

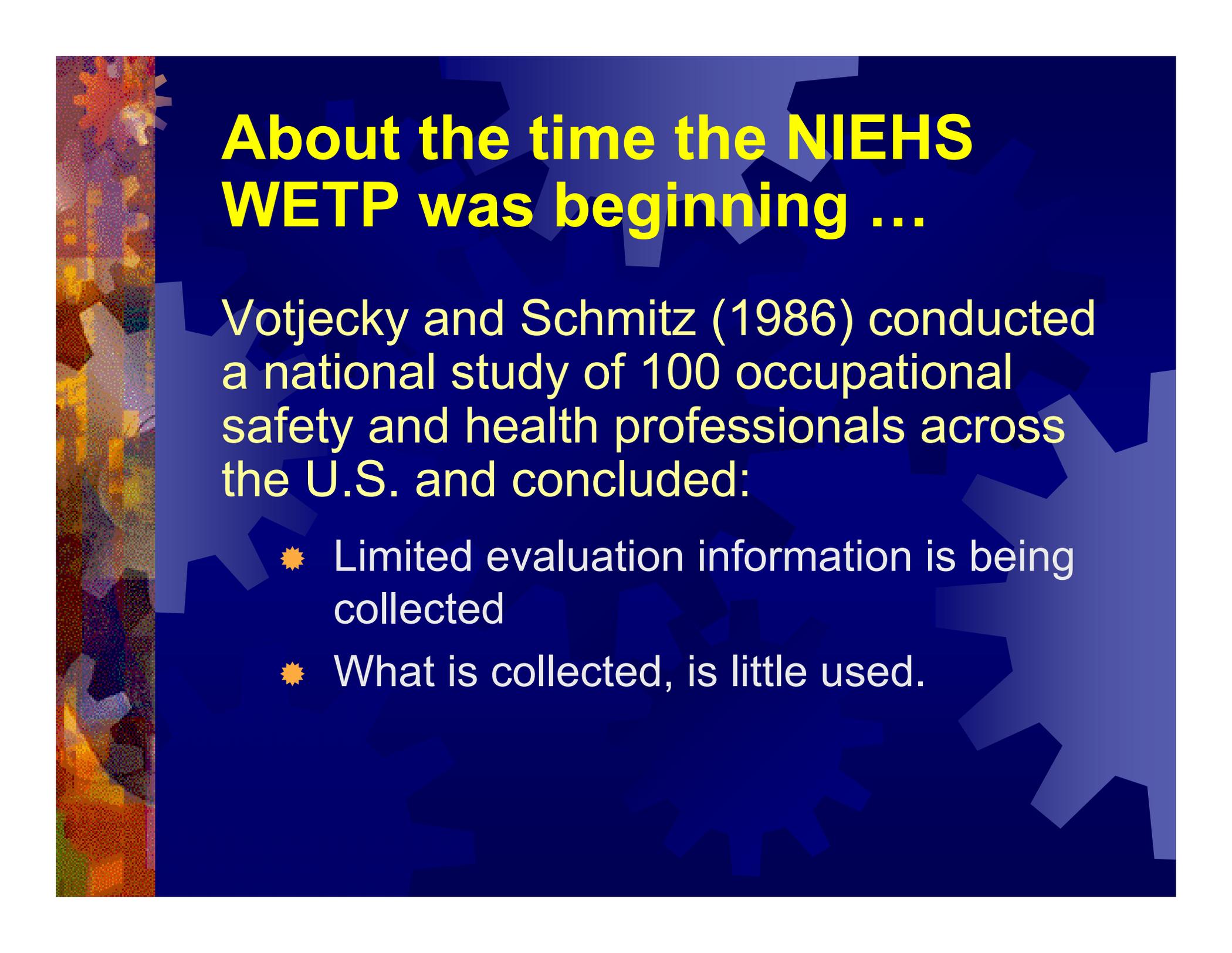
NIEHS WETP Evaluation

**Minimum Criteria Technical Workshop
March 30 to April 1, 2005
Manhattan Beach, California**

Tom McQuiston, Dr. P.H.

**Paper, Allied Industrial, Chemical and Energy Workers
International Union (PACE)**

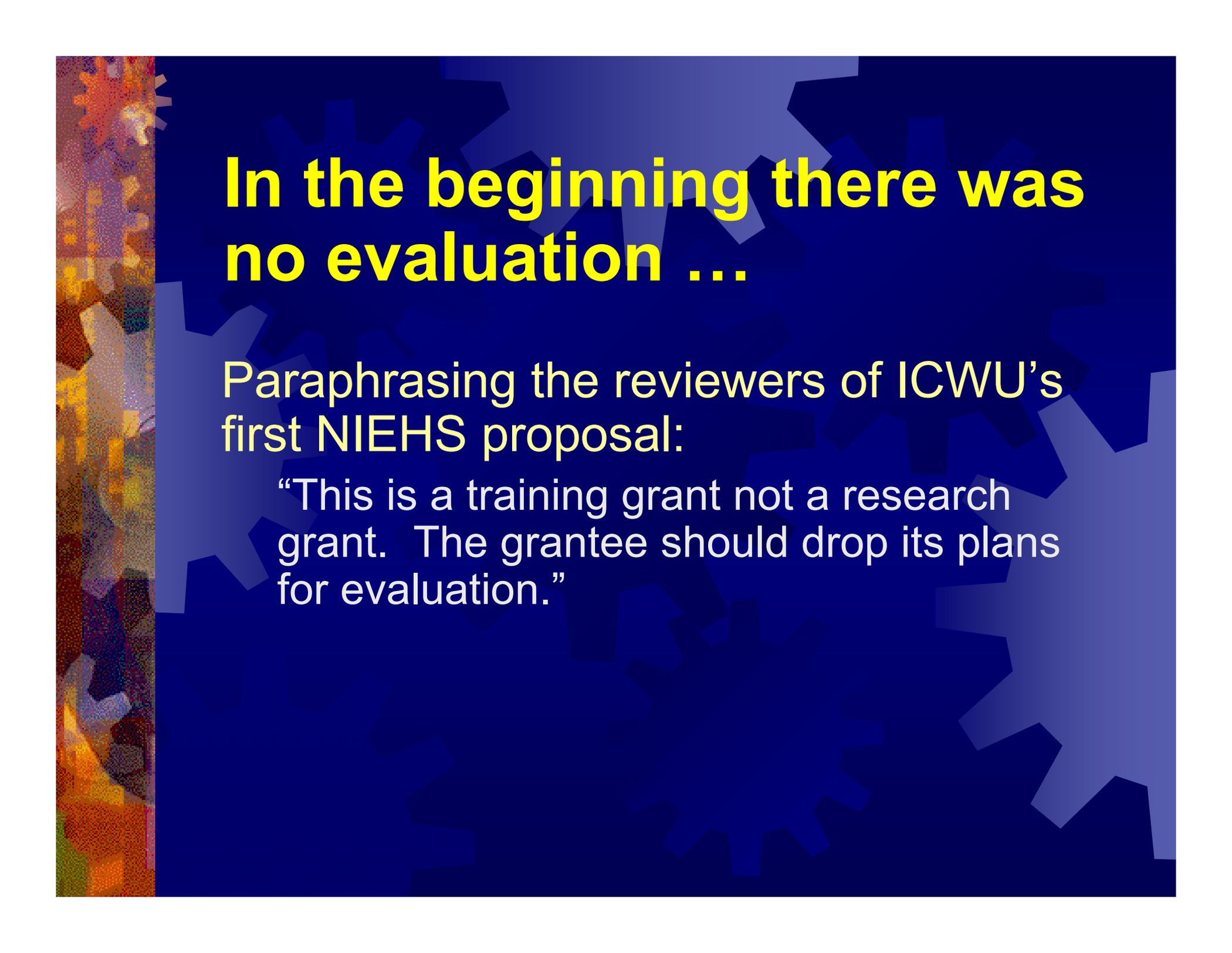
**Tony Mazzocchi Center for Health, Safety and Environmental
Education (TMC)**



About the time the NIEHS WETP was beginning ...

