

What is UT- CIS?



Bill Wiley

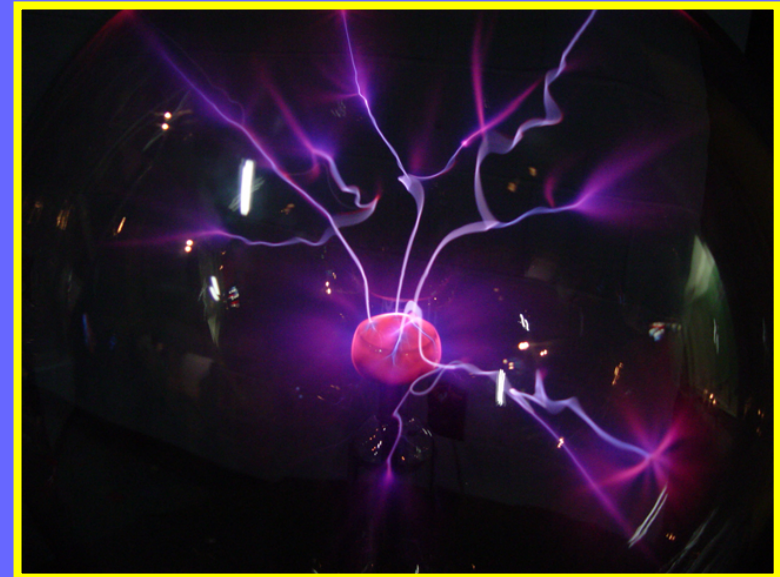
Instructional Designer



The University of Tennessee

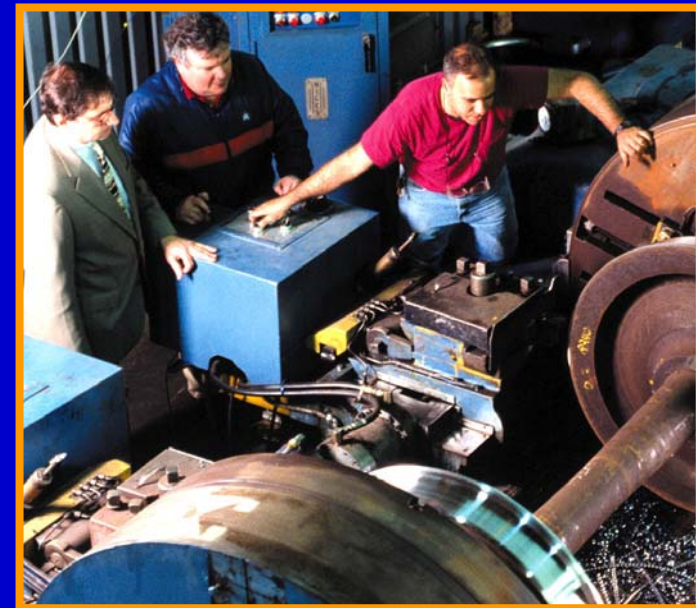
Services Provided

- **Tennessee Manufacturing Extension Program**
 - Lean Manufacturing
 - **Quality Management**
 - Human Performance
 - **eBusiness**
 - EHS
 - **Manufacturing Management**
 - Video and Online Services



UT - CIS Resources

- **University Faculty & Services**
- **Federal Laboratories**
- **Private Consultants**
- **CIS Staff Specialists**



Value of UT- CIS to Tennessee Business 2002 -2003

- ➔ 1400 requests for technical assistance
- ➔ More than 4,600 attendees UT- CIS sponsored training
- ➔ Economic Impact: \$283,989,919
- ➔ 6,639 jobs create or saved



