



# Excellence Award

**MWV**

Mahrt Mill, Cottonton, AL

*February 20, 2015*



# MeadWestvaco

- Headquartered in Richmond, VA, MeadWestvaco Corporation (NYSE: MWV) is a global packaging company providing innovative solutions to the world's most admired brands
- MWV's network of 125 facilities and 15,000 employees spans North America, South America, Europe, and Asia



# MAHRT MILL

## Cottonton, AL

- Started production in **December 1966**
- Has a workforce of approximately 700
- Produces Coated Natural Kraft® (CNK®) paperboard on two paper machines
- End-use product is converted into packaging for beverage cartons, dry foods, frozen foods, software packaging, sporting goods, and more





Much of what you buy is packaged in – and protected by – MWV’s CNK<sup>®</sup> produced at the Mahrt Mill



# TEAM MEMBERS



Name of Member	Discipline	Role within the Team
<b>Courtney Tinner</b> (center)	Industrial Hygienist	Hearing Conservation Administrator and Industrial Hygiene
<b>Cathy Porter</b> (right)	Health Occupational Nurse, COHC	Hearing Conservation Coordinator
<b>Wanda Hall</b> (left)	Health Occupational Nurse, COHC	Performs Audiometric examinations
<b>Jacqueline Massey</b>	Health Occupational Nurse, COHC	Performs Audiometric examinations
<b>Stephanie Hallman</b>	Health Occupational Nurse, COHC	Performs Audiometric examinations
<b>Roy Rigney</b>	Safety Manager	Leadership and Supervisory

# PROBLEM STATEMENT

- Noise hazards are challenging to control at a paper mill approaching its 50<sup>th</sup> anniversary
- The Hearing Conservation Program (HCP) focus was focused on regulatory compliance.
  - Recordable significant threshold shifts (in 2007, Mahrt Mill had 5 confirmed recordable hearing cases and 28 standard threshold shifts).
- Previous system had gaps in tracking retest outcomes.
- No follow-up of noise exposure assessments and noise dosimetry data to identify departmental trends in order to be proactive.



# MWV HCP PARAMETERS

- All employees exposed to noise levels  $\geq 85$  dBA for 8-hr time-weighted average (TWA) are in the HCP.
- In 2013 8.3% of our employees that had an 8-hr TWA below 85 dBA but are still included in our HCP.
- Approximately 12% of our employees work in either a control room or lab with noise levels below 85 dBA are included in our HCP in order to account for intermittent high level exposures in the production areas.



# OUR INITIATIVES

- Expand and enhance the value of industrial hygiene (IH) noise assessments
  - Provide detailed noise exposure assessments.
  - Increase personal noise dosimetry monitoring.
  - Develop Similar Exposure Groups (SEGs).
  - Identify frequency components of sound sources by performing octave band analysis in production areas for potential noise control opportunities.



## OUR INITIATIVES

### **Detailed IH Noise Assessments**

- Sound Level Survey –performed during annual IH monitoring.
  - 2011, 2012, 2013
- 2014 – Updated all area noise maps mill-wide
- Identify trends in employee STS by evaluating worker noise exposure level and hazardous noise sources in each employee’s work area.

# IMPLEMENTATION:

## Detailed IH Assessments

### Similar Exposure Group (SEGs)

- Personal Noise Dosimetry Monitoring
- 3M™ Edge noise dosimeter
- Develop Similar Exposure Groups (SEGs)
  - American Industrial Hygiene Association (AIHA) exposure group strategies
  - Task, agent, process and job classification
  - Historical data and current data

### MWV Utility Department SEG

Department	SEG	Job Class	Primary Tasks
Utility	UT-1	A-Tech	Control Room Operator
Utility	UT-2	B-Tech	Laboratory
Utility	UT-3	Tour Foremen	Administrative/ Department rounds
Utility	UT-4	E-Tech	Drives Bull Dozer, clears bark pile
Utility	UT-5	C-Tech	Motors, pumps, boilers, mill water supply
Utility	UT-6	Crew Leader	Departmental Rounds
Utility	UT-7	D-Tech	Motors, pumps, boilers, mill water supply, compressor room