Votjecky and Schmitz (1986) conducted a national study of 100 occupational safety and health professionals across the U.S. and concluded:

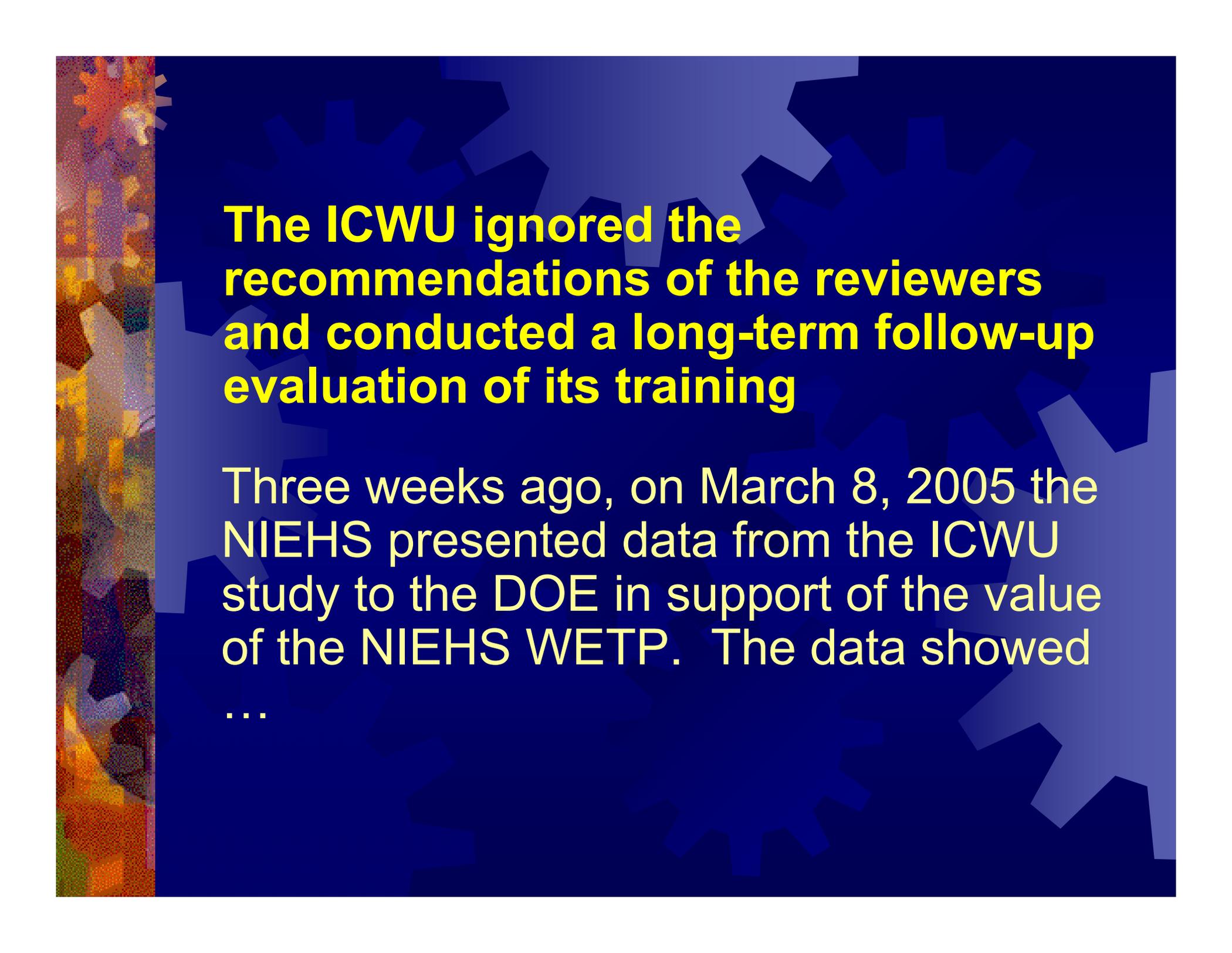
- ✿ Limited evaluation information is being collected
- ✿ What is collected, is little used.



In the beginning there was no evaluation ...

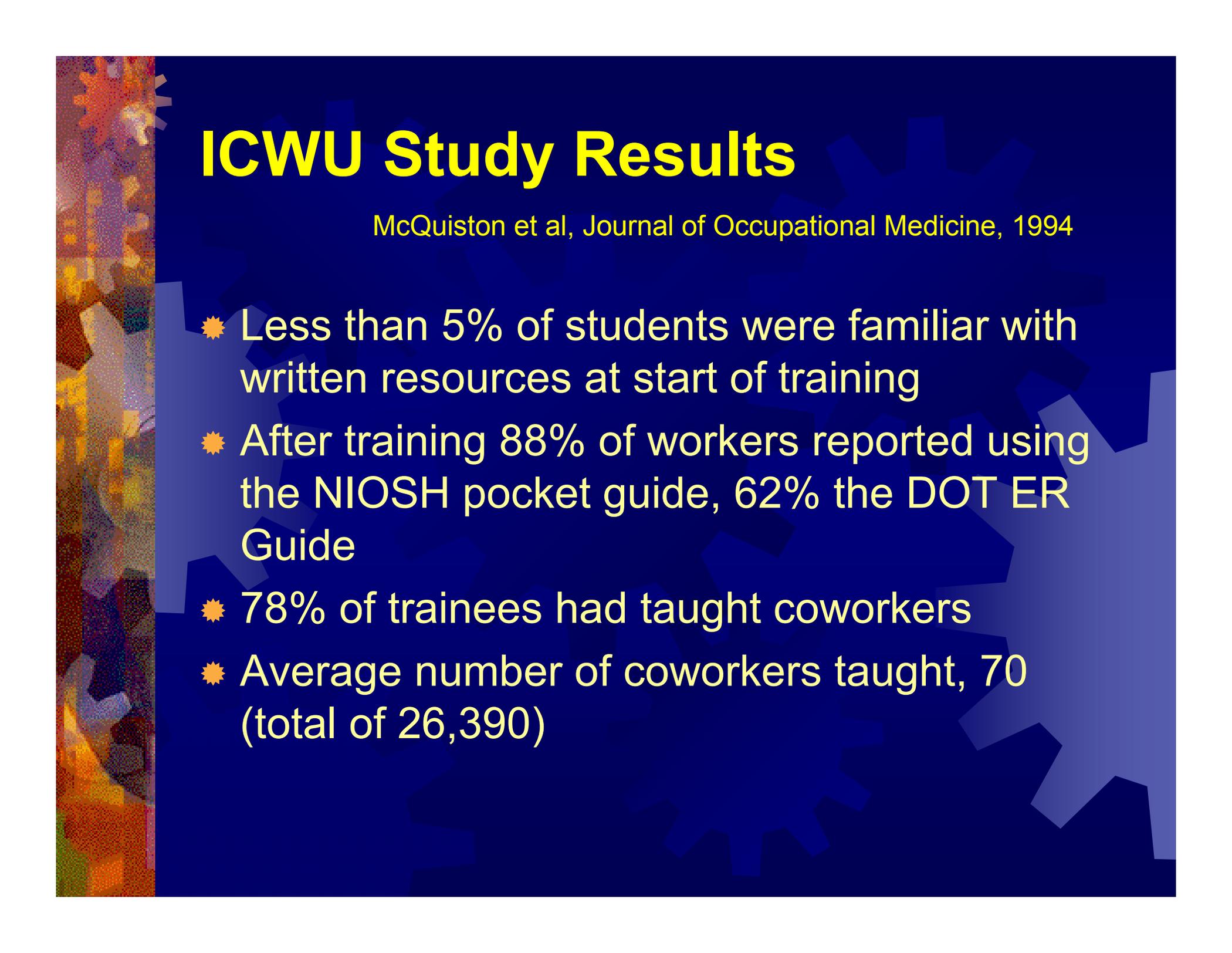
Paraphrasing the reviewers of ICWU's first NIEHS proposal:

“This is a training grant not a research grant. The grantee should drop its plans for evaluation.”

The background of the slide is a dark blue field filled with various shades of blue gears of different sizes, some overlapping. On the left side, there is a vertical strip with a colorful, abstract, and somewhat pixelated pattern in shades of orange, red, and brown.

