

TEXETHICS

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This Issue of TexethicS is Dedicated to a Lifelong Supporter of Professionalism & Ethics Joe Paul Jones, P.E.

Editor's Note: Our long-time friend and fellow engineer, Joe Paul Jones, P.E., died of cancer on July 24, 1999. He was to assume the chairmanship of the Texas Board of Professional Engineers in September 1999. Joe Paul's untimely death gives us reason to pause and consider his many contributions to the engineering profession and to mankind, in Texas and the nation.

Joe Paul Jones, P.E. of Fort Worth, Texas, was vice-president of Freese & Nichols, Inc., Ft. Worth and chair-elect of the Texas Board of Professional Engineers. He served as president of the National Society of Professional Engineers from 1991 to 1992 and as president of the Texas Society of Professional Engineers in 1981. He served the Consulting Engineers Council of Texas as a director in 1973 and 1974.

Joe Paul had been named a fellow by the Texas Engineering Foundation, the American Society of Civil Engineers and the Society of Military Engineers. His career and civic activities centered on improving the quality of life for his fellow citizens. He took on a variety of roles in the Boy Scouts of America ranging from Scoutmaster through Council President.

A retired lieutenant colonel in the Army Reserve, Joe Paul was a strong community advocate, having led various committees for the Fort Worth Chamber of Commerce, served as president of the Kiwanis Club of Greater Fort Worth and as Lieutenant Governor in the Texas-Oklahoma District.



A lifetime of public and professional service resulted in numerous awards. Joe Paul was honored as Engineer of the Year by the Texas Society of Professional Engineers; Distinguished Engineer by the Texas Engineering Foundation; the Silver Beaver by the Boy Scouts of America; and he was awarded the Service to the People Award from the American Society of Civil Engineers.

Joe Paul's professional career encompassed management of a wide range of civil and architectural transportation projects, including design and construction of airports, streets and highways, site development and drainage projects. One of the most challenging assignments of his

44-year career was the management of a \$54 million project to develop infrastructure systems during the initial construction phase of the Dallas-Fort Worth International Airport. He had also been responsible for design, management and administration of projects for a number of governmental, municipal and industrial clients.

Joe Paul held a BS degree in Architectural Engineering from the University of Texas and was named distinguished graduate from the University of Texas at Austin.

Surviving Joe Paul are his wife, Joanne Jones of Fort Worth; sons, Alan P. Jones and wife, Kim, of Waycross, Ga. and Steven R. Jones and wife, Virginia, of Katy; daughter, Kristi Jones of Fort Worth; and grandchildren, Angela and Kevin Jones of Waycross, Ga. and Melissa and Page Jones of Katy.

“Remembering Joe Paul”

By Dave Dorchester, P.E., Vice Chair, Texas Board of Professional Engineers: “Joe Paul Jones was more than a personal friend of long standing. As a past president of the Texas Society of Professional Engineers and the National Society of Professional Engineers, he served as a mentor to me for many years. I can remember many pleasant events with him. I especially remember the time we went to Texas A&M to present the Certificate of Registration as a Professional Engineer to Congressman-engineer Joe Barton. Joe Barton was and still is a member of the United States House of Representatives as a member from Texas. He was, at the time, the only Professional Engineer in the House of Representatives. Joe Paul was very instrumental in obtaining my appointment as one of the representatives of NSPE to the United States Council for International Engineering Practice.

I could go on and on about Joe Paul’s mentoring of me and many other people. His mentoring was not only in the field of Professional Engineering activities but also in the field of business, “how to live”, how to contribute to society and many other things. One of Joe Paul’s life ambitions was to be appointed to the Texas Board of Professional Engineers. Not only did he reach this goal in 1997 but he was later elected Chairman of the Board for the 1999-2000 term of office. Joe Paul was once described as tall, energetic - almost beyond imagination, robust, bald, extremely outgoing and with a voice like God. I think I can sum up the many things that can be said about this man in this way: After he was made, they threw the mold away.”

By Jim Nichols, P.E., Chairman, Freese & Nichols, Inc.: “Joe Paul set the standard for ethics and professionalism in our profession. It was my privilege to work with Joe Paul for 45 years, and the engineering profession has been enriched through his dedication and effort.”

By Bob Nichols, P.E., Past President, TSPE, NSPE, NIEE: “Joe Paul Jones, P.E. was truly a professional engineer, a community leader and a Boy Scouter. He joined Freese and Nichols, Inc. in 1955. Joe Paul was a dedicated, excellent engineer. He, and another engineer, were admitted into the Freese and Nichols partnership in 1971. They were the first non Freese or Nichols family member to join the partnership - a tribute to their contribution to the firm. Joe Paul was a very ethical person and spent considerable time counseling

young engineers on ethical practices. Joe Paul Jones was an “engineer’s engineer.” The engineering profession is fortunate that he came our way. He will truly be missed.”

