

SCOPE MARTIX - Rev.00					
OWNER - END USER					
CLIENT - KAZ UNIVERSAL PROJECT CONSTRUCTION (KUPC LLP)					
SUBJECT - CHEMICAL CLEANING OF FOSSIL / HRSG BOILER / PIPE LINE / VESSEL / EXCHANGER					
CONTRACTOR - ARUDRA ENGINEERS PRIVATE LIMITED					
07.March.2018					
Sl. No	Description	AEPL	KUPC LLP	CLIENT	Comments
A	Mobilization & De-mobilization Services				
A.1	Mobilization & de-mobilization of CC skid with valves / pipelines / hoses (FOR Chennai)	√	x	x	
A.2	Logistic (Ex-factory of M/s.AEPL to site and from site to M/s.AEPL factory)	x	√	x	As per discussion / mail correspondence, we understand mobilization duration is maximum 50 day (from Chennai to Site in Kazakhstan).
A.3	Mobilization of technical man support process	√	x	x	07 Nos
A.4	Supply of process & neutralization chemicals	x	√	x	
A.5	Supply of testing chemicals	√	x	x	
A.6	Supply of inhibitor.	√	x	x	If required
A.7	Testing equipment & glass wares	√	x	x	
A.8	Necessary pumps for handling chemicals	√	x	x	
A.9	Air fare for M/s.AEPL staffs (Chennai, India to Beirut airport)	x	√	x	
A.10	Air port to guest house / hotel pick-up & drop	x	√	x	
B	Man power for execution of chemical cleaning				
B.1	Technical manpower support.	√	x	x	
B.2	Erection & dis-mantling of temporary pipelines as per approved circuit	x	√	x	
B.3	Dismantling & box-up of permanent MOV, instrument lines, etc. and placing temporary the spool wherever required in the permanent system including penguin blind.	x	√	x	
B.4	Fabrication crew, riggers & helpers during process on shift basis.	x	√	x	Fitter, gas cutter, grinder, welder, riggers and helpers to erect & dismantle the temporary circuit / hose and handling chemicals.
C	Documentation				
C.1	Preliminary site visit, study of work and preparing the needful documents	√	√	√	
C.2	Submission of procedure and getting approval along with temporary circuit lay out.	√	√	√	
C.3	Utilities requirement note to Client (requirements of power / DM water / etc.)	√	x	x	
C.4	Visa for M/s.AEPL staffs	x	√	√	
C.5	Work permits / Licenses for M/s.AEPL personnel's as and when required till completion of the said work.	x	√	√	
C.6	HSE training for your contractor before starting the said work	x	√	√	
C.7	Site coordinator / supervisor to extract work from our team.	x	√	x	
D	Site Resources				
D.1	In site / internal transportation of materials & chemicals	x	√	x	
D.2	Lifting equipments - crane / fork lift & crew capable of lifting units, loading & unloading from trucks / trailers	x	√	x	
D.3	Personnel transportation to & from camp - work for M/s.AEPL staffs	x	√	x	
D.4	Access scaffolding materials / scaffolder crew for working.	x	√	x	
D.5	Fitter, welder, cutter & grinder.	x	√	x	
D.6	Incoming power cable / supply / DG	x	x	√	Free of cost

D.7	Area lighting as required during process	x	x	√	
D.8	Air, power, DM & service water for process and fire water in case emergency chemical spillage.	x	x	√	Free of cost
D.9	Process control & monitoring.	√	x	x	
D.10	Neutralization of spent solution after chemical cleaning process	√	x	x	
D.11	Neutralization pit to hold the spent solution for neutralization	x	x	√	Min. approximate volume 200 Cu.M
D.12	Disposal of neutralized spent solution after chemical cleaning process and neutralization.	x	x	√	After adjusting pH 6.5 to 9
D.13	Accommodation and boarding for M/s.AEPL staffs	x	√	×	
D.14	Diesel	x	√	×	
D.15	Safe & area clearance / access to all working for continuous 24 hours	x	x	√	
D.16	Renewal of materials permits	x	√	×	
D.17	Shifting of materials from one site / location to other site / location	x	√	×	
D.18	Insulation	x	√	×	As per site requirments / condition.
D.19	Consumables	x	√	×	Gas / welding rod / gaskets / etc.
D.20	Mixing tank (15 Cu.M)	x	√	×	
D.21	Heating system / aux. boiler	x	√	×	As per site requirments / condition.
F	General				
F.1	Pre-job induction, safety meeting, tool box meeting & emergency plan	√	√	√	
F.2	Work completion certificate in each phase	√	√	√	
F.3	Work shop facilities.	x	x	√	
Legends:	AEPL - ARUDRA ENGINEERS PRIVATE LIMITED				
	KUPC LLP - Kaz Universal Project Construction.				
	Client - Deir-Amar & Zahrrani combined cycle power plant				
	CC - Chemical cleaning				
	DG - Diesel Generator				
	HSE - Health, safety & Environmental				
	MOV - Motor operator valve				
Note:					
1	Sub-contractor offer is fully compliant with M/s.Deir-Amar PP & M/s.Zahrrani PP under scope for chemical cleaning of HRSG boiler only.				
2	The scope matrix / division of responsibilities will vary (20 to 30%) based on the clients / end user norm.				
3	However this scope matrix / division of responsibilities above is provisional. Based on site condition, client requirments and with mutual discussion / understanding, any deviation from above shall be implemented.				
4	At initial stages may we kindly suggest you for site visit and discuss with client for better understanding among us.				