Clean Air Act Compliance Training – 1993 - 2001

Completed Projects

Satellite Broadcasts

MACT Rules

Nationwide - Seven

ISO 14001 Video Series

APC Control Devices Series

Seven Videos



Clean Air Act Compliance Training

The Hats of Bill Wiley

Project Manager/PI

Video Producer

Content Developer

Web Design/Programming



Clean Air Act Compliance Training 2002

Results of “desktop” projects

APC Device video series – Cyclone video added

91 groups requested the APC videos

36 states

Video CD - 174 sets

VHS - 31 sets

DVD – 20 sets

MACT Web Site for Regulators



Clean Air Act Compliance Training 2003

Results of “desktop” projects

Surface Coating Video Training Series – 3 hours

Tape 1 – Surface Coating Inspection

Thermal Oxidizer – Paint Line

Wood Bldg. Products MACT Case Study

Misc. Metal Parts MACT Case Study

Tape 2 – Liquid Coating Case Study

Liquid Coating Pretreatment

Transfer Efficiency

Spray Types

Electrostatic Spraying



Clean Air Act Compliance Training 2003

Results of “desktop” projects

Surface Coating Video Training Series – 3 hours

Tape 3 – Powder Coating Case Study

Powder Coating Panel

Powder Coating Pretreatment

APC Training Video Catalog



Clean Air Act Compliance Training 2003

Surface Coating Video Training Series Distribution

73 groups requested the videos

35 states

Video CD – 77 sets

VHS - 41 sets

DVD – 29 sets

Additional APC Video requests

28 agencies – 23 states

Video CD - 35 set

VHS - 13 sets

DVD – 6 sets



Clean Air Act Compliance Training



Thank you for sending APC Devices for Gases and Particles in both VCD and DVD formats. It is much easier to view these in the comfort of my own cubicle, and the quality is, of course, excellent. Retention of the subject matter is greatly enhanced in this personalized environment. Unlike my experience with other CDs, starting and viewing these on the PC went smoothly and without any problem. – Oklahoma

“We received the VHS copy of the cyclone tape. We have a 5 person air pollution control unit at a DNR regional office. The experience of our staff ranges from 6 weeks to 14 years. Most of us have had several APTI courses, both lecture and self-study. We watched the tape together; it was informative for the newer people and a good review for the more experienced. Everyone in the unit liked it. Very professional and well done - ideal for air quality inspectors.” - North Carolina

Clean Air Act Compliance Training



“Talk about service. The CDs arrived this morning. Will definitely be useful for the new guy. Thanks again.”
- Colorado

“Thank you for putting the video series together. I had a lot of responses to view them.”
- Missouri

Sorry it has taken so long to get back to you on this offer. We would like to order a DVD copy, if they are still available. We have used the previous training disks from you to train our new inspectors and have found them very beneficial.
- Utah