By Roxanne Pillar, P.E., President-Elect. TSPE: “My first assignment for TSPE was the Fort Worth Chapter newsletter editor (1979). Every month either Joe Paul or Roland Jary called to critique my efforts. Joe Paul was focused in making it interesting and having some humor in it. It made writing the newsletter a challenge but as also a growing opportunity. I appreciated Joe Paul’s honesty and forthright approach, it was something I understood and liked. I never was in doubt where I stood with him. He listened and he would do what it took to fix things. And he let you know what the expectations were and you better know what you were talking about when you went to see him. We could talk frankly and bluntly about a situation and our perception even if the perceptions were totally different.

When he got engaged to Joanne, he called me to share his good news. He told me he was going to be the best husband he could be. When he told me what she was doing to move to Texas, selling her house and packing up, I stated I wasn’t sure I would do that. He said it was okay, he didn’t ask me to marry him!!!

I’m glad a friend and I went to visit him less than two weeks before he died. He looked good, was in good spirits, did not dwell on his situation. He was so proud of his children and grandchildren telling us all about them and all that they had accomplished. We took in lunch and had called to ask him what he wanted. He wanted Pulido’s Mexican food! and he made a dent in it. He finally told us he had to go lay down but we were to come in and say good-bye before we left.

I talked to Joe Paul the Tuesday before he died, telling him how everyone at the NSPE meeting in Spokane had been asking about him. He told me he was going home for Hospice care. He acknowledged his situation and was at peace with it. He did me the favor of saying good-bye and I have no concerns of bad feeling or misunderstood words between us.

When he took my place on the Board, I kidded him that he had big shoes to fill. He knew I was kidding and snorted around about how full of themselves some people are. Now there are some really big shoes to fill. The original owner has taken his final trek to the prefect campsite.”

Thanks to Outgoing Board Chair C. H. “Herb” Treat, Ph.D., P.E.

C. H. “Herb” Treat, Ph.D., P.E. was appointed to the Texas Board of Professional Engineers in 1993 and has served as Chair since September 1997. He graduated with a BS in civil engineering from Purdue University in 1953. Following three years in the army, he returned to Purdue and received his MS in 1958. He subsequently joined the staff at Sandia Corporation in Albuquerque where he was primarily involved in the design of nuclear reactors. After three years at Sandia he became an instructor and graduate student in the Department of Mechanical Engineering at the University of New Mexico where he received his Ph.D. in 1968. Upon

completing his doctorate, he joined the Engineering Science faculty at Trinity University in San Antonio. He spent 25 years at Trinity, 19 in Engineering Science and 6 in Computing Science, and took early retirement in 1992. Since then he has been actively involved in forensic engineering. Now a resident of Austin, he and his son, Bryan, formed Precision Forensics, L.L.C., in 1994, where Herb is the CEO and Principal Engineer. *Thanks, Herb, for your faithful service to the engineering profession and the Texas Board of Professional Engineers!*

“TOMORROW’S ENGINEER -- WHAT DO WE REALLY NEED?”

By Joe Paul Jones, P.E., April, 1991

Presented at the Fourth Annual Murdough Symposium

I am pleased to have the opportunity to share some thoughts with you on the characteristics that are really needed in tomorrow's engineer.

The subject is timely with me since NSPE has been attempting to develop a vision of needs in the next century with its Task Force 2000. We started this study in order to determine how our professional society should be molded to serve tomorrow's engineers. This, of course, demanded a systems look at our profession and mushroomed into examination of a model that has three sub-models Education, Registration and Organization, all of which must be reactive to the individual engineer and the environment in which he or she will work.

The one certain fact is that our profession is, and has been throughout my career, changing at a dizzying pace. The obvious answer that I must give to what we really need for tomorrow's engineer is that they must be prepared for change. They must be more than a technical engineer, and they must have a sensitivity for the world that surrounds them.

Let's develop this in an understandable way. I have had a long career in engineering. It has been challenging, interesting, and at times trying, but always rewarding. Rewarding both financially, and most importantly, by giving a feeling of satisfaction only obtained when we know that we've done something worthwhile.

During the past 40 years, I have moved from using a slide rule to a hand-operated desk calculator, then electrical, and on to a \$300.00 electronic calculator that is now surpassed by a pocket size machine that costs less than \$10.00. Finally, a P.C. that was doubled in capacity and reduced in price by another, within a year of its delivery.

Why reflect back? Because these catastrophic changes in our tools and methods of engineering have been accelerating at an exponential, not linear rate. Quite obviously, this change will continue and, if examined properly, may give some clues as to what we really need in tomorrow's engineers.