# IMPLEMENTATION

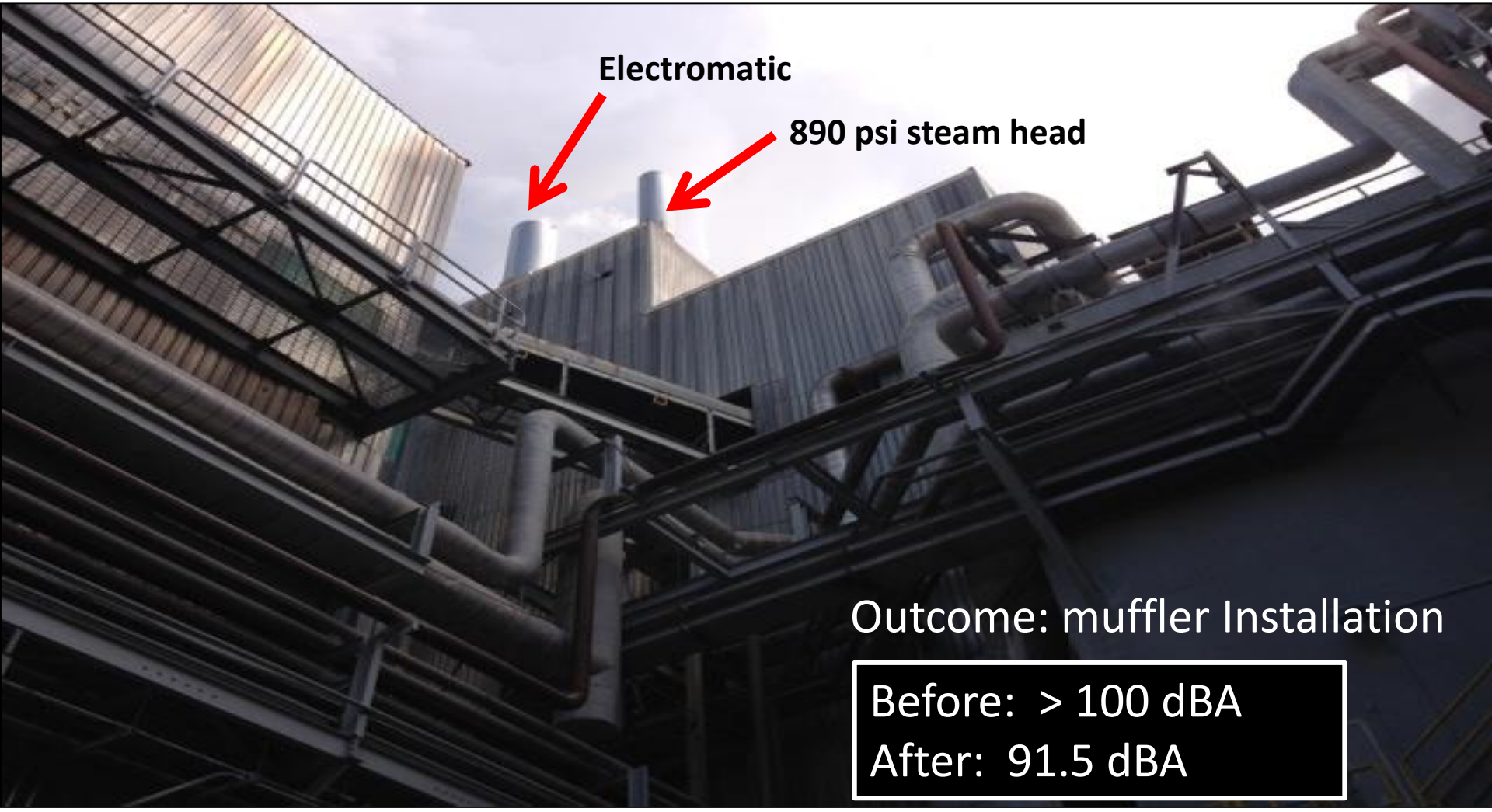
## Noise Management

- Identification of potential noise control opportunities
  - In compressor room in the Utility Department.
- Established a Noise Control Committee
- Implemented Buy-Quiet
  - National Institute of Occupational Safety and Health (NIOSH) Power Tools Database is being used to implement quieter tools in our maintenance department.



