

Volume 53

3rd Quarter 2010

## Giving Back to the Profession: NELSON's Support of Standards Organizations and Professional Societies

By: David R. Stewart, P.E.

NELSON has a long and rich history of support for and participation in organizations engaged in writing technical codes and standards and in professional societies dedicated to the betterment of the engineering profession. NELSON's employees have donated thousands of hours of personal and company time to these activities, with the full backing and support of the company. This article will provide an overview of the professional organizations and codes/standards groups that we have been involved with, and highlight the specific activities in which our staff have been engaged.

### CODES AND STANDARDS

The backbone of modern industrial engineering practice is formed by the thousands of codes and technical standards that have been developed to define design, manufacturing, construction, and other requirements of the systems and equipment employed in our society. The majority of these codes and standards are developed and maintained by volunteer professionals involved in related industries. In that sense, many of the technical aspects of the systems, equipment, and materials that make up our industrial society are defined and monitored by the entities that design, produce, and use them. NELSON has been very active in codes and standards writing for many years, having significant



involvement in the oil and gas, petrochemical, marine, and construction materials industry committees. NELSON's involvement in these activities has included participation on committees stewarded by the American Petroleum Institute (API), the Institute of Electrical and Electronics Engineers (IEEE), Instrument Society of America (ISA), National Fire Protection Association (NFPA), American Society of Mechanical Engineers (ASME), American Society of Civil Engineers (ASCE), American Concrete Institute (ACI), and others.

#### American Petroleum Institute (API)

NELSON's involvement with API working groups dates back to 1978, when Jim Cospolich (now retired) worked on the original four person team to develop API RP 14F, Design and Installation of Electrical Systems for Offshore Production Platforms. This document serves as the

basis for the design of offshore electrical systems in US federal waters, and has been adopted as law by the Department of the Interior in the Code of Federal Regulations. Since this First Edition, API has released numerous updates and revisions to the original document, as well as a sister document (API RP 14FZ) which covers electrical design and installation requirements for offshore electrical systems in areas classified under the Zone method of area classification.

NELSON's Jim Cospolich and David Stewart have been steady contributors to both documents for many years, and the Company frequently hosts meetings of the RP 14F and 14FZ working groups in both our New Orleans and Houston Offices. Jack Neelis has also been a recent contributor to RP 14FZ.

Another API standard that has benefited from NELSON participation and support is API RP 500, Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division 1 and Division 2 and its sister document, API RP 505, Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Zone 0, Zone 1, and Zone 2. Jim Cospolich has worked for many years in support of these standards, and David Stewart played a significant role in incorporating requirements for floating production facilities into both standards. Due to their efforts in working on these API



**THE CONSULTANT®**

**WALDEMAR S. NELSON AND COMPANY**  
 Incorporated  
**Engineers and Architects**  
 1200 St. Charles Ave., New Orleans, LA 70130  
 Telephone: (504) 523-5281 Fax: (504) 523-4587  
 www.wsnelson.com  
 2 Northpoint Dr., Ste. 300  
 Houston, TX 77060-3235  
 Telephone: (281) 999-1989 Fax: (281) 999-6757

WaldeMAR S. Nelson, P.E.	(1916-2005)
Charles W. Nelson, P.E.	President and Chairman
Kenneth H. Nelson, P.E.	Secretary
James B. Lane, P.E.	Treasurer
Thomas G. Ehrlicher, P.E.	Executive Vice President
Virginia N. Dodge	Assistant Secretary
Wayne J. Hingle, P.E.	Sr. Vice President
Robert J. Leaber, Jr., P.E.	Sr. Vice President
Arthur J. Smith, III, P.E.	Sr. Vice President
Peter M. Smith, P.E.	Sr. Vice President
David R. Stewart, P.E.	Sr. Vice President
Thomas W. Wells, P.E.	Sr. Vice President
Michael D. Harbison, P.E.	Vice President
Barton W. Harris, P.E.	Vice President
Stephen O. Johns, P.E.	Vice President
Lyle F. Kuhlmann, P.E.	Vice President
Joseph R. Lawton, III P.E., PMP	Vice President
A. Pierre Olivier, P.E.	Vice President
Stephen M. Pumilla, P.E.	Vice President
Clifton A. Snow, Jr. P.E.	Vice President
Louis W. Conner, P.E.	Assistant Vice President
R. Kent Davis, P.E.	Assistant Vice President
Anthony D. Hoffman, P.E.	Assistant Vice President
Leanne M. Gehegan, P.E.	Assistant Vice President
Jack H. Neells, II, P.E.	Assistant Vice President
Robert C. Olivier, A.I.A.	Assistant Vice President
Stephen E. Prados, P.E.	Assistant Vice President
R. Bradford Rogers, P.E.	Assistant Vice President
William E. Rushing Jr. P.E.	Assistant Vice President
Wayne D. Talley, P.E.	Assistant Vice President
Ronald J. Villere, PMP	Assistant Vice President