But first, another aspect of the engineering profession that has changed drastically during my career is the need for a professional to be far more than a technician. We live today in an era of total quality management, of competition from firms throughout the world, and of clients that have a wide range of choice of engineers and have been able, therefore, to make their selection based on whom they like to work with, and who will most likely make them look good to their clients.

This means that today's, and most certainly tomorrow's, engineer needs to be a much broader person. This should be started during the educational foundation building days, and continually developed throughout the engineer's professional life.

I would like to spend several minutes discussing the preparation of a young person for an engineering career in this rapidly changing field and then, briefly, look at the challenges that must be met during that career in order to be successful. Since it is difficult, if not impossible, to predict the materials, methods, and techniques of engineering that we will experience in the year 2000, perhaps a much greater emphasis, during college years should be placed on flexibility, management, communications, human relations, ethics, finance, marketing, and political awareness, along with the basic engineering knowledge.

This sounds like a 200 + hour curriculum doesn't it? Believe me, that too would be a major error. Somehow we must,, within 4 to 6 years of college, filter out those who are not meant to be engineers and give those who remain, the fundamentals upon which to build after college.

Perhaps the most important knowledge to be mastered in engineering school is not statistics, dynamics, or advanced mathematics, but how to think in a logical, methodical manner.

Since there will still always be a need for in-depth technical solutions, there may be a strong argument for two distinctly different courses to be taught in our engineering schools; one for professional engineers who will become the practitioners, and one for the technologist who will be dealing primarily with scientific facts. In medicine, this compares with the doctor and the specialist, or even the laboratory technician.

Today, there are schools that give a Bachelor of Technology (B.E.T.) as one route, and a Bachelor of Science (B.S.) as the other. However, the B.S. is generally so concentrated on technical courses that it is really technology. My degree was certainly this way. Please note that this change will not come easy since most teachers of engineering are highly skilled in technology and limited in recent experience with real world problems.

...our profession is changing at a dizzying pace.

...the most important knowledge to be mastered in engineering school is not statistics, dynamics, or advanced mathematics, but how to think in a logical, methodical manner.

What can we do to

prepare young people who wish to study engineering for a truly professional career?

Today, college technical training becomes outdated, or at least partly useless in 5 years or so. This cycle repeats itself again and again. I mentioned the rapid obsolescence of the tools used during my relatively short career.

Be active in a youth organization, such as Boy Scouts or Camp Fire. Serve on a public board or commission, help the United Way and your church

My bookshelf is also still filled with college texts that are about as useful as the slide rule. The basic principles are there, but the methods of their use is entirely different today. The college classroom notes that I carefully saved were, likewise, of little or no use a few years into my career.

Another aspect of obsolescence, as a result of education and even on-the job training, is that of being too highly specialized. In 1970, there were major layoffs in the aerospace industry as there are again today. General Dynamics in Fort Worth has released 7,000 employees in the last 6 months, 1,000 of whom were engineers. Engineers who had spent their entire careers in wind tunnel testing, structural design of a radar antenna for fighter planes, etc., are suddenly jobless.

Many have left the field of engineering forever in order to support their families. Others went into a skills conversion program to learn a completely different area of engineering practice. Their college training had been so narrow and deep in one technical area, followed by a career that did the same, that they were not armed to cope with a changing job situation, any more than the Graham, Hudson or Studebaker automobile manufacturers were able to survive changing demands in the automobile field.

What can be done to prepare today's students as tomorrow's engineers? Perhaps one solution could be as follows:

1. Concentrate technical training on properties of materials, how they perform under environmental and structural stresses, why

...work on a political campaign (maybe even your own)

they react the way they do, and finally, how they should be used in problem solving.

2. Cover basic sciences, basic advanced mathematics, and basic engineering principles as essential foundations for a career, emphasizing the thought processes that must be utilized in their practical applications.
3. Teach courses in how to think and reason logically using real world problems as exercises.
4. Include economics, some sociology, some basic psychology, management and leadership skills, ethics and within all of these, require both oral and written work until communication becomes second nature.

This describes a much broader and less specialized curriculum than is found in most colleges today. However, I feel that it, realistically, would prepare the young person for a highly successful career in the engineering field of their choosing.

What else does a young engineer need to think of in order to be the best prepared for tomorrow?

Without question, continuing education is essential. If what you learned in college is continually becoming obsolete, then you must learn its replacement.

Is there no end to school and studying? ... That's right!

However, it is much easier when your learning is directly related to the work that you do on the job. When you stop learning, you had better be prepared to retire. Perhaps the non-technical side of a career needs the same degree of continuing education effort.

...and do all of these in enough depth to have fun and be of true service to others.

Tomorrow's professional engineer must be prepared to keep himself or herself broad by working with many other people, both professionally and socially. In the profession, they should work and associate with engineers from other areas of employment in their particular field.

