INTERNSHIP PROGRAM
Two interns placed at two separate electroplating facilities in Chicago

- One student’s report is still referred to today
- The other student saved the company $40,000 in reduced chemical costs
No. of Interns

- In 1989 there were 2 interns

- In 1997 ................. 27 .................

- In 2006 ................. 20 .................

- In 2007 ................. 15 - 20 ........
Actual Internships

Training = One (1) week
+ at host = Eleven (11) weeks

Total = Twelve (12) weeks
Undergrads - $2,100 / month

Grad. Students - $2,300 / month

(Salary is increased by $400 / month if the student has to relocate)
Salaries paid by...

- First requests .............................. IEPA 100%
- Second ............... Company 50% : IEPA 50%
- Third ............... Company 75% : IEPA 25%
- Fourth, etc....... Company 100% : IEPA 0%
Participating Colleges (liaisons at each school)

- IIT, Chicago
- U of I, Chicago
- Bradley, Peoria
- SIU, Carbondale
- SIU, Edwardsville
- U of I, Urbana-Champaign
- Northern Illinois University, DeKalb
Student Backgrounds

- Engineering disciplines, all except computer and electrical
- Chemistry
- Environmental Management
**Time Frames - 2007**

- **January 31** - Online applications
  - Company requests due
  - Student applications

- **February** – prescreens conducted

- **First week in March** – students and companies selected
Time Frames – 2007 (Cont.)

- **March/April/May**
  - Site visits conducted
  - Contracts established

- **May 21 through May 25** - Training conducted in Springfield.

- **May 29** - Interns start at the facility

- **August 10** - Internships completed
Host Organizations

- Primarily manufacturing facilities
- but have also included:
  - Trade associations
  - Local government facilities
  - Environmental groups
  - Military installations
P2 Training - Springfield

Topics include:

- P2 Basics
- Process Mapping
- How to Conduct a Waste Audit
- EMS
- Energy Efficiency
P2 Training (Cont.)

- Energy Efficiency Topics:
  - Energy audit, energy bill analysis
  - Lighting
  - HVAC, refrigeration, chillers
  - Air Compressor systems
  - Boilers, steam traps, condensate
  - Motors & VSDs
P2 Training (Cont.)

- Site visit to a nearby facility
  Interns will conduct:
  - A waste audit
  - An energy efficiency audit

- Training concludes with:
  - A brainstorming session
  - P2/E2 project presentation
Available to Interns

- Ultrasonic leak detector
- Lumen meter
- Infrared temperature gun
- Wind-vane anemometer
- Past reports

(May purchase a thermal imager)
Company Responsibilities include providing ...........

- Workers comp. coverage
- On-site supervisor
- Safety training
- Pay for misc. expenses
Our Responsibilities include

- Initial on-site visit with student
- Intern training
- Establish contracts
- Research project beforehand
Intern Responsibilities include:

- Attend P2/E2 Training
- Work normal hours at facility
- Submit bi-weekly progress reports
- Submit a final written report
- Attend final presentations
Company Solicitation

- Four (4) staff members located at regional offices around the state:
  - Des Plaines (Chicago area)
  - Springfield (Central Illinois)
  - Collinsville (E. St. Louis area)
  - Marion (Southern Illinois)

- Referrals from regional inspectors or site visit with the inspectors
Company Solicitation (Cont.)

- E-mail list to former intern hosts
- On-line application form posted on website year-round
- Speaking engagements with associations or Chambers of Commerce throughout the state

(Discontinued mailing brochures due to cost)
Continuous Improvement

- 1989 – 1998 only hired graduate students
- 1999 – Undergraduates with junior status

- In 2003, energy efficiency added to training. US DOE funding, assisted by IAC at U of I, Chicago. Attractive with electricity deregulation

- Budget has been cut 20% in 2 years. Now ask 1st time requestors to split costs if able.
Continuous Improvement – Implemented but discontinued

- From 1997 – 2000, recruited students from Northwestern in Evanston (on quarters). Could not afford to conduct two separate training sessions.

- Payment directly to the college was expensive. Able to place student on our payroll or host.

- Trialed outside of summer session. Difficulty to match trained grad student and nearby host facility.
Survey Forms

Survey forms e-mailed one year after the conclusion of the internship.

Mainly interested in:

- Amount of wastewater reduction
- Amount of wastes reduced include hazardous, special, or solid waste or HAPs
- Energy savings
Survey Form - Results

- On average:
  - 2/3 of the companies respond
  - 30% of respondents implement one recommendation
  - 25% of respondents report savings

- Post technical summaries/abstracts on our website upon company approval
- Report requests are referred directly to that host company
Past Successes

- **2006** – **Big M Mfg. in Taylorville** – Ability to produce both heating and cooling from a shelled corn burner due to intern research.

- **2003, 2004** – **Keystone Steel & Wire in Peoria**; Savings of $600,000 in recycling slag from Electric Arc Furnace; Savings of $300,000 utilizing crushed refractory brick.
Past Successes (Cont.)

- 2003 – Champaign Public Works Dept. Credited savings of $77,000 due to calculation errors in energy bill

- 1999 – Motorola in Arlington Heights savings of solder paste of $500,000 in mfg. of printed circuit board at three locations
Challenges

- Increase implementation rates
- Increase survey form participation
- Reduced funding
Program Coordinators

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