

Agenda for  
Buy Quiet Workshop for Construction and Manufacturing Industries  
NIOSH Noise and Hearing Loss Prevention Program  
NIOSH-Taft Laboratories, 4676 Columbia Parkway, Cincinnati, OH 45226  
November 9 - 10

**Objectives:**

The National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC) Buy Quiet Workshop is a National Occupational Research Agenda (NORA) activity jointly organized by the NORA Construction Sector and Manufacturing Sector Programs, and the NIOSH Hearing Loss Prevention Cross-sector Program. The purpose of the Workshop is to determine feasibility and functionality of Buy Quiet programs and to explore proactive steps to ensure successful implementation. The Workshop goal is to stimulate the wider adoption of current and future engineering noise controls on machinery and equipment and to motivate the development and implementation of Buy Quiet programs for the Construction and Manufacturing industries.

The following will be discussed during the 1.5-day workshop:

- a. Provide a documented status of "buy quiet" program implementation, research and practice in construction and manufacturing industries (i.e., How NIOSH worked with Tier1 and Messer),
- b. Identify workplace and market barriers and benefits for implementing "buy quiet" solutions in the workplace,
- c. Document demonstrated economic and health impacts of "buy quiet" programs.
- d. Describe methods for implementing "buy quiet" in Construction and Manufacturing industries,
- e. Assess the needs of OSHA in using "buy quiet" to determine feasibility,
- f. Discuss the development of a NIOSH Workplace Solutions document on Buy Quiet targeting purchasers of equipment (i.e., employers, contractors) and manufacturers of equipment in both the construction industry and the manufacturing industry. The document will provide initial guidance for implementing "buy quiet" programs in the workplace.

Meeting Chairs: Chuck Hayden; Heidi Hudson

## November 9

### 8:30 – 8:45 **Welcome and Introductions**

Chuck Hayden and Heidi Hudson

Workshop charge and overview.

Lunch order from [http://www.leboxxcafe.com/Box Lunch/](http://www.leboxxcafe.com/Box_Lunch/) (\$10.00 per person) and Dinner Plan shared.

### 8:45 – 10:30: **Overview of “Buy Quiet” Issues and Opportunities:**

Greg Lotz, NORA Manufacturing Sector Council, *NORA Manufacturing Sector Perspectives on “Buy Quiet”*

Matt Gillen, NORA Construction Sector Council, *NORA Construction Sector Perspectives on “Buy Quiet”* – Envisioned from Washington, DC

Sarah Haynes, Health & Safety Executive, Her Majesty’s Specialist Inspector of Health & Safety (Noise & Vibration), United Kingdom, *“Practical development of HSE’s Buy Quiet initiative”*

Jean Tourret, Chair of INCE-Europe, *“Quieting the world by inducing a “Buy-Quiet” attitude among product purchasers”* – presented by Chuck Hayden

Heidi Hudson, NIOSH, *“World Power Tools Market”*

### 10:30 – 10:45 **Break**

### 10:45 – 12:00 **Case Studies in Buy Quiet**

Beth Cooper, NASA, *“Buy-Quiet” and “Quiet-by-Design” at NASA*

David Nelson, Nelson Acoustics, *Development of a Case for Buy Quiet or Nuances of Buying Quiet*

Chris Cordrey, Messer Construction, *“Overview of Messer Buy Quiet Experience to Date”*

Rod Ford, Tier 1 Performance Solutions, *“Buy Quiet Web-tool Development”*

### 12:00 – 1:15 **Lunch**

Chuck Hayden, NIOSH, *Overview of NIOSH Activities on Engineering Noise Control*

### 1:15 – 3:00 **Levels, Labels, and Factors Affecting the Implementation of Buy Quiet in Manufacturing and Construction**

Rick Neitzel, University of Michigan, *“Noise in Construction: Why Should We Care?”*

Matt Patten, Laborer’s Health and Safety Fund, *Buy Quiet & Noise Control in Construction*

Marco Nabuco, Director, Acoustic Testing Laboratory, National Institute of Metrology, Standardization and Industrial Quality-Inmetro, Brazil. *Noise labeling: an overview of the Brazilian experience*

Erich Thalheimer, Parsons Brinckerhoff, *Perspectives of Municipal Programs Encouraging Buy Quiet and Use of Quiet Equipment*

Matt Nobile, IBM Acoustics Lab, Chair- INCE Technical Committee on Product Noise Emissions, *PNR: A Simplified Product Noise Rating for the General Public* – PowerPoint/mp3 presentation with live phone hookup.