organization responsible for the development of numerous safety codes and standards recognized throughout the US and in many other countries. The most prominent of these documents is NFPA 70, the National Electrical Code, which was first developed in 1897 and is currently in its 51st edition. NELSON has played a prominent role in various code-making panels within the NEC Committee, particularly on panels that deal with industrial and petrochemical installations.

Jim Cospolich has been involved with NEC code-making panel CMP14 since 1992, representing first the ISA and then IEEE on this panel. CMP14 is the NEC code-making panel responsible for writing codes for electrical installations in hazardous locations. Arthur Smith has been a member of code-making panel CMP11 since 1999, representing the IEEE. This panel writes and maintains Sections 409, 430, 440, 460, and 470 of the NEC.

**PROFESSIONAL ORGANIZATIONS**

NELSON is supportive of our employees who wish to participate actively in professional organizations such as engineering societies, local business organizations, and university advisory boards. The company has long recognized that participation in such groups offer our employees opportunities for professional development, continuing education, and valuable networking with clients and peers. Many NELSON employees enjoy membership in one or more of these organizations, and the company is well represented in leadership positions in many of these institutions. Some of the more prominent organizations in which we are active are listed below.

*American Concrete Institute*

Bill Rushing of NELSON's New Orleans Civil Engineering Department has been a long time member of ACI and has served in leadership roles at the national level within this organization for many years. Bill is a Fellow within ACI, and is currently Chair of their Finance Advisory Committee. He is a member of numerous



**Bill Rushing, P.E.**

technical committees within ACI, and has held Chair positions on many committees within the organization. He is also a past President of the Louisiana Chapter of ACI.

Bill was recently notified that he will be receiving the Henry L. Kennedy award from the American Concrete Institute. The recipients of this very prestigious international award include a long line of past presidents and ACI distinguished members. The award was established in 1958 by ACI to honor the late Henry L. Kennedy, an extremely active Institute member who was a past president and, at the time of his death, chair of the Institute's Building Committee. The award is given only for outstanding technical or administrative service to the Institute and is not mandatory each year. The basis for selection of awardees is outstanding activity or service that has enhanced the Institute's prestige, marked leadership in technical, administrative, or special committee work, or other distinguished service to the Institute. We congratulate Bill on this great honor and thank him for his long involvement with ACI.

*IEEE Petroleum and Chemical Industry Committee*

The IEEE PCIC is a large and very active organization. Operating under the auspices of the Industries Applications Society (IAS) of IEEE, PCIC stewards the development and updating of numerous nationally-recognized technical standards, and hosts annually one of the electrical

recommended practices, Jim Cospolich, David Stewart, and Frank Stone (Shell Oil, Retired) were awarded the 1999 Corporate Leadership Award from the Minerals Management Service.

Over the years, each edition of these API electrical standards has required updates and revisions to the many drawings and figures included in the documents. NELSON has had a significant contribution to this effort, primarily through Sal Perez in NELSON's New Orleans Electrical Department. Sal has created and revised numerous detailed drawings and diagrams (dubbed "art work" by API) to augment the written recommendations expressed in the documents.

NELSON has also participated in the development of two other API standards. Jim Melancon (now retired) served as a committee member for the development of API RP 14J, Recommended Practice for Design and Hazards Analysis for Offshore Production Facilities, and Wayne Hingle served as a committee member for the development of API RP 75, Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities.