The ICWU ignored the recommendations of the reviewers and conducted a long-term follow-up evaluation of its training

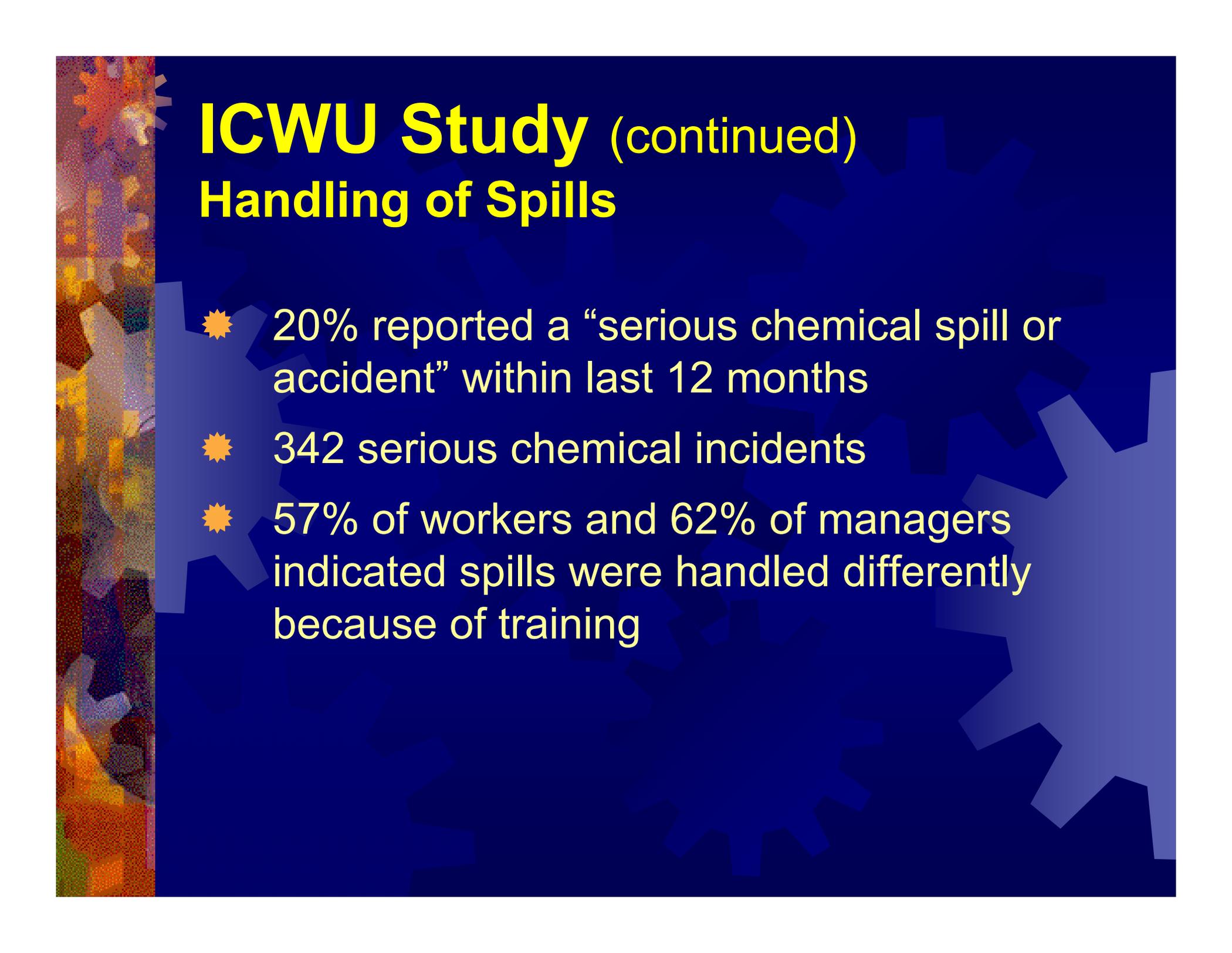
Three weeks ago, on March 8, 2005 the NIEHS presented data from the ICWU study to the DOE in support of the value of the NIEHS WETP. The data showed ...



ICWU Study Results

McQuiston et al, Journal of Occupational Medicine, 1994

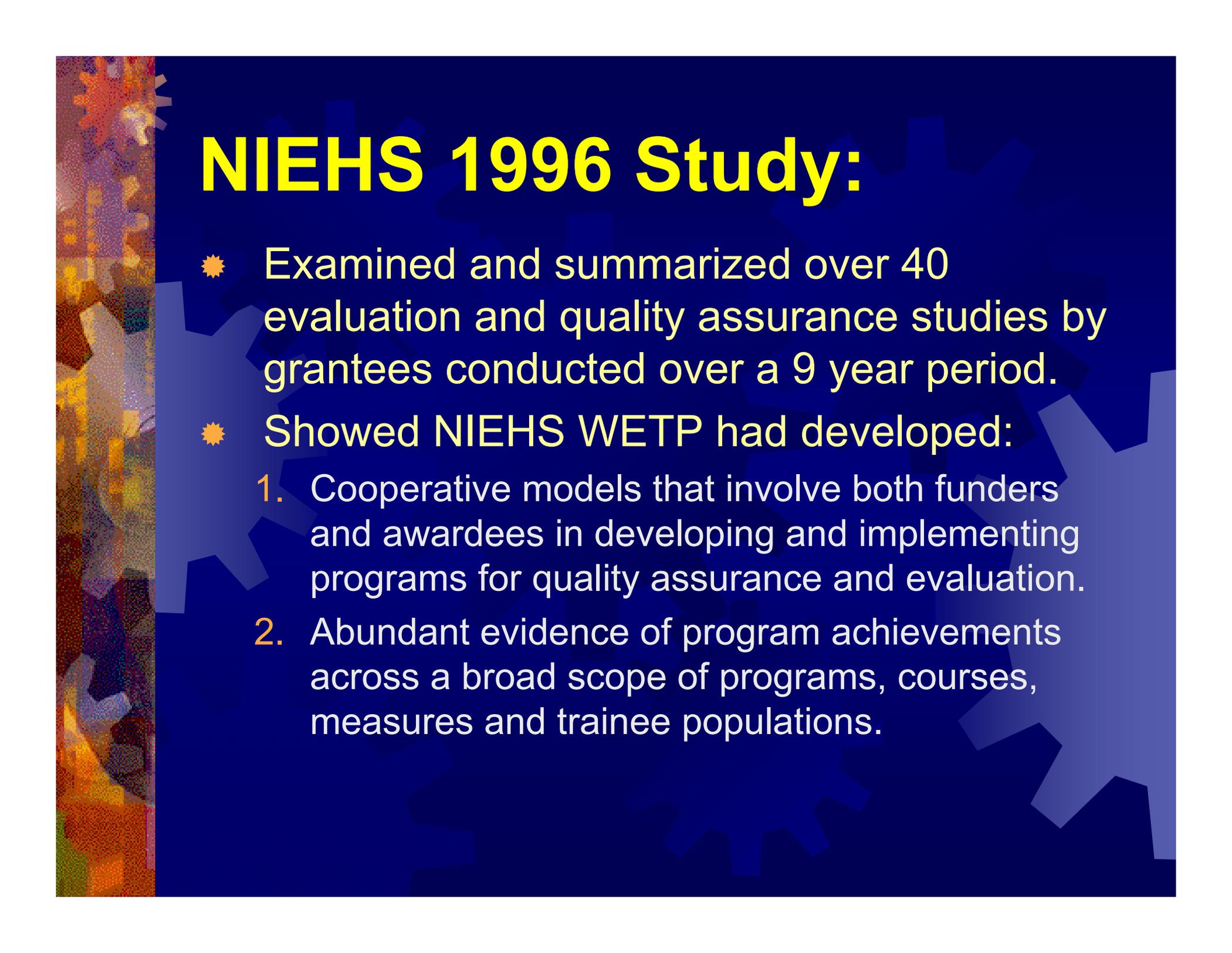
- ✱ Less than 5% of students were familiar with written resources at start of training
- ✱ After training 88% of workers reported using the NIOSH pocket guide, 62% the DOT ER Guide
- ✱ 78% of trainees had taught coworkers
- ✱ Average number of coworkers taught, 70 (total of 26,390)



ICWU Study (continued)

Handling of Spills

- ☀ 20% reported a “serious chemical spill or accident” within last 12 months
- ☀ 342 serious chemical incidents
- ☀ 57% of workers and 62% of managers indicated spills were handled differently because of training



NIEHS 1996 Study:

- ✦ Examined and summarized over 40 evaluation and quality assurance studies by grantees conducted over a 9 year period.
- ✦ Showed NIEHS WETP had developed:
 1. Cooperative models that involve both funders and awardees in developing and implementing programs for quality assurance and evaluation.
 2. Abundant evidence of program achievements across a broad scope of programs, courses, measures and trainee populations.