3:00 – 3:15 **Breakout Group Charge**

3:15 – 3:30 **Break**

3:30 – 5:00 **Convene Breakouts**

Group A: Process Techniques for Implementation (Moderator - Chuck Hayden)

Group B: Incentives and Barriers for Implementation (Moderator - Thais Morata)

Group C: Research to Practice Products and Partnerships (Moderator - Heidi Hudson)

6:00-8:00 **Dinner**

Via Vite, 520 Vine St, Cincinnati, (513) 721-8483 (see Page 10 of program).

## **Day 2: November 10**

8:30 – 10:00 **Breakout groups convene**

10:00 – 10:30 **Breakout group report**

Groups A, B, & C - Hayden, Morata, Hudson

10:30–10:45 **Break**

10:45 – 11:45 **Discussion**

11:45 – 12:00 **Closing Remarks**

12:00 **Adjourn**

## **SPEAKER'S BIOS**

### **W. Gregory Lotz**

Gregory Lotz is the Director of the Division of Applied Research and Technology at the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH) in Cincinnati, Ohio. He also is the Manager of the National Occupational Research Agenda (NORA) Manufacturing Sector research program. Dr. Lotz holds the rank of Captain as a Commissioned Officer in the United States Public Health Service.

Dr. Lotz received a Bachelor of Science degree in Physics from Heidelberg College, and Masters and Ph.D. degrees in Biophysics from the University of Rochester School of Medicine and Dentistry, Rochester, New York.

### **Matt Gillen**

Matt Gillen is Deputy Director for the National Institute for Occupational Safety and Health (NIOSH) Office of Construction Safety and Health. Since joining NIOSH in 2000, he has worked to coordinate and plan construction research efforts and build stronger relationships between researchers and the construction industry. He served as NIOSH Co-chair for the multi-stakeholder National Occupational Research Agenda (NORA) Construction Sector Council, which developed a "National Construction Agenda" to guide safety and health research and practice initiatives over the decade. He serves as NIOSH representative to the OSHA Advisory Committee for Construction Safety and Health.

Matt is certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene, and is a member of the American Conference of Governmental Industrial Hygienists and the American Industrial Hygiene Association, where he is active on the Construction Committee. Mr. Gillen received his M.S degree in Industrial Hygiene from the University of Cincinnati.

### **Sarah Haynes**

Sarah Haynes has a biological sciences background. She started work with the UK Health and Safety Executive in 1993, working as a factories inspector. As part of this work, she developed an interest in noise and vibration and persuaded HSE to let her retrain as a Specialist Inspector in this area. Noise control at source is often the last thing on employers' minds, and she was responsible for developing the HSE Buy Quiet strategy in an attempt to rejuvenate our approach to the supply of tools and machinery. Outside work, she lives with her family in the north of England, and can mostly be found with her chickens, vegetables and friends on her allotment.

### **Chuck Hayden**

Chuck Hayden is a Research Mechanical Engineer with the National Institute for Occupational Safety and Health. He's been with NIOSH for 20 years and accomplishing research in the area of acoustics and noise control of machinery for the past 11 years. His primary area of research is sound power level measurements and declaration for powered hand tools used in the construction industry. He is a registered professional engineer in the state of Ohio, earned his B.S and M.S. in mechanical engineering at the University of Cincinnati, and completed advanced training in acoustics at Penn State University. He is a member of the Institute for Noise Control Engineers and the Acoustical Society of America. He was recently recognized at NIOSH for his outstanding service for establishing and directing the NIOSH program in noise control outside of mining over the last 11 years.

### **Heidi Hudson**

LCDR Heidi L. Hudson is a Health Communication Officer for the National Institute for Occupational Safety and Health (NIOSH). She provides agency leadership, consultation and technical assistance in planning, analysis and developing health marketing priorities, strategies, products and practices for effectively transferring workplace

safety and health research into practice. LCDR Hudson is a co-author of a forthcoming chapter on Research to Practice in Solving Ergonomic Problems.

From 2006 to 2011, LCDR Hudson served as Coordinator for NIOSH's Communication and Information Dissemination Program. Prior to her work at NIOSH, LCDR Hudson worked in Corporate Communications for a Fortune 500 company for over five years. Currently, LCDR Hudson is serving as the Interim Program Coordinator for NIOSH's Total Worker Health Program. LCDR Hudson worked in three hospital-based Wellness and Prevention Centers delivering services in Executive Health, Cardiac and Pulmonary Rehabilitation, and Community-based Health Education.

LCDR Hudson received her Master of Public Health concentrating in Health Behavior and Health Promotion and a Bachelor of Science in Education concentrating in Exercise Physiology, both from The Ohio State University. She was a Health Communications Fellow under an Association of Schools of Public Health/Centers for Disease Control and Prevention Fellowship. She is a member of the American Public Health Association. Heidi lives in Cincinnati, Ohio with her husband and two children, age 3 and age 1.

