

*Will Instrument & Control Engineers  
(I&C's)  
be Able to Work in California?*



Presented to: ISA Orange County  
on: January 11, 2006  
by: Robert A. Katin, PE

# *OUTLINE*

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- Engineers' Act restricts Instrument Engineers from practicing engineering
- BPELS is self serving
- Legislation is changed in “Baby Steps”
- Current events

# *MESSAGE #1*

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- Engineers' Act restricts I&C's from practicing engineering



# *PROBLEMS WITH ENGINEERS' ACT*

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- BPELS assigns every engineering activity to only one engineering discipline
- Once an activity is defined as one discipline's "turf" it arbitrarily restricts other qualified engineers from doing this work
- Broad definition of civil engineering

# *WHO CARES? I'M NOT A PE*

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- Once an activity is defined to be CE, you cannot do it even if you are a plant employee.
- Industry is downsizing and outsourcing
- Contractors/Engineering Firms/Consultants and job shop employees need a PE
- You may have the technical skill, but w/o a Civil PE you could be *breaking the law*

# *WHO CARES? I'M A PLANT EMPLOYEE*

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- Industrial exemption only includes plant employees doing primary plant mission
- Civil engineering is not included in the industrial exemption. Once an activity is defined to be CE, you cannot do it as a plant employee.
- If industry obeys State Law, industry would have to hire CE firm to either learn I&C, or subcontract I&C. Either way, **industry will incur higher cost for no added value.**

# *WHO CARES? I'M A STATE EMPLOYEE*

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- To get promoted beyond a certain level as an engineer, you need to obtain your license.
- Your union PECG said there is no need to recognize I&C.
- If you can no longer obtain a CSE PE, **you may never get promoted** as a State engineer.

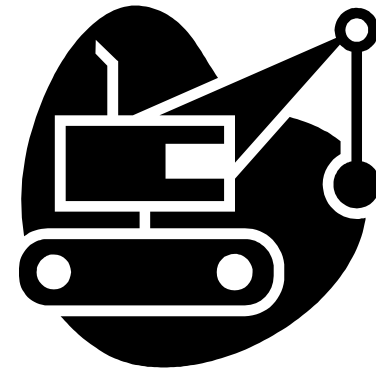
# *CIVIL ENGINEERING*

*(Chapter 7 Business & Professions code 6731)*

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- Anything that involves fixed works
- Manage construction
- Manage people
- Write reports
- Investigate the forces of nature
- (and CE's can overlap and do it all)



# *REPERCUSSIONS* *of poorly worded Engineer's Act*

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## 1. Restricts Competition



# *BPELS Policy Resolution 98-02 of JUL 98*

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Data collection & preparation of accident scene maps is civil engineering domain

- All cops who aren't CE's are violating law by sketching traffic accidents
- AB 1341 was drafted to exempt police

# *BPELS Policy Resolution*

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- Geologists & others using GIS are violating law by making groundwater concentration profiles
- Astronomers use GIS to do mapping-are they practicing civil engineering, too?

# *DRAFT Board Regulation*

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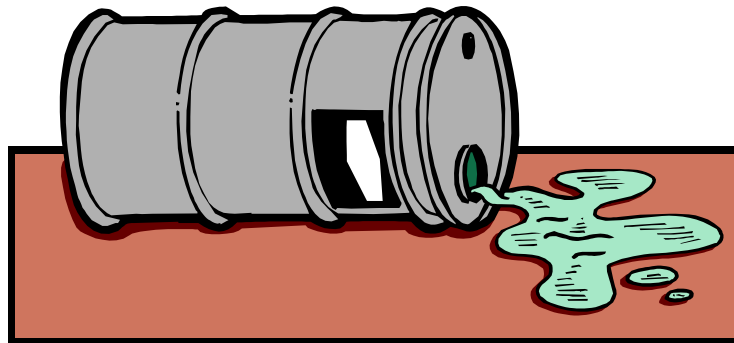
- Restricts environmental work to Civil Engineers
- Restricts competition