For instance, civil engineers should belong to and be active in ASCE. All professional engineers should support and work in their professional society, NSPE, in order to develop breadth and to see the viewpoint of others. (If you went to Texas A&M, for instance, consider being friendly with at least one non-Aggie, even if you don't trust him at first.) Join a service club, such as Rotary or Kiwanis.

Be active in a youth organization, such as Boy Scouts or Camp Fire. Serve on a public board or commission, help the United Way and your church, work on a political campaign (maybe even your own), and do all of these in enough depth to have fun and be of true service to others.

Baden Powell, who founded of the Boy Scouts over 80 years ago, said that true happiness only comes from helping others. You will find that in doing this, you will gain much more when you give. Do these things and you will continually broaden, and as result be alert to our changing society.

One final suggestion for achieving success is to assign a young engineer a mentor or big brother or sister, if you will.

Most of the valuable things that I know today, I've learned since graduation. Much of it was acquired in working with older, wiser heads that had already made their own myriad of mistakes. They also had the wisdom to let me make many of my own, but caught me before the fall was fatal.

One thing should be remembered. There will never be enough people in the world that have a foundation of broad-based education, that have applied themselves in depth to their job, no matter what it is, that have gone the extra mile to help their fellow man, that have been active in civil, professional, and technical societies, and that have always served their employer by doing more than asked. Jobs may come and go, but a person who has "gone the extra mile" will always be in demand. Give me 50 of them, and I will take on any engineering firm in the world.

In closing, let's again review the characteristics that the tomorrow's engineer should have.

They are

- ✍ Flexibility,
- ✍ Common sense,
- ✍ Education in fundamentals of engineering,
- ✍ The desire to always learn,
- ✍ People skills, and
- ✍ A willingness to be more than a technical person, be a "true professional".

Thank you.

*Joe Paul Jones, P.E. Vice President, Freese & Nichols, Inc.
President-Elect, National Society of Professional Engineers*

*And thank you, Joe Paul...
for all you gave us ... in word and deed,
...and for setting so many examples for us to follow.*

On Doing Good:

**“How wonderful it is that we
can start doing good at this
very moment.”**

-- Anne Frank --

On Freedom and Responsibility:

“True independence and freedom can only exist in doing what's right.”

-- Brigham Young --

On Character:

**“What man's mind can create,
man's character can control.”**

-- Thomas Edison --

NSPE/Board of Ethical Review -- Case 72-4

Supplanting Another Engineer

Facts:

John Adams, a registered engineer, had a formal agreement to perform preliminary design of a project for the ABC Company. Richard Edwards, a non-registered engineer employee of Adams, performed a substantial part of the preliminary design. The working drawing phase of the project was to be performed only when and if authorized by the ABC Company. Prior to any decision being made on the working drawing phase, Edwards voluntarily terminated his employment with Adams and was immediately employed by George Barton, a registered engineer in private practice. Thereafter the ABC Company notified Adams that it did not desire him to proceed with the working drawing phase and paid him the fees due for the preliminary design work. Barton was retained within a few days thereafter to furnish the working drawing engineering services to the ABC Company and assigned to continue work on the project. Neither the ABC Company, Barton, nor Edwards contacted Adams regarding these arrangements and events subsequent to the cessation of the arrangement between Adams and the ABC Company. Adams alleged that Barton and Edwards had conspired to supplant him in this engagement with the ABC Company.

Questions:

1. Was Edwards unethical in transferring his services from Adams to Barton under the circumstances stated?
2. Was Barton unethical for participating in the arrangement to transfer the work to his firm?
3. If Edwards had acted unethically prior to obtaining his registration as a professional engineer, would it be ethical for a registered engineer to withhold his recommendation that Edwards be registered, and to submit unfavorable comments on Edwards' character to the state registration board?

References:

NSPE Code of Ethics--Section 7a-- While in the employ of others, he will not enter promotional efforts or negotiations for work or make arrangements for other employment as a principal or to practice in connection with a specific project for which he has gained particular and specialized knowledge without the consent of all interested parties.

Section 8--The engineer will endeavor to avoid a conflict of interest with his employer or client, but when unavoidable, the engineer shall fully disclose the circumstances to his employer or client.

Section 11--The engineer will not compete unfairly with another engineer by attempting to obtain employment or advancement or professional engagements by competitive bidding [*editor's note: this provision was subsequently struck for private projects, but remains in effect for most public projects*], by taking advantage of a salaried position, by criticizing other engineers, or by other improper or questionable methods.

Section 11a--The engineer will not attempt to supplant another engineer in a particular employment after becoming aware that definite steps have been taken toward the other's employment.

Section 12--The engineer will not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice, or employment of another engineer, nor will he indiscriminately criticize another engineer's work in public. If he believes that another engineer is guilty of unethical or illegal practice, he shall present such information to the proper authority for action.

