



# *Laboratory Training Management Using LIMS*

Enterprise Laboratory Platform



# Introduction

## ■ Tyson Foods, Inc.

- Food Safety & Laboratory Services Network
  - 17 Corporate/Regional/On-site Labs with ~240 users
  - Quality Assurance + Other with ~600 users
  - LabWare LIMS implemented in 1998
  - English, Spanish and Portuguese languages supported
  - Served via Windows Terminal Server



# The Problem

## ■ Corporate Lab (Springdale, AR)

- 90+ Team Members
- 305 Individual training topics
  - Chemical
  - Microbiological
  - ISO 9001 (TUV:SUD)
  - ISO 17025 + AOAC (A2LA)
  - EHS and Regulatory Compliance
- One HUGE MS Excel file and hours of management time used
- Prone to errors and procrastination



# Key Objectives

## ■ Improve recordkeeping

- ISO 17025 and AOAC Requirements
- Timeliness, accuracy, and reduce management time required.

## ■ Electronic records only

- Electronic signature
- remove paper

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# Key Objectives Continued...

## ■ Segment and categorize

- Generate reports for routine management, training compliance, audits, and data analysis on demand
- Training requirements/needs highly visible to individual Team Members to support self management of training
  - Re-enforced by performance reviews

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# The Solution

- **Utilize LabWare LIMS**
  - For team members, no new applications to learn
  - For admin, no additional software or cost accrued
- **Use existing LabWare functionality with user dialogs and user menus to create a Training Manager.**
  - 100% managed by lab staff



# Structure

- **Added 3 new tables to the database**

- Training Topics

- Unique ID, description, type, interval, active flag

- Required User Training

- Unique ID using topic and user name, training topic, user name, active flag, group name, testing facility, trainer flag

- Training Log

- Training date, training topic, user name, approval date, and other information pieces

- Mimics the table INSTRUMENT\_LOG



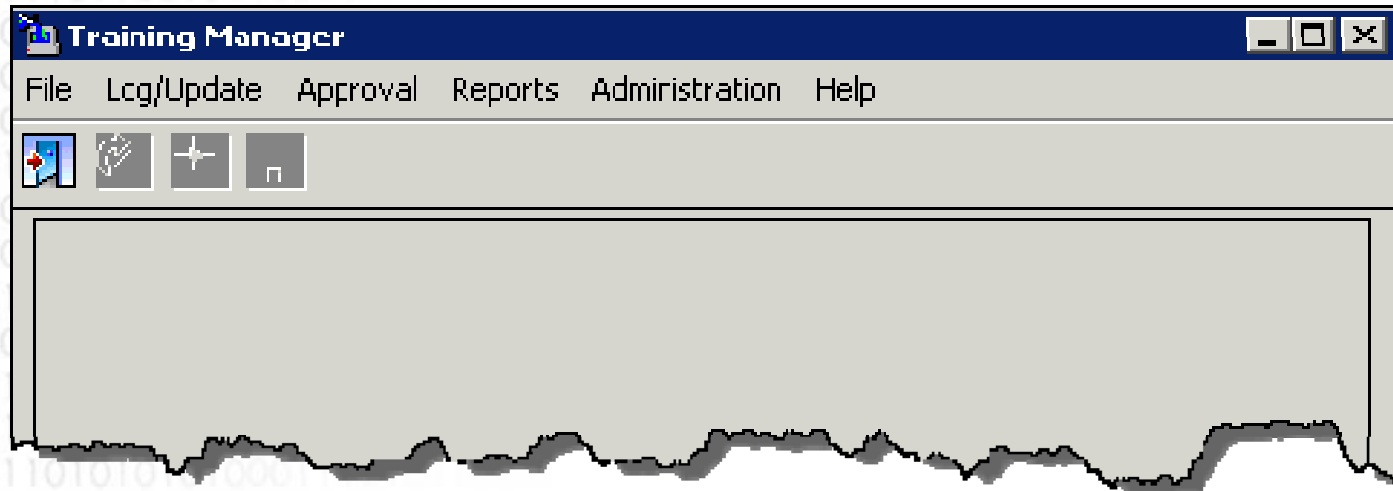
# Objects and Interfaces

- **Several subroutines, user dialogs and user menus**
- **Utilized existing laboratory, group, and functional security**
- **Created 7 reports**
- **Workflow visual aid to notify team members of upcoming training needs**