# *REPERCUSSIONS* *of poorly worded Engineers' Act*

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## 2. Jeopardizes Community Safety



# *PROTECT THE PUBLIC*

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- Weekly bad press against process industries
- CA is 2nd worst state in US for toxic chemical accidents
- CA has 11 of 55 worst counties in US
- Bhopal--3,500 killed; 200,000 injured
- Contra Costa--2,020 HazMat incidents 89-96
- BP explosion at Isom plant in Texas City MAR 05
- Not only industries can cause chemical contamination (bakeries, dry cleaners, gasoline stations)

*REPERCUSSIONS*  
*of poorly worded Engineers' Act*

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3. Jeopardizes the Environment

# *Compare Disciplines*

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## CIVIL ENGINEERING

- Design/Construct Roads
- Design/Construct Buildings
- Design/Construct Bridges
- Design and Analysis of Foundations
- Design and Analysis of Drainage/Flood Control Systems

## INSTRUMENT ENGINEERING

- Sensors
- Data Transmission
- Analytical Instruments
- Actuators
- Controllers
- DSC and PLC
- Safety

# *BPELS direction to regulators*

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- Los Angeles says only CE's can do environmental work
- LA Sanitary District won't promote non-CE's

# *REPERCUSSIONS* *of poorly worded Engineers' Act*

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## 4. Jeopardizes California Economy



# *ECONOMIC IMPACT ON CALIFORNIA*

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- US is the largest economy in the world
- Calif is 4th largest world economy
- Los Angeles area ranked 11th
- San Francisco Bay area ranked 21st
- Global economy
- Industry will be forced to move to compete

*Repercussions  
of poorly worded Engineers' Act*

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5. Unfair Employment Practice

# *UNFAIR EMPLOYMENT PRACTICE*

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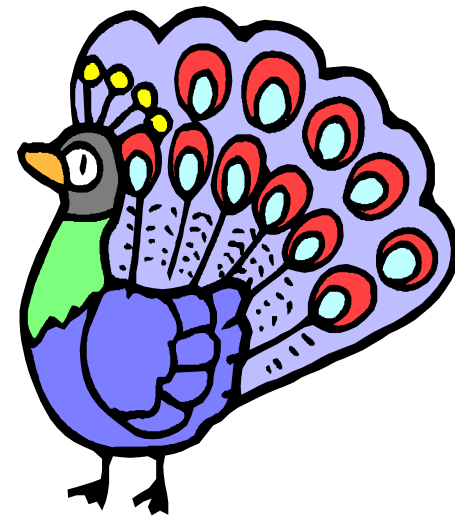
- Existing Civil definition restricts Instrument Engineers

# MESSAGE #2

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- BPELS is *self serving*



## *BPELS is self-serving*

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- Three of the 6 licensed Board members are members of PECG (work for CalTrans)
- The 6 licensed Board members include 2 PE's positions that are supposed for non-CE/ME/EE; but BOTH are Civil PE's
- Board does not represent the 13 non-CE / ME / EE engineering disciplines
- Board only changes law when in its favor

# *JLSRC REPORT of NOV 99*

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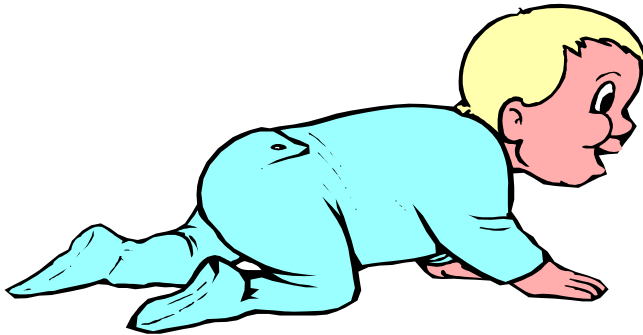
- Working on Act since 1970, why not fixed
- Resolve overlap between disciplines
- \$27k per complaint; Medical Bd only \$15k
- Take 9 mo to investigate case
- Been involved in political campaign
- Write regs w/o going thru legislature (Underground Regulations)

# *MESSAGE #3*

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- Legislation is changed in “Baby Steps”



