



HUMAN HEALTH | ENVIRONMENTAL HEALTH



## TURA 20<sup>th</sup> Anniversary

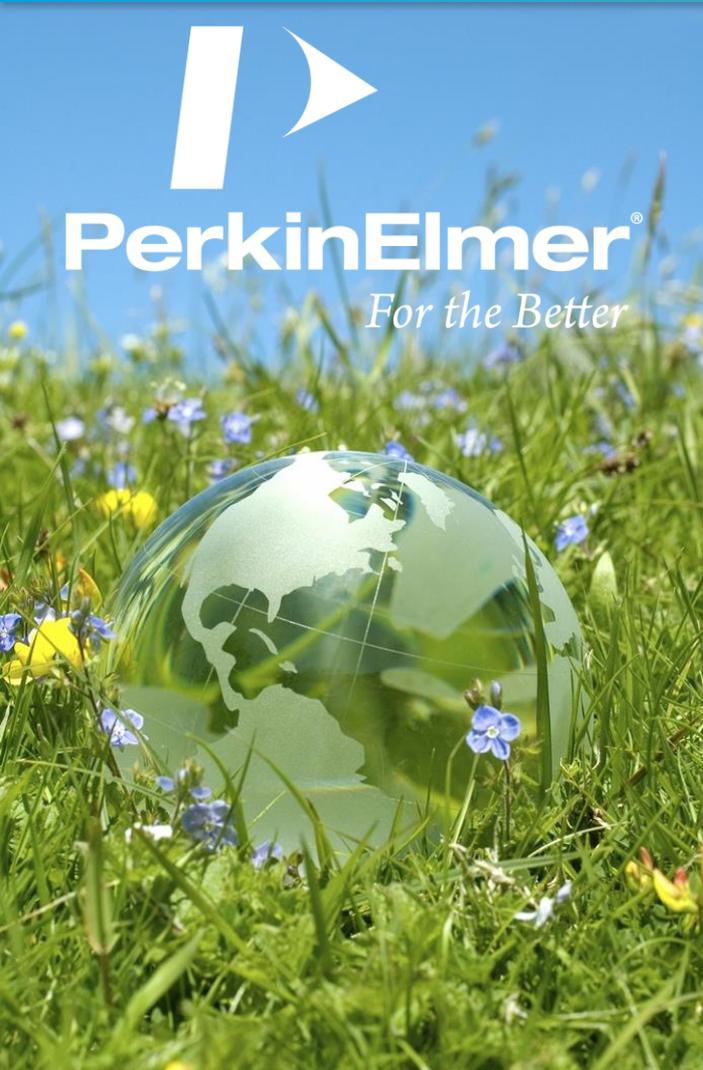
PerkinElmer Salem  
April 22, 2010

HUMAN HEALTH | ENVIRONMENTAL HEALTH



Global technology leader  
taking action to improve the  
health and safety of people and  
the environment

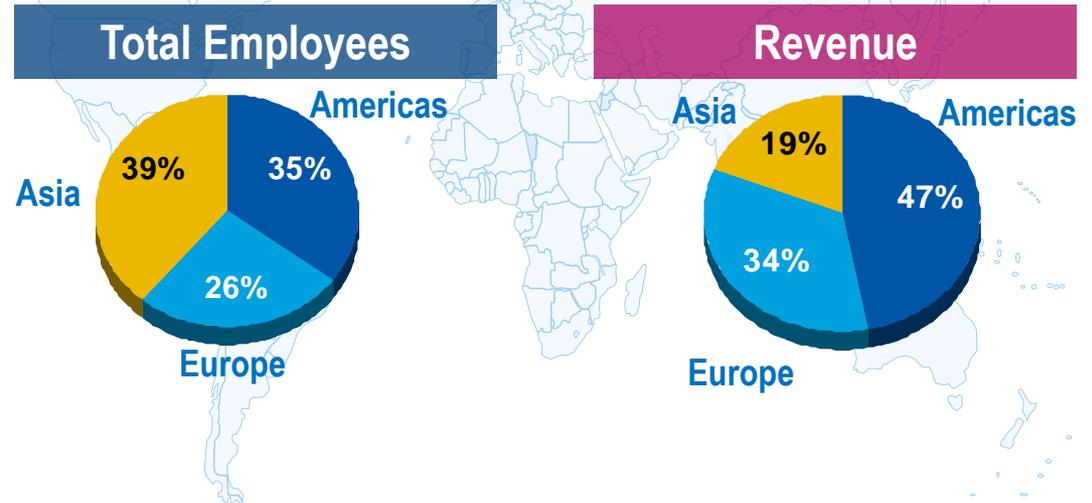
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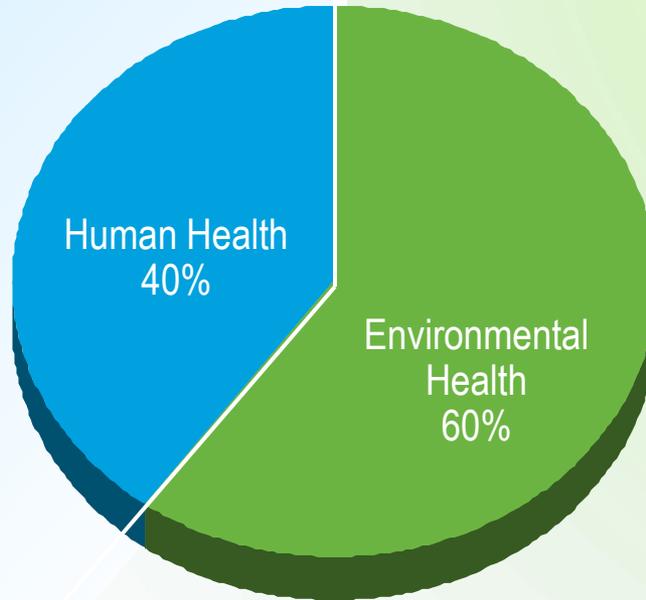
**\$1.8B in Revenue**