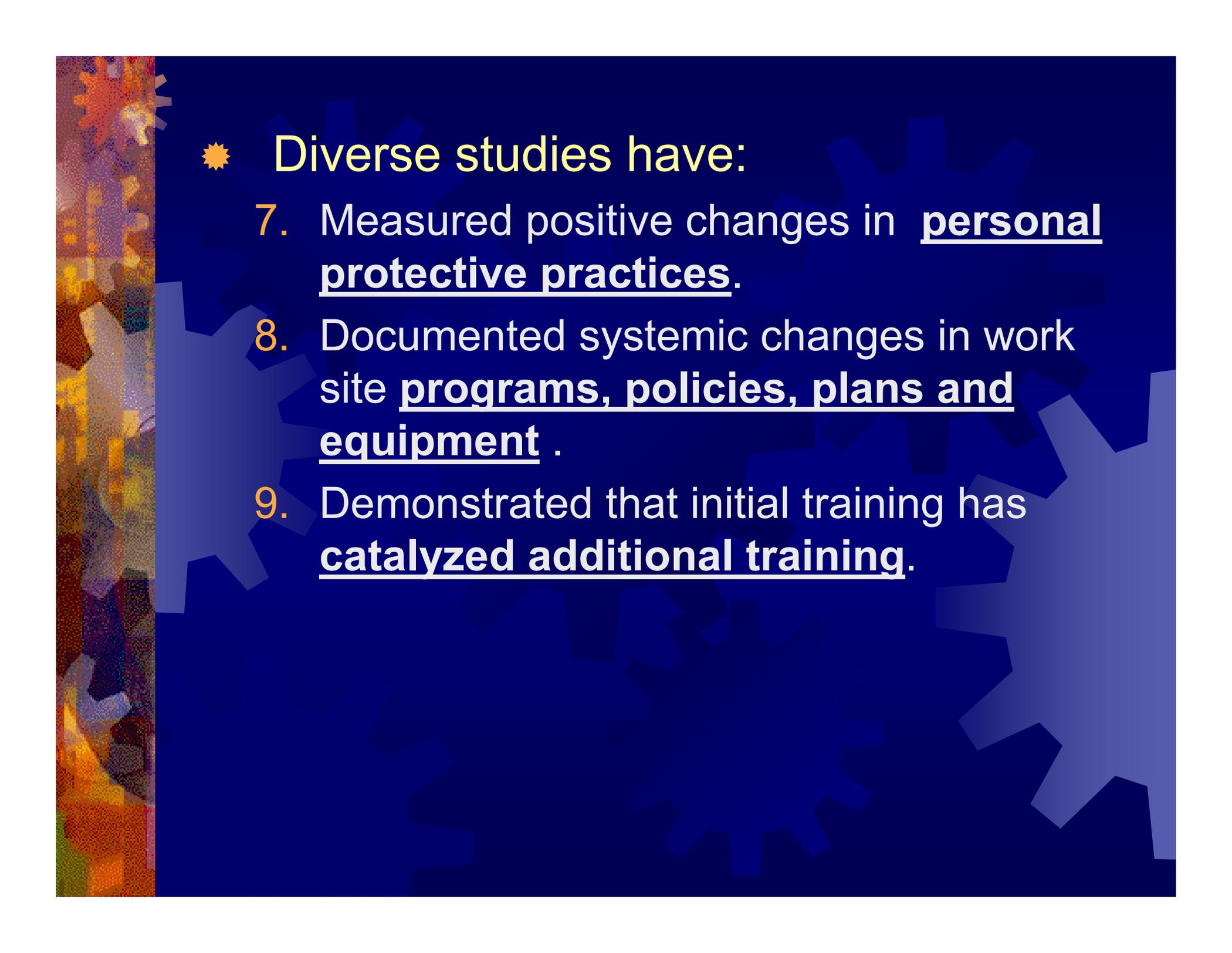
NIEHS 1996 Study (continued)

- ★ Diverse studies have:
 1. Reported positive student ratings of programs.
 2. Documented usefulness and use of course materials and information.
 3. Provided self- assessments of increased knowledge, skills and preparedness related to hazardous materials.



★ Diverse studies have:

4. Shown post-training improvements in knowledge, decision-making, and performance in realistic hazardous waste and emergency response simulations.
5. Documented increased awareness, and concerns about hazardous materials.
6. Revealed the programs' impacts in improving response actions and saving lives, health and property.

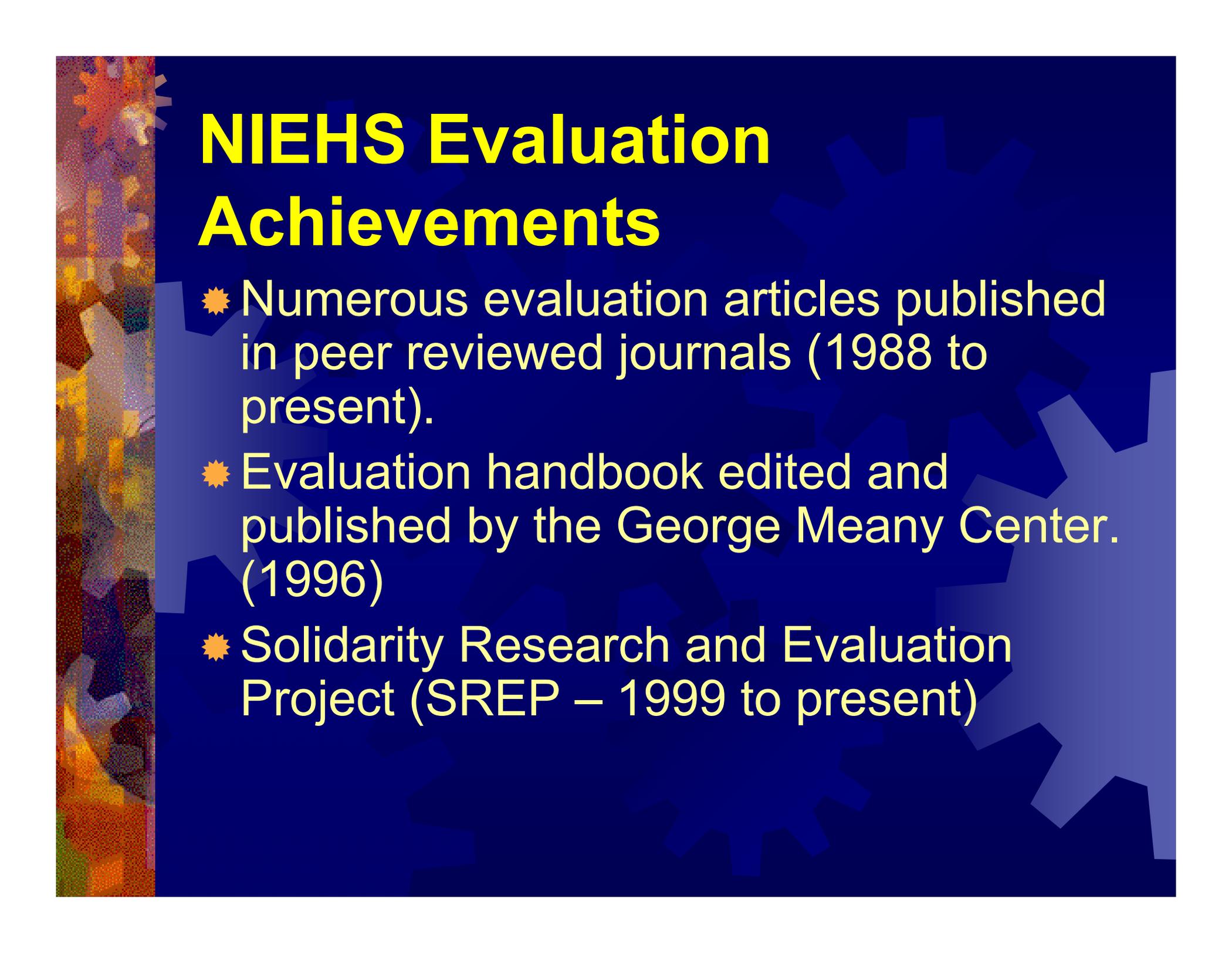


★ Diverse studies have:

7. Measured positive changes in personal protective practices.
8. Documented systemic changes in work site programs, policies, plans and equipment .
9. Demonstrated that initial training has catalyzed additional training.

