

 EPA
United States
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Improving Lab Sample Management

2008 EPA Conference on Managing Environmental Quality Systems

Margie Vazquez
Mitchell Binford



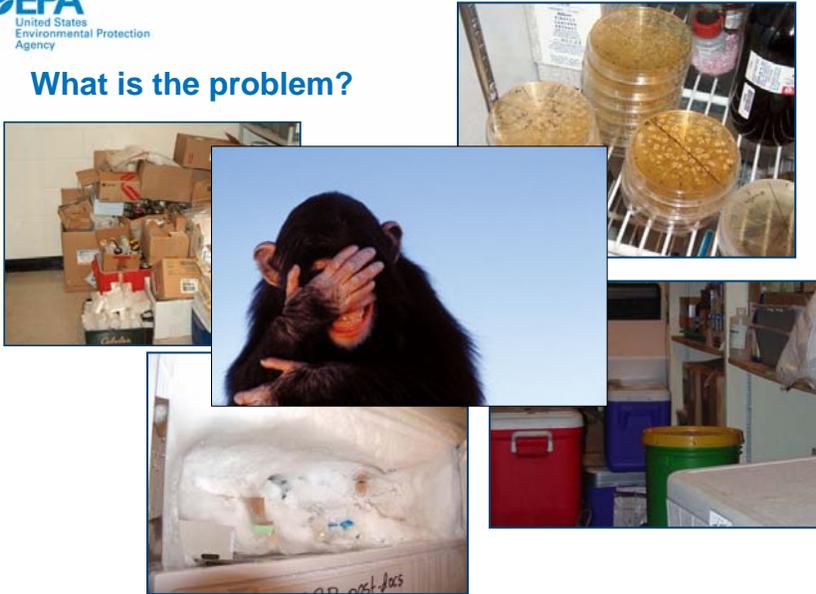
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What is the problem?



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What is the problem?

- Thousands of samples generated and stored per year
- Tissues
- Viruses
- Cell lines
- Protein extracts
- DNA/RNA extracts
- Soil and water samples
- Reagents



epa.gov/bioindicators/html/photos_fish_freshwater_sunfishes.html



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What is the problem?

- Productivity
- Defensibility
- Health and safety problem
- Space



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Solution - Policy

- Software can't solve problems on its own!
- Sample Storage Policy*
 - Minimum labeling requirements
 - contact person, contents, date, expiration date, safety
 - Recommended labeling
 - origin, project, sample ID
 - Requirement for some samples to be in electronic tracking system
 - Consequences for not following policy
 - unlabeled samples photographed
 - disposal
 - Enforced by quarterly inspections

*adapted from AED policy, Narragansett lab

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Solution – Electronic Tracking System

- Assessed needs with inventory of labs, activities, storage units
- Surveyed products on-line and in-house
- Webinars
- Contacted clients with similar work flow
- Visited client and talked to staff
- Invited and kept researchers & management informed

 **Freezerworks Unlimited**
A product of Dataworks Development, Inc.

Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

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Solution – Software Acquisition

Freezerworks Unlimited 3.1 from Dataworks Development

- Key Functionalities
 - Data repository capabilities
 - samples and metadata
 - Customizable
 - templates
 - security
 - Import/export capabilities
 - Bar-coding
 - Audit table
 - who, what, when

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Solution – Key Locations

- Targeted high traffic areas
 - Freezer farms
 - Sample receiving rooms
 - Limited budget



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Solution – Hardware



- Identified Hardware Components
 - One dedicated computer terminal, USB barcode scanner, and label printer for each high traffic area, 3 systems
 - Wireless barcode scanners w/ memory for each floor



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Solution – Labels



- Specialized labels
 - Minus 80 and -150° C temperature compatibility
 - Compatibility with pre-frozen samples



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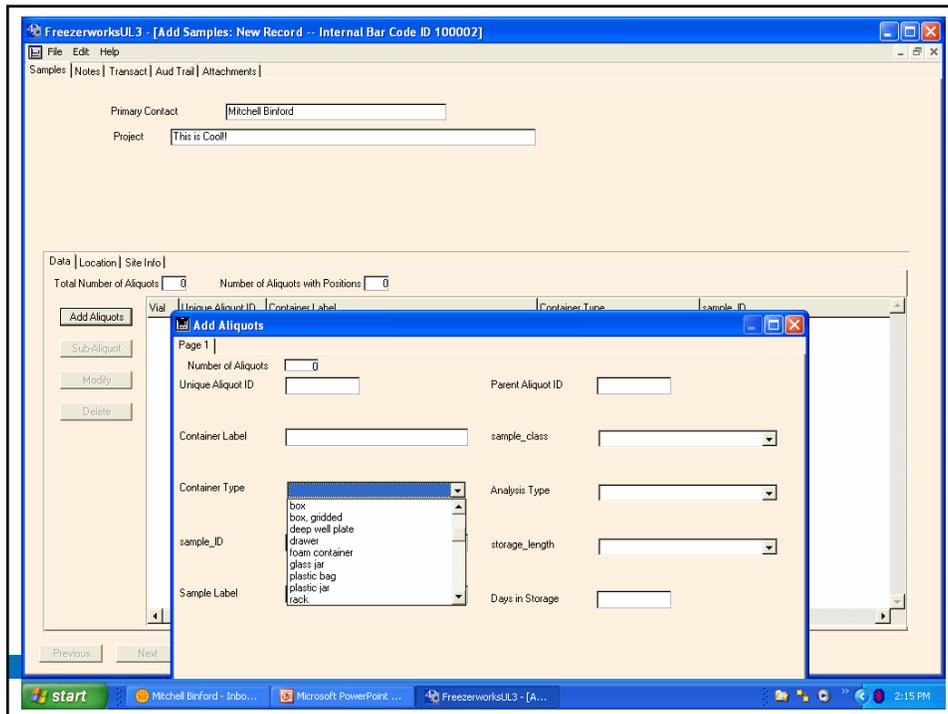


Solution – Customization of Freezerworks

- Create templates
 - Track information about samples
 - Unique to each branch
 - We choose which data elements to track
- Add users
- Add groups
- Security
 - Assign privileges
 - Prohibit modification and/or viewing of data

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Solution - Training

- Types
 - On-site training visit from Dataworks
 - Online webinars
 - In-house expert
- Key people to train
 - In-house expert
 - Primary Investigators
 - Lab managers (federal and contract)



How's it working?

- Enforcement of policy: Health and Safety with QA
- Hardware installed
- IT issues overcome: security, software installation
- Small group of “early adapters” have taken vendor training
- Future plans: hiring student to enter legacy samples



Summary

- Identified a problem
- Solution: 1) policy, and 2) electronic tracking system
- Implementation of electronic system
- Status and future plans



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