**8,500 employees**

**Operations in 150 Countries**



## HUMAN HEALTH | ENVIRONMENTAL HEALTH



**\$1.8B in Revenue**



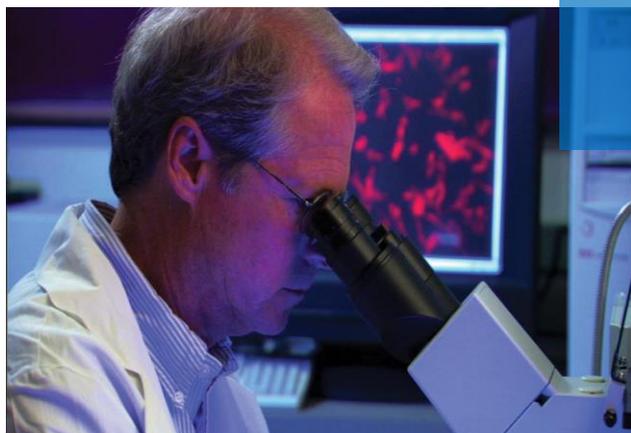
## HUMAN HEALTH



Diagnose



Monitor



Discover



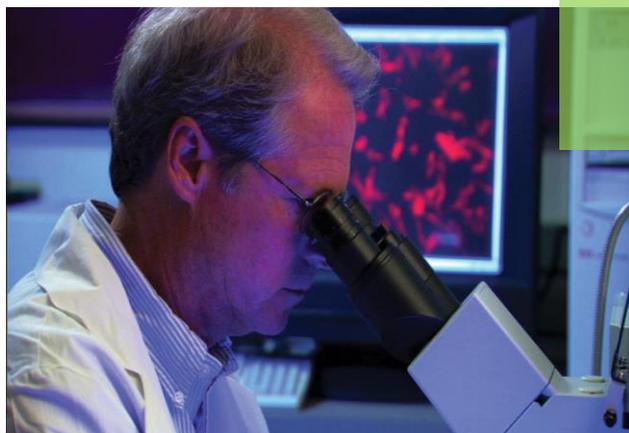
Identify



Diagnose



Monitor



Discover

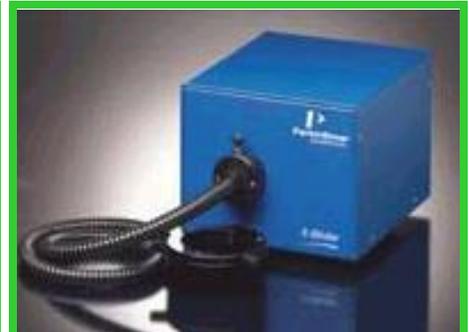
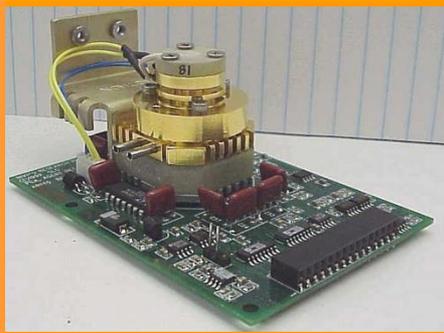