### **Beth A. Cooper**

Beth Cooper is an acoustical engineer serving as NASA's Internal Agency Consultant for Hearing Loss Prevention and Low Noise Design in the Office of the Chief Health and Medical Officer at NASA Headquarters. Ms. Cooper provides specialized support for the agency's occupational health and engineering communities to help them meet NASA's hearing conservation program requirements, including those for "Buy-Quiet" and "Quiet-by-Design" Programs. She also manages the development, promotion, and public distribution of unique multimedia training resources for hearing conservationists and noise control professionals, which are distributed under the auspices of the NASA Glenn Research Center Auditory Demonstration Laboratory.

Ms. Cooper has managed the conceptual design, construction, accreditation, and ongoing operations of several NASA acoustical laboratories and has provided noise control design, testing, and training support to help NASA's science experiment payload developers meet International Space Station hearing conservation requirements.

Ms. Cooper holds a B.S. in mechanical engineering from the University of Hartford and a M.S. in acoustics from the Pennsylvania State University and has 30 years of professional experience in the field of acoustics, noise control, and hearing conservation.

### **David Nelson**

David Nelson received his Bachelors of Science in Mechanical Engineering/Acoustics from MIT and a Master of Science from The University of Texas, Austin. For 9 years David was Laboratory Technical Director at Acoustic Systems, Austin TX, measuring sound isolation and absorption of building components as well as noise emission from computers and other noisemakers.

David has been a consultant since 1994, first with Hoover & Keith in Houston and from 1998 with Nelson Acoustics in the Austin Texas area. He's active in such diverse fields as fan noise, product design, sound quality, industrial noise control, power plant and wind turbine noise, architectural acoustics, NASA Glenn's Audio Demonstration series, customized training seminars, and development of commercial software for acoustical measurement and analysis.

He enjoys demystifying the obscure, systematizing the complex, and explaining it so "regular" people can understand.

### **Chris Cordrey**

Chris Cordrey is the Environmental, Health and Safety Director at Messer Construction based out of Cincinnati, Ohio. Chris has been with Messer Construction for the past 6 years and has 16 years of construction safety experience. He is a Certified Safety Professional through the Board of Certified Safety Professionals. Chris graduated from Marshall University with a Bachelor's of Science Degree in Safety Technology.

### **Rod Ford**

Mr. Ford is a Principal Consultant at TiER1 Performance Solutions with over 15 years of experience in learning strategy and technology consulting experience. His focus is on the bringing together of instructional technologies and instructional design to create a complete training program. He is currently leading TiER1's Buy Quiet project team for NIOSH. As a project manager, Mr. Ford has extensive experience leading teams to deliver training and technology solutions on large projects across a variety of vertical markets, including government, manufacturing, and non-profit. Mr. Ford has been the architect of learning management systems used by Johnson & Johnson and International Paper. Mr. Ford has also served as an adjunct professor at Tulane University. He has a diverse background in education, instructional development, instructional technologies, and project management.

### **Rick Neitzel**

Rick is an Assistant Professor in the Risk Science Center within the University of Michigan's Department of Environmental Health Sciences. He received a PhD in Environmental and Occupational Hygiene from the University of Washington in 2009, and has been a Certified Industrial Hygienist since 2003. He has been conducting research on noise and hearing loss since 1997. His current research interests include quantitative and subjective exposure assessment in occupational and non-occupational settings and development and evaluation of effective occupational health interventions and controls."

**Matt Patten**

Matt Patten has worked in the construction industry for over 15 years. He has run work for various sized contractors from residential to industrial settings. As a Field Coordinator for the Laborers' Health & Safety Fund, Patten works with contractors to develop and implement drug free workplace programs, job site safety audits, up to date health & safety plans and site specific training to ensure that proper care and technique are used when contractors enter a new market. Patten enjoys working proactively with employers to lower workplace injuries and fatalities and provide technical assistance in the ever changing construction industry.

### **Marco Nabuco**

Obtained Bachelor's degree in Electrical Engineering from the Catholic University of Petrópolis (1975), specializing in Metrology/Acoustics (1976), Masters in Mechanical Engineering from Universidade Federal de Santa Catarina (1980) and Ph.D. in Mechanical Engineering from Universidade Federal do Rio de Janeiro, Brazil (2002). He was president of the Brazilian Society of Acoustics 2006 to 2010. Since 1977 he works in Metrology at the Technology Research Institute of Metrology, Standardization and Industrial Quality. He is director of the Acoustics Department. His experience is in acoustics, with emphasis on Metrology, specifically on the following topics: Measurement of sound power in reverberation, calibration of reference sound sources, measurement of sound absorption in reverberation, measurement of sound insulation in situ measurement noise in populated areas, measurement of acoustic parameters of rooms, and theaters. Since 2009 he is the course coordinator for Acoustics and Vibration Metrology for a graduate program linked to the national laboratory where he works.

