# WELCOME

The following material is being provided for informational purposes and in order to promote safety awareness. It does not constitute nor should it serve as a substitute for legal or other professional advice. Alcatel-Lucent makes no representations or warranties of any kind, express or implied, in providing this material.

### **EHS COMMITMENT FROM THE TOP**

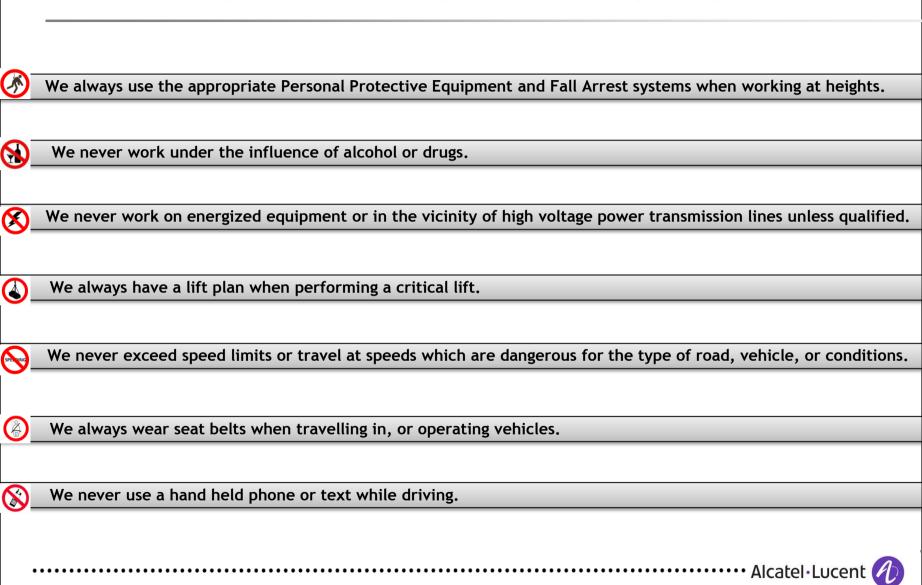


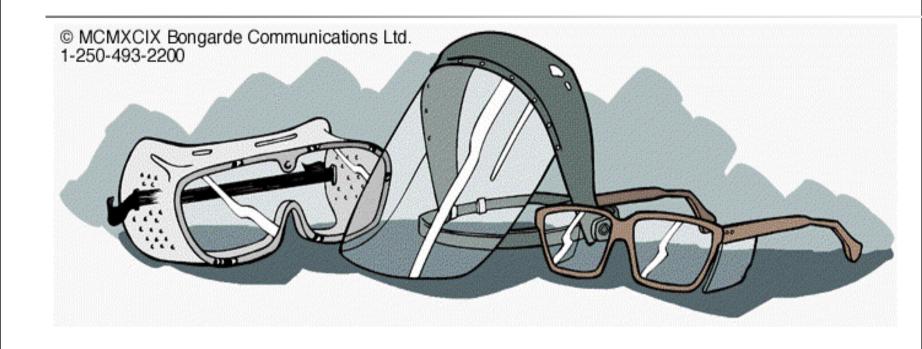
My ambition is for Alcatel-Lucent to be the recognized leader in sustainability and responsible business innovation for the technology industry.

Michel Combes
CEO Alcatel-Lucent
2013 Sustainability Report



# ZERO TOLERANCE SAFETY PRINCIPLES





# Personal Protective Equipment (PPE)

LES147WG-December 2014

### **AGENDA**

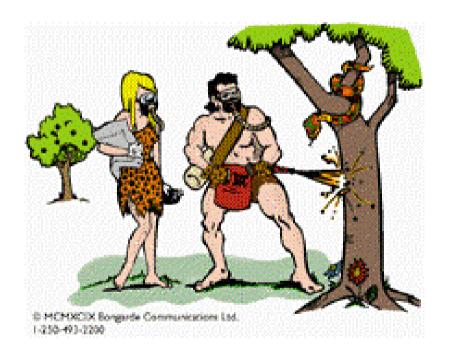
- Program Objectives
- EHS Policy
- Introduction
- General Information
- Eye and Face Protection
- Respiratory Protection
- Hearing Protection
- Head Protection
- Hand and Foot Protection
- Fall Protection
- PPE Hazard Assessment Certification Form
- Employee Responsibilities
- Subcontractor Requirements



### PROGRAM OBJECTIVES

This is a list of personal protective equipment that may be required during performance of a job at a work site:

- Eye and Face Protection
- Respiratory Protection
- Head Protection
- Hand and Foot Protection
- Protective Clothing
- Fall Protection
- Hearing Protection



Refer to the Hierarchy of Controls process when deciding whether PPE shall be used for control of identified risks and hazards

### ALCATEL-LUCENT EHS POLICY

The <u>Alcatel-Lucent Environment</u>, <u>Health and Safety Policy</u> provides the framework for EHS performance improvement in support of the business strategy.