Identify

- Originally known as EG&G
- Facility established in 1961
- 1999 changed name to PerkinElmer
- Facility approx. 112,000 ft<sup>2</sup>
- 160 Employees
  - Operations
  - Design Engineering
  - Sales/Marketing and Product Mgmt
  - Finance, HR, IT
- EPA Green Power Partner
- Energy Demand Response Participant



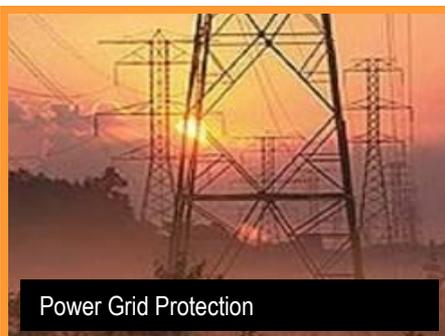
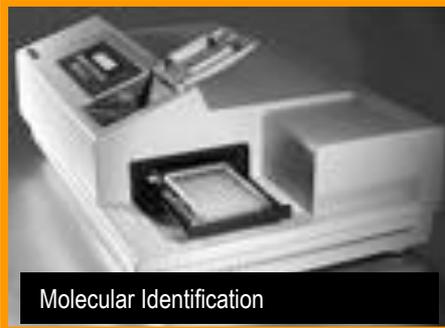
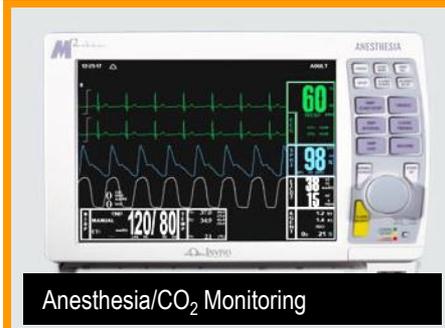
# Diverse portfolio of 12 product lines