# *In response to JLSRC Report of NOV 99*

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- CLCPE lobbies to add to SB 2030 an evaluation of State Engineers' Act to determine if the Act is fair
- SB 2030 became law--JAN 01
- SB 2030 hired independent consultant (ISR) to evaluate State Engineers' Act--JUN 01
- ISR submitted report to DCA--SEP 02
- DCA submitted report to Legislature--NOV 02

# *ISR's Recommendations*

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- Provide total overlap amongst the engineering disciplines
- Accept all recognized engineering disciplines
- Allow all disciplines to be in charge of projects and/or groups

# *Response to ISR Report*

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- DCA (BPELS boss) submitted report to Legislature--NOV 02
- Legislature wanted BPELS opinion; BPELS formed Task Force (TF) to develop position
- TF met 1<sup>st</sup> time--AUG 03
- TF met 5<sup>th</sup> & final time and submitted recommendations to BPELS--JAN 04
- BPELS accepts TF recommendations--APR 04

## *Activities early in 2005*

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- Sunrise Hearing by JCCBCP (formerly JLSRC) to determine what engineering disciplines should be recognized in CA--6 JAN 05
- Sen Figueroa writes “spot” bill SB 246--15 FEB 05
- BPELS has meeting & recommends not recognizing Ag, Industrial, & Metallurgical--18 MAR 05
- JCCBCP holds meetings & adopts BPELS recommendations--12 APR 05

## *SB 246 is amended*

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- SB 246 words issued--20 JUN 05
  - Recognize I&C's
  - Allow I&C's to overlap & conduct activities currently defined as exclusively CE
  - Allow I&C's to be in charge of projects and/or groups
  - Make it illegal for any governmental agency to prohibit I&C's from doing work they are competent to conduct based on formal education & experience

## *Recent Events*

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- Assembly B&P Hearing voted 3 to 2 against us (Vargas, Tran, Yee)--28 JUN 05
- B&P reviewed SB 246, made an urgency bill, allowed bill to stay in B&P--5 JUL 05
- Met with ASM Vargas, Tran, Yee--JUL 05
- B&P Chair tasked stakeholders to participate in good faith meetings--23 AUG 05

# *Stakeholders Meetings*

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- CELSOC says purpose of Engrs' Act is consumer protection, & since public only hires CE, only CE's need to be recognized. PECG said no, its for public health & safety--31 AUG 05
- CELSOC & PECG said no problem w/Engrs' Act. Consultant to B&P said, wrong here is 2-page list (broad definition of CE, prevents other engrs from protecting public health & safety, requires all engrs to get CE PE, turf battles)--29 SEP 05
- CELSOC & PECG continue to say no problem w/Engrs' Act. Sr Consultant to B&P said what about 2-page list. "We haven't had time to review". "Wrong"--13 OCT 05
- Next meeting scheduled--12 JAN 06

## *Potential Timeline*

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- B&P re-hears SB 246--14 FEB 2006
- SB 246 was modified so has to be re-heard in Senate--JUL-AUG 06
- Gov signs bill to mod Engineers' Act designating what engineering disciplines will be recognized in CA --SEP 06
- Engineers' Act changes--01 JAN 07

# *Who is our opposition?*

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## **CELSOC** (Consulting Engrs & Land Surveyors of CA)

- Has testified against non-CE's at TF, Sunrise, B&P Hearings
- “None of the arguments suggest the public is safer or actually benefits from this change.”
- If a CE needs the experience of a non-CE's, we will sub out that work under our supervision
- If non-CE's were recognized, they could practice CE.
- It will restrict the practice of CE, as non-CE's “seek to exert their dominance over (our) specialty.”
- CE's are terrified of non-CE's taking over Water Treatment Plants and concrete mixtures

# *Who is our opposition?*

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## **PECG** (Professional Engineers in CA Government)

