

S.C. Railway, Carriage Workshops, Lallaguda	Doc. No	R/IMS/ER Analysis	Ref : P/29
	Rev. No.	00	Effective Date 12/12/2016
		Page No.	Page 1 of 6

Sr. No.	Description of Process	Potential Environmental Risk	Potential Environmental Impact	Severity (S)	Potential causes identified Risk	Prob. of Occurrence (O)	Current Controls	Effectiveness of Control(C)	Legal Concern (LC) (Y/N)	Interested Party Concern (IPC) (Y/N)	RPN (S x O x C)	Recommended Action(s)	Responsibility with Target Date	Action Result				
														Action Taken date	Severity (S)	Prob. of Occurrence (O)	Effectiveness of Control(C)	RPN (S x O x C)
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Dismounting of axle box housing	Hazardous waste generation (grease, muck etc)	Soil pollution	3	lack of awareness & Improper Handling	3	careful handling and use of trays	2	Y	Y	18	as per ASP/WHL/1.2 of R/IMS/Aspect Score	SSE/Wheel immediately	30/01/2017	-	-	-	-
	Cleaning of bearings	Spillage of Kerosene oil	Soil Pollution	4		4	careful work practices and use of collection trays	2	N	N	32	as per ASP/WHL/1.1 of R/IMS/Aspect Score			4	2	1	8
	Cleaning of roller bearings in cleaning plant	Generation of chemical water.	Water pollution	3	ETP non functional	4	Treatment of effluents using ETP	1	Y	N	12	as per ASP/WHL/2.1 of R/IMS/Aspect Score			-	-	-	-
	Zygly testing of Roller bearings:	Generation of chemical water.	Water pollution	3		4	1	Y	N	12	-				-	-	-	
	Cleaning with water, Application of Fluorescent dye, drying and application of developing powder	Chemical Spray, Fumes	Air pollution	2	lack of awareness & Improper Handling	3	Use of RDSO recommended testing sprays	3	Y	Y	18	continue with present controls			-	-	-	-
	Machining operations (VTL, ATL, Wheel Lathe etc)	Ferrous metallic waste	Soil pollution	3	Improper Handling	4	skilled and responsible workforce	2	N	Y	24	as per ASP/WHL/7.1 of R/IMS/Aspect Score			3	2	2	12

Date & Signature of Evaluator

SSE/INS:

SSE/CBF

SSE/SFT

CMS/CMT

CMS/LFP

S.C. Railway, Carriage Workshops, Lallaguda	Doc. No	R/IMS/ER Analysis	Ref : P/29
	Rev. No.	00	Effective Date 12/12/2016
			Page No.

Sr. No.	Description of Process	Potential Environmental Risk	Potential Environmental Impact	Severity (S)	Potential causes identified Risk	Prob. of Occurrence (O)	Current Controls	Effectiveness of Control(C)	Legal Concern (LC) (Y/N)	Interested Party Concern (IPC) (Y/N)	RPN (S x O x C)	Recommended Action(s)	Responsibility with Target Date	Action Result				
														Action Taken date	Severity (S)	Prob. of Occurrence (O)	Effectiveness of Control(C)	RPN (S x O x C)
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	De-wheeling of bogie components	Spillage of oil during draining of used dashpot oil	Soil pollution	3	lack of awareness & Improper Handling	4	careful handling and use of trays	5	N	Y	60	as per of ASP/CBF/1.2 R/IMS/Aspect Score.	SSE/CB&UF immediately	30/01/2017	3	3	2	18
	Cleaning of dashpot assembly components / hytral washer	sludge/dust/use of kerosene/oil soaked cloth	Soil pollution	3		4		3	N	Y	36	as per of ASP/CBF/3.1 R/IMS/Aspect Score			3	3	2	18
	Sand blasting of bogie & bogie components	Generation of sand dust	Air pollution	4	Leakage through enclosure	4	Isolation of activity with closed chamber	3	Y	Y	48	<b>Continue with present control &amp; try alternate processes</b>			3	3	3	27
	Welding and oxy-cutting of different coach components	Generating of metal scraps	Resource wastage	4	Improper Handling	4	Skilful handling / disposal of generated scrap	2	N	Y	32	as per of ASP/CBF/7.6 R/IMS/Aspect Score			4	3	1	12
	Cleaning with kerosene	Spillage and Solid Waste generation	Soil pollution	4	lack of awareness & Improper Handling	4	careful handling and use of trays	3	N	Y	48	as per of ASP/CBF/9.1 R/IMS/Aspect Score			4	4	1	16
	IOH Attention of Bogie	Spillage of dashpot oil	Soil pollution	4	lack of awareness & Improper Handling	3	careful handling and use of trays	3	N	N	36	as per of ASP/CBF/10.1 R/IMS/Aspect Score			3	3	2	18

