

Revision No. 3	05 / 01 / 2006	Page 1 of 3
Kennecott Utah Copper Corporation Safety and Health Standards		Standard No. 15.2 Lighting: Natural and Artificial

15.2 **INTRODUCTION**

15.2.1.1 Illumination is a factor of primary importance which affects the environment and the safe condition of the workplace.

15.2.2 **REQUIREMENTS**

15.2.2.1 Whenever possible, natural lighting should be utilized. Artificial lighting must be adequate for the type of work being performed in an area, especially where hazardous or night work situations are involved.

15.2.2.2 Reflectors, diffusers and globes will be cleaned as required.

15.2.2.3 Energy efficient lighting products must be considered whenever changing existing lighting or designing new lighting layouts.

15.2.2.4 Poorly lit working areas will be identified and corrected as soon as possible. During routine inspections, faulty lights are to be recorded for subsequent replacement.

15.2.2.5 **GLAZING** - Tempered glass must be used in accordance with the Uniform Building Code. Where large glass surfaces are used as doors, the glass must be plainly marked so that clear glass cannot be mistaken for an open door.

15.2.2.6 **ANNUAL LIGHTING LEVEL CHECKS** - Each maintenance superintendent must ensure that as a minimum, an annual lighting level inspection is carried out in his / her area of responsibility. Daytime and nighttime inspections are required. The annual inspection can be completed by including it in routine housekeeping / shift inspections provided that all areas are covered during the year. When there is a question the foot-candle light meter will be used to determine the light level

- o The results of the inspection will be recorded on the Illumination Survey Checklist (See attached Exhibit 15.2.1)
- o The lighting levels necessary for various areas are found within the attached Lighting Level Standards (Exhibit 15.2.2).

References: American National Standard Practice for Industrial Lighting ANSI RP7 Uniform Building Code Latest Edition					
Signatures					
Original signed by: Frank Klobchar	06/26/06	Original signed by: Scott Lawson	06/27/06	Original signed by: Bill Champion	06/27/06
_____ Standards Committee Chairman	_____ Date	_____ VP and GM Engineering and Technical Services	_____ Date	_____ President, KUCC	_____ Date

LIGHTING LEVEL STANDARDS

<u>LOCATION</u>	<u>RECOMMENDED MINIMUM RANGE (FOOT-CANDLES)</u>
Offices, and Conference Rooms	80 - 100
Laboratories	50 - 100
Indoor Operating Areas	20 - 30
Change Houses and Time Offices	20 - 30
Warehouses and Storage Rooms	10 - 20
Outside Working Areas (Night)	10 - 20
Conveyors and Walkways	30 - 50
Lunchrooms and Restrooms	20 - 30
Control Rooms	80
Exterior Areas:	
· Entrances	5
· Parking Lot	10
Service Garages:	
· Repairs	100
· Active Traffic Areas	20
Machine Shops:	
· Rough Bench and Machine Work	50
· Medium Bench and Machine Work	100
Welding Shops:	
· General Illumination	50
Paint Shops:	
· General Illumination	50
Sheet Metal Shops:	
· General Illumination	50
Service Space	
· Stairways, Corridors	20
· Elevators, Freight and Passenger	20
· Toilets and Washrooms	30
Woodworking:	
· General Illumination	30 - 50
Emergency Lighting (all areas)	

***NOTE:** These are the recommended illumination levels developed by the Illuminating Engineering Society, published as American National Standard Practice for Industrial Lighting, ANSI/IES RP7.