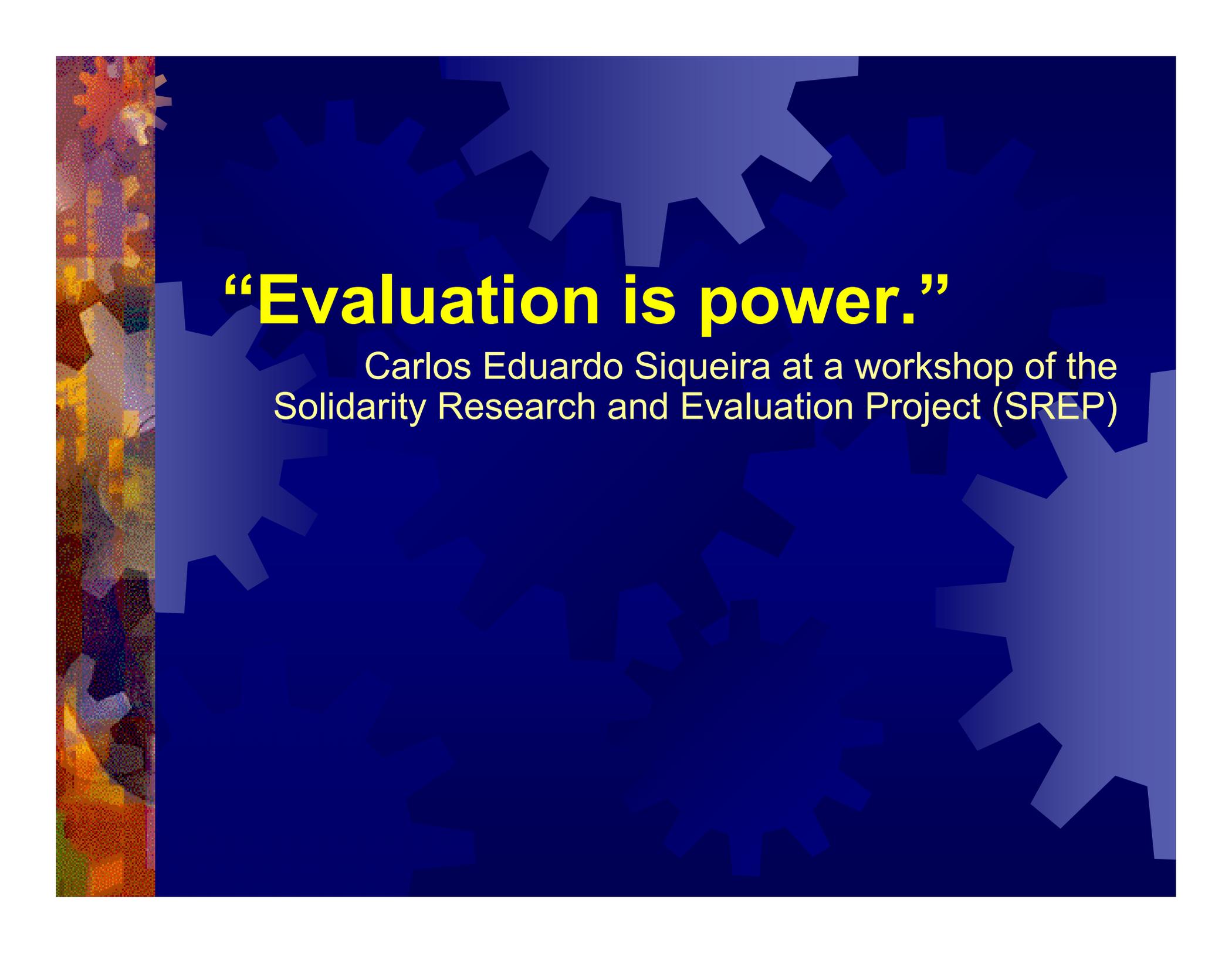
NIEHS 1996 Study (continued)

- ☀ Documented three equally important achievements of WETP:
 1. Established minimum criteria for evaluation and quality assurance
 2. Provided awardees with the latitude to tailor their evaluations to meet their own information needs.
 3. Fostered important innovations in evaluation practice among awardees.

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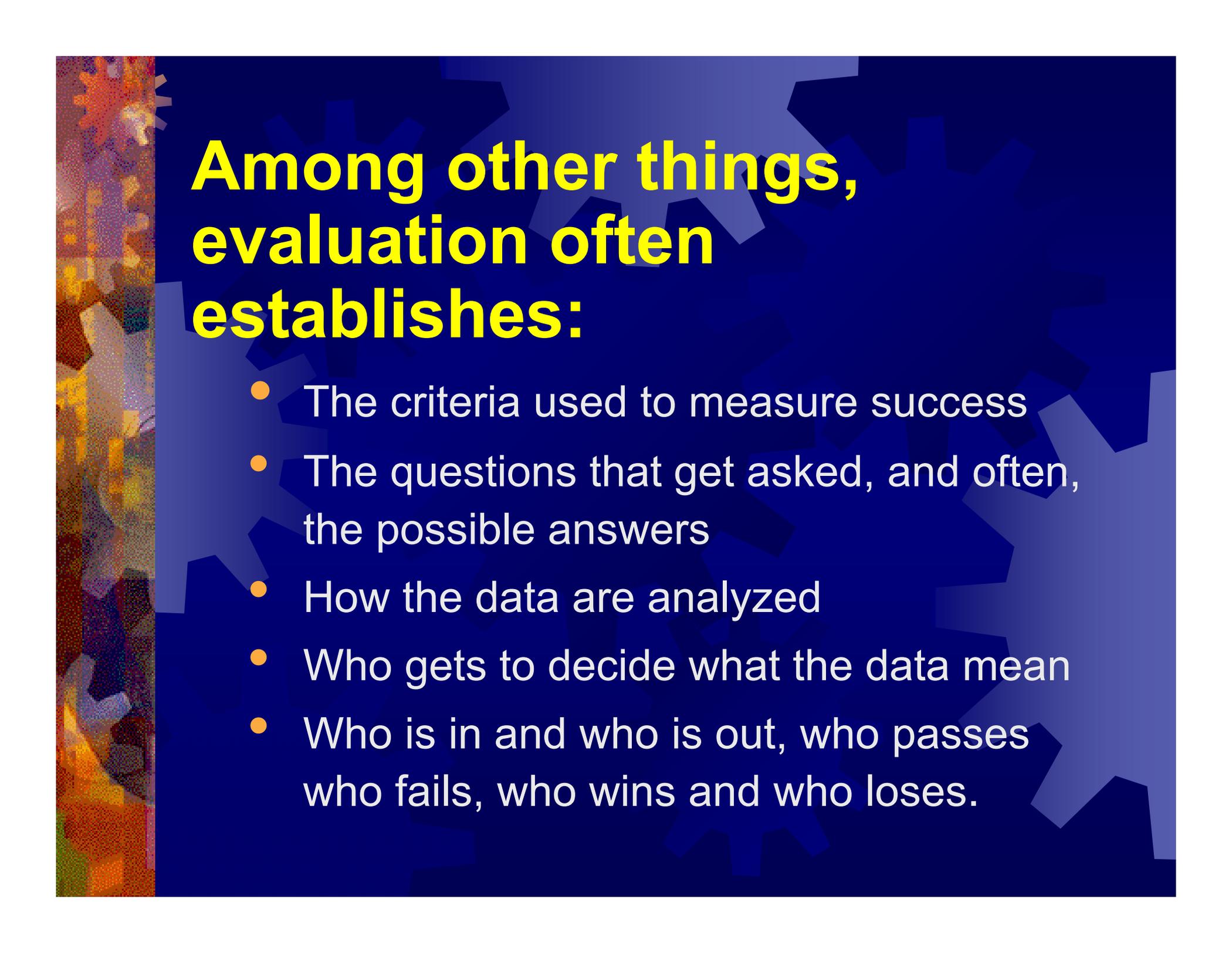
NIEHS Evaluation Achievements

- ★ Numerous evaluation articles published in peer reviewed journals (1988 to present).
- ★ Evaluation handbook edited and published by the George Meany Center. (1996)
- ★ Solidarity Research and Evaluation Project (SREP – 1999 to present)

