

DIRECTORATE GENERAL NATIONAL SECURITY GUARD
PROVISIONING BRANCH (ORD SEC)

The Sub Group of Technical Experts on BDDS Equipment constituted by MHA vide their letter No. IV-24011/12/2011-Prov-I dated 13 Jun 2012, dated 28 Dec 2013 & 27 Jun 2013 held its meeting at HQ NSG on 17 Nov 2017 to formulate the Draft Qualitative Requirements and Trial Directives of TCV Treatment System.

After detailed deliberations, the referred Sub Group has formulated the revised QRs and Trial Directives which are as per Appx 'A' & 'B' attached. The sub Group has decided to upload the QRs and Trial Directives on MHA as well as NSG website for asking comments/suggestions from prospective firms to make the QRs generic & broad based.

Firms are requested to forward their comments/suggestions on the formulated QRs and Trial Directives as per Performa given below along with the details (product specifications, pectoral's etc.) of their product meeting the referred QRs.

It is requested that comments if any on the QRs and Trial Directives may please be forwarded to the under mentioned within 15 days i.e. latest by Dec 2017.

GC (PROV)
Provisioning Directorate
HQ National Security Guard
Mehram Nagar, Near Domestic Airport, Palam
New Delhi-110037
Fax No 01125663258
Email :gcprov@nsg.gov.in

DRAFT QRs OF TCV TREATMENT SYSTEM

<u>Ser No</u>	QRs	Response from the firm	
		Compliant (Mention Yes or No)	Comments/ suggestion (in case non compliant)
1.	<u>General</u>		
	(a) Treatment system should integrate directly with Total Containment Vessel		
	(b) Anti agent for treatment of TCV after detection for any Chemical and Biological agent need to be filled in treatment system.		
	(c) All components shall be made from stainless steel, aluminum and treated to resist corrosion and deterioration from the chemicals and other products associated with the treatment process.		
2.	<u>Treatment Process</u>		
	(a) The treatment system should treat/neutralize Chemical hazards with treatment solution that will completely purge the Total Containment Vessel and sampling unit of TCV.		
	(b) The treatment system should treat/neutralize Biological hazards with treatment solution that will completely purge the Total Containment Vessel and sampling unit of TCV.		
	(c) The treatment system should decontaminate explosive blast remanants in case of normal explosives blast.		
	(d) The treatment system must remain completely sealed throughout treatment including containment of potential high pressures in the Total Containment Vessel.		
3.	<u>Systems</u>		
	(a) The treatment system should have a liquid solution reactor with 1.5 times the Total Containment Vessel volume.		
	(b) The treatment system should have vacuum capacity to recirculate atmosphere inside Total Containment Vessel through solution reactor.		
	(c) The treatment system should have compressor to purge liquid from Total Containment Vessel.		
	(d) The treatment system should have an adsorbent filter for final filtration.		
	(e) The treatment system should have pneumatic or electric controls for operational valves.		
4.	<u>Power Supply</u>		
	(a) The treatment system should have an onboard generator to supply all necessary electrical power for the system for min 2hrs.		
	(b) The treatment system should have capability to operate from 110/220VAC 50/60 Hz external electric supply.		

DRAFT QRs OF TCV TREATMENT SYSTEM (Contd...)

<u>Ser No</u>	QRs	Response from the firm	
		Compliant (Mention Yes or No)	Comments/ suggestion (in case non compliant)
5.	<u>Spares, Supplies, Accessories and Tools.</u> For use of the Treatment System with Total Containment Vessel		
	(a) Hoses		
	(b) Fittings		
	(c) Connections		
	(d) Tool Box		
	(e) Two complete sets of spares		
6.	<u>Controls</u>		
	(a) A control system that operates the operational valves, pumps, and compressor on the Treatment System.		
	(b) Control panel should be located centrally where exposure to Total Containment Vessel door and Treatment System exhaust are minimized.		
7.	<u>Sampling.</u> The treatment system should have ports and controls for sampling the liquid and vapor to verify complete decontamination of the Total Containment Vessel.		
8.	<u>Platform.</u> The treatment system should be mounted on a mobile platform or trailer that has all terrain wheels, tyres and suspension and can be towed by a medium range vehicle.		
9.	Treatment system should integrate directly with all type of Total Containment Vessel held with all forces.		

DRAFT TRIAL DIRECTIVES FOR TCV TREATMENT SYSTEM

Ser No	QRs		Trial Directives	Response from the firm	
				Compliant (Mention Yes or No)	Comments/suggestion (in case non compliant)
1.	General				
	(a)	Treatment system should integrate directly with Total Containment Vessel	To be physically checked by the BOO. Connect treatment system to TCV and demonstrate how the atmosphere including any residual static pressure is decontaminated. Include in the demonstration how the interface to the TCV is accomplished without exposure to the operator as well as how the transfer of any air and/or liquid materials will occur, both from the TCV to the treatment system and from the treatment system to the TCV.		
	(b)	Anti agent for treatment of TCV after detection for any Chemical and Biological agent need to be filled in treatment system.			
	(c)	All components shall be made from stainless steel, aluminum and treated to resist corrosion and deterioration from the chemicals and other products associated with the treatment process.	Certificate to be provided by the OEM. Vendor should provide material details and specifications for all components exposed to harmful or corrosive environments.		
2.	Treatment Process				
	(a)	The treatment system should treat/neutralize Chemical hazards with treatment solution that will completely purge the Total Containment Vessel and sampling unit of TCV.	OEM to provide certificate from a National/International accredited laboratory for the same and BOO to verify.		
	(b)	The treatment system should treat/neutralize Biological hazards with treatment solution that will completely purge the