- Biotech
- Mil/Aero
- Industrial Flash

... all with different business needs and solutions

# Each product supports various applications ...

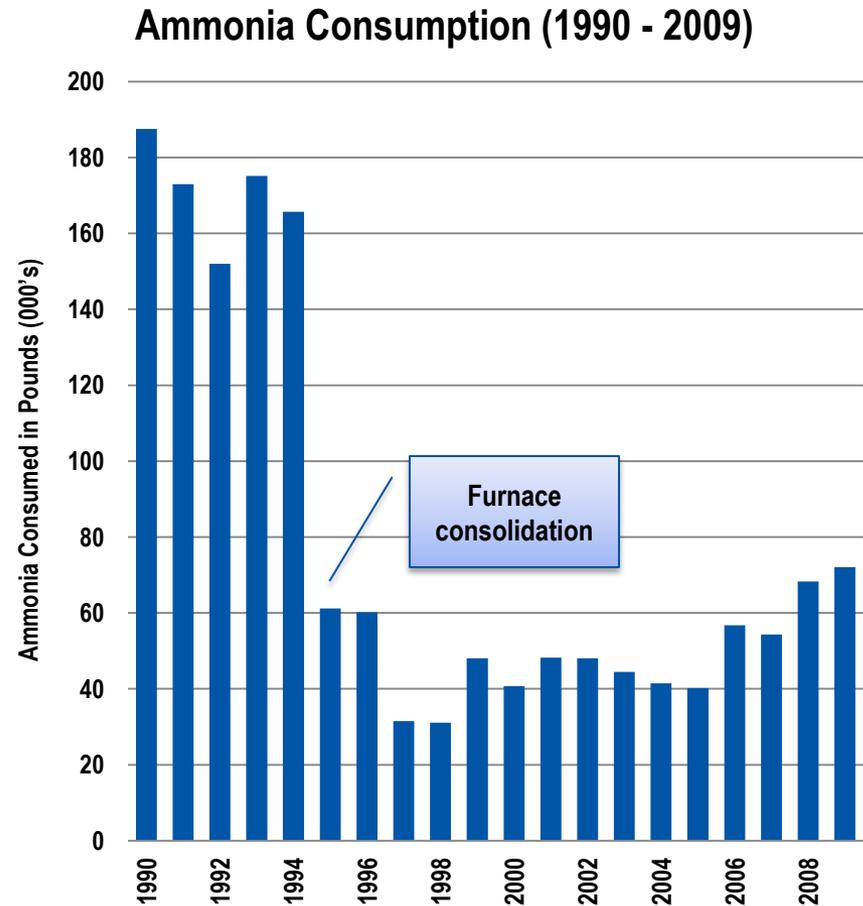


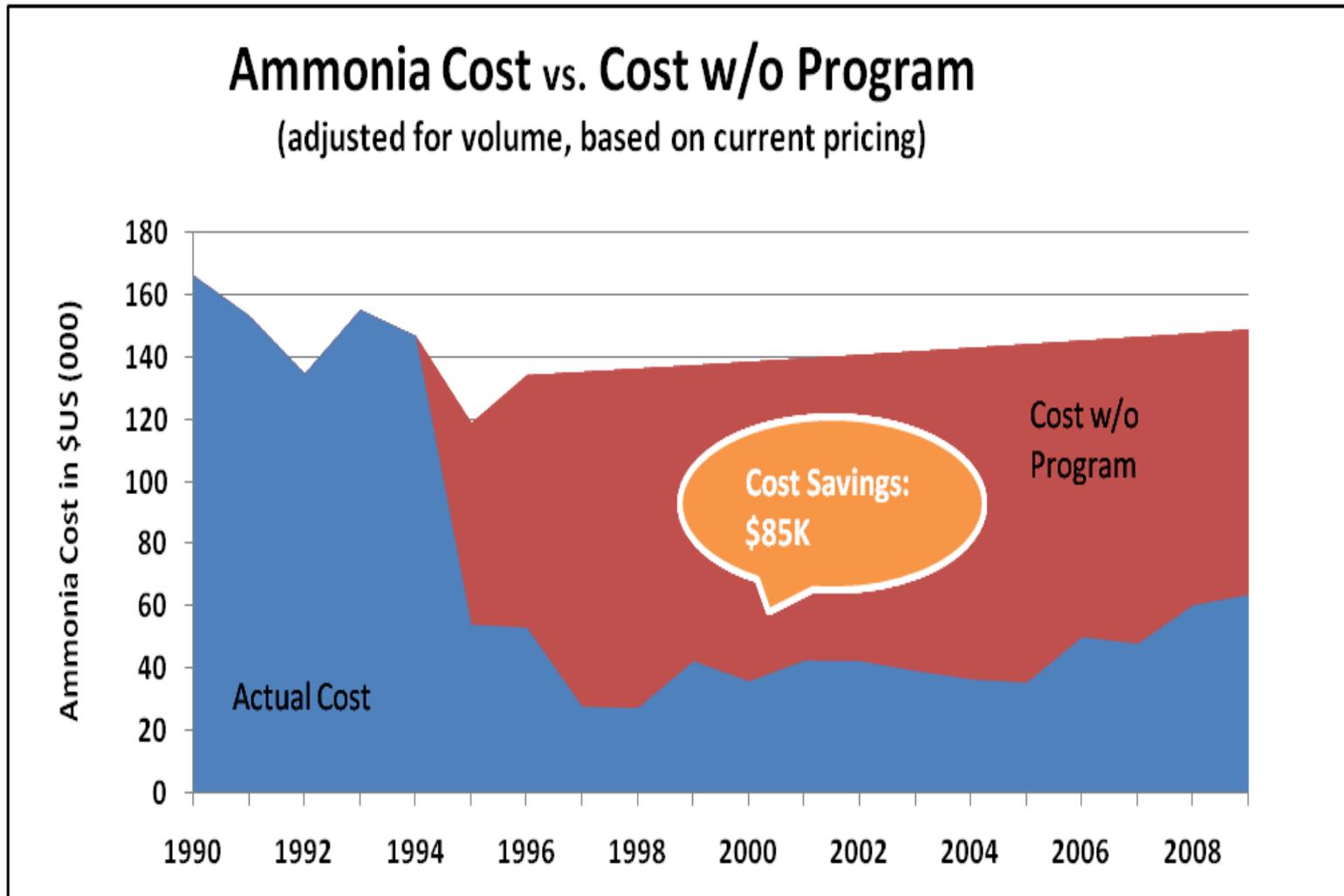
- Biotech
- Mil/Aero
- Industrial Flash

- ▶ PerkinElmer adopts a proactive approach to implement effective EHS management systems, to prevent accidents and to use energy and materials efficiently
  
- ▶ Certifications
  - ISO 9001:2008
  - ISO 14001:2004
  - OHSAS 18001: 2007
  
- ▶ Toxics use reduction planning is integrated into environmental management system. (EMS option for TUR compliance)