Discussion:

The facts presented to us suggest, but do not necessarily prove, that Barton and Edwards had entered into some form of prearranged relationship to shift the continued work on the project from Adams to Barton after the preliminary phase had been completed by Adams.

We have consistently held that an engineer does not have an exclusive right to perform engineering services for a particular client and that a client has a right to change from one consulting engineer to another. In Case 62-18 we dealt in some detail with the supplanting question under circumstances in which several years had elapsed between the time of preliminary studies for a project by one engineer and the retention of another engineer for a new report and design of a project, concluding that there had not been any unethical act of supplanting. (See also Case 64-9 in which we distinguished a related situation and held that the second engineer had unethically supplanted the first.)

Assuming, as we do for the purpose of this case, that Barton and Edwards had conspired to have the work transferred from Adams to Barton by utilizing Edwards' intimate knowledge of the project based on his connection with and work during the preliminary design, we believe that both are in violation of the mandate of Section 11 and Section 11a in that such action was an attempt to advance their respective interests by taking advantage of a salaried position (as to Edwards) and by supplanting Adams for the balance of the project (as to Barton). Edwards was also, by this arrangement with Barton, in violation of Section 7a. Although that portion of the code refers to promotional efforts or negotiations for work ". . . as a principal . . .," it also forbids ". . . practice in connection with a specific project for which he has gained particular and specialized knowledge without the consent of all interested parties." Adams was clearly an interested party. Section 8 is also cited because Edwards' conduct generated a conflict of interest with his employer, Adams. When the code language says that a conflict of interest may be tolerated when unavoidable, provided ". . . the engineer shall fully disclose the circumstances to his client or employer," it means that the disclosure must be made before the fact and not after the damage has been done, as in this case.

As to the ethical duty of an engineer called upon or volunteering to comment on Edwards' qualifications for registration as a professional engineer, Section 12 imposes a duty on all engineers to advise the "proper authority" if he believes that another engineer has engaged in unethical acts. We can imagine no more clear-cut application of this duty than in these circumstances and conclude that an engineer having knowledge of the facts must disclose them to the state registration board. It is not necessary for an engineer to know as a certainty that an applicant for registration had acted un-

ethically (that is a matter of opinion), but if, as in this case, there is reasonable belief that an applicant for registration may have acted unethically, it is required that the basis for the belief be submitted to the registration board. Whether such action would constitute a sound basis for the registration board to refuse to register an applicant is within the discretion of the registration board in accordance with the qualification standards in the registration law and the interpretation of the facts under those standards.

Conclusions:*

1. Edwards was unethical in transferring his services from Adams to Barton under the circumstances stated, insofar as the transfer of his services was to improperly shift the work on the project from Adams to Barton.
2. Barton was unethical in conspiring with Edwards to supplant Adams.
3. It would be ethical for an engineer to withhold his recommendation that Edwards be registered and to submit unfavorable comments on Edwards' character to the state registration board.

*Note--This opinion is based on data submitted to the Board of Ethical Review and does not necessarily represent all of the pertinent facts when applied to a specific case. This opinion is for educational purposes only and should not be construed as expressing any opinion on the ethics of specific individuals. This opinion may be reprinted without further permission, provided that this statement is included before or after the text of the case.

Board of Ethical Review Case Reports

The Board of Ethical Review was established to provide service to the membership of the NSPE by rendering impartial opinions pertaining to the interpretation of the NSPE Code of Ethics.

NSPE Board of Ethical Review

W.R. Gibbs, P.E.
Joseph H. Littlefield, P.E.
James D. Maloney, P.E.
Sherman Smith, P.E.
Robert E. Stiemke, P.E.
Albert L. Wolfe, P.E.
Frank H. Bridgers, P.E., chairman

* * *

An Excellent Web Site for Engineering Ethics is: www.niee.org

“Teachers open the door. You enter yourself.”

-- Chinese proverb --

**“All persons ought to endeavor to follow what is right,
and not what is established.”**

-- Aristotle --

Former PEPL Case of the Month with Results – March - April 1999

From the Web Site of the “Ethics Case of the Month Club” -- <http://www.engr.washington.edu/~uw-epp/Pepl/Ethics/>
Professional Engineering Practice Liaison Program -- PEPL -- By Dr. Ron Buckman, College of Engineering, University of Washington

“An Engineering Exorcise” (Case 1011)

A substantial commercial/industrial development is planned for a large tract of land on the edge of town where an old peat bog once existed and was subsequently filled. Since it is of such a magnitude, Ramrod Enterprises, the developer /owner, has had to make

numerous submittals before the town's zoning and planning commissions, and there has been a lot of coverage of the project in the local newspaper. Most of the town is in support of the proposed

development, since it will greatly enhance the tax base and provide approximately 125 new jobs.