- Has testified against non-CE's at TF, Sunrise, B&P Hearings
- Art Duffy was one of 2 BPELS mbrs not in favor of TF recommendation (Art was Pres of PECG)
- By recognizing non-CE's, would take work away from CE's
- “No allegations that (non-CE's) somehow endanger the public”
- If non-CE's are recognized, the services of several engineers would have to be procured to perform the task currently performed by just one CE.
- Delete the requirement that CA license the person in “the closest branch” for out of state engineer requesting comity

# *THE WAR IS HARDLY OVER*

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To continue your current job w/o having to

- work for a Civil PE, or
- return to school & get a civil engr degree, or
- get a Civil PE

**UNITE AND SPEAK W/ ONE VOICE**

# *Who are our supporters?*

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## **The MARKETPLACE--MAJOR FIRMS**

- Mr. Rick Stephens, The Boeing Company (Sr VP)
- Mr. Jack Coffey, ChevronTexaco
- Ms. Heike Abeck, PE, CHIRON
- Mr. Doug James, ConocoPhillips Los Angeles Refinery
- Dr. Prakash Karpe, ConocoPhillips San Francisco Refinery
- Mr. Randy Fischback, PE, Dow Chemical
- Ms. Andrea Jackson, Genentech
- Mr. Clay Hinkle, Goodrich Aerostructures Group
- Mr. Mario DiGiovanni, PE, Monsanto
- Mr. Robert Panero, PG&E
- Mr. Jim Fairchild, PE, Searles Valley Minerals
- Mr. Ronald Bray, SRI Consulting
- Mr. Brian Kelley, PE, Unocal

# *Who are our supporters?*

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## **ENGINEERING FIRMS**

- Mr. Noel Watson, Jacobs Engineering (Chairman & CEO)
- Mr. Samuel Tam, PE, Nexant, Inc (VP)
- Mr. Helmy Andrawis, PE, Parsons E&C
- Mr. Stan I&C, PE, Technip USA Corp

# *Who are our supporters?*

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## **ENVIRONMENTAL FIRMS**

- Mr. Anthony Tartaglione, PE, Brown & Caldwell
- Mr. Robert Weber, PE, ENSR (President & CEO)
- Mr. Peter Hendricks, PE, Entrix Inc
- Mr. Bill Sedlak, PE, Kennedy/Jenks Consultants
- Mr. Jay Shipley, PE, Levine Fricke
- Mr. Mario Sternad, PE, Secor International, Inc
- Dr. Serge Baghdikian, PE, Science Application International Corporation (SAIC)
- Dr. Jude Francis, PE, URS

# *Who are our supporters?*

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## **DEANS of ENGINEERING SCHOOLS**

- Dean Max Nikias, School of Engineering at USC
- Dean Vijay Dhir, School of Engineering at UCLA
- Dean Enrique Lavernia, School of Engineering at UC Davis
- Dean Mark Matsumoto, School of Engineering at UC Riverside
- Dean Matthew Tirrell, School of Engineering at UC Santa Barbara
- Dean Michael Mahoney, School of Engineering at CSU Long Beach
- Dean Edward Hohmann, PE, School of Engr at Cal Poly Pomona

# *Who are our supporters?*

## *(continued)*

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### **ASSOCIATIONS**

- Ms. Dorothy Rothrock, CA Manufacturer's Tech Assoc (CMTA)
- Mr. John Ulrich, Chemical Industry Council of California (CICC)
- Mr. Scott Anderson, PE, Industrial Association of Contra Costa Co
- Ms. Patti Krebs, Industrial Environmental Association (IEA)
- **Mr. Don Zee, Instrumentation, Systems, & Automation Soc (ISA)**
- Mr. Arthur Cote, PE, National Fire Protection Association (NFPA)
- Dr. Bobby Price, PE, Nat'l Society of Professional Engrs (NSPE)
- Dr. Jim Bates, Western Contra Costa Council of Industries
- Mr. Kurt Glaesermann, Soc of Professionals, Scientists, & Engrs