- ▶ In general, our programs represent almost 20 years of continuous improvement
  - Which minimized environmental impact
  - Generated cost savings for the business which improved financial performance
  - Represented a “win – win” on the environmental and financial fronts
  
- ▶ Main areas of focus as points of discussion
  - Ammonia reduction
  - Hazardous waste reduction
  - Water conservation
  - Electrical conservation

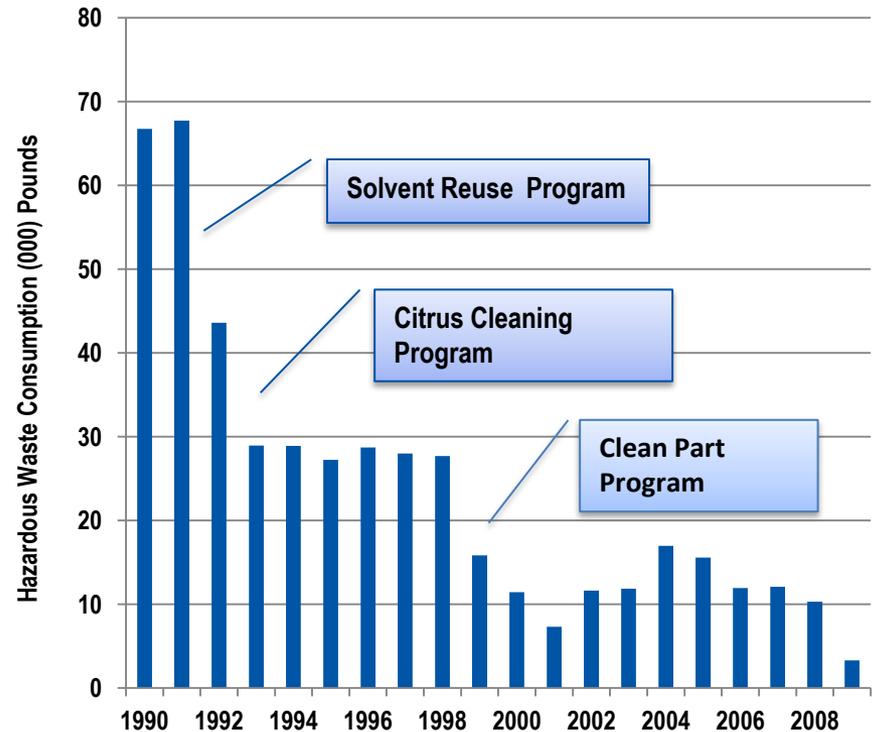
- ▶ 1990 furnace operations located on 3<sup>rd</sup> and 4<sup>th</sup> floors
- ▶ 4 ammonia Dissociators
- ▶ 6000 gallon ammonia storage tank
- ▶ Performed efficiency studies for furnace relocation (Lean,6 Sigma)
- ▶ Consolidated furnace operations to a central location
- ▶ Removed inefficient furnaces
- ▶ Eliminated 3 ammonia Dissociators
- ▶ Installed 1000 gallon ammonia storage tank



