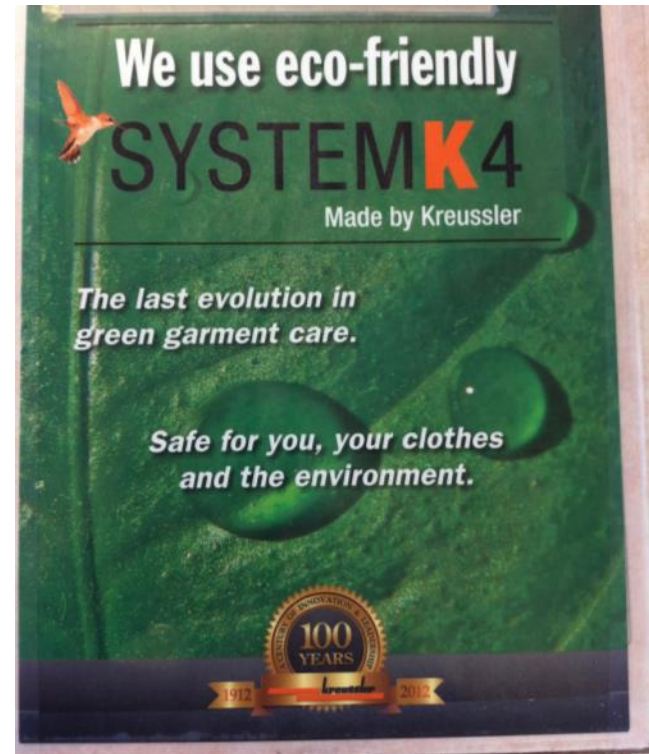


Evaluation of Drycleaning Shops Using Solvon K4 (Part I)



Steve Whittaker, Ph.D.

Local Hazardous Waste Management Program

Public Health – Seattle & King County



Local Hazardous Waste Management Program in King County, Washington

Local Governments for Health and the Environment: King County, City of Seattle, Sound Cities Association

Outline

- What is LHWMP?
- LHWMP and dry cleaning
- Emerging solvents
- “Greenwashing”
- Connection with NIOSH



LHWMP?

- Local Hazardous Waste Management Program (in King County, WA)
- “To protect and enhance public health and environmental quality in King County by reducing the threat posed by the production, use, storage and disposal of hazardous materials”
- Multi-jurisdictional - includes four government agencies, 37 cities and tribal governments in King County



**Local Hazardous Waste
Management Program
in King County, Washington**

LHWMP and Dry Cleaners

- Providing technical and financial assistance for >20 years
- Many are “EnviroStars”
- New solvents in last 10 years
- Data gaps!