# *Who are our supporters?*

## *(continued)*

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### **AGENCIES**

- Mr. Benjamin Hancock, PE, CA Air Resources Board (CARB)
- Mr. Tawfiq Deek, Department of Toxic Substances Control (DTSC)
- Mr. Randy Sawyer, Contra Costa Co Hazardous Materials Program
- Mr. Michael Dorsey, CA Certified Unified Program Agencies
- Mr. Brian Bateman, Bay Area Air Quality Management District
- Mr. Andrew Gere, PE, San Jose Water Company
- Mr. Robert S.Castle, PE, Marin Municipal Water District
- Mr. Andrew DeGraca, PE, San Francisco Public Utilities Comm

# *Who are our supporters?*

## *(continued)*

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### **The MARKETPLACE (other companies)**

- Mr. Woody Brogdon, PE, Environmental Applications, Inc
- Mr. Richard Call, SDS Kerr Corp
- Ms. Judy Cervantes, Quality Design & Packaging
- Hon. W. Kenneth Davis, PE, Engineer and Management Consultant
- Mr. Jim Harrison, Chemtec Chemical Co
- Mr. Dominic Meo, PE, Meo & Associates
- Mr. Kanna Meyyappan, PE, Processes Unlimited International, Inc
- Mr. Michael Mikhail, PE, U. S. Commerce International Corp
- Mr. Art Perkins, PE, Chemical Engineering Consulting Services
- Mr. John Reiter, Kemiron Pacific
- Mr. Guy Roy, PE, Environeering, Inc
- Mr. Stephen Sawdon, Pan American Group
- Dr. Henry Sheng, PE, Consulting Chemical Engineer

# *Who are our supporters?*

## *(continued)*

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### **The MARKETPLACE (other companies)**

- Mr. Morgan Buchanan, PE, Buchanan Enterprises
- Mr. Jay Sheth, PE, Robert Brown Engineers
- Mr. Ebbe Skov, PE, Hetagon
- Dr. Pedro Sole, Management Consultant
- Mr. Anu Sood, PE, EP Consultants
- Mr. Sean Tobin, EIT, Valley Facilities Management Corp
- Mr. Chris Blanchard, PE, Salvitas Consulting
- Ms. Agnes Jaszenovics, PE, AJ Process Consulting
- Mr. Daniel Gary, PE
- Mr. John Hart, PE
- Mr. Ken Kimura
- Dr. Linda Kiss, PE
- Dr. Robert Kiss, PE

# *Who are our supporters?*

## *(continued)*

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### **The MARKETPLACE (other companies)**

- Mr. Al Lappinga, PE
- Mr. Amit Pathak, PE
- Mr. Ralph Simon
- Mr. Dan Spisak, PE
- Mr. Noel Call
- Mr. Bob Carloni, PE
- Ms. Carole Elm
- Ms. Linda Lee, PE—a PECG employee against PECG policy
- Ms. Leah Walker, PE (CE)—a PECG emp against PECG policy
- **Petition** against PECG position—106 signatures
- **Petition** from So Coast Air Quality Mgmt District—56 signatures

# *WHAT CAN I DO TO HELP?*

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- Have your company lobbyist contact CLCPE lobbyist
- Need letter, I was precluded from doing I&C
- Need letter on company letterhead to ASM McLeod
- Need letter from organizations like Chamber of Commerce, Sierra Club, Industrial associations
- If member of PECG, write personal letter to ASM McLeod
- Need letters from the Dean of School of Engineering
- Get I&C members to join ISA to report higher number of I&C Engineers in California
- Make phone calls when the time is right

# *Write Assemblywoman McLeod*

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- See sample letter at <http://www.sb246.us>
- Write to:  
The Honorable Negrette McLeod  
California State Assembly  
State Capitol, P. O. Box 942849  
Sacramento, CA 94249-0061
- Make cc to:  
Bob Katin, PE  
P.O. Box 4727  
Antioch, CA 94509



# *WHAT CAN I DO TO HELP?*

## *(continued)*

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- Become ISA member and receive monthly Newsletter
- Maintain ISA membership in CLCPE  
(to be able to pay CLCPE's lawyer/lobbyist)



# *SUMMARY*

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For the public safety, California economy, and financial sustainability of all engineers get involved and support

**YES ON SB 246**