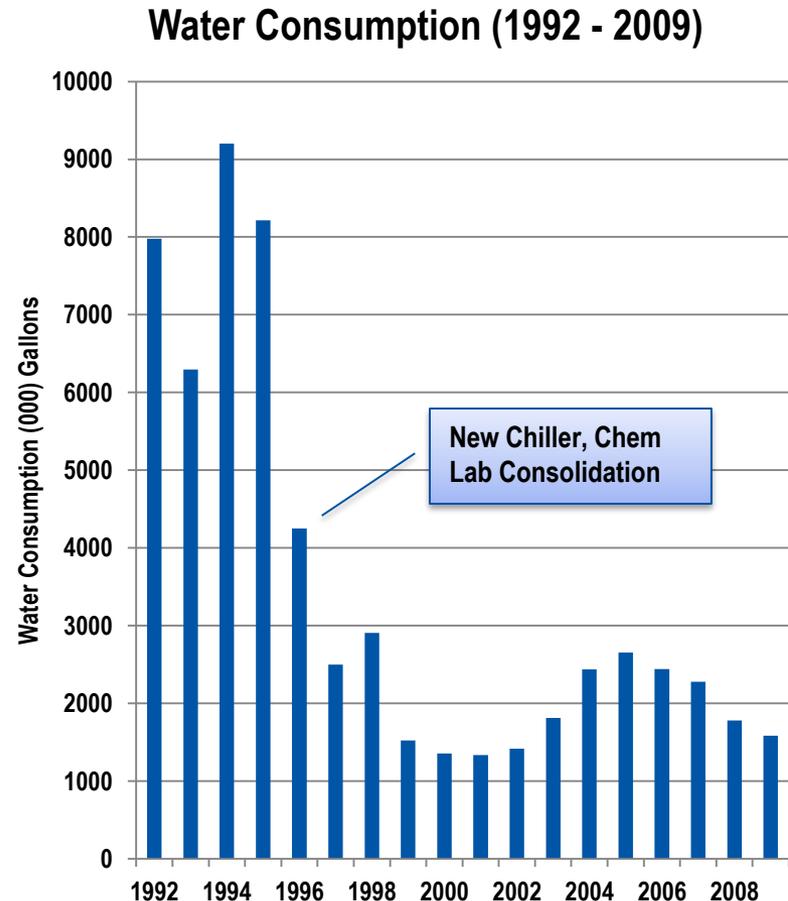


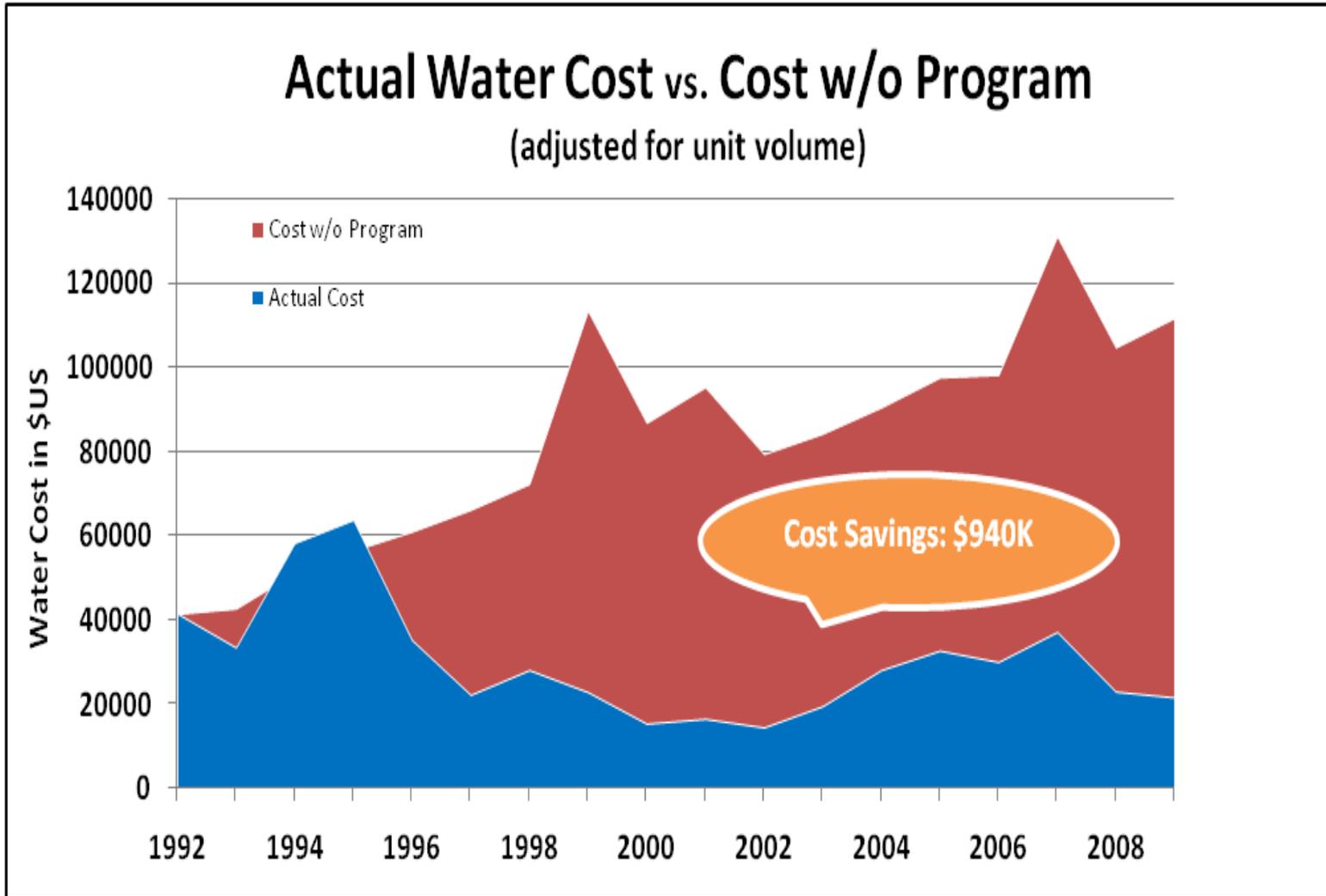
- ▶ Lean and six sigma principles used to consolidate and streamline chemical processing
  - Eliminated the use of trichloroethylene, trichloroethane, freon
  - Reduced use of ozone depleting solvents below reporting thresholds
- ▶ Consolidated 4 chem labs to 1.25 labs
  - Reduced footprint 6000 sq.ft
  - Central chemical processing, storage
- ▶ Implemented alternative cleaning method
  - Citrus cleaning
  - Significantly reduced hazardous materials
- ▶ Site reduced emission status from major to 25% facility emissions cap