### **Erich Thalheimer**

Erich Thalheimer is a Senior Acoustical Engineer with Parsons Brinckerhoff and has been a practitioner of noise measurement, modeling, analysis and control for over 25 years. He is Board Certified by the Institute of Noise Control Engineering, widely published, and is a frequent participant and presenter at national noise conferences. Most notably he managed the noise control program at the country's largest infrastructure project, the Central Artery/Tunnel Project, also known as the Big Dig in Boston. The lessons learned there were put to immediate use as he then developed FHWA's Roadway Construction Noise Model (RCNM) and associated handbook. NYC DEP retained Mr. Thalheimer's services in 2004 to assist them in developing the New York City Construction Noise Regulation which went into effect in July 2007. The NYC DEP Noise Regulation has been covered in print and Internet news media world-wide, was recently cited as a noteworthy example in the new book *Technology for a Quieter America* by the National Academy of Engineering, and has won several independent awards including the 2009 ACEC Silver Award and the 2010 NHCA Safe-In-Sound Award.

### **Matthew A. Nobile**

Matthew A. Nobile received his Ph.D. in Acoustics from Penn State University, and is currently a Senior Technical Staff Member at IBM. He serves as the Technical Lead for IBM's Acoustics program, responsible for noise control design and acoustical measurements on IBM's high-end servers, and is the NVLAP Technical Director of the IBM Hudson Valley Acoustics Lab. Dr. Nobile is a Board Certified Member of the Institute of Noise Control Engineering and a Fellow of the Acoustical Society of America. He is active in both of these organizations on Technical Committees and presenting papers and chairing sessions at their conferences. He is also an active member on both American and international standards working groups on noise and has contributed to many of the fundamental standards for measuring sound power levels of products.



## Questions for Buy Quiet Meeting Breakout Session A: Process Techniques for Implementation

1. What partners would be essential to facilitate a national buy quiet initiative? What would these partners help us to do?
2. What are the essential steps in a "Buy Quiet" program?
3. What type of products and guidance are needed to implement a "buy quiet" program?
4. In terms of reporting noise levels to the public, what methods might be most useful? Database, brochure, product labels? Advantages/Disadvantages?
5. How best can reported noise levels be verified?
6. What noise level measurement test standards should be followed? Challenges?
7. How might we classify machinery and equipment classes when reporting noise levels? What existing classifications are there already?
8. What are the advantages/disadvantages to the "buy quiet" program user, to the manufacturer of machinery/equipment/tools, or to the worker?
9. How can we incorporate buy quiet or quiet by design programs into noise control solutions?

## Questions for Buy Quiet Meeting Breakout Session B: Incentives and Barriers for Implementation

1. What are the main barriers for the adoption of buy quiet initiatives?
2. What mechanism would be most effective to address such barriers?
3. What type of products/media and guidance is needed to communicate buy quiet efforts?
4. Which subpopulation should be given priority in the promotion of buy quiet initiatives (those in purchasing, the manufacturer of machinery/equipment/tools, or to the worker)?
5. What incentives could be created/used to promote a buy quiet initiative for “buy quiet” program user, manufacturers of machinery/equipment/tools, or to the worker?
6. What are the best ways to reach and communicate with targeted audiences (i.e., social networks, meetings, conferences)?
7. Are there subsectors or industries which would be more open towards a buy quiet initiative?
8. Which stakeholders should we seek to engage to create incentives towards a buy quiet initiative?

## Questions for Buy Quiet Meeting Breakout Session C: Research to Practice Products and Partnerships

1. What partners would be essential to facilitate a national buy quiet initiative? What would these partners help us to do?
2. What type of products and guidance is needed to communicate buy quiet efforts?
3. Who are the best audiences to target for a buy quiet initiative?
4. How and where can buy quiet strategies influence the professional demand for low noise power tools in construction and manufacturing industries?
5. How can we position buy quiet to create professional and political demand for quieter power tools?
6. What are the best ways to reach and communicate with audiences (i.e., social networks, meetings, conferences)
7. What are some ways to achieve momentum to start having impact?
8. How can we evaluate and capture the successes of impact?
9. How can we incorporate buy quiet or quiet by design programs into noise control solutions?