

# **Lusail Real Estate Development Company**

Health, Safety, Security, Environment, Logistics & Quality Department

# Lusail Construction Safety Procedural Forms/Checklists – Laser Safety Lenses

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#### **COMPANY PROPRIETARY INFORMATION**

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## **Amendment Record**

This document is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

Rev. No	Description / Comments	Prepared By	Checked By	Approved By	Issue Date
1	(Pg. 1) Company Propriety Information  – Not controlled if printed has been added.	HSE Working Group	Michael Ford	Uwe Krijeger	1 <sup>st</sup> April 2015
1	(Pg. 2) Revised Amendment Table	HSE Working Group	Michael Ford	Uwe Kruleger	1 <sup>st</sup> April 2015
2	Insert monitoring table	HSE Working Group	Michael Ford Michael Ford	Uwa Kritieger	1 <sup>st</sup> April 2015



## **EYEWEAR SELECTION CHART**

Q-Switched Lasers (1 ns to 0.1 ms)		Non-Q-Switched Lasers (0.4 ms to 10 ms)		Continuous Lasers Momentary (0.25 s to 10 s)		Continuous Lasers Long-Term Staring Greater than 3 hours		Attenuation	
Maximum Output Energy (J)	Maximum Beam Radiant Exposure (J·cm <sup>-2</sup> )	Maximum Laser Output Energy (J)	Maximum Beam Radiant Exposure (J·cm <sup>-2</sup> )	Maximum Power Output (W)	Maximum Beam Irradiance (W·cm <sup>-2</sup> )	Maximum Power Output (W)	Maximum Beam Irradiance (W·cm <sup>-2</sup> )	Attenuation Factor	OD
10	20	100	200	NR	NR	NR	NR	100,000,000	8
1.0	2	10	20	NR	NR	NR	NR	10,000,000	7
10 <sup>-1</sup>	2 x 10 <sup>-1</sup>	1.0	2	NR	NR	1.0	2	1,000,000	6
10 <sup>-2</sup>	2 x 10 <sup>-2</sup>	10 <sup>-1</sup>	2 x 10 <sup>-1</sup>	NR	NR	10 <sup>-1</sup>	2 x 10 <sup>-1</sup>	100,000	5
10 <sup>-3</sup>	2 x 10 <sup>-3</sup>	10 <sup>-2</sup>	2 x 10 <sup>-2</sup>	10	20	10 <sup>-2</sup>	2 x 10 <sup>-2</sup>	10,000	4
10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	10 <sup>-3</sup>	2 x 10 <sup>-3</sup>	1.0	2	10 <sup>-3</sup>	2 x 10 <sup>-3</sup>	1,000	3
10 <sup>-5</sup>	2 x 10 <sup>-5</sup>	10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	10 <sup>-1</sup>	2 x 10 <sup>-1</sup>	10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	100	2
10 <sup>-6</sup>	2 x 10 <sup>-6</sup>	10 <sup>-5</sup>	2 x 10 <sup>-5</sup>	10 <sup>-2</sup>	2 x 10 <sup>-2</sup>	10 <sup>-5</sup>	2 x 10 <sup>-5</sup>	10	1

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Document No: LUS-HSE-FM4-446-015.02 Page **3** of **3**