## Hazardous Waste Generation (1990 - 2009)



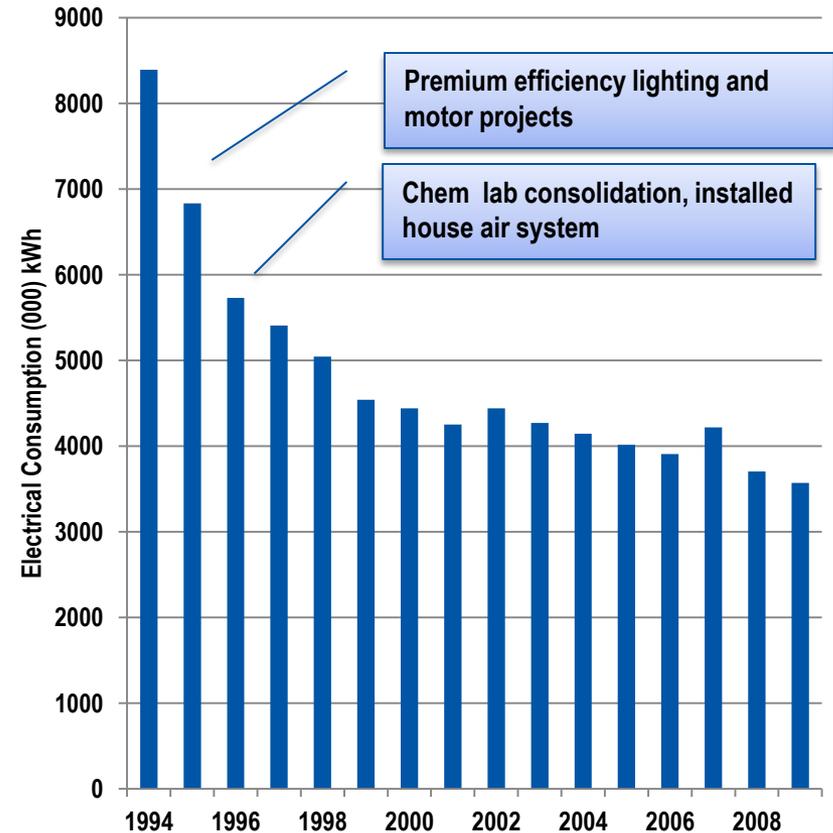
- ▶ Installed new closed loop chilled cooling system
  - Removed inefficient, problematic, cooling towers
  - Eliminated use of glycol
- ▶ Consolidated furnace and chem lab operations
- ▶ Streamlined cleaning processes to minimize water cascade baths
- ▶ Installed water alarm system to notify when switched to city water, monitor all water utilizing equipment to detect leaks
- ▶ Installed automated restroom fixtures

