

RISK ASSESSMENT FORM

STRTRA-07

Dept. Name:	Engineering Workshop	RA no*:		Rev No.*	01	Date:	
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Work / B.E Locomotive – Battery Acid Replenishment

(Topping up of individual BE Battery Cells by electrically pumping 30% Sulphuric Acid supplied in 25 litre poly drums into the cell)

Sect.1. Risk Assessment Table

Sub Task/Activity	Hazards Identified	RA Criteria (People/Environment/Property/Process)	Consequences	Existing Control Measures	Severity** Rating (A) of consequence	Likelihood** Rating (B) /Refer Table in	Risk Level** (A X B)	Additional Controls (if any)	Person Responsible	Agreed time frame	New Severity Rating(A1) (after additional)	New Likelihood Rating(B1) (after additional)	Residual Risk (A1 x B1)	Decision to proceed with work Y/N
Handling & Use of Sulfuric Acid	Handling Acid	People	Contract with skin and eyes	MSDS Sheet to be consulted prior to handling acids	3	3	9				3	2	6	Y
				PPE to be worn, Face shield, Goggles, Gloves and Rubber Apron	3	4	12				3	2	6	Y
				Eyewash kit to be readily available.	3	2	6				3	2	6	Y
				Only person handling acid to be in the working area.	3	3	9	Access to be restricted to people not involved.			3	2	6	Y
		People / Property	Acid Spill	A running water hose pipe to be in close proximity to work sight for washing down spills	3	3	9				3	2	6	Y
	Improper storage of acid.	People / Property	Spill and improper use	Sulphuric Acid held in locked chem vault store until required	3	2	6				3	2	6	Y

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- *Numbering guidance: a. New RA No. if it is a fresh case. b. Old RA No. with new date if no change is hazards. c. Old RA No. inserting Rev. No & new date if there are additional Hazards
- ** Refer RA Matrix (Sect.2 Table 1,2,3, of this Form for Hazards / Consequences Evaluation (Likelihood/Severity) to People, Environment and/or Property / Commercial aspects as applicable to arrive at ratings of (A) & (B).
- *** Refer Risk Level table (Sect.2 Table 4 of this form)). .If results are either in yellow or red consider additional measures to mitigate the risk.
- ‘Contingency Plans’ to limit the impact of unplanned occurrences/ failure of control measures to be discussed and recorded in the section below.
- During review of the RA process, if scope for improvement of the documented HSE procedure for the operation/activity is identified, same should be recorded in the comments section below.

Contingency Plans :

Comments :

SR is only person approved to undertake this work – there must be someone else available in the EW throughout the work to respond to any emergency – no other volunteers / visitors to be present on any part of the Alston site whilst work is being undertaken, EW access doors to be locked whilst work in progress – BE loco must be outside the EW during the work – only 1 x 25 litre drum to be at work site at a time, rest must remain in the secure store still needed – empty drums to be rinsed out and placed back in the secure store with rinse water going into the foul drain, not the storm drain or onto unmade ground, pending disposal – eye irrigation kit must be in place at the work location throughout the work – hose pipe to be located at work area and running whilst work is taking place – EW shower door to be opened to permit easy access whilst work is taking place.

Specify PPE Required: Acid Resistant one piece overall – acid resistant arm’s length gauntlets - acid resistant wellington boots – acid resistant eye protection

Signed: _____

Reviewer’s Comments: _____

Signed: _____

Name / Position / Signature

Date

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SECT 2: Risk Ranking Matrices & Risk Level Tables

TABLE 1 : - PEOPLE			(Severity of)Consequence-A				
			FAC: First Aid Case	LTI: Lost Time Incident	Hospital: Injury requiring Hospitalization or LTI >24hours	Perm Disability: Injury resulting in permanent disability	Fatality: Injury resulting in death
Likelihood Of Consequence)-B	Rating		1	2	3	4	5
	Happened several times per annum in a location/s (Very likely)	5	5	10	15	20	25
	Happened several times per annum within the company (Likely)	4	4	8	12	16	20
	Happened within our company at least once (Unlikely)	3	3	6	9	12	15
	Heard Within the industry (Highly unlikely)	2	2	4	6	8	10
	Never heard within the industry (Almost NIL chances)	1	1	2	3	4	5

TABLE 2: PROPERTY / COMMERCIAL			(Severity of)Consequence-A				
			GBP 10. Damage to property/equipment	GBP 50. Damage to property/equipment	GBP 100. Damage to property/equipment	GBP 500. Damage to property/equipment	GBP 1000 Damage to property/equipment
Likelihood Of Consequence)-B	Rating		1	2	3	4	5
	Happened several times per annum in a location/s (Very likely)	5	5	10	15	20	25
	Happened several times per annum within the company (Likely)	4	4	8	12	16	20
	Happened within our company at least once (Unlikely)	3	3	6	9	12	15
	Heard Within the industry (Highly unlikely)	2	2	4	6	8	10
	Never heard within the industry (Almost NIL chances)	1	1	2	3	4	5

TABLE 3 : RA - MATRIX FOR MOC			(Severity of) Consequence (To be defined)\#* - A				
			Negligible	Minor	Moderate	Major	Catastrophic
Likelihood Of Consequences-B	Rating		1	2	3	4	5
	Very likely	5	5	10	15	20	25
	Likely	4	4	8	12	16	20
	Unlikely	3	3	6	9	12	15
	Highly unlikely	2	2	4	6	8	10

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Almost NIL chances	1	1	2	3	4	5
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Table 4: Risk Levels	Meaning	Action
1 - 7	Tolerable	Risk is acceptable and job can be undertaken. Consideration may be given for further reduction of risk if reasonably possible. However, in case value is above 4, continuous monitoring is required to ensure existing controls are maintained.
8 - 11	Moderate	Efforts are to be made to reduce the risk by placing additional controls with an aim to bring down Risk Level to Green zone.
12 - 25	Substantial	Efforts are to be made to reduce the risk to green/yellow rating by placing additional controls and taking appropriate action as defined above. However, If the final risk level is in the red zone then no job shall be undertaken. Until the final risk level is reduced so that it is no longer in the red zone the job shall not be undertaken."