Date & Signature of Evaluator

SSE/INS:



SSE/CBF



SSE/SFT



CMS/CMT



CMS/LFP

S.C. Railway, Carriage Workshops, Lallaguda	Doc. No	R/IMS/ER Analysis	Ref : P/29
	Rev. No.	00	Effective Date
		Page No.	Page 3 of 6

Sr. No.	Description of Process	Potential Environmental Risk	Potential Environmental Impact	Severity (S)	Potential causes identified Risk	Prob. of Occurrence (O)	Current Controls	Effectiveness of Control(C)	Legal Concern (LC) (Y/N)	Interested Party Concern (IPC) (Y/N)	RPN (S x O x C)	Recommended Action(s)	Responsibility with Target Date	Action Result				
														Action Taken date	Severity (S)	Prob. of Occurrence (O)	Effectiveness of Control(C)	RPN (S x O x C)
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3	Welding and oxy cutting of body panels, trough floor, head stock, corroded panels of the coaches, under frame of the coach body.	Use of Electricity	Resource Depletion	3	lack of awareness & Improper work practices	4	careful use of natural resources	4	Y	N	48	compliance to applicable act/laws highlighted in LOR register	SSE/ COR/immediately	30/01/2017	3	3	2	18
		Use of LPG & Oxygen		3		5		5	Y	N	75				3	4	2	24
	generation of Solid Waste	soil pollution	4	Improper Handling	4	Skilful handling / disposal of generated scrap	3	N	Y	48	As per ASP/COR/1.6 of R/IMS/Aspect Score. Adherence to Scrap Disposal Schedule	4			3	2	24	
	Grinding on welded joints	Generation of Noise	sound pollution	4	lack of awareness / reluctance	4	Use of PPEs & following control instructions	2	N	Y	32	As per ASP/COR/2.1 of R/IMS/Aspect Score.			3	3	2	18
4	Removal of used grease, cleaning with kerosene.	Hazardous waste generation (grease, muck oil soaked cloths etc.)	Land pollution	4	lack of awareness & Improper Handling	4	proper handling making use of collection tray	2	Y	Y	32	As per ASP/ABS/3.1 of R/IMS/Aspect Score.	SSE/ABS immediately	30/01/2017	4	3	2	24
5	Overhauling of shock absorbers, BMBC, brake gear components	generation of rubber waste		4		3		use of designated bins	2	N	Y				24	3	3	2

Date & Signature of Evaluator

SSE/INS:



SSE/CBF



SSE/SFT



CMS/CMT



CMS/LFP

S.C. Railway, Carriage Workshops, Lallaguda	Doc. No	R/IMS/ER Analysis		Ref : P/29
	Rev. No.	00	Effective Date	12/12/2016
			Page No.	Page 4 of 6

Sr. No.	Description of Process	Potential Environmental Risk	Potential Environmental Impact	Severity (S)	Potential causes identified Risk	Prob. of Occurrence (O)	Current Controls	Effectiveness of Control(C)	Legal Concern (LC) (Y/N)	Interested Party Concern (IPC) (Y/N)	RPN (S x O x C)	Recommended Action(s)	Responsibility with Target Date	Action Result				
														Action Taken date	Severity (S)	Prob. of Occurrence (O)	Effectiveness of Control(C)	RPN (S x O x C)
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6	Hot riveting of new face plates	Noise emission	Sound pollution	4	lack of awareness / reluctance	4	Use of PPEs & following control instructions	2	N	Y	32	As per ASP/DBS/3.1 of R/IMS/ Aspect Score.	SSE/CAR immediately	30/01/2017	4	3	1	12
	Cutting of ply wood, Decolam using circular saws	Noise emission	Sound pollution	4	lack of awareness / reluctance	4	Use of PPEs & following control instructions	3	N	Y	48	As per ASP/CAR/2.1 of R/IMS/ Aspect Score.			3	3	2	18
	PVC flooring activity	Generation of removed PVC sheets, Compreg sheets, Decolam etc.,	Land pollution	4	lack of awareness / reluctance	4	proper handling & adhering to control instructions	3	Y	Y	48	Compliance to applicable act/ laws highlighted in LOR register. Also, adherence to ASP/CAR/4.1 of R/IMS/ Aspect Score.			3	2	2	12
	Replacement of rock wool in power car engines	Dust formation	Air pollution	4	Lack of awareness	3	careful handling	2	Y	N	24	as per ASP/CAR/6.1 of R/IMS/ Aspect Score.			3	2	2	12
7	Spray Painting on coaches and components	Generation of Paint fumes	Air Pollution	4	Lack of awareness & complete knowhow of the procedure	3	Confined Area with enclosed chamber	2	Y	Y	24	Compliance to applicable act / laws highlighted in LOR register. Also, adherence to ASP/CAR/4.1 of R/IMS/ Aspect Score.	SSE/Paint	30/01/2017	4	3	2	24
		Generation of Blower Sound	Sound Pollution	4	3	2		Y	Y	24	4				3	2	24	