*National Fire Protection Association (NFPA)*

The NFPA is a standards writing



**Recent API-RP 14FZ Committee Meeting Hosted in the NELSON Houston Office**

industry's most successful technical conferences. NELSON has actively participated in PCIC for many years, regularly sending a group of our engineers to the annual conference, authoring numerous technical papers for presentation at the conference, and holding many leadership positions on the various committees that make up PCIC. Jim Cospolich, Arthur Smith, and David Stewart have all authored papers that were presented at the conference, some of which were subsequently selected for publication in IEEE magazines. Jim Cospolich served as the 2002 Local Conference Chair, responsible for managing and hosting the conference in New Orleans that year. David Stewart is a past Chair of the Production Subcommittee, and is now Chair of Technical Papers Review for the committee. Mike Harbison (Mgr. of Electrical and Control Systems Depts, Houston) has followed Dave onto the Production Subcommittee, and is now serving as the Vice-Chair of that committee. In a related position Arthur Smith has been a member the IEEE Standards Coordinating Committee (SCC-18) since 1996, and has served as its Secretary since 2008.

American Society of Civil Engineers (ASCE)

Many of NELSON's Civil Engineers are active in ASCE, both at the local and national levels. Steve Johns of NELSON's New Orleans Civil Engineering Department is the current Treasurer of the New Orleans chapter of ASCE. Bill Rushing is the current Chair of the Structures Committee of the organization.

American Institute of Chemical Engineers (AIChE)

NELSON is very pleased when our younger staff members take leadership roles in professional societies. An example of this is Carol Schmidt, a Chemical Engineer in our Houston Office, who is an officer in the South Texas Section of AIChE and recently re-

ceived the STS AIChE Young Chemical Engineer of the Year Award for 2010 at the Houston Engineering Week Young Engineer Banquet. Carol was selected in recognition of her multiple roles and extensive work for the STS-AIChE Young Professional Association. Carol has been actively involved in the South Texas Section since her graduation from University of Houston in 2007. She is a past Chair of the Young Professionals and the current Secretary for STS.



Carol Schmidt with her husband Nathan after accepting her award

**EDUCATIONAL INSTITUTIONS**

NELSON has long recognized the value of strong engineering educational programs in our local areas. Many of our employees are long time residents of the New Orleans and Houston areas, and many hold their degrees from local colleges and universities. We take great pride in our support of these local institutions. As examples of our company's commitment to these programs, several members of our New Orleans staff, including Tom Wells (Manager of Civil Engineering Department), Ken Nelson (Senior VP and Corporate Secretary), Bill Rushing (Assistant Vice President) and Steve Johns (Vice President) are all active on the Civil Engineering Advisory Board of the University of New Orleans. Bill Berg (Staff Engineer) and Richie Melancon (Senior Engineer) are active on the Mechanical Engineering Advisory Board of UNO. Ken Nelson is also an at-large member of the Louisiana Engineering Foundation board.

NELSON's commitment to and support of the engineering tradition is strong and clearly manifested by the tremendous involvement of our staff in professional activities and organizations outside of their daily jobs. Much of the time spent in these activities is donated by our staff, and much of the expense related to participation in organizations is borne by the Company. The Company is justifiably proud of our record of service to our profession, and we look forward to many more years of active involvement and support.

**NEW ORLEANS EMPLOYEES ENJOY A SUMMER GET TOGETHER AT ROCK-N-BOWL**



## New Orleans Chapter of Engineers Without Borders Adopts Community in Amayo, Nicaragua

By: Joel Dorsa, P.E.

Engineers Without Borders (EWB) is an international organization whose goal is to create a more stable and prosperous world by addressing people's basic human needs. Several years ago, the New Orleans Chapter of EWB adopted the community of Amayo, Nicaragua in an effort to improve the public health of the community through education and basic water and waste facilities. The objectives of the project are to improve access to potable water, provide latrines for each home, and develop a community public health education program.

Amayo is a sparse community of only about 60 homes. Most homes have no electricity, and those that do have little more than a few naked light bulbs. Currently the two sources of water in Amayo are rainwater and a river that livestock also use. The river water has biological contamination from the livestock and chemical contamination from nutrients. During the rainy season, the river floods making it dangerous to collect water, and it has a large sediment concentration. During the dry season it nearly goes dry. Many of the villagers experience repeated episodes of contaminated water-borne illnesses.

Latrine Pit



This project will supply home ceramic water filters for each residence to address the immediate health concerns of the village. To date, water filters have been installed in about half of the homes.

