do so by contacting Secretary Albert M. Tantala, c/o Tantala Associates, 4903 Frankford Ave., Phila., PA 19124, (215) 289-4600.

FALL SOCIAL AT THE HEISER'S

The Philadelphia Section, ASCE 1980 Fall Social was hosted by Past President and Mrs. Will M. Heiser at their beautiful Bucks County estate on Sunday, November 2, 1980. Sponsored and arranged by the Women's Auxiliary in keeping with the policy — started in 1976 — of "at-home" parties, proceeds of the function were deposited into the Auxiliary's Annette Estrada Memorial Fund, to assist, financially, deserving Civil Engineering students in the Delaware Valley area.

A large group of Section members and their wives enjoyed cocktails and favorite hors d'oeuvres with the adept assistance of Will and Audrey Heiser (Audrey is a Past President of the Women's Auxiliary). Auxiliary members prepared the attractive and tasty delicacies and Section members paid modest ticket fees to cover costs and enhance the Memorial Fund.

Since the new Fall Social format was established, every Fall Social has been successful. The Heiser party was no exception. The atmosphere was warm and cordial; it was well arranged and thoroughly enjoyable. The Heisers deserve highest praise for their graciousness as hosts. All the Women's Auxiliary members who participated are extended the heartfelt gratitude of the Section. This was a splendid and memorable affair.

SECTION MEMBERSHIP ASSIGNMENT PREFERENCES

A number of the area ASCE members have raised questions concerning their assignment to an ASCE Section. Section assignments are made on the basis of mailing addresses. If an ASCE member, for example, lives in New Jersey but works in Philadelphia he/she will be assigned by National to one of two Sections. If the ASCE member uses his/her home address for receiving mail, the Section assignment will be New Jersey. If the mailing address used, however, is the work address, the Section assignment will be Philadelphia.

For ASCE members who do not live or work in a region covered by the ASCE Section he/she would prefer to belong to, ASCE National will still make the Section Membership assignment based on mailing address. If membership in another Section is still desired, the member must personally contact the Section he/she is desirous of joining and pay Local Section dues. This procedure is discussed in the mailing package sent with the annual dues statement.

Any ASCE member may belong to as many Sections as he/she would like, but he/she must contact the Sections directly, with the sole exception being the Section assigned by National. Persons interested in membership in the Philadelphia Section should contact either Judy Longfield, Membership Secretary or call Al Tantala, Section Secretary, at 289-4600.

WOMEN'S AUXILIARY

Christmas Party

The next monthly Luncheon-Meeting of the Auxiliary will take place at the Engineers' Club on Wednesday, December 17, 1980 — 12:00 noon. It will be the Annual Christmas Party, and the Chairperson is Audrey (Mrs. Will M.) Heiser. There will be an absolute minimum of business discussed.

Featured speaker is Mrs. John C. Simon, whose intriguing topic will be: "All About Angels." Pollyannas will be exchanged and the spirit of the Holiday Season will fill the air. All Auxiliary members and their guests are cordially invited to attend.

There will be no Women's Auxiliary Luncheon-Meeting in January or February. The Women's Auxiliary will join the Main Section, however, at the January 13, 1981 regular Section Dinner-Meeting at the Engineers' Club.

Details will appear in the January, 1981 issue of THE NEWS.