# Training Manager



# Log a Training Event

**TRAINING LOG**

User Name: COOKV

Event Type: Training & Competency Log Event

Topic Group: Microbiology Training

Topic Code: M-103\_ASPER

Topic Description: Aspergillus spore stain (Biochemical Id)

Completed Date: 04/01/2012

Batch Template: MOLD\_ID

Batch: SPR-MOLD\_ID-1234

Z\_SCORE:

Comments: in-house PT sample used

Trainer Name: Adams, Jacquelyn

OK Cancel

# Edit a Training Event

TRAINING LOG ID: 90947 Last Changed by COOKV on 04/02/2012

User Name: COOKV

Event Type: Training Log Event

TOPIC: Safety Training

Topic Code: EHS\_PROGRAM

Topic Description: Environmental Health and Safety Program

Completed Date: 04/02/2012

Batch Template:

Batch:

Z\_SCORE: 0

Comments: Attended the Mega Safety Mtg

Trainer Name: Alsup, Monica

Remove Log Entry:  True  False

OK Cancel

# Approve a Training Event

TRAINING LOG ID: 86430

Change By: COOKV

Changed On: 11/22/2011 01:00:42 PM

Group Name: DEFAULT

User Topic Id: ALSUPM\_A-009

User Name: ALSUPM

Topic Code: A-009

Topic Descr: Control Charts

Event Type: TRAINING

Completed Date: 11/22/2011 12:00:00 AM

Batch:

Z\_SCORE: 0

Comments: testing security - do not approve

Approver Name: COOKV

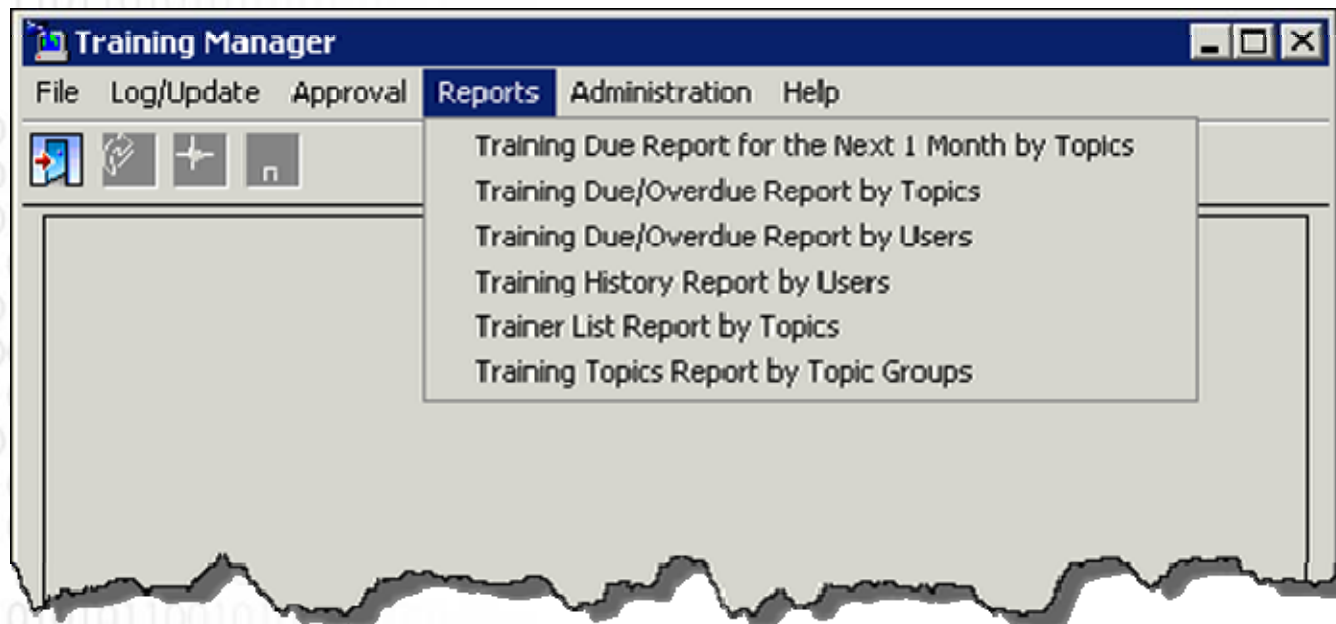
Approval Date: 04/09/2012 11:14:28 PM

This Log is Approved:  True  False

OK

Cancel

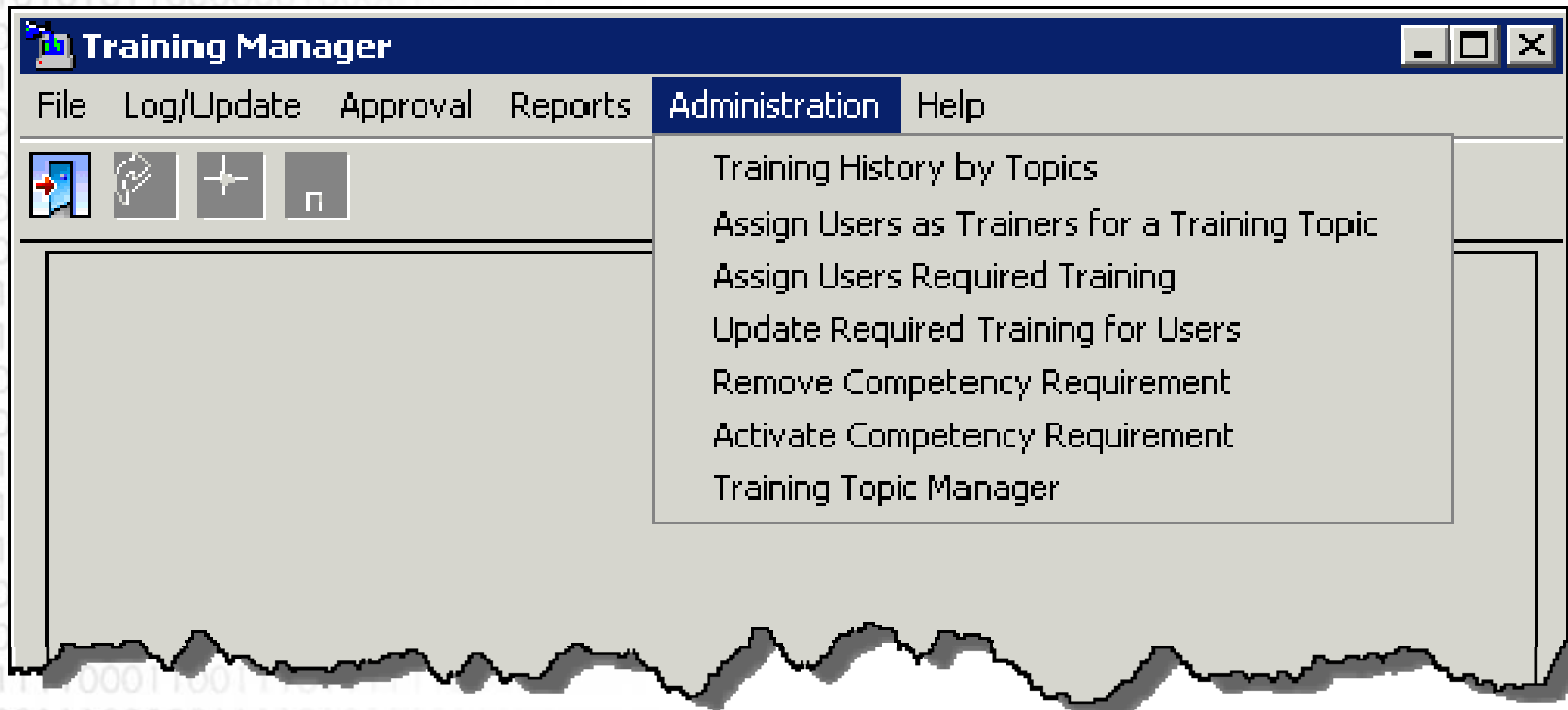
# Reports



- **Plus a “Training Matrix” report that exports to Excel in cross-tab format for internal and 3<sup>rd</sup> party audits**



# Administration



# Training Topic Manager Tool

The screenshot shows a software window titled "Training Topic Manager" with a menu bar containing "File" and "Tools". The "Tools" menu is open, showing the following options: "Open Training Topic", "Reset All Req\_User\_Training from Training\_Topic", "Update Multiple Required User Training - Grid View", and "Update UserName on Training Record". Below the menu, the main interface contains several input fields: "Active Flag" (a dropdown menu), "Description" (a text box), "Train Interval" (a time spinner set to "0 00:00"), "Competency Interval" (a time spinner set to "0 00:00"), "Topic Group" (a dropdown menu), "Group Name" (a dropdown menu set to "Default"), "Changed By:" (a text field), and "Changed On: 04/09/2012".