This project will also install rainwater catchment systems on community structures as available, though this may not supply enough water to carry through the dry season. However, EWB has begun to investigate the possibility of digging a deep aquifer well for use by the entire community. Even this has its challenges given that Amayo is spread out and would require the installation of a sustainable water distribution system over hilly terrain.

Improper human waste disposal also contributes to village illnesses. Over 95% of villagers do not have access to latrines and use grassy areas as bathroom facilities.

This project will construct a latrine for each residence or group of family residences. Latrine construction utilizes all local materials. Rocks to line the latrine hole are available from a nearby quarry, and wood and metal materials are available from stores in the neighboring city of Diriamba. One Amayo resident studying to be an engineering technician has offered his own design for covered latrines which the village citizens approved. Ten latrines have been installed to date. As part of this effort, the community has provided labor and will provide maintenance as required.

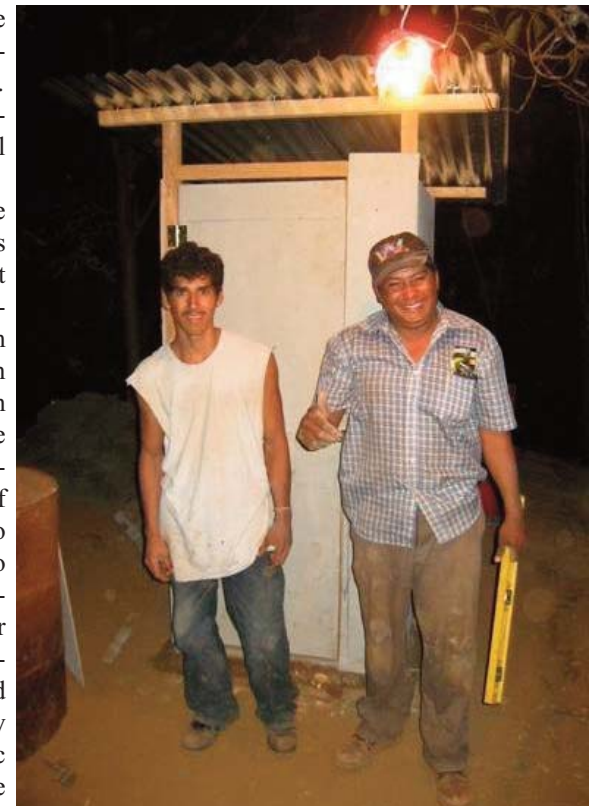
Several village women will be trained as public health resources for the community. This project will develop a simple public health education program that focuses on water and waste transmitted diseases. The goal of this program is to bring awareness to the causes and effects of improper hygiene, with a resultant shift toward more healthy lifestyles. Public health surveys have been conducted



Latrine Construction

throughout the community. On subsequent visits, EWB will continue surveying the overall health of the citizens of Amayo to track the progress of overall health.

Much work remains to be done. The chapter expects to send a team of up to 8 individuals to Nicaragua in early 2011 to build additional latrines, install more water filters, and further assess the viability of a well. The New Orleans chapter of Engineers Without Borders is determined to do what it can to improve the quality of life for the citizens of Amayo.



Construction Complete

# NELSON CELEBRATES 65 YEARS

Waldemar S. Nelson & Co., Inc. marked a milestone over the summer, celebrating 65 years since the founding of our company. In tracing our beginnings, it is significant to note that our founders initially met through a very special Boy Scout Troop – the Pine Tree Troop 22, which met at Lusher School in uptown New Orleans. The scoutmaster, Colonel Victor J. Bedell, oversaw two promising youths – his son John G. Bedell and a youngster from Carrollton – Waldemar S. Nelson. This disciplined group practiced precision marching drills at weekly meetings and held one overnight camping trip per month, regardless of the weather. A “Pine Tree Troop” was specially trained in setting up and breaking down camp in under 10 minutes. The scouting ethic of integrity, spirit of readiness (“Be Prepared”) and service to others laid the foundation for the philosophy that would guide the business that grew out of the vision and dreams of these three men. Waldemar himself would later become scoutmaster of Troop 22, and his son Charles was a member of the troop and remains active in Boy Scout affairs at the council level.