The planning commission has required the developer to complete a preliminary report of the project for review and comment before starting final design. The preliminary report was submitted four weeks ago, including a number of recommendations and comments from one of the developer's consultants, Weeks & Weeks, who is a competitor of yours. In fact, you were a bit put out when you did not get the contract for the preliminary engineering design report, since you had done three similar projects in the past two years, and were familiar with the conditions at the proposed site.

John Bigge, the president of Ramrod Enterprises, called you yesterday about 4:15 p.m. to ask if you would be willing to do the final engineering design for the project. He indicated that some of the preliminary recommendations made by Weeks & Weeks were unrealistic, and that was also recognized by the planning commission in their review of the preliminary submittal. He would like to go forward with an engineering firm who is well known and respected in the community. That is why he is contacting you.

What do you tell him?

Alternate Approaches:

The alternate solutions proposed with the case history presented for March-April 1999 are shown below, with the percentage of votes received tabulated for each proposed solution. Not all of those replying cast votes for the solutions proposed with the case history, preferring to recommend their own. These alternate solutions and additional comments received from the web site visitors and members of the Board of Review are shown in parentheses.

1. Tell Bigge how pleased you are that he contacted you and set up a meeting with him to discuss the project, so you can define the scope of work and prepare a proposal. *(Percentage of votes agreeing: 5%)*
2. Ask Bigge if he had considered retaining your firm initially to review the reasonableness of Weeks and Weeks recommendations before deciding to shift the project to another design firm. *(Percentage of votes agreeing: 2%)*
3. Offer to meet with Bigge, on a no-charge basis, to make a preliminary review of Weeks and Weeks recommendations to see if you find them to be reasonable considering what you know of the site conditions. *(Percentage of votes agreeing: 9%)*
4. Accept the assignment. Your competitor obviously did not have the experience or expertise to make appropriate recommendations for the preliminary engineering design of the project and that was

recognized by the planning commission. Since your firm is well known and respected in the community, and you do have experience with three similar projects as well as being familiar with the conditions at the site, your firm is the ideal one to step in immediately and get the project back on track. *(Percentage of votes agreeing: 4%)*

5. Ask the developer if your competitor has been released from his/her contractual obligations for the project. If not, tell the developer that you cannot take over from an incumbent engineer until they have been released from their involvement in the project. Once that is accomplished, then you will accept the assignment. *(Percentage of votes agreeing: 25%)*

6. Before accepting the assignment, obtain a copy of the other engineer's report from the developer for your review. *(Percentage of votes agreeing: 8%)*

7. Accept the assignment, provided the developer gives you the opportunity to submit a proposal to provide engineering field services during construction. *(Percentage of votes agreeing: 2%)*

8. Call the other engineer to a) verify their release from the project, b) let them know you have been asked to step into the project, c) determine what in their recommendations was not acceptable to the developer, d) determine what in their recommendations was not acceptable to the planning commission, and e) ask about their business relationship with the developer. *(Percentage of votes agreeing: 15%)*

9. Accept the assignment, provided that the developer allows you to (and pays you to) evaluate the recommendations made by Weeks and Weeks based on your experience and professional judgement. *(Percentage of votes agreeing: 2%)*

10. Accept the assignment, provided that the developer allows you to (and pays you to) evaluate the recommendations made by Weeks and Weeks based on your experience and professional judgement, and provided that he understands and agrees that you may have to do additional work on the preliminary report recommendations, including engineering analyses and possibly additional field investigations. *(Percentage of votes agreeing: 12%)*

11. Contact the chair of the planning commission to briefly discuss the project and its present status. Determine if the story relayed to you by the developer is accurate regarding the engineer who you are to replace and what was "unrealistic" about their recommendations. Determine the time schedule for the project and any constraints as far as the planning commission is concerned. *(Percentage of votes agreeing: 16%)*

Current Applied Ethics Case of the Month -- May-June 1999

“Priming the Town Pump”

(Case 1012)

From the Web Site of the “Ethics Case of the Month Club” -- <http://www.engr.washington.edu/~uw-ep/Pepl/Ethics/>
Professional Engineering Practice Liaison Program -- PEPL -- By Dr. Ron Buckman, College of Engineering, University of Washington

Your firm worked long and hard visiting the public works engineer and staff in the City of Elm Grove, some 150 miles from your office, to demonstrate your interest and the firm's capabilities with regard to the design of a new wastewater treatment plant that was expected to be announced in a few months.

You knew of this planned project because your receptionist's brother lives in Elm Grove and is friendly with one of the operators at the present treatment plant. As a result of that lead, you assigned one of your engineers that lives the closest to Elm Grove to attend the monthly city council meetings and spend a little time getting to know who the key players were in the public works arena.