# IMPLEMENTATION

## Engineering noise controls



Electromatic

890 psi steam head

Outcome: muffler Installation

Before: > 100 dBA

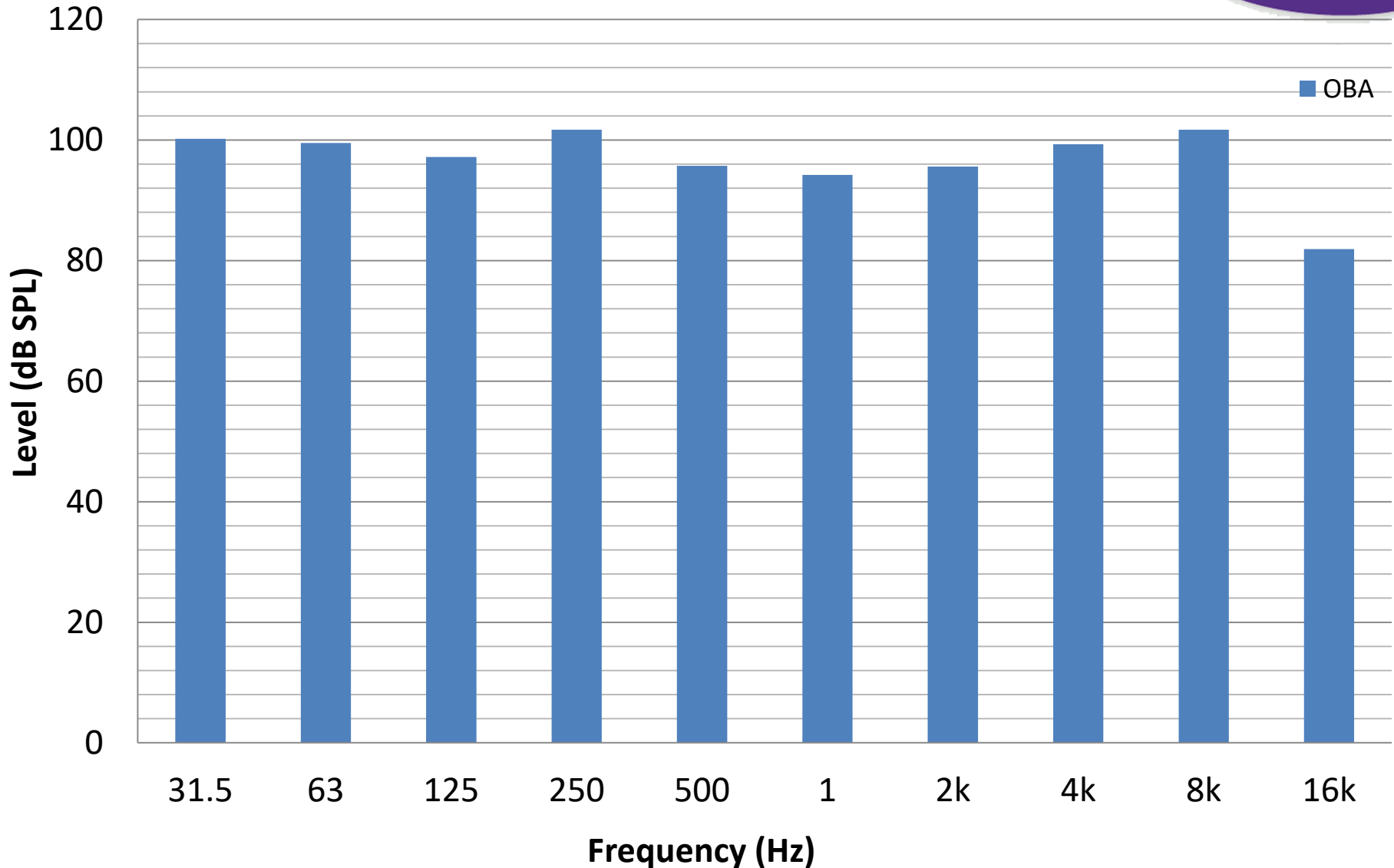
After: 91.5 dBA





# PFI FD Fan Noise Levels

Measured with 1:1 Octave Band Filter



# IMPLEMENTATION:

## Noise Control: Curtain enclosure

**Powered for Industry Forced Draft Fan (PFI FD)**



# OUR INITIATIVES (continued)

## Hearing Protective Devices

Improve hearing protection initiatives by:

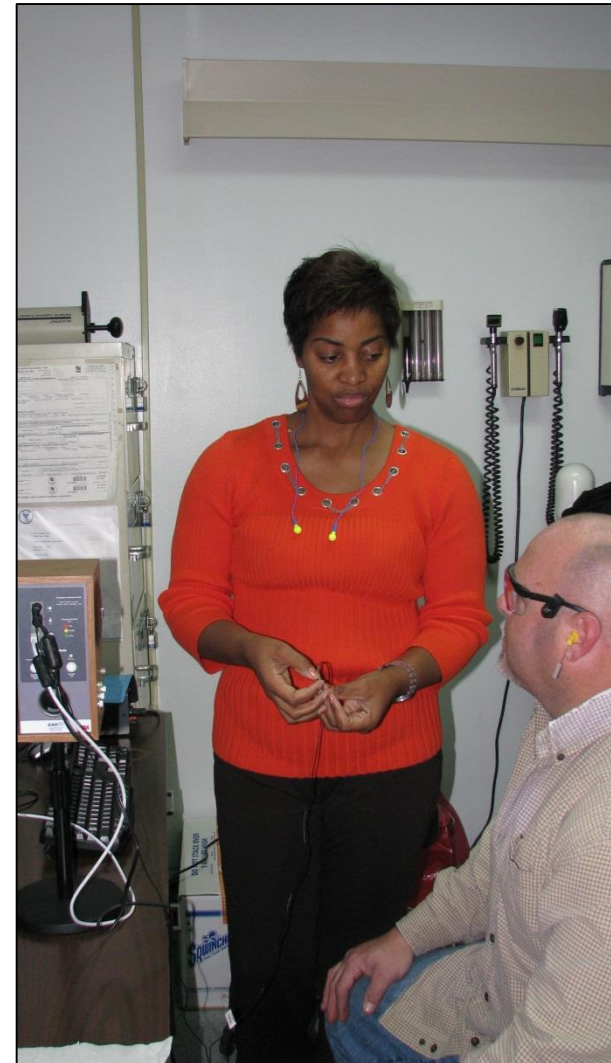
- Conducting fit-testing
- Incorporating communication devices as needed into hearing protectors
- Improving the training of our employees.

# OUR INITIATIVES (continued)

## Hearing Protective Devices

### Fit-testing

- December 2010 MWV began fit-testing employees using the 3M™ E-A-Rfit Validation System on all “Near Recordable Cases”.
- In 2011 we increased one-on-one training and fit-testing beyond Near Recordable Cases.





# OUR INITIATIVES (continued)

## Hearing Protective Devices

- Problem: unacceptable Personal Attenuation Rating (PAR) on some employees.
  - Congenital
  - Trauma to the ear(s)
- Custom molded plugs
- Sound Restoration Muffs
  - Hearing impaired



# OUR INITIATIVES (continued)

## Hearing Protective Devices

### Outcomes: Personal Attenuation Rating (PAR) Data

13 different types of HPDs available – we know one type doesn't fit all

#### 3M™ E-A-Rfit™

- 120 employees (24%)
- Provide a baseline for all new incoming employees.

#### Phonak™ SafetyMeter™ (Custom Plugs)

- 261 employees (52%)

#### Total PARs YTD – January 2015

- 381 (75%) employees have PARs completed.



# OUR INITIATIVES (continued)

## Hearing Protective Devices

### Communication Devices

- Phonak™ ComCom™ Device
- Worn with custom plug in conjunction with mill radio
- Features uninterrupted hearing protection
- Employee does not have to remove their HPD's in order to communicate.
- Device provides outside noise attenuation and better audibility in noisy environments at lower volume settings.



## OUR INITIATIVES (continued)

### Audiometric Testing

**Goal:** Increase communication with, and develop a partnership with Examinetics audiologists.

- 95% of employee annual audiograms are performed on-site.
- All plant nurses are certified by the Council for Accreditation in Occupational Hearing Conservation.
- 5% performed by Examinetics mobile unit.
- All audiograms are completed annually by June 30<sup>th</sup> of the calendar year, an audiologist is available on site for technical consultation and employee counseling during this time.



# OUR INITIATIVES (continued)

## Audiometric Testing

### Hearing Test Retest and Follow-up

- For employees with possible STS, retest(s) are performed within 21 days.
- If retest show a STS, the plant nurse instructs the employee to complete Recordable Shift Questionnaire to be evaluated by Examinetics audiologist and referred for further care.