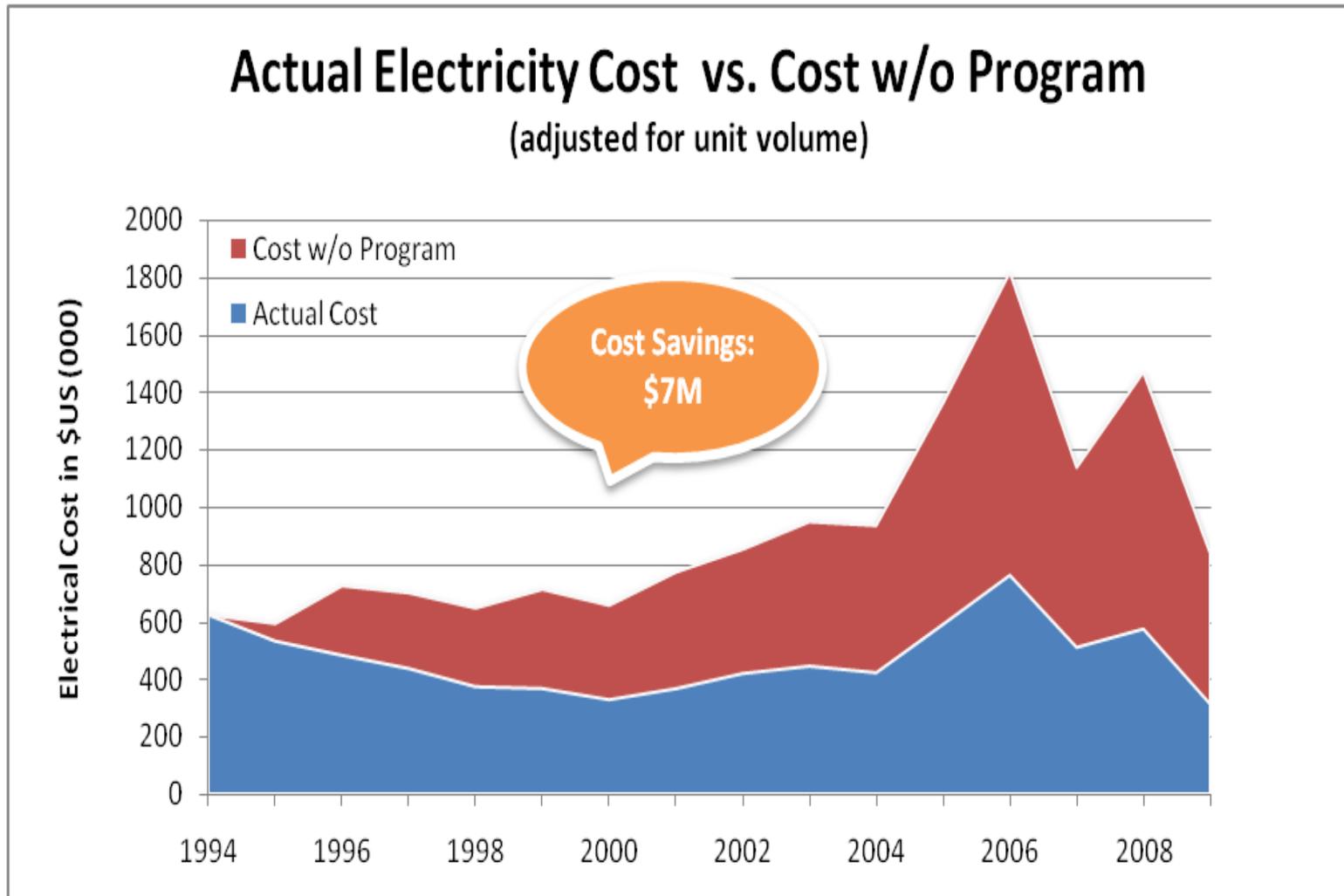




- ▶ Consolidated chem. lab and furnace operations to central location
- ▶ Lighting
  - Monitored/controlled lighting system
  - Replaced/retrofitted 1328 light fixtures
    - Replaced T12 fixtures with T8 fixtures
- ▶ Motors and drives
  - Replaced 31 motors (220 hp)
  - Installed variable speed drives in chem. lab and house air system
- ▶ Energy Management System
  - Installed initial system 1993
  - Upgraded to state of the art system 2009
  - Allowed to control electrical peak demand
  - Greenhouse gases saved 47K mtonne

## Electrical Consumption (1994 - 2009)





## Program benefits – summary

- ▶ Eliminated and/or significantly reduced hazardous chemicals used in manufacturing
  - Provided safer work and community environment, lessened environmental impact
  
- ▶ Reduced waste and added value to our process using the lean approach
  - Reduced facility footprint 100,000 sq ft = substantial rental and environmental savings
  - Leaned staff 50%
  
- ▶ Realized cost savings of \$8M to date as a result
  - Continuous improvement efforts key to program success
  - Mature program presents challenges for further future reductions
  
- ▶ Contributed to PerkinElmer competitiveness
  
- ▶ Increased employee awareness and has grown into an integral part of the business

- ▶ Program has resulted in operations
  - that have increased physical output with the use of fewer resources
  - Less tax on the environment
  - Provided safer environment for employees and community
  - Increased financial success of the business