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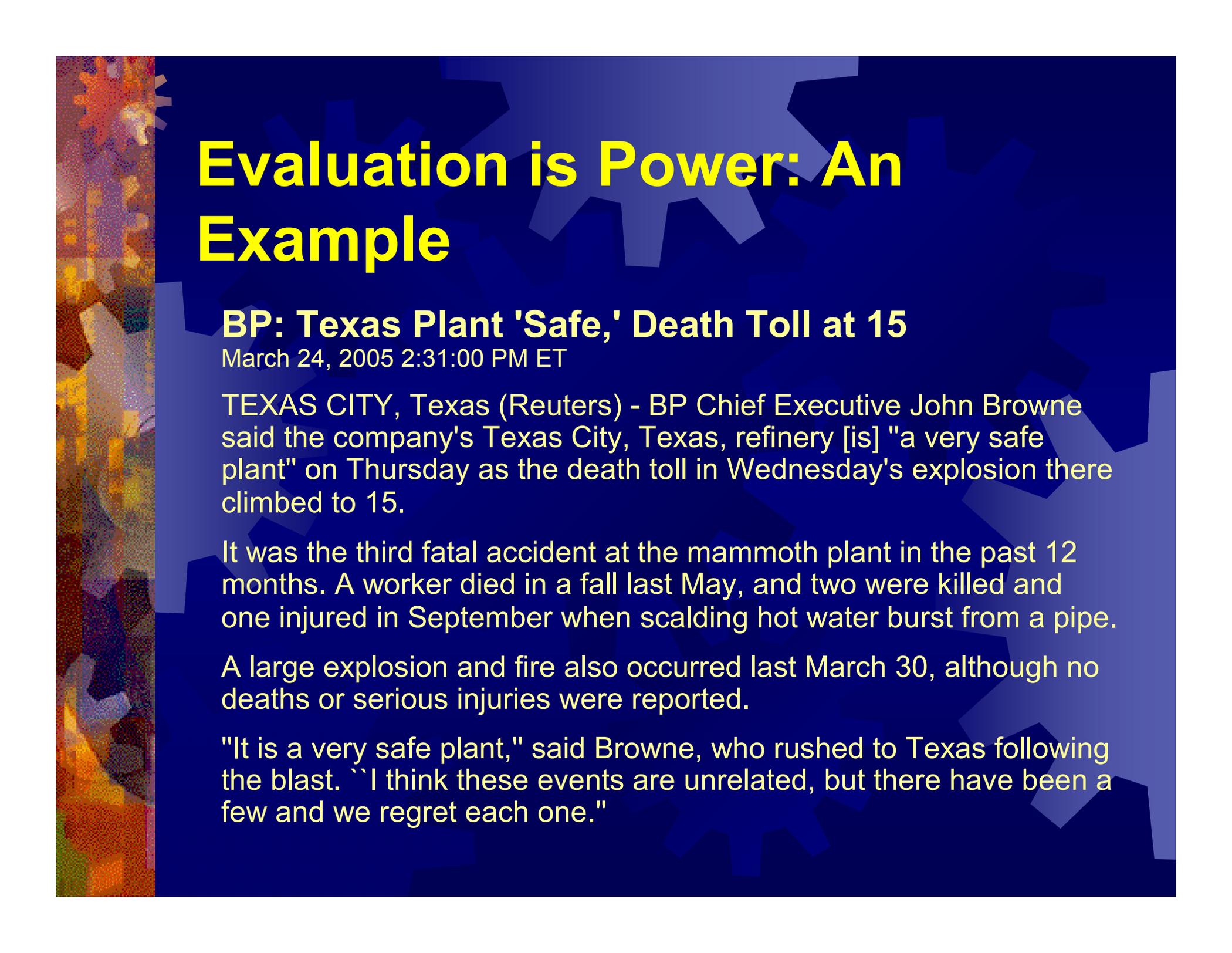
“Evaluation is power.”

Carlos Eduardo Siqueira at a workshop of the
Solidarity Research and Evaluation Project (SREP)



Among other things, evaluation often establishes:

- The criteria used to measure success
- The questions that get asked, and often, the possible answers
- How the data are analyzed
- Who gets to decide what the data mean
- Who is in and who is out, who passes who fails, who wins and who loses.



Evaluation is Power: An Example

BP: Texas Plant 'Safe,' Death Toll at 15

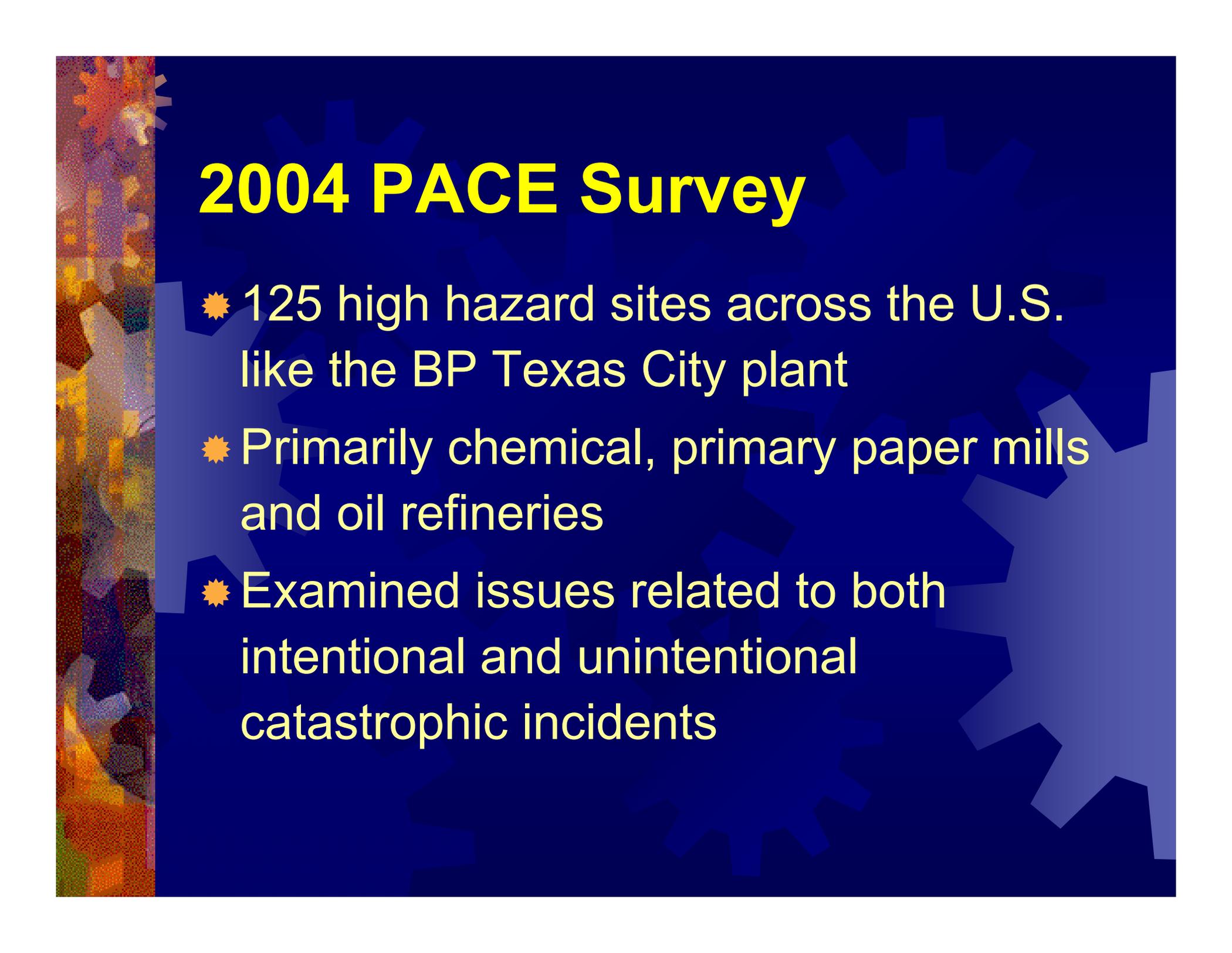
March 24, 2005 2:31:00 PM ET

TEXAS CITY, Texas (Reuters) - BP Chief Executive John Browne said the company's Texas City, Texas, refinery [is] "a very safe plant" on Thursday as the death toll in Wednesday's explosion there climbed to 15.

It was the third fatal accident at the mammoth plant in the past 12 months. A worker died in a fall last May, and two were killed and one injured in September when scalding hot water burst from a pipe.

A large explosion and fire also occurred last March 30, although no deaths or serious injuries were reported.

"It is a very safe plant," said Browne, who rushed to Texas following the blast. "I think these events are unrelated, but there have been a few and we regret each one."