Date & Signature of Evaluator

SSE/INS:



SSE/CBF



SSE/SFT



CMS/CMT



CMS/LFP

Sr. No.	Description of Process	Potential Environmental Risk	Potential Environmental Impact	Severity (S)	Potential causes identified Risk	Prob. of Occurrence (O)	Current Controls	Effectiveness of Control (C)	Legal Concern (LC) (Y/N)	Interested Party Concern (IPC) (Y/N)	RPN (S x O x C)	Recommended Action(s)	Responsibility with Target Date	Action Result				
														Action Taken date	Severity (S)	Prob. of Occurrence (O)	Effectiveness of Control(C)	RPN (S x O x C)
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
8	Use of Baking Oven for drying purpose	Consumption of Fuel	Resource Depletion	4	Lack of awareness & complete knowhow	3	Confined Area with enclosed chamber with stack emission	3	Y	Y	36	Compliance to applicable act/ laws highlighted in LOR register. Also, adherence to safety norms and sufficient fire fighting equipment & Emergency Response practices as per the manual,	SSE/Paint immediately	30/01/2017	4	3	2	24
		Emission of smoke	Air Pollution	4		4	2	Y	Y	32	3				3	2	18	
		Fire with explosion in the fuel storage tank	Air pollution	5		2	storage at secluded place with suitable Fire Fighting arrangements	4	Y	Y	40				4	2	3	24
9	Preparation of battery electrolyte	Spillage of electrolyte, generation of acid fumes	Air pollution, Land contamination	4	Lethargy / practicing short cut methods	4	Regular Counselling for adhering to proper works procedures.	2	Y	Y	32	Compliance to applicable act/ laws highlighted in LOR register. Also, adherence to safety norms and sufficient fire fighting equipment & Emergency Response practices as per the manual,	SSE/ETL	30/01/2017	3	3	3	27
	Cleaning of old batteries with kerosene	Spillage of electrolyte, use of kerosene	Soil pollution, Depletion of natural resource	4	Lethargy, reluctance towards work	3		2	N	Y	24				3	3	2	18
10	Soaking of chemical bosch tanks in chemical waste water	Generation of chemical waste water	Water pollution, soil pollution	4	Non-functional ETP	3	compliance to applicable act/laws highlighted in LOR register	2	Y	Y	24	Modification to other suitable cleaning options.	SSE/SPG	30/01/2017	3	3	2	18

Date & Signature of Evaluator

SSE/INS:



SSE/CBF



SSE/SFT



CMS/CMT



CMS/LFP

Sr. No.	Description of Process	Potential Environmental Risk	Potential Environmental Impact	Severity (S)	Potential causes identified Risk	Prob. of Occurrence (O)	Current Controls	Effectiveness of Control(C)	Legal Concern (LC) (Y/N)	Interested Party Concern (IPC) (Y/N)	RPN (S x O x C)	Recommended Action(s)	Responsibility with Target Date	Action Result				
														Action Taken date	Severity (S)	Prob. of Occurrence (O)	Effectiveness of Control(C)	RPN (S x O x C)
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
11	Use of Fork lifters, hydraulic cranes, IC engines, Trucks	Use of hydro carbon fuels like diesel, petrol etc.,	Depletion of natural resources, Air pollution	4	non availability of alternate fuel	3	compliance to applicable act/ laws highlighted in LOR register	2	Y	Y	24	As per ASP/MLW/1.1 of R/IMS/Aspect Score.	SSE/MLW	30/01/2017	3	3	2	18
	Running check of engines	Generation of smoke and noise	Noise pollution, Air pollution	3	non practicability of alternate methods	3	compliance to applicable act/ laws highlighted in LOR register	2	Y	Y	18	As per ASP/MLW/5.1 of R/IMS/Aspect Score.			3	2	2	12
12	Magnaflux testing	Usage of Fluorescent magnetic powder	water pollution	3	non practicability of alternate methods	3	compliance to applicable act/ laws highlighted in LOR register	1	Y	N	9	As per ASP/CMT/1.1 of R/IMS/Aspect Score.	CMS/CMT LAB	30/01/2017	3	2	1	6
	Zyglo testing	Usage of Fluorescent dye penetrant		3	non practicability of alternate methods	3	compliance to applicable act/laws heighlited in LOR register	2	Y	N	18	as per ASP/CMT/2.1 of R/IMS/Aspect Score.			3	2	2	12

Date & Signature of Evaluator

SSE/INS:



SSE/CBS



SSE/SFT



CMS/CMT



CMS/LFP