# Required User Training Grid

Required User Training Manager

File Edit

Num Fields

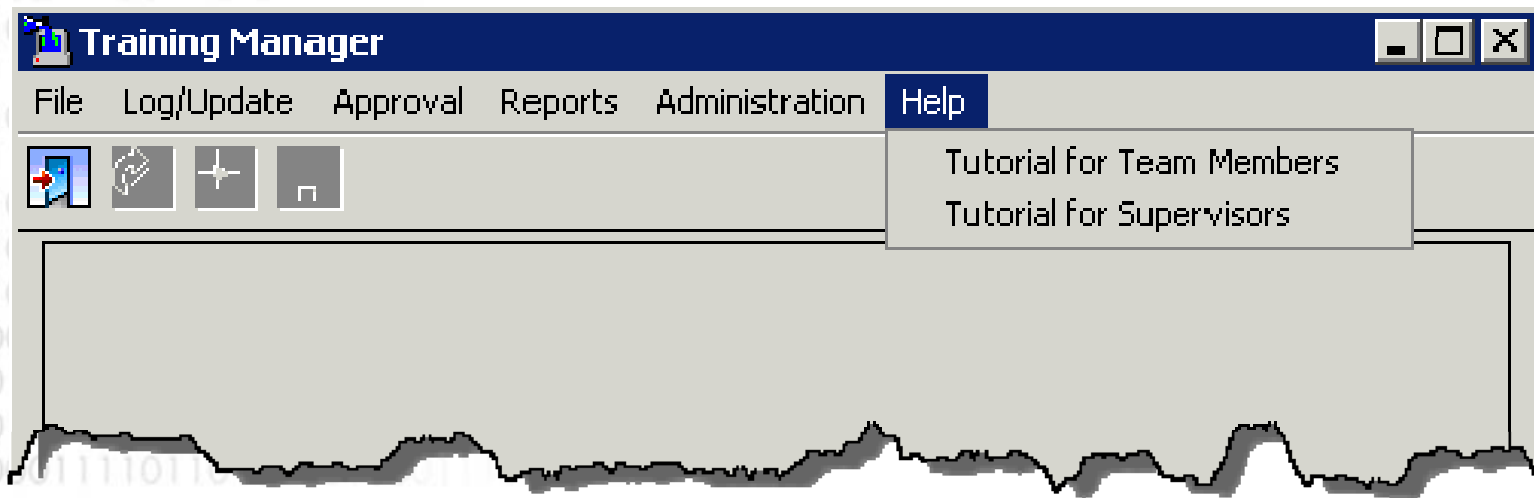
	User Name	Topic Code	User Topic Id	Active Flag	Trainer Flag	Trained Date	Train Due Date	Train Interval	Competency Req'd	Comp
1	ALSUPM	C-006	ALSUPM_C-006	<input type="checkbox"/>	<input type="checkbox"/>		07/25/2010	365 00:00:00	<input checked="" type="checkbox"/>	
2	APPLEC	C-006	APPLEC_C-006	<input type="checkbox"/>	<input type="checkbox"/>	10/29/2007		365 00:00:00	<input type="checkbox"/>	10/29/2007
3	APPLER	C-006	APPLER_C-006	<input type="checkbox"/>	<input type="checkbox"/>		07/25/2010	365 00:00:00	<input checked="" type="checkbox"/>	
4	BOWMANM	C-006	BOWMANM_C-006	<input type="checkbox"/>	<input type="checkbox"/>		07/25/2010	365 00:00:00	<input checked="" type="checkbox"/>	
5	BOYDA	C-006	BOYDA_C-006	<input type="checkbox"/>	<input type="checkbox"/>	05/16/2008		365 00:00:00	<input type="checkbox"/>	05/16/2008
6	CAMACHOA	C-006	CAMACHOA_C-006	<input type="checkbox"/>	<input type="checkbox"/>		05/16/2010	365 00:00:00	<input type="checkbox"/>	
7	FLOWERSAM	C-006	FLOWERSAM_C-006	<input checked="" type="checkbox"/>	<input type="checkbox"/>	04/14/2011	04/13/2012	365 00:00:00	<input checked="" type="checkbox"/>	04/14/2011
8	GAUCING	C-006	GAUCING_C-006	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07/12/2011	07/11/2012	365 00:00:00	<input checked="" type="checkbox"/>	07/12/2011
9	GLENNJ	C-006	GLENNJ_C-006	<input type="checkbox"/>	<input type="checkbox"/>	08/28/2008		365 00:00:00	<input type="checkbox"/>	08/29/2008
10	GONZALEZRIC	C-006	GONZALEZRIC_C-006	<input checked="" type="checkbox"/>	<input type="checkbox"/>	04/02/2012	04/02/2013	365 00:00:00	<input checked="" type="checkbox"/>	04/02/2012
11	GREENHAWC	C-006	GREENHAWC_C-006	<input type="checkbox"/>	<input type="checkbox"/>	04/06/2009		365 00:00:00	<input type="checkbox"/>	04/06/2009
12	HARPERG	C-006	HARPERG_C-006	<input type="checkbox"/>	<input type="checkbox"/>			365 00:00:00	<input type="checkbox"/>	
13	HAWKINSBEN	C-006	HAWKINSBEN_C-006	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/05/2011	12/04/2012	365 00:00:00	<input checked="" type="checkbox"/>	12/05/2011
14	HITTD	C-006	HITTD_C-006	<input type="checkbox"/>	<input type="checkbox"/>	10/23/2006	10/23/2007	0 00:00:00	<input type="checkbox"/>	
15	KINGK	C-006	KINGK_C-006	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	07/18/2011	07/17/2012	365 00:00:00	<input type="checkbox"/>	
16	LANCEJ	C-006	LANCEJ_C-006	<input type="checkbox"/>	<input type="checkbox"/>	03/05/2010		365 00:00:00	<input type="checkbox"/>	03/05/2010
17	MORGANT	C-006	MORGANT_C-006	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12/01/2011	11/30/2012	365 00:00:00	<input type="checkbox"/>	
18	MURPHYE	C-006	MURPHYE_C-006	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09/16/2011	09/15/2012	365 00:00:00	<input type="checkbox"/>	09/16/2011