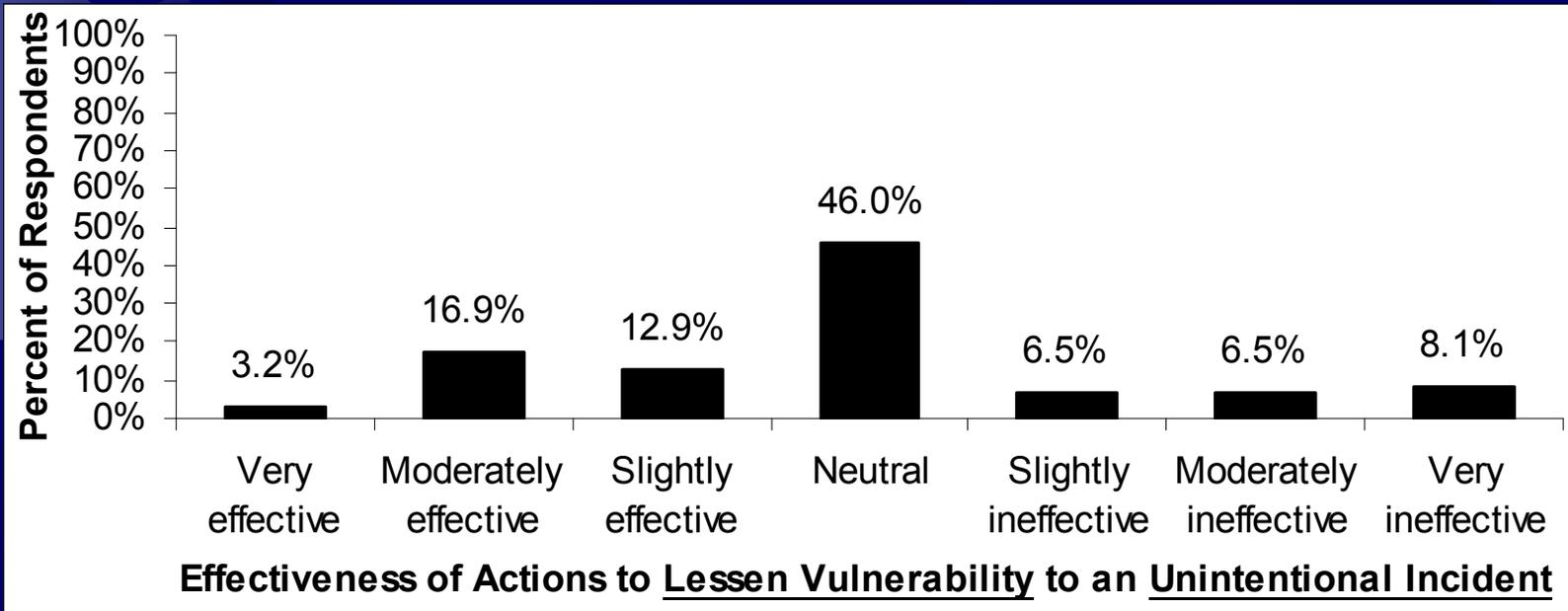


2004 PACE Survey

- ✿ 125 high hazard sites across the U.S. like the BP Texas City plant
- ✿ Primarily chemical, primary paper mills and oil refineries
- ✿ Examined issues related to both intentional and unintentional catastrophic incidents

2004 PACE Survey

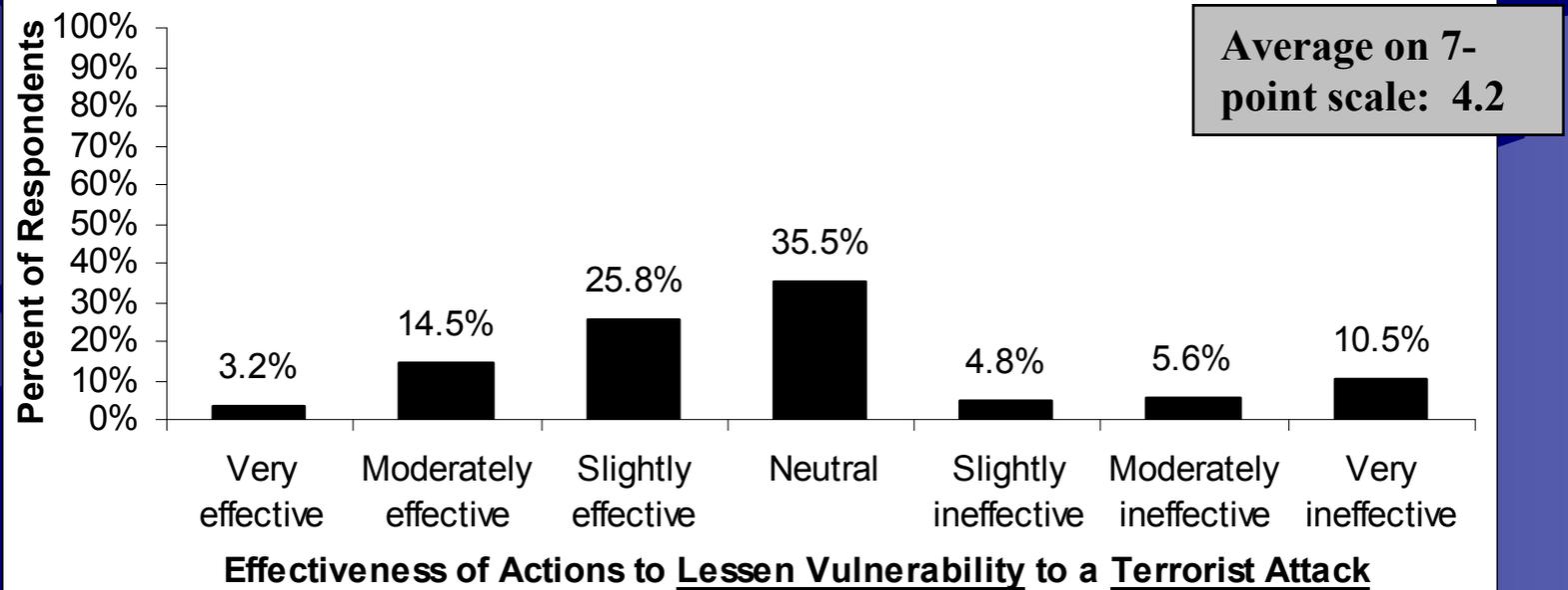
Effectiveness of Company Actions to **LESSEN VULNERABILITY** to a Catastrophic Event Caused by an **UNINTENTIONAL INCIDENT**



Q6. Overall, since September 11, 2001, how effective have the actions taken by the company been in lessening the vulnerability of your worksite to a catastrophic event caused an unintentional incident? (Responses = 124, Missing = 0.8%)

2004 PACE Survey

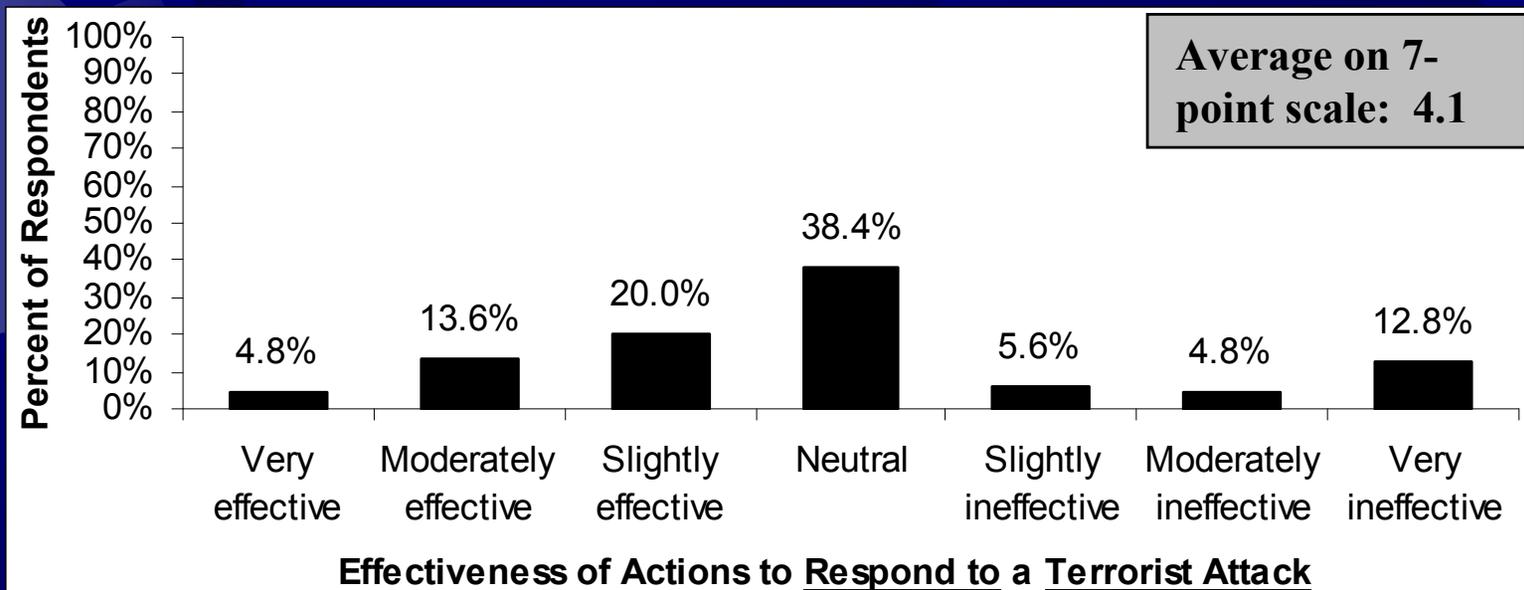
Effectiveness of Company Actions to LESSEN VULNERABILITY to a Catastrophic Event Caused by a TERRORIST ATTACK



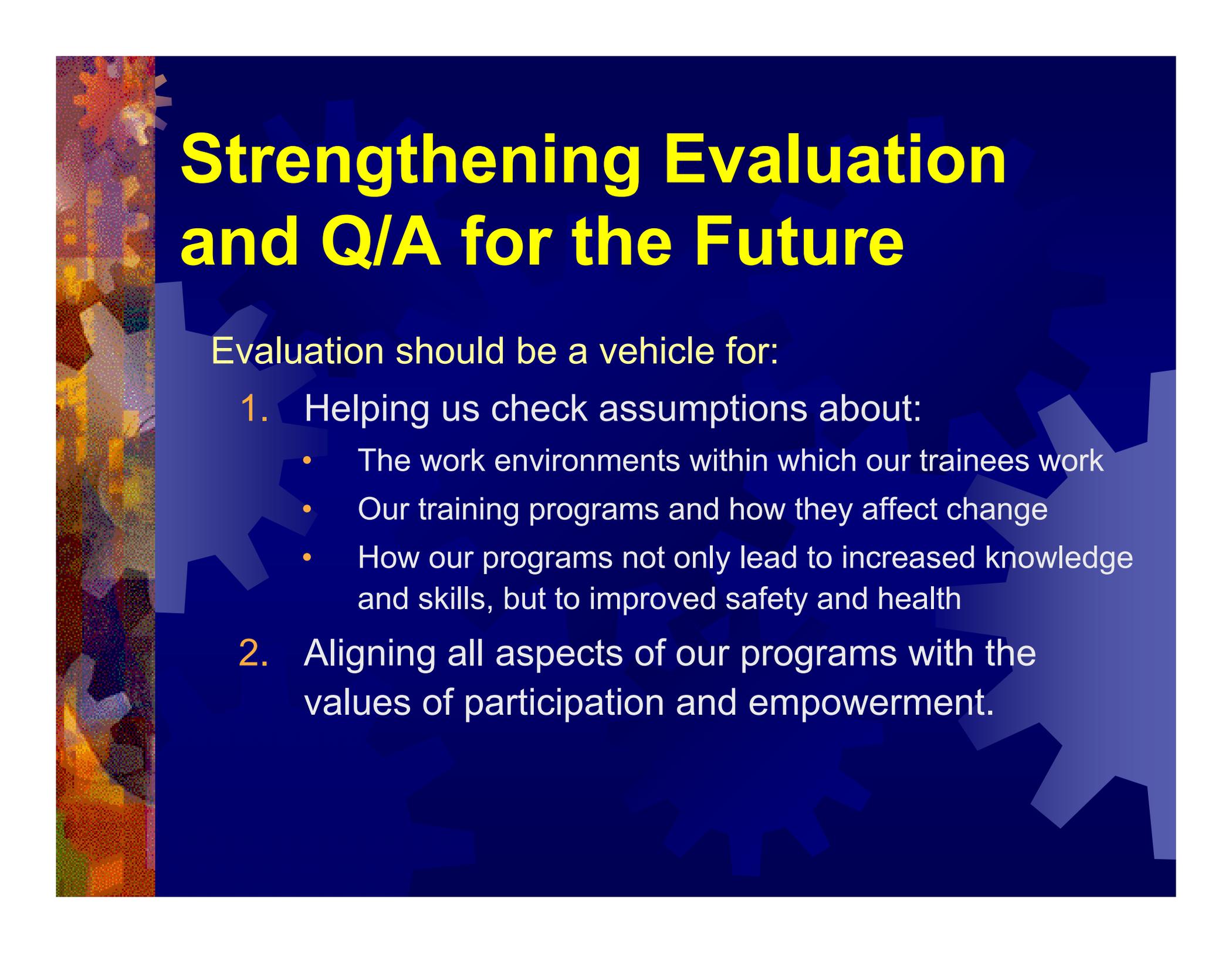
*Q6. Overall, since September 11, 2001, how effective have the actions taken by the company been in lessening the vulnerability of your worksite to a catastrophic event caused a **terrorist attack**? (Responses = 124, Missing = 0.8%)*

2004 PACE Survey

Effectiveness of Company Actions PREPARING TO RESPOND to a Catastrophic Event Caused by a TERRORIST ATTACK



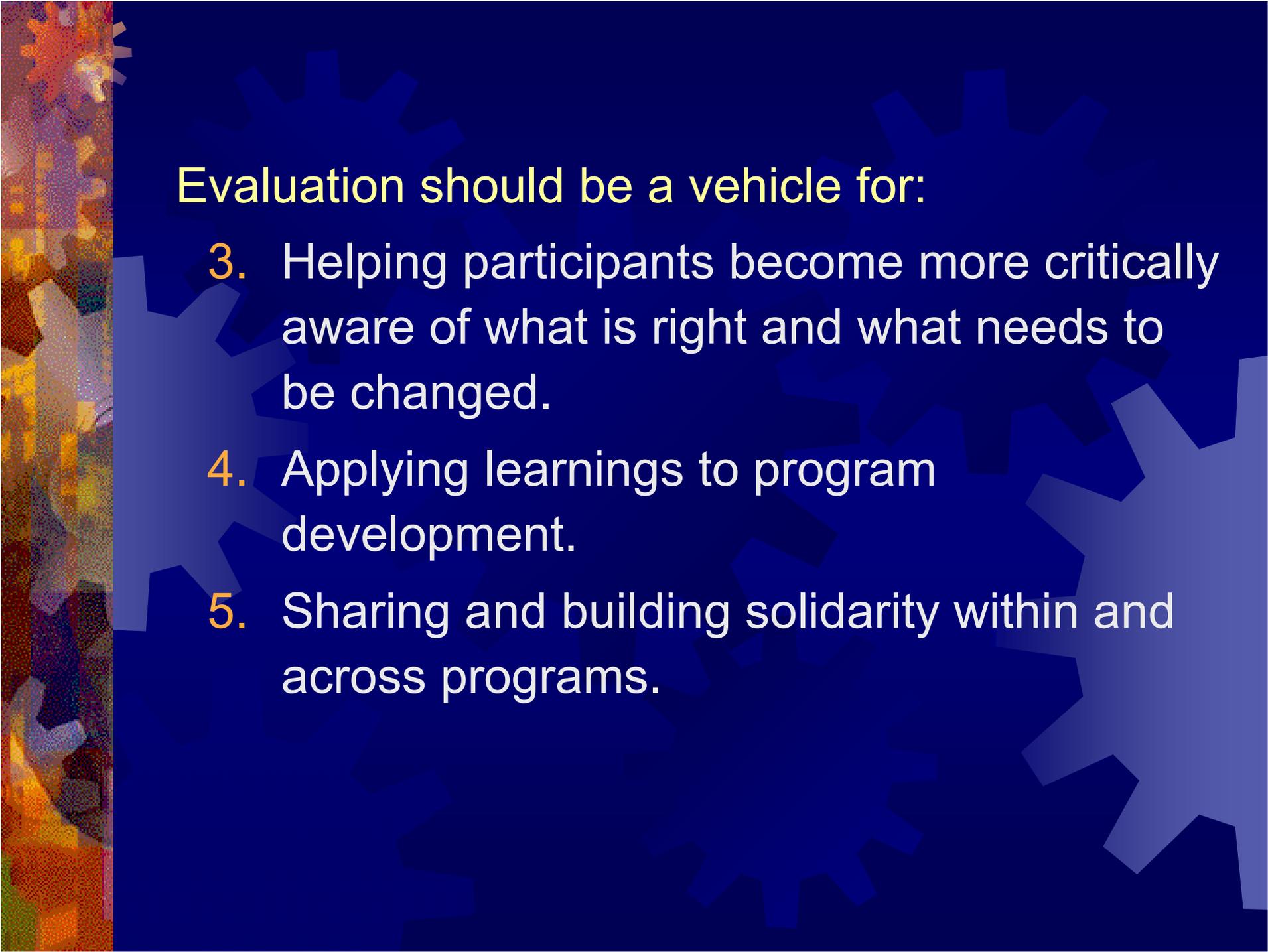
Q8. Overall, since September 11, 2001, how effective have the actions taken by the company been in preparing your worksite to respond to a catastrophic event caused a **terrorist attack**? (Responses = 125, Missing = 0.0%)

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Strengthening Evaluation and Q/A for the Future

Evaluation should be a vehicle for:

1. Helping us check assumptions about:
 - The work environments within which our trainees work
 - Our training programs and how they affect change
 - How our programs not only lead to increased knowledge and skills, but to improved safety and health
2. Aligning all aspects of our programs with the values of participation and empowerment.



Evaluation should be a vehicle for:

3. Helping participants become more critically aware of what is right and what needs to be changed.
4. Applying learnings to program development.
5. Sharing and building solidarity within and across programs.