

International Transport and Environmental Conference 2009

“Nothing in the Middle”

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What is CLD?

Closed Liquid Dispense (CLD):

System used to close the container from fill through transport to dispense.

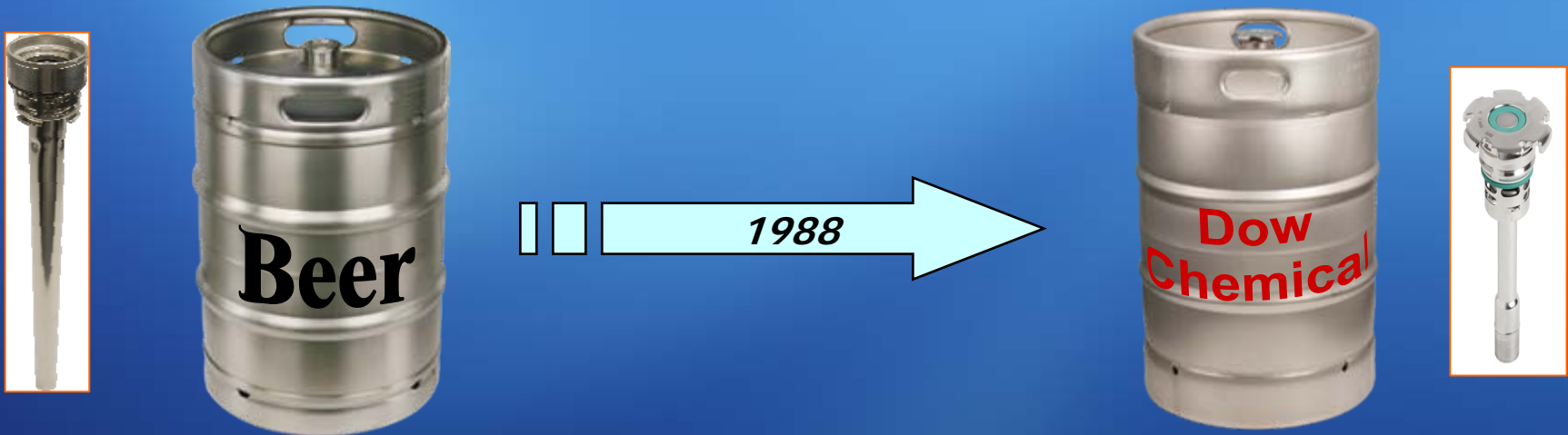
How was CLD started?

- USA Environmental Protection Agency proposed the FIFRA '88 regulations
- FIFRA '88 was the basis for setting the standard for CLD
- The Green Dot in Europe 1990
- AVCARE in Australia 1996

Each country has taken a separate initiative to reduce the waste going into the environment from chemical packaging and focusing on worker safety and exposure issues

History of CLD

- Chemical Industry approached Micro Matic to take the Beer Valve technology into the industrial sector
- Threat of regulation in the agro-chemical industry drove initial implementation



Micro Matic has been providing these system to the industry for 20+years

Open System



Chemprobe Dispensing (open system)



CLD Jug System



CLD Stainless Steel Container System



Stationary CLD and Returnable System

- Volumetric Measuring and Transfer System
 - Costa Rica
 - Honduras
 - Paraguay



CLD Tank Mounted System



2. 13. 2003

CLD IBC Systems



CLD Returnable Systems



Before and After CLD System



Before CLD

After CLD



Where does South Africa stand on CLD?

- Current regulations for filling, labeling and transport under SANS 10229
- Current regulations for disposal of chemical containers and measures for clean-up SANS 10406