**MeadWestvaco Health Services  
Hearing Re-Test Appointment**

Name: \_\_\_\_\_

Department: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Appointment Date: \_\_\_\_\_

\_\_\_\_\_  
Employee's Signature

\_\_\_\_\_  
Nurses' Signature

# OUR INITIATIVES (continued)

## HCP Training

### Develop engaging training

- Ramp up the HCP training annually, efforts to keep it interesting.
  - Noise Jeopardy
  - “Mr. Ears” Demo
  - Trivia
  - Tower Game
  
- If you gain an employee’s interest you will gain that employee’s participation and trust.



# MEET MR. BIG EARS

## THE TOP BANANA AWARD



Left to Right: Wanda Hall and Charles Eubanks



Left to Right: Tommie Clines and Arthur Williams



Left to Right: Forrest Pearson and Brenda Horton

# THE TOWER GAME

- Hearing Conservation Trivia. The first employee who presses the buzzer color lights up on the Tower.
- Nurse Porter reads off the Trivia questions!!!





## OUR INITIATIVES (continued)

### HCP Training

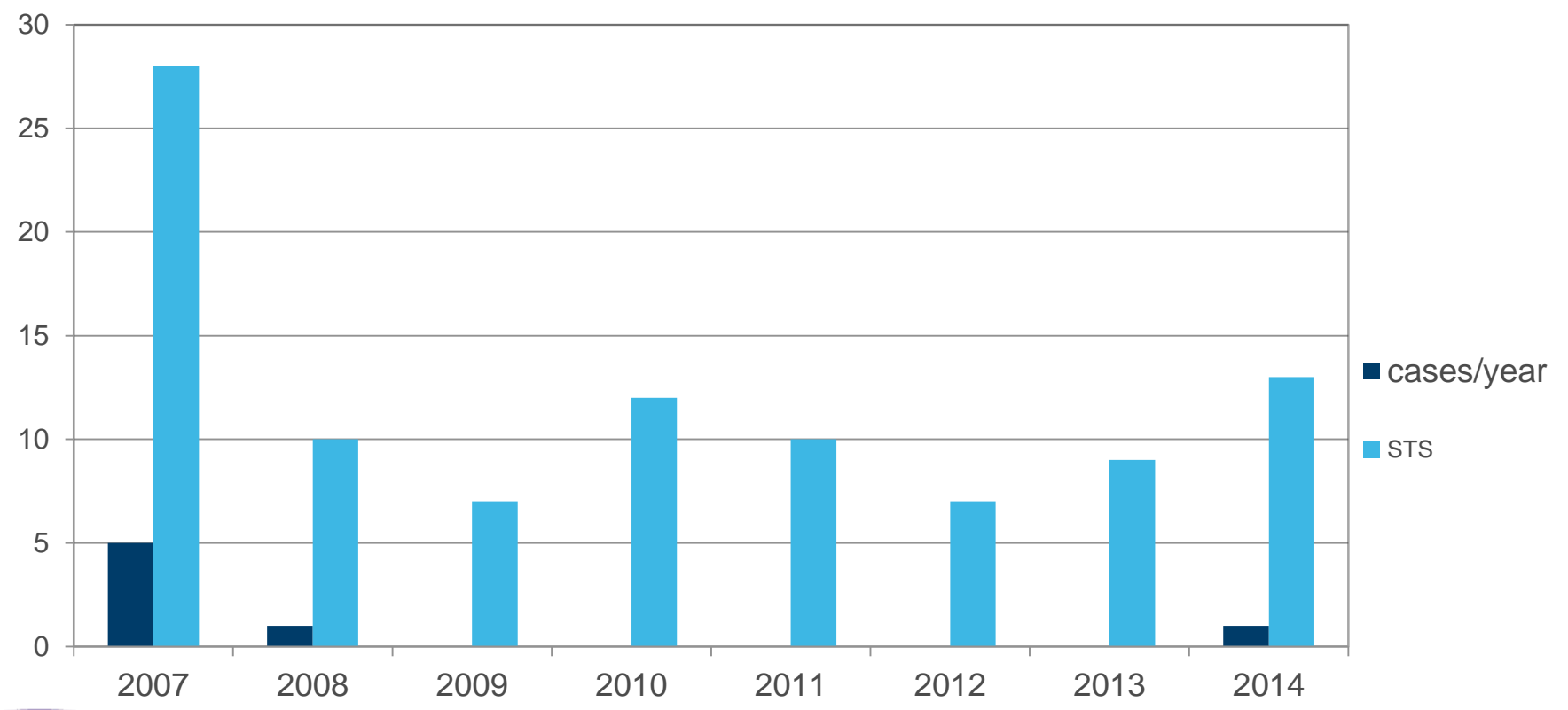
#### Content of Training expanded

- Hearing Conservation training goes beyond MWV and to the families of our employees.
  - HPD's worn while car racing,
  - Hunting
  - Wood working/cabinetry
  - Recreational shooting
  - Healthy/safe habits for listening to music
- Employee Testimonials