Clean Air Act Compliance Training 2002-03

**MACT Rule Web Site
Components of Each Site**

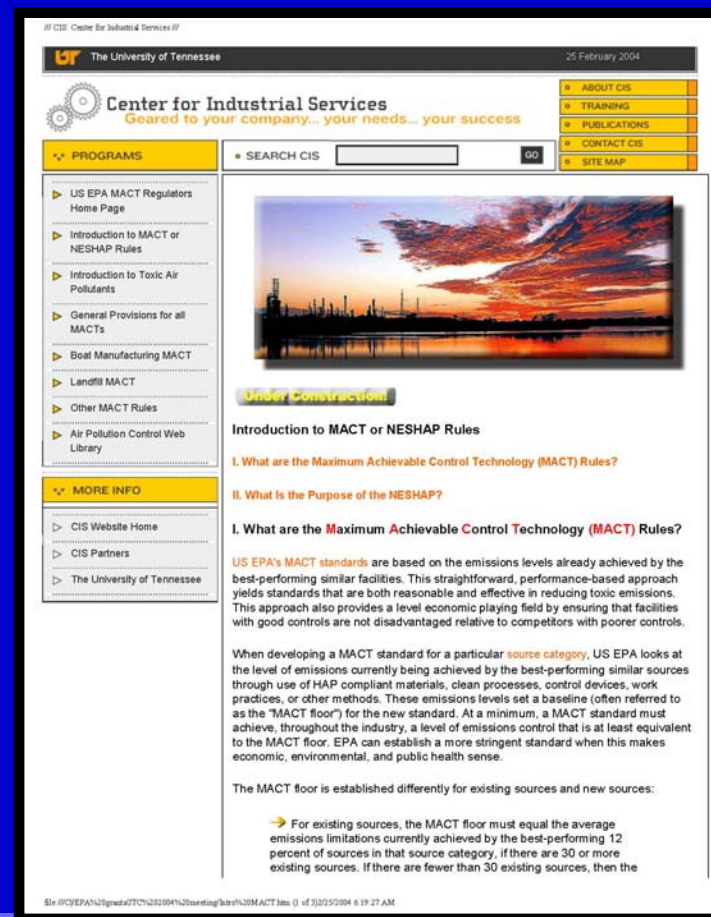
Rule Introduction

Rule Timeline

Virtual Tour of Facilities

Inspection Checklist

**Use as reference in
classroom MACT courses**



The screenshot shows the website for the Center for Industrial Services (CIS) at The University of Tennessee. The page is dated 25 February 2004. The header includes the CIS logo and the tagline "Geared to your company... your needs... your success". A search bar is present with the text "SEARCH CIS" and a "GO" button. The main navigation menu includes "ABOUT CIS", "TRAINING", "PUBLICATIONS", "CONTACT CIS", and "SITE MAP". The "PROGRAMS" section lists various topics: "US EPA MACT Regulators Home Page", "Introduction to MACT or NESHAP Rules", "Introduction to Toxic Air Pollutants", "General Provisions for all MACTs", "Boat Manufacturing MACT", "Landfill MACT", "Other MACT Rules", and "Air Pollution Control Web Library". The "MORE INFO" section includes "CIS Website Home", "CIS Partners", and "The University of Tennessee". The main content area features a large image of an industrial facility at sunset, with the text "Under Construction" overlaid. Below the image, the text reads "Introduction to MACT or NESHAP Rules" and "I. What are the Maximum Achievable Control Technology (MACT) Rules?". The text explains that US EPA's MACT standards are based on the emissions levels already achieved by the best-performing similar facilities. It states that this approach provides a level economic playing field by ensuring that facilities with good controls are not disadvantaged relative to competitors with poorer controls. The text also mentions that when developing a MACT standard for a particular source category, US EPA looks at the level of emissions currently being achieved by the best-performing similar sources through use of HAP compliant materials, clean processes, control devices, work practices, or other methods. These emissions levels set a baseline (often referred to as the "MACT floor") for the new standard. At a minimum, a MACT standard must achieve, throughout the industry, a level of emissions control that is at least equivalent to the MACT floor. EPA can establish a more stringent standard when this makes economic, environmental, and public health sense. The text concludes that the MACT floor is established differently for existing sources and new sources: "→ For existing sources, the MACT floor must equal the average emissions limitations currently achieved by the best-performing 12 percent of sources in that source category, if there are 30 or more existing sources. If there are fewer than 30 existing sources, then the

Clean Air Act Compliance Training

Web Projects – MACT Rules for Regulators

Boat Manufacturing (Final 8-22-01)

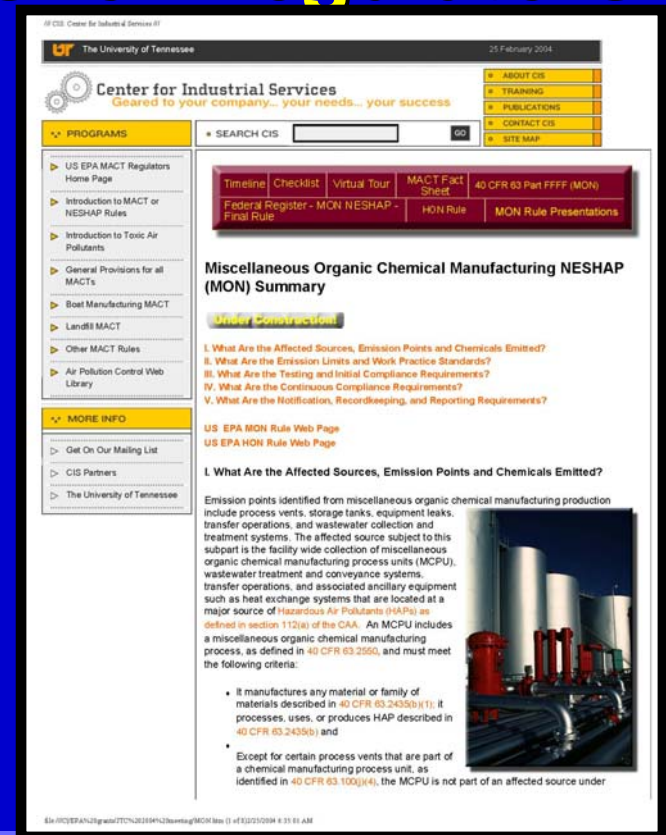
Landfills (Final 1-16-03)