Evolution of Dry Cleaning Solvents

Pre 1960s

1960s

1970s

1980s

1990s

2000s


2010s



621 N. P. AVENUE TELEPHONE 658

THE PANTORIUM

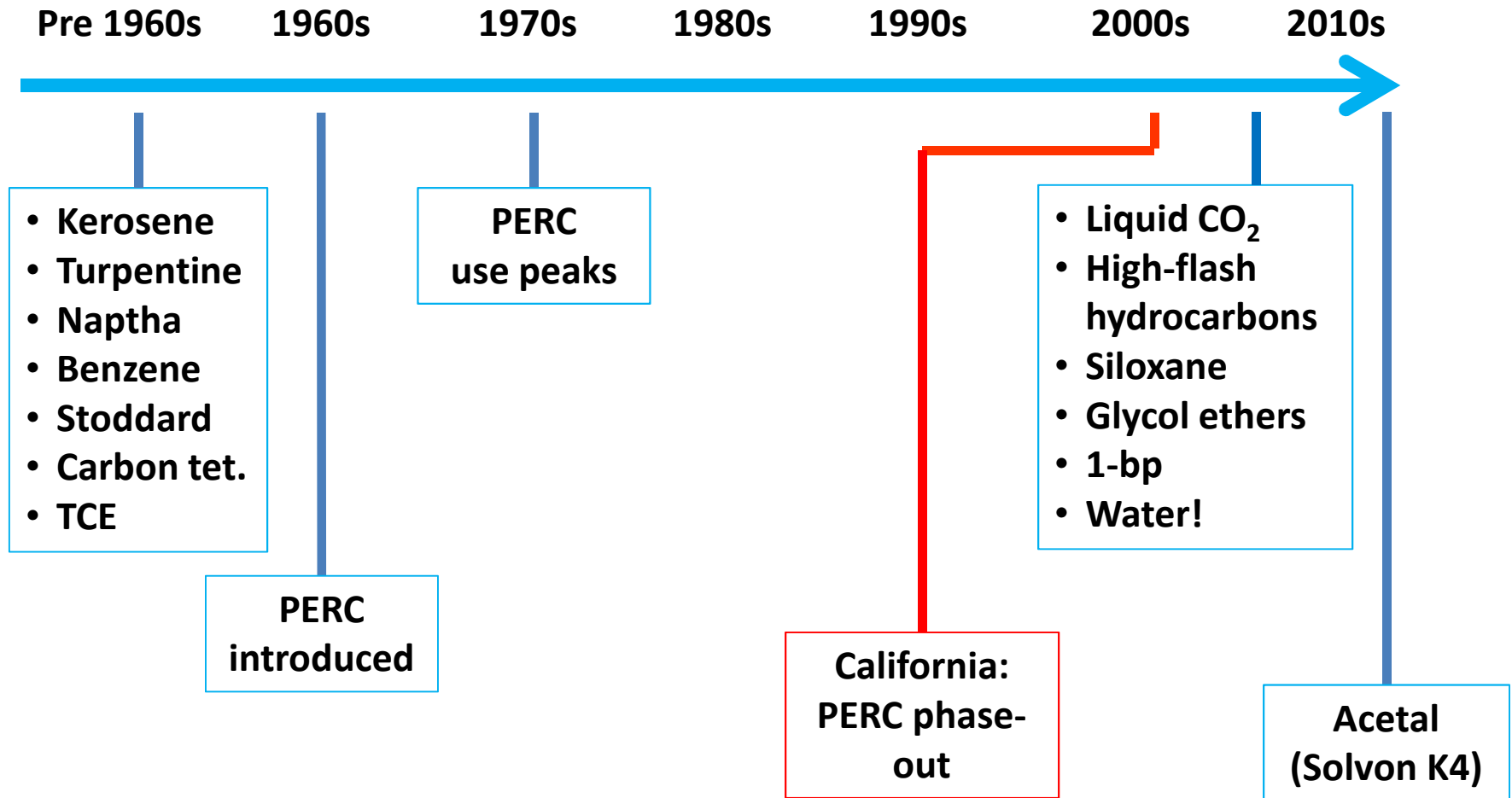
F. O. ROCKWELL, Prop.



