

## APPENDIX A

### Safety Risk Matrix and Likelihood and Severity Tables

Likelihood of Occurrence of the Consequence		
Qualitative Definition	Meaning	Value
<b>Frequent</b>	Likely to Occur Frequently ( $>10^{-1}$ )	A
<b>Probable</b>	Likely to Occur Several Times ( $<10^{-1}$ but $>10^{-3}$ )	B
<b>Occasional</b>	Likely to Occur Sometime ( $<10^{-3}$ but $>10^{-6}$ )	C
<b>Remote</b>	Very Unlikely to Occur ( $<10^{-6}$ but $>10^{-8}$ )	D
<b>Improbable</b>	Almost inconceivable that the event will occur ( $<10^{-8}$ )	E

Severity of the Consequence		
Definition Category	Meaning	Value
<b>Catastrophic</b>	Could result in one or more of the following: death, permanent total disability, irreversible significant environmental impact or monetary loss equal to or exceeding \$10M.	1
<b>Critical</b>	Could result in one or more of the following: permanent partial disability, injuries or occupational illness that may result in hospitalization of at least three personnel, reversible significant environmental impact, or monetary loss equal to or exceeding \$1M but less than \$10M.	2
<b>Marginal</b>	Could result in one or more of the following: injury or occupational illness resulting in one or more lost work day(s), reversible moderate environmental impact, or monetary loss equal to or exceeding	3
<b>Negligible</b>	Could result in one or more of the following: injury or occupational illness not resulting in a lost work day, minimal environmental impact, or monetary loss less than \$100K.	4

Risk Assessment Matrix				
Likelihood	Severity			
	1 (Catastrophic)	2 (Critical)	3 (Marginal)	4 (Negligible)
<b>A (Frequent)</b>	1A	2A	3A	4A
<b>B (Probable)</b>	1B	2B	3B	4B
<b>C (Occasional)</b>	1C	2C	3C	4C
<b>D (Remote)</b>	1D	2D	3D	4D
<b>E (Improbable)</b>	1E	2E	3E	4E

Risk Assessment Matrix Color Code	
"Tolerability" based on identified severity and likelihood.	
	Unacceptable under the existing circumstances.
	Acceptable based upon mitigations.
	Acceptable with senior management approval.

\*Numbers provided for illustrative purposes only