The Colonel, John and Waldemar all worked at Camp Claiborne near Alexandria, Louisiana, designing and

overseeing construction of cantonments to house troops during World War II. Toward the close of the war, Waldemar and John looked to the future and agreed they would join forces in civil work when the war was over. The Colonel opened the doors of V. J. Bedell Company in the summer of 1945 in the Pan American Life Building at Camp and Poydras Street in New Orleans. A partnership agreement, effective January 1, 1946, was executed on January 16th, 1946 by V. J. Bedell, John G. Bedell and Waldemar S. Nelson. The name was changed to Bedell & Nelson Engineers on August 17, 1949. In October of 1956, the firm was incorporated as Bedell & Nelson Engineers, Incorporated. The name changed again in 1961 to Waldemar S. Nelson & Co., Incorporated. We have grown from those three founding members to well over three hundred today, with offices in New Orleans and Houston. Being qualified in twenty-five states and having worked on projects worldwide, we are poised to move forward, continuing to serve an ever-growing client list. We trust the Bedells and Waldemar would be pleased that their legacy lives on.



**Colonel Victor J. Bedell**



**John G. Bedell**



**Waldemar S. Nelson**

We are happy to announce that an increase in practice has made it necessary for us to move from our old location, 840 Union Street, to our new and larger building. Please change our address and telephone number on your records to the following:

BEDELL & NELSON ENGINEERS  
INCORPORATED  
1200 ST. CHARLES AVENUE  
NEW ORLEANS 13, LOUISIANA

MAgnolia 5281

1 MARCH 1957

## SERVICE ANNIVERSARIES - 2010

### 30 Years

David R. Stewart  
Lonnie J. Robin  
Anthony E. Catalanotto  
Barry L. Wilson  
Stephen O. Johns  
Carl G. Cappel

### 25 Years

Mary L. Dauzat  
Robert D. Denman

### 20 Years

Rene F. Delaune  
Ernest J. Orgeron III  
Michael T. Daussin

Barry J. Valence  
Dwayne A. McElroy  
Irvin Grinder III  
Randy P. Chatagnier  
Edward O. Merchan  
Anthony D. Hoffman  
Robert D. Chandler

### 10 Years

Anthony W. Beard  
Robert P. Stoddard  
Robert A. Toca  
Gloria J. Schultz  
Michael W. Glenn  
Kah Yep Zee  
John T. Robinson  
Richie A. Melancon  
Rachel C. Cambre  
Brian D. Chauvin  
Sean T. Zeringue

### 5 Years

Martin W. Patterson  
Joseph J. Guerra  
Ross S. Harris  
John J. Dore  
Richard G. Lawson  
Campbell C. McFarland  
Michael R. James  
Wense Savala, Jr.  
Elizabeth A. Wood  
Felicia L. Abu Fannoun  
Kenneth B. Hertz  
Kenneth T. Schlag  
Steven P. Mailhos  
Laurel S. Wood  
William H. Holshouser  
Colin R. Hestilow  
Son A. Truong

Stephen W. Carlson  
Jason A. Kammer  
Tadeusz Cybin  
Kelly T. Guthrie  
Ronald L. Walker  
Rupert P. Cullum  
Jeffrey T. Roy  
Charles C. Corr  
Pamela M. Dominique  
Thomas L. Burns  
Eric A. Melancon  
Charles R. McAdams  
Mark R. Neeb  
Alvin Cobb  
Kelly D. Miller  
Michelle R. Jones

## Kent Davis Awarded For His Service to Scouting

On Monday, October 18, Kent Davis of our Houston Office was presented with a Silver Beaver Award for distinguished service to youths in the Boy Scouts. The Silver Beaver Award is the highest form of recognition that a local council can bestow on a volunteer. Kent received this award for his 27 years of service in scouting. His service includes: Varsity Huddle Commissioner; a Committee Member for Troop 6; Scoutmaster and Troop Committee Chairman of Troop 362 in the Southeast Louisiana Council; and chair of the Logistics Committee for VAM Jam, the Vietnamese, American and Malaysian Jamboree, for the Direct Service Council. He previously served as a Chartered Organization Representative and Council Committee Member in the Gulf Coast Council.

Kent has received the District Award of Merit and is Wood Badge trained. He has attended and participated in two high adventure trips with his Varsity Team.



RETURN SERVICE REQUESTED  
 1200 ST. CHARLES AVENUE  
 NEW ORLEANS, LA 70130



PRSR STD  
 U.S. POSTAGE  
**PAID**  
 New Orleans, La.  
 Permit No. 650