Once the project looked as though it might become a reality, you concentrated on making your qualifications known. You realized that it might be an uphill battle, since there were already two firms in or very close to Elm Grove who had done work on public works design projects for the city over the past five to ten years. In addition, you found out through your engineer that the public works engineer, Stan Upright, and his two project managers ran a tight ship and had provided excellent services to the community since the director had been hired some 18 years ago.

As it turned out, your firm was responsive to the SOQ for the project, was short-listed as one of four firms (including the two local firms), submitted a thorough and somewhat innovative proposal highlighting your experience in the selection of customized treatment plant equipment, and was selected for the project.

During design of the project, your project engineer, Florence (Flo) Moore, specified a series of pumps manufactured by an excellent, but little known, company called Excelsior Pumps. When the city's project manager, Dee Taylor, reviewed the specifications for the project, she questioned the cost of the pumps and whether the anticipated maintenance-free warranty would actually hold up under use. As an alternative, she strongly recommended using a standard series of pumps manufactured in the adjoining state by Pumpco, at a purchase price approximately \$20,000 below the cost of the Excelsior pump series.

Even though the long-term advantages and life-cycle savings resulting from use of the Excelsior pumps were pointed out and documented from several previous projects completed by your firm, Ms. Taylor still insisted that Pumpco should be the supplier, especially since the initial cost was lower and the city was currently in a belt-tightening mode. Since the issue grew to the point where it had the potential of damaging the relationship between your firm and the city, you finally decided with Flo Moore to specify the Pumpco equipment in the bid documents.

It is now three years after completion of the project and the Elm Grove Gazette has just called for you on the telephone and left a message to inform you that the treatment plant pumps have failed

again for the third time in 11 months, and to ask what statement you would like to make about the situation. They are especially interested in your comments regarding who was responsible for selection of the pumps.

What do you do?

Alternate Approaches:

1. Call and tell the Gazette reporter that you have not been aware of the problems with the pumps in Elm Grove since your office is some distance away, and that you cannot comment.
2. Call the reporter and say that the choice of pumps was made by the city and your firm since the initial cost was less and there was no information to suggest that the long term use of the pumps would be a problem.
3. Call the Gazette reporter and tell them the truth: your firm had originally recommended Excelsior pumps because of their excellent reputation, your experience with the product, and their maintenance-free warranty. Nonetheless, the city's project manager, Dee Taylor, rejected the recommendation in favor of the cheaper Pumpco product. Now it appears that the difference in initial cost has more than been eaten up by maintenance costs on the Pumpco product over the last 11 months.
4. Call Dee Taylor (the city's project manager), to determine what the facts really are, including whether the pumps are just inferior and cannot operate efficiently with use, whether the manufacturer's recommended maintenance schedule has been adhered to, and whether the manufacturer has agreed to rectify the situation, technically and financially. Then call the Gazette reporter to inform them of the facts you have just learned.
5. Instead of calling the reporter, call Dee Taylor at the city and strongly recommend that she go the Elm Grove Gazette and explain the process which was used in selecting the pumps. Tell her that the city should take responsibility for the bad pumps because they had been presented data about the more costly Excelsior pumps and they had decided to go with the low cost alternative.
6. Determine from Dee Taylor if Pumpco is going to rectify the problem, then call the Gazette reporter and suggest that they contact the city's public works director, Stan Upright, for an official statement to that effect.
7. Call the reporter and indicate that you cannot make a statement without looking into the matter further. Then call the city's Director of Public Works, Stan Upright, and tell him that the city should submit a written statement about the situation to the Gazette, and that your legal counsel insists that you review and revise the letter

as necessary to accurately reflect your firm's position before the letter is sent.

8. Do not call the reporter. Instead, send a letter to the city indicating what you have heard about the pump problem. State that you want to have the record clear that your firm is not at fault for having allowed the city to change your original pump manufacturer recommendations. Indicate it is the responsibility of the city to require Pumpco to honor its warranty, or if for some reason the warranty no longer applies, to make the required repairs and absorb the associated costs, chalking up the experience to a good lesson learned.

9. Do not return the reporter's call. Instead, arrange a meeting for you and Flo Moore with Dee Taylor (the city's project manager), the public works director and the city attorney to discuss the situation. In the meeting stress that the decision was made to specify the Pumpco product for what appeared to the city's representative to be good reason at the time, and even though you did not feel it to be as good a product as the Excelsior pumps, you did not reject the Pumpco product, since they had a decent reputation and an acceptable warranty. Be sure to get an agreement that the city will not involve your firm in the media.

10. Call back and tell the Gazette reporter to contact the Elm Grove Director of Public Works, Stan Upright, for a statement. Do not offer any information on your own.

11. Do not return the reporter's call. News gets old rapidly and reporters have story deadlines to meet. They are only interested in getting statements from people as soon as possible and are rarely willing to wait a few days or more. Besides, by talking to the reporter, you run the risk that they may not understand the technical details and will end up misquoting you or using portions of your statement out of context (you never get a chance to review and edit the material before it is printed).