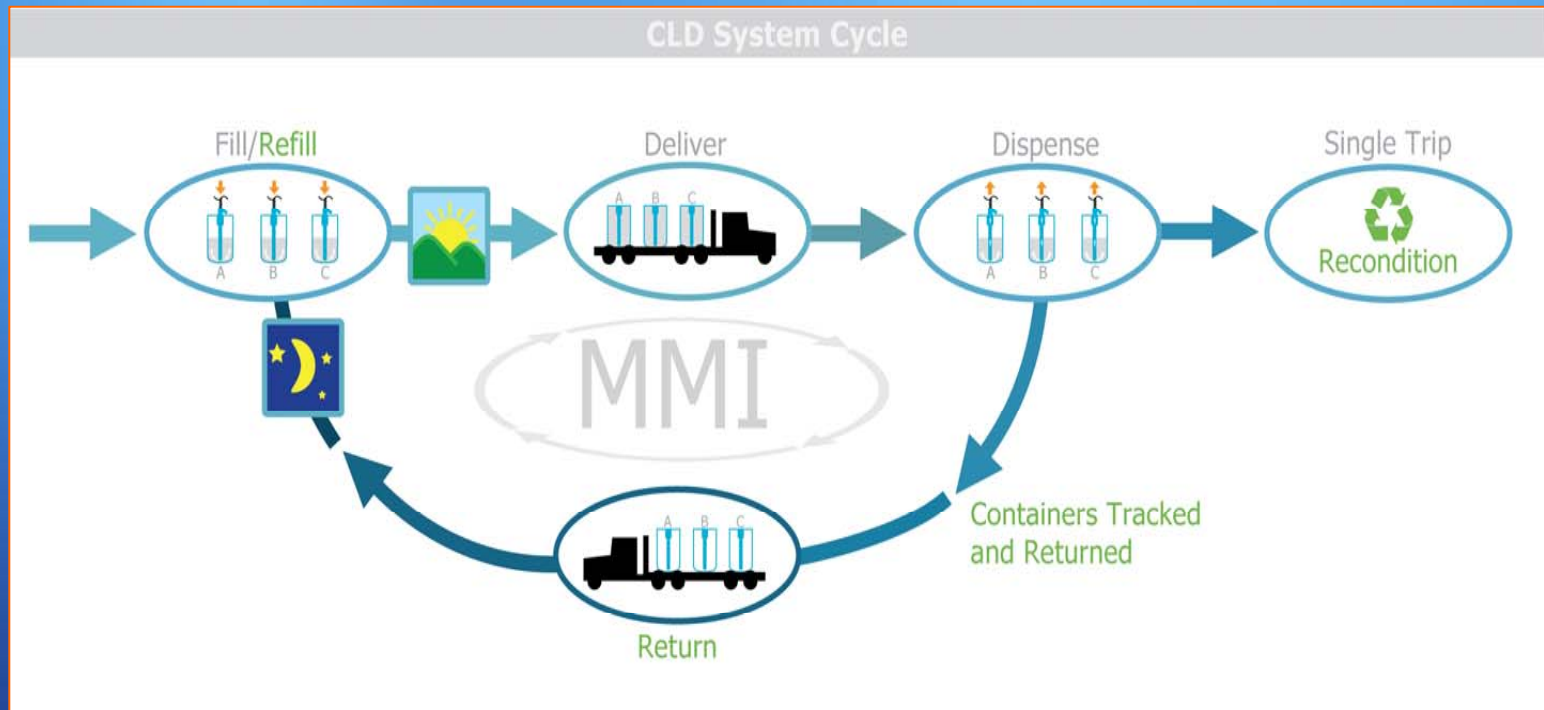
What is missing?...“How to safely dispense chemicals at the point-of-dispense”...**Nothing in the Middle**

CLD Addressed Multiple Issues

- Promotes environmental stewardship
- Reduces worker exposure to chemicals
- Eliminating rinsing containers after each use
- Waste management by reducing container disposal issues
- Cost saving to the manufacturer by reducing packaging costs
- Cost savings to the end user by reducing chemical price
- Managed approach to a highly visible problem