MON (Final 11-10-03)

Misc. Metal Parts (Final 1-02-04)

Plywood & Composite Board
Manufacturing (Proposed 1-09-03)

Boilers (Proposed 1-13-03)



The screenshot displays the Center for Industrial Services (CIS) website. The header includes the CIS logo, the University of Tennessee name, and the date 25 February 2004. A navigation menu on the right lists: ABOUT CIS, TRAINING, PUBLICATIONS, CONTACT CIS, and SITE MAP. The main content area is titled "Center for Industrial Services" with the tagline "Geared to your company... your needs... your success". Below this is a "PROGRAMS" section with a search bar and a list of topics: US EPA MACT Regulators Home Page, Introduction to MACT or NESHAP Rules, Introduction to Toxic Air Pollutants, General Provisions for all MACTs, Boat Manufacturing MACT, Landfill MACT, Other MACT Rules, and Air Pollution Control Web Library. A "MORE INFO" section includes links for "Get Our Mailing List", "CIS Partners", and "The University of Tennessee". The main content area features a "Miscellaneous Organic Chemical Manufacturing NESHAP (MON) Summary" section with a "Under Construction" banner. Below this is a list of questions: I. What Are the Affected Sources, Emission Points and Chemicals Emitted? II. What Are the Emission Limits and Work Practice Standards? III. What Are the Testing and Initial Compliance Requirements? IV. What Are the Continuous Compliance Requirements? V. What Are the Notification, Recordkeeping, and Reporting Requirements? There are also links for "US EPA MON Rule Web Page" and "US EPA HON Rule Web Page". A detailed section titled "I. What Are the Affected Sources, Emission Points and Chemicals Emitted?" explains that emission points include process vents, storage tanks, equipment leaks, transfer operations, and wastewater collection and treatment systems. It defines a Miscellaneous Organic Chemical Manufacturing Process Unit (MCPU) as a facility-wide collection of miscellaneous organic chemical manufacturing process units (MCPUs), wastewater treatment and conveyance systems, transfer operations, and associated ancillary equipment such as heat exchange systems. A photograph of industrial equipment is shown on the right. A bulleted list at the bottom states: "If it manufactures any material or family of materials described in 40 CFR 63.2435b(i)(1); it processes, uses, or produces HAP described in 40 CFR 63.2435b(i) and Except for certain process vents that are part of a chemical manufacturing process unit, as identified in 40 CFR 63.100(j)(4), the MCPU is not part of an affected source under".

Clean Air Act Compliance Training

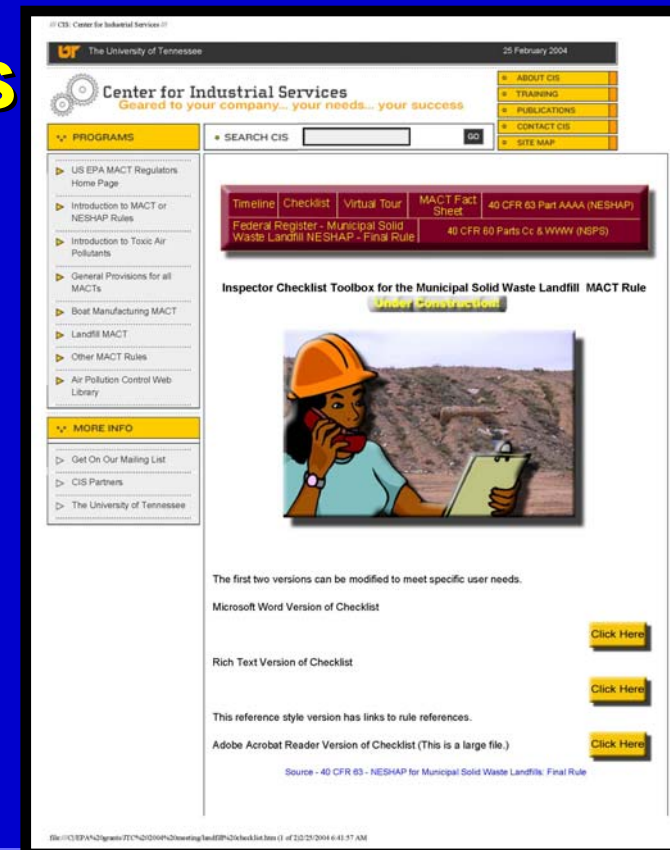
Web Projects – Current Status

Boat - 3 Parts completed

Landfill - 3 Parts completed
Working on Tour

MON - 2 Parts completed

Technical Review started



The screenshot displays the Center for Industrial Services website. The header includes the logo for The University of Tennessee and the Center for Industrial Services, with the tagline "Geared to your company... your needs... your success". A navigation menu on the right lists: ABOUT CIS, TRAINING, PUBLICATIONS, CONTACT CIS, and SITE MAP. A search bar is located below the header. The main content area is titled "Inspector Checklist Toolbox for the Municipal Solid Waste Landfill MACT Rule Study Construction". It features a navigation bar with links for Timeline, Checklist, Virtual Tour, MACT Fact Sheet, 49 CFR 63 Part AAAA (NESHAP), Federal Register - Municipal Solid Waste Landfill NESHAP - Final Rule, and 48 CFR 60 Parts Cc & WWW (RGSP). Below this is an image of a woman in a hard hat talking on a phone while holding a clipboard. The text below the image states: "The first two versions can be modified to meet specific user needs." and provides three download options: "Microsoft Word Version of Checklist" (Click Here), "Rich Text Version of Checklist" (Click Here), and "Adobe Acrobat Reader Version of Checklist (This is a large file.)" (Click Here). The source is cited as "Source - 40 CFR 63 - NESHAP for Municipal Solid Waste Landfills: Final Rule".

Clean Air Act Compliance Training

Web Projects – Challenges

Web Training

Two EPA Mandated Design Changes

EPA Mandated Move to **UT** Servers

UT Brand Issues

MACT Rules not Finalized

The screenshot shows the website for the Center for Industrial Services at The University of Tennessee. The page is titled "Municipal Solid Waste (MSW) Landfill Virtual Tour" and "NESHAP/MACT Rule Site Considerations". It features a navigation menu on the left with options like "PROGRAMS" and "MORE INFO". The main content area includes a "Timeline Checklist Virtual Tour" section with links to "Federal Register - Municipal Solid Waste Landfill NESHAP - Final Rule" and "40 CFR 60 Parts Cc & WWW (NSPS)". Below this, there is a section titled "Under Construction" and a "Bioreactor Collection System" section with an image of a bioreactor and a caption stating "The final rule also requires the source to operate its air pollution control devices within the operating parameter boundaries and to continuously monitor control devices operating parameters. Compliance with the operating conditions is demonstrated when monitoring data show that the gas control devices are operated within the established operating parameter range." The page also includes a "Go to Page 2" link.

Clean Air Act Compliance Training

Continued and New “Desktop” Products for FY 2005

Video Broadcast and Case Study Reedit

Reedit video from past broadcasts. These could be used to provide examples of various industrial processes that have been affected by MACT rules. Past MACT broadcasts include:

Dry Cleaning
Vapor Degreasers
Chrome Electroplating
Wood Furniture
Consumer Products



Clean Air Act Compliance Training



New “Desktop” Products for FY 2005

Web sites for future MACTS for Regulators

<u>Rule</u>	<u>Final</u>	<u>Compliance Date</u>	<u>Source #s</u>
General Prov.			
Fabric Printing	5-29-03	5-29-06	135
Misc. Coating Manf.	12-11-03	12-11-06	
Paper & Web Coating	12-02-02	12-05-05	203
Plastic Parts	8-22-03 signed		202
Reinforced Plastic	4-21-03	4-21-06	435
Wood Bldg. Products	5-28-03	5-28-06	215

Clean Air Act Compliance Training



Other Possibilities:

Survey agencies for “desktop” training needs.

Assist on setting up CEU approval process

Lesson learned at UT

Choose established criteria such as IACET

Use a standard format for curricula

Clean Air Act Compliance Training

**Please Send Ideas &
Comments to:**

**Bill Wiley
UT- CIS
105 Student Services Building
Knoxville, TN 37996-0213
865-974-8464 fax 865-974-1528
mobile 615-642-0875
wwiley@tennessee.edu**