- Role assignments allow appropriate access to functionality





# Instructional Documents



- **Tutorial documents are stored in our LIMS User Manual SharePoint library and open in the Terminal Server environment for easy access.**



# Workflow Status Window

LIM\_PLIMS1: LabWare LIMS for Windows - COOKV

File Configure Run Utilities Debug LabStation Workflows Search Help Macros

**Tyson FSLs LABORATORY LIMS**  
Springdale Food Safety & Research Laboratory

Welcome Vanessa Cook!

**Favorite Reports**

Site Actions Browse Page Cook, Vanessa

**Tyson** Food Safety & Laboratory Services ▶ Newsletter - General Announcements

Food Safety & Laboratory Services Rick Roop Site Content QMS Search this site...

Newsletter Labs Safety FSLs Balanced Scorecard

Newsletter Links

- General Announcements
- Quality News
- Community Service

Quality Mgmt System

- QMS Documents
- Chemistry
- Microbiology

**Do you have a general question regarding quality, LIMS or general lab practices? Put your questions on the FSLs Discussion Board.**

**PM's for Centrifuges** 3/15/2012 11:50 AM  
by Alsip, Monica

SPR-PAR-303 initiated the centrifuge PM to be changed from monthly to quarterly. All FSLs labs reviewed the owner's manual for their specific centrifuge and approved this

**Service Anniversaries**

Thank you and congratulations to the following Team Members for their recent service anniversaries.

**April 2012**

- Tammy Thornton, Pearl - 29 yrs.
- George Miles, Wilkesboro - 27 yrs.
- Nancy Griffin, Pearl - 24 yrs.

**Sample Status**

Sample	Incomplete	Inprogress	Completed
AUTOCLAVE	13	2	73
BLANK	3	25	3
COMPOSITE	1	0	20
FEED_PROJ	494	494	15

**Standard Reagent Expirations**

Standard Reagent	Description	Exp Date
SPR-CULQC-523	Clostridium perfringens	12/25
SPR-CULQC-1247		04/12

**Training Due**

Topic Group	Topic Code	Description	Due Date
FFT_SAFE	FFT_MEETING	Fire Force Team Meeting Quarter 1	03/17

**Instrument Events Due**