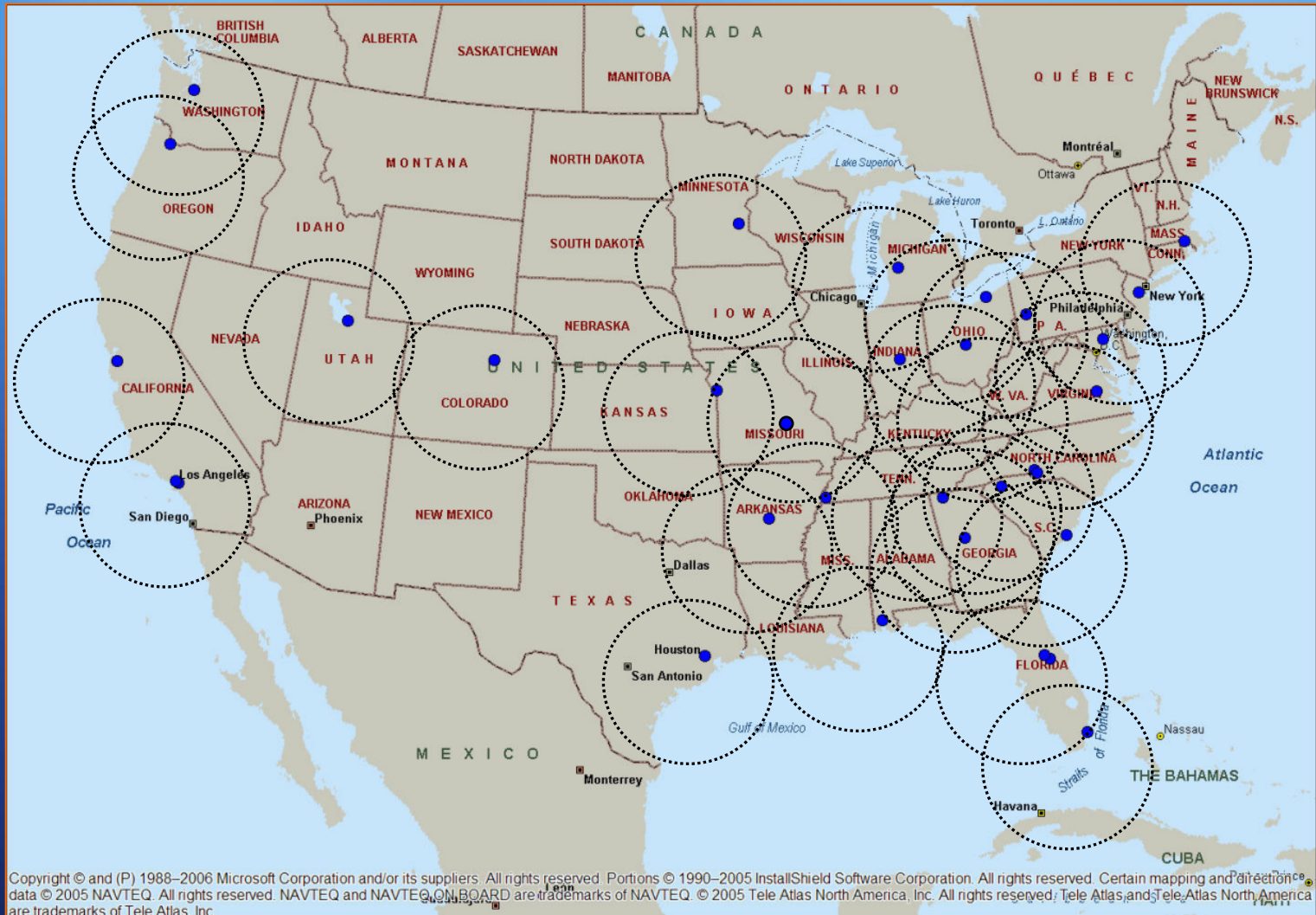
Everybody wins or saves money with CLD Systems

Managing the returnable container



- Reconditioners
- Company Fleets
- Industry Programs
- Regional Specialists

USA Return Logistics Network



How do we develop CLD in South Africa?

- MMUSA has established MMSA JV to develop this market
- MMSA is developing a CLD container in SA with a local manufacturer
- Working to develop the infrastructure for returnable containers
 - Reconditioners
 - Chemical Manufacturers
 - Distributors
- Providing container tracking system
- MMSA will work with local authorities and organizations to help establish standards for this “missing link”
- South Africa: www.micromatic.co.za Global: www.industrial.micromatic.com



FEATURES

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To learn more about CLD Technology, please read the February 2009 issue of *Chemical Technology*