# ENVIRONMENT, HEALTH AND SAFETY POLICY

Alcatel-Lucent is committed to operating in a sustainable manner that protects the environment and the health and safety (EHS) of employees, contractors, customers, and the communities where we conduct business. Meeting this commitment is a primary management objective and the individual and collective responsibility of all employees and will be proactively communicated internally and externally through our Corporate Social Responsibility efforts. To that end, Alcatel-Lucent will:

- Comply with applicable EHS laws, regulations, directives, commitments with customers, company requirements, and with other requirements to which Alcatel-Lucent subscribes.
- Provide employees and those who visit or work at Alcatel-Lucent locations with safe working conditions.
- Design products that are safe, energy-efficient, can be installed/serviced/uninstalled safely, and can be recycled or disposed of in an environmentally responsible manner.
- Strive to efficiently and effectively prevent pollution, prevent occupational injury and ill health, optimize energy and resource consumption and minimize the EHS impacts from activities, services and products.
- Regularly assess and continually improve EHS performance in a responsible manner by implementing management systems, setting goals and meeting objectives.
- Appropriately train, inform, motivate and consult with employees to help them
  perform their activities in a safe and environmentally responsible manner.
- Work with suppliers and customers to promote responsible use of products throughout their life cycles.
- Promote the adoption of similar principles by contractors and suppliers.

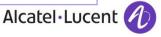
This policy will be regularly reviewed, updated as necessary, applied and communicated to all employees and persons working for or on behalf of Alcatel-Lucent, and made available to interested parties and the public.

Michel Combes CEO Alcatel-Lucent

Barbara Landmann Chief EHS Officer Alcatel-Lucent



EHS-1-1, Edition 3.2 April 2013



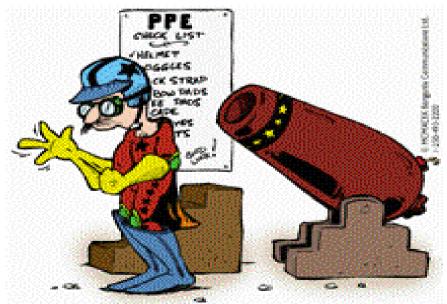
### Introduction

Personal Protective Equipment (PPE) is one of the best defenses against exposure to on-the-job hazards. PPE is designed to protect you from health and safety hazards that cannot be practically removed from the work environment.

PPE includes devices and clothing used to protect the eyes, ears, face, head, hands, feet and extremities

### PPE also Includes:

- protective clothing
- respiratory devices
- hearing protection



### GENERAL INFORMATION

PPE shall be used wherever hazards are encountered that could cause injury or impairment to any part of the body because of:

- hazards of processes or environment
- chemical hazards
- mechanical irritants
- absorption, inhalation or physical contact

### **GENERAL INFORMATION**

 PPE is selected based on worksite hazard assessments or Job Safety Analysis (JSA)

 Defective or damaged PPE shall not be used and must be discarded and replaced

 PPE must be used in accordance with manufacturer's requirements and specifications

Take care of the equipment that has been assigned to you and keep it clean.

# **GENERAL INFORMATION (cont.)**

- Consideration must be given to comfort and fit. PPE that fits poorly may not provide the necessary & desired protection
- PPE shall, whenever possible, be issued to individual users and not shared with other individuals

- Employees shall be trained in the proper use and maintenance of PPE
- All ALU visitors and contractors must follow local PPE requirements

# **GENERAL REQUIREMENTS**

Installation will provide PPE to employees to minimize potential exposures to chemical, physical, & biological agents only when:

- it is not technologically feasible to control the hazard by engineering, workplace and/or administrative controls
- While these measures are being implemented or evaluated
- If the hazard cannot be eliminated without using PPE, indicate which type(s) of PPE will be required to protect your employee from the hazard
- Refer to the GLOBAL EHS PROCEDURES: PERSONAL PROTECTIVE EQUIPMENT SECTION 6.0, TABLE 1 - PPE BY WORK ACTIVITY to determine the required Personal Protective Equipment for each installation activity

### EYE AND FACE PROTECTION

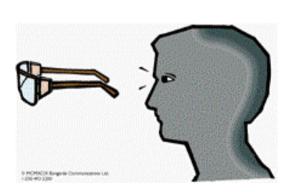
### Appropriate eye and face protection is required when:

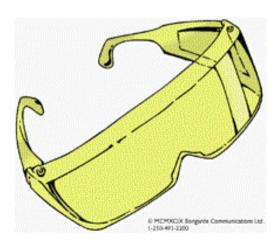
- Performing installation or removal of equipment
- Using chemicals
- Working in the presence of flying particles or dust
- Drilling, punching, grinding or buffing
- Soldering or welding
- Using hand tools or power tools
- Using compressed air or compressed gases
- Chemical, physical, or biological hazards exist, capable of causing injury to the eyes or face

### **EYE PROTECTION**

### **Eye Protection must:**

- Provide front and side protection
- Be constructed of non-metallic materials
- Meet local regulatory specifications





# **EYE PROTECTION (cont)**

Installation Operations with potential exposure to airborne particles and chemical vapors/fumes that require Safety Glasses with Side Shields are:

- Breaking or Drilling concrete or Masonry
- Using Paints or Chemicals
- Cleaning with Compressed Air
- Using Power Tools
- Cable & Wire Pulling
- Soldering
- Wiring
- Work on Live Equipment near AC power

All employees who perform, supervise, and/or observe installation work operations are required to wear eye protection

### **FACE PROTECTION**

Installation operations requiring Chemical Goggles or Face Shields are:

- Equipment Removal such as Batteries
- Hoisting & Positioning of Storage Batteries
- Removing Lead-covered cable

Note that any work with battery electrolyte requires face shields in addition to safety glasses with side shields.

### RESPIRATORY PROTECTION

### Appropriate respiratory protection is required when:

- Monitoring data indicates employees may be exposed in excess of legal requirements
- Temporary measure during implementation of engineering controls
- Absence of monitoring data for contaminants, e.g., asbestos or lead

No employee should wear a respirator without first undergoing training, a fit test, and a medical evaluation.

### RESPIRATORY PROTECTION

Installation operations requiring Respiratory Protection are: Containment Systems

- Removing Cable Covered with Metallic Lead
- Working with Kaowool or Rockwool for more than one hour in a day-

A Dust Mask is Recommended





### **VOLUNTARY USE OF RESPIRATORY PROTECTION**

The voluntary use of respiratory protection requires implementation of certain procedures.

### **Voluntary Use of Respirators:**

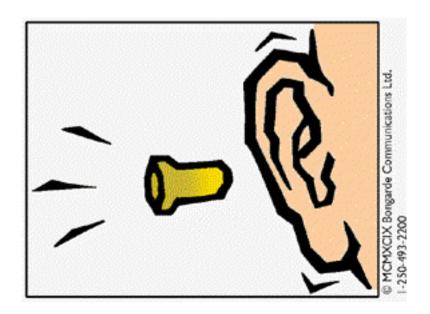
Should an Alcatel-Lucent employee voluntarily choose to wear an air-purifying respirator, your country / region's Respiratory Protection standard must be implemented. This includes training, fit-testing, medical evaluation, & a written program. Contact your Regional EHS Manager for a task evaluation and assistance.

### **Voluntary Use of Dust Masks:**

Should an Alcatel-Lucent employee voluntarily choose to wear a dust mask, he/she must be informed of the uses and limitations of using a dust mask. In the US, Appendix D of the Respiratory Protection standard will accomplish this. Outside the US, your regional EHS Representative will provide applicable information. A medical evaluation is not necessary.

### **HEARING PROTECTION**

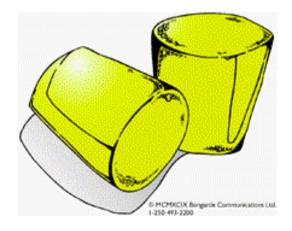
- Required in job operations resulting in noise levels exceeding legal requirements
- Employees must be trained and given an audiometric exam if they are LEGALLY REQUIRED to wear hearing protection



# INSTALLATIO OPERATIONS REQUIRING HEARING PROTECTION

- Performing work operations or conducting tests when noisy machines (e.g. Power generators) are continuously running
  - Monitoring must indicate noise levels exceeding levels potentially causing hearing loss





### **HEAD PROTECTION**

Installation employees shall wear a hardhat when they are in areas with the potential for head injury from falling or moving objects, or electrical shock from contact with electrical equipment.

Some examples where head protection is required include:

- Construction sites
- Operating an aerial lift
- Manholes or CEV
- Working under raised floors

# **HEAD PROTECTION** (cont.)

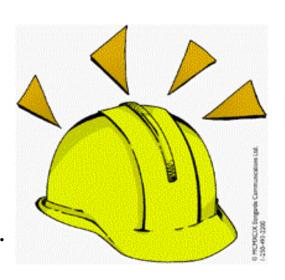
### Protective headgear requirements:

Helmets must comply with ANSI Z89.1-1986 or local equivalent

### **Employee responsibilities:**

- Inspect daily
- Discard if damaged
- Do not throw or drop
- Do not use as a seat or equipment support

Hard hats do not have a shelf life. They can continue to be worn as long as they pass inspection.