Ethics is a Benchmark in TxDOT

Ethics is a vital "benchmark" in TxDOT. If our "ethics benchmark" is flawed or obscure, our projects will be flawed regardless of our technical and professional accuracy.

With a philosophy of both "doing things right" and "doing the right things," we can and will demonstrate to the citizens of Texas that TxDOT can always be trusted to meet our State's transportation needs.

Public service is a public trust. The citizens of Texas trust us to serve them in a professional manner, with integrity, accountability and impartiality, and in accordance with the law. When we don't, we lose their trust, and trust, once lost, is never easily regained.

We promote the public's trust by being good stewards of State property, never using our positions or confidential department information for personal gain, treating both the general public and our fellow employees with respect and courtesy, not participating in activities that could be perceived as conflicts interest, and avoiding all appearances of improper and unethical conduct.

Employees of the Texas Department of Transportation are expected to do more than simply what is required by law; we are expected *to do the right thing*. And doing the right thing means looking out for the transportation interests of the citizens of Texas, placing our citizen's interests above our own personal interests.

We trust that TxDOT employees conduct themselves in a professional manner at all times. But we are *required to do so when representing this agency*. It can be no other way because our actions in the workplace are the substance of our public image and credibility.

TxDOT has a proud history of dedicated employees who knew they did not have to memorize a long list of principles of ethical conduct in order to be ethical; they just knew the difference between right and wrong and chose to do what's right.

Let's embrace our department's tradition of a strong system of moral values and our actions will become a part of this legacy.

Charles "Wes" Heald, P.E., TxDOT Executive Director



Charles W. Heald, P.E.
Executive Director, TxDOT

of



National Institute for Engineering Ethics Moves Headquarters to Murrough Center for Engineering Professionalism at Texas Tech University

[Lubbock, Texas] On August 2, 1999, the National Institute for Engineering Ethics (NIEE) Board of Directors authorized relocation of the NIEE Headquarters from their current office in Webb City, Missouri to the Murrough Center for Engineering Professionalism, on the main campus of Texas Tech University in Lubbock, Texas. Per the agreement, which extends through December 31, 2001, Mr. William D. Lawson, P.E., Deputy Director for the Murrough Center, will serve as Executive Director for NIEE.

NIEE is an independent not-for-profit [IRS 501(c)(3)] educational corporation established to promote the study and application of ethics in our nation's engineering schools and throughout the engineering profession. NIEE was created by the National Society of Professional Engineers (NSPE) in July 1988 and remained within NSPE until July 1996.

The Murrough Center for Engineering Professionalism was established in 1986 in honor of James Harold Murrough, faculty member and head of the Civil Engineering Department at Texas Tech University from 1925-1962, for his contributions to engineering education and the profession. The purpose of the Murrough Center is to promote professionalism and ethical values for the engineering profession.

Texas Tech has had a long-standing relationship with NIEE, almost from its inception. Tech Professor Jimmy H. Smith, P.E., Director for the Murrough Center, served as president of NIEE from 1995-1997, and has been on the NIEE Board of Directors since 1990.

Bill Lawson, NIEE's new executive director, sees a lot of opportunity for success in the relationship: "Relocation of NIEE to Texas Tech provides synergy to both organizations – we

will be able to accomplish much more together than either organization can accomplish individually." The relationship between the two organizations is defined as an association founded on the NIEE's and Murrough Center's shared interests and goals in promoting engineering ethics.

The principal thrusts of NIEE are communication, program development, education, and practice applications in the area of engineering ethics. One of the primary roles of the Institute is to encourage cooperation among individuals, universities, professional and technical societies and business organizations with regard to engineering ethics and professionalism issues.

NIEE developed and distributed the highly successful engineering ethics video, "Gilbane Gold," which has been used at most engineering colleges in the nation as well as in industry and society presentations. The newsletter *Engineering Ethics Update*, published by NIEE, keeps members informed about national engineering ethics activities.

NIEE currently has about 700 individual members and some 25 institutional and corporate members. The goal is to grow and serve the engineering profession in the area of engineering ethics. NIEE is structured to serve as an independent liaison organization to promote engineering ethics among all engineering disciplines. Viewed as a cooperative effort among many engineering organizations with potential for far-reaching influence and impact, NIEE can and should bridge many gaps within the profession.

We invite you to join NIEE or renew your membership by completing and submitting the form below. This form is also available on the NIEE web site (www.niee.org).

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Name: _____

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Individual (\$30 annually) -- Firm/Corporate/Institution (\$100 annually) -- Student (\$10 annually)

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Please Send to: NIEE, Box 41023, Lubbock, TX 79409-1023

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