# IMPACT OF INITIATIVES

## Recordable Cases and Standard Threshold Shifts 2007-2014



# EMPLOYEE TESTIMONIALS

Re: Safe and Sound

From: Mike Davenport

After having been fitted by Health Services here at the MWV Packaging Resources mill at Mahrt, with and daily use of the PHONAK reusable custom fitted ear plugs, I have noticed considerable benefits from their use.

In my particular work area, I am subjected to sudden bursts of noise created from high pressure steam releases many times each day, and having the fitted ear protection has helped very much.

→ I also use the devices for loud work at the homeplace, which has also helped. I can now hear what my wife thinks I can't!

All jokes aside, which that last statement really is true, I wish I had been fitted with these earplugs many many years ago.

Thanks,





Dear Safe and Sound Committee,

My name is Arthur Williams; I have been an employee at MeadWestvaco's Mahrt Mill in Cottonton, Alabama for approximately seventeen and a half years and I am a very safety conscious individual. To me an ideal day is being able go home to my family unharmed. Perhaps the most important safety aspect is to conserve my hearing. During my tenure here, I have recently, within the last four years, noticed a difference in the approach of hearing conservation by the company. My job requires me to frequent the entire mill site and I have seen many subtle changes throughout the mill that has increased hearing safety. Being a safety committee member, this peaked my interest and I began to investigate further. I then began to see and experience many wide ranging programs, efforts and requirements that have been put in place to enhance our protection. Some items and programs that I have found extremely helpful are custom fit ear plugs, noise abatement curtains, new signs that signify a hearing protection required area or a double hearing protection required area. Double hearing protection consist of using ear muffs in conjunction with ear plugs. The entire workforce is required to attend hearing conservation seminars, take annual hearing test, and have fit test.

The hearing conservation seminars are very intuitive. They consist of a speaker, several models of hearing protection, and interaction with the employees through games, questions and answer sessions and active participation in different exercises to show the differences with and without hearing protection.

The company has also invested in two technologies that have increased our hearing protection by leaps and bounds. They are the 3M Earfit Validation test and the Safety Meter test. The 3M Earfit Validation test performs an ear fit test on regular company issued earplugs. This test can determine if the employee is using the wrong size or type of ear protection or if they are incorrectly inserting their earplugs. The safety Meter test is for custom fit earplugs. It tests the noise attenuation level of the custom earplugs. Both of these technologies are software controlled and remove the human error element from the test providing the best quality fit for our employees.

The longer we work for companies we become numb to changes and they are transparent to us, but I can say without a doubt that MeadWestvaco has implemented hearing conversation changes that are obvious and effective for all of us. It shows we have caring safety personnel and when I see this level of commitment from the company to me, it increases my level of confidence to the company and to me. My protection of choice is custom fit earplugs. These are most effective for me but it's great to know that any hearing protection we carry will provide more than adequate protection of my most precious asset, my hearing.


Sincerely,

Arthur F. Williams, MWV Employee

A handwritten signature in black ink, appearing to read 'A F Williams', is written below the typed name.



## LESSONS LEARNED

- “There ain’t no mountain high enough” 
- Strive for excellence in every component of Hearing Conservation Program.
- Employee engagement is a key element for change

## FUTURE OF THE INITIATIVE

- Implement more protective 85/3 dB exchange rate in 2015.
- Strive to get 100% of employees with PAR testing on HPDs
- Continue to identify departments/areas for noise engineering controls.
- Utilize the newly established Near-STS report provided by Examinetics to provide proactive interventions.

# SIGNIFICANCE OF THE AWARD

- The Safe in Sound award encourages our employees through team efforts and outside the box thinking that all goals are achievable. The culture of the past was to just accept things the way they were. Focus of the team proved this past view did not have to be the case and that collectively we can improve. This is the same type focus we will use going forward.
- The award gives our employees recognition for their efforts, realization that we are on the right path, and motivation to continue on this journey.
- We will continue the momentum and identify noise reduction projects and support the broader MWV locations in their hearing loss prevention efforts.



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