### **HEAD PROTECTION**

The following installation operations require head protection:

- All Over-head work including Painting
- Working in areas where the head may come in contact with sharp objects
- Dismantling Iron Work
- Rip Outs
- Hoisting



### FOOT PROTECTION

- Appropriate footwear shall be worn
- Always wear footwear that affords adequate support and general protection from lacerations and bruises
- Sandals, open toe shoes, sneakers, or high heels are not appropriate
- Areas will not be designated as foot protection areas without a Formal Hazard Analysis by the NARO Regional EHS Manager
- Some customers may require safety foot wear
- Safety Shoes must comply with ANSI Z41-1991 or equivalent



### HAND PROTECTION

### Hand protection (gloves) for protection:

- skin absorption of harmful substances (e.g., chemicals, BBPs)
- severe cuts, lacerations, or punctures
- severe abrasions
- chemical or thermal burns
- harmful temperature extremes
- electrical hazards



Needs for dexterity, duration, frequency of use, physical stresses, and degree of exposure should be addressed when selecting gloves

### HAND PROTECTION OR PROTECTIVE CLOTHING

The following installation activities require hand protection or protective clothing:

- Working with Battery Electrolyte
- Paint-spraying, solvent cleaning, lead cable removal & work with chemicals
- Handling of mineral wool & kaowool
- Working on or near energized electrical equipment or power
- Chemical Spill Cleanup
- Material Handling (Aligning Frames, Framing, Pulling Cable)



### **FALL PROTECTION**

### Required when:

- working within 6 feet of an unprotected edge
- Operating boom lifts
- Climbing fixed ladders >20 feet in length without a protective cage
- Working above dangerous equipment

### Fall Protection Kit includes:

- Full-Body Harness
- Lanyard
- Rope and Rope Grab
- Connecting Devices
- Shock Absorber



### **INSTALLATION PPE MATRIX**

The GLOBAL EHS PROCEDURES: PERSONAL PROTECTIVE EQUIPMENT SECTION 6.0, TABLE 1 - PPE BY WORK ACTIVITY determines the required and optional Personal Protective Equipment for each installation activity. This is a list of the different types of personal protective equipment that you may require during performance of a job at a worksite.

A brief summary of jobs identified in the personal protective equipment matrix will assist in understanding the proper PPE requirements

### Easy to use:

- Locate operation
- Determine PPE required from Table 1 in Program document
- Contact local EHS if further guidance required



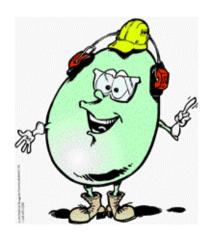
### LIMITATIONS OF PPE

Be knowledgeable of the limitations of your PPE-it won't protect you from everything!

In order to be knowledgeable about the limitations perform the

following:

- Inspect
- Maintain
- Care & Storage





### **EMPLOYEE RESPONSIBILITIES**

- Employees are responsible for wearing PPE at all times in the required areas
- PPE must be used correctly to protect you-protective devices do not provide unlimited protection!
- Please help yourself and others to remember to wear all PPE when required - this is a TEAM effort!



# SUBCONTRACTOR REQUIREMENTS FOR PPE

#### PM Role

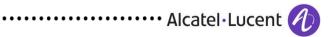
- Overall, ensure all safety rules are being followed on the project
- Ensure Subcontractor has knowledge and training in PPE equipment use
- ALU PPE Verification Form can be shared with the subcontractor
- Periodically review the Subcontractor's PPE appropriateness when onsite

### **Subcontractor Role**

- Adherence to their PPE procedures
- Make pertinent PPE available to ALU upon request
- Use ALU PPE Verification Form if none available

# **SUMMARY**

- PPE alone should not be relied on to provide protection against hazards
- Selection of PPE should match the particular hazard and employee needs (i.e. Hazard Assessment or Job Safety Analysis of worksite)
- All PPE should be kept clean & properly maintained
- PPE should be inspected at regular intervals to ensure adequate protection
- Follow Manufacturer's guidelines
- Be aware of potential multiple & simultaneous exposures to a variety of hazards. Protection to the highest level is needed
- Contaminated PPE should be disposed of in a manner that protects employees & the environment



# **Questions or Comments?**

### **Contact:**

Your local EHS Coordinator for PPE selection and technical guidance.

Regional EHS Leaders

APAC - Ong Wee Liang

**CALA** - Martha Montes

EMEA - Robert Nolan

NAR - Rich Quick