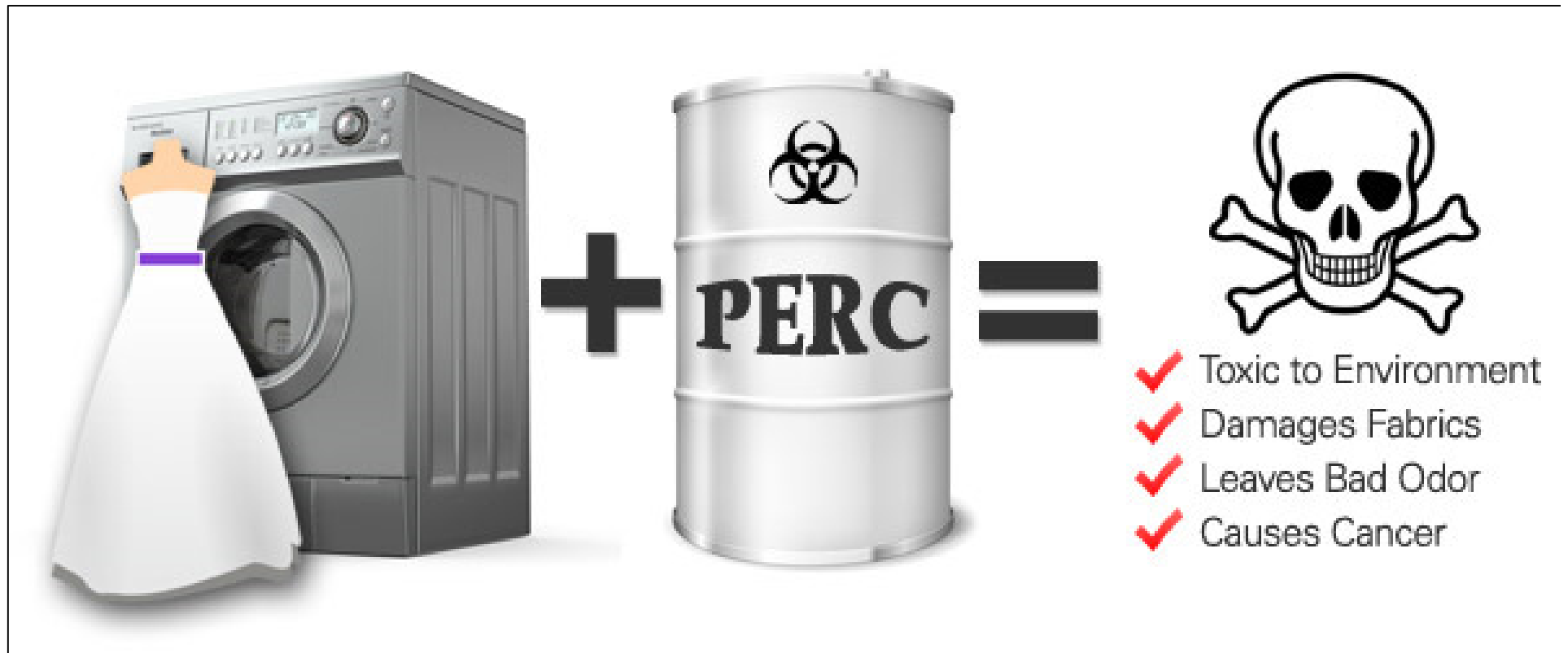
CLOTHING CLEANED, PRESSED and REPAIRED
FRENCH DRY and STEAM CLEANING and DYEING
Special Attention to Out-of-Town Orders
We make a Specialty of Cleaning Ladies' Silk
Gowns, Party Dresses and Kid Gloves

FARGO, N. D.

Evolution of Dry Cleaning Solvents



Evolution of Dry Cleaning Solvents



The diagram illustrates the evolution of dry cleaning solvents. On the left, a white dressmaker's mannequin stands next to a modern front-loading washing machine. A large plus sign (+) is positioned between the mannequin and a silver metal barrel. The barrel has a biohazard symbol at the top and the word "PERC" written in large, bold, black letters. To the right of the barrel is an equals sign (=). Further right is a black and white skull and crossbones symbol, representing toxicity. Below this symbol is a list of four negative effects, each preceded by a red checkmark (✓):

- ✓ Toxic to Environment
- ✓ Damages Fabrics
- ✓ Leaves Bad Odor
- ✓ Causes Cancer

Evolution of Dry Cleaning Solvents



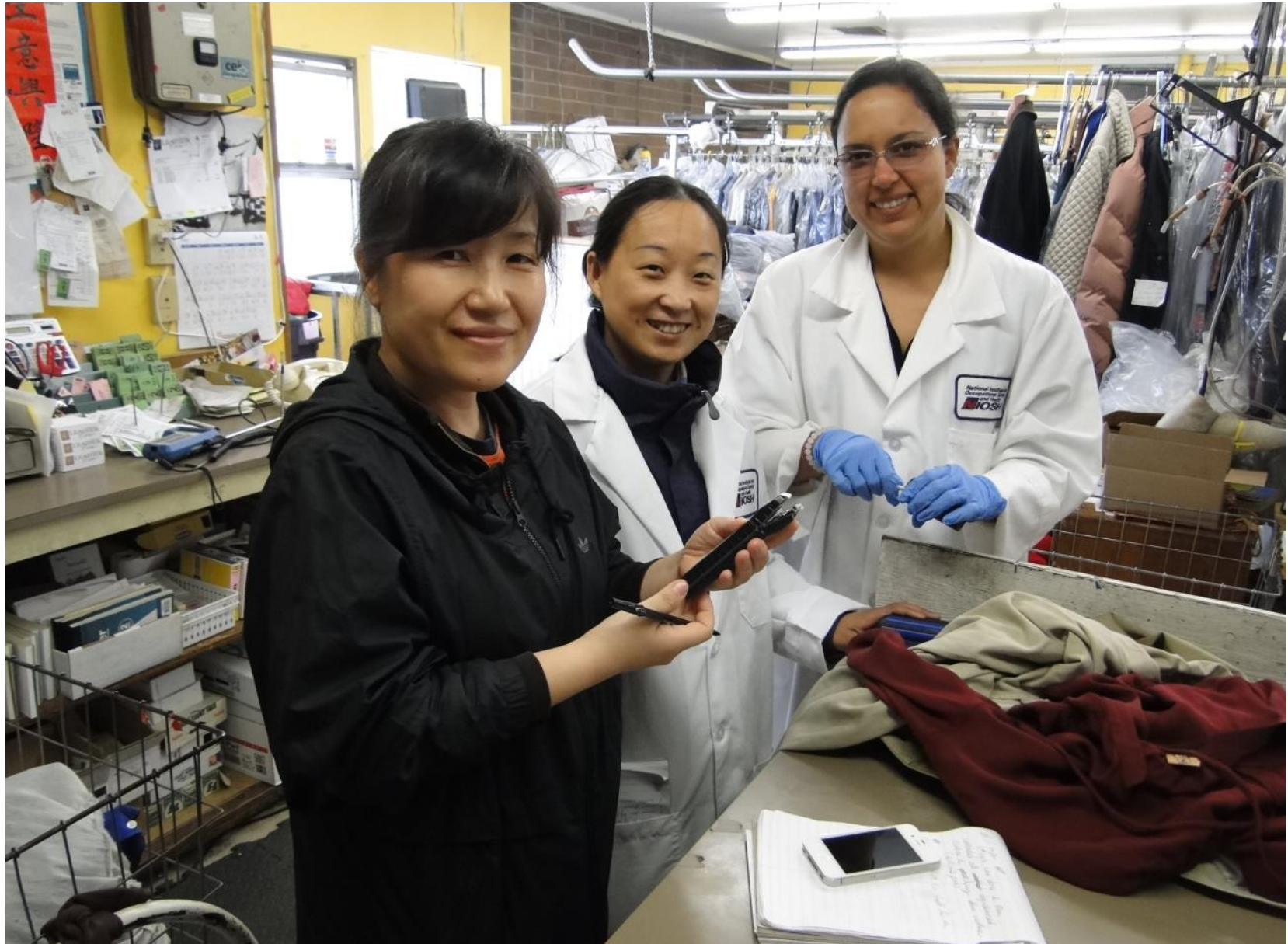
Greenwashing



LHWMP and NIOSH

- Solvon K4 shops appearing in King Co.
- WA OSHA complaint about odor
- No information about exposures
- Sampling methods not developed
- Concern about formaldehyde
- Contacted Diana Ceballos re. NIOSH interest
- Facilitated an HHE in a King Co. shop

The NIOSH Dream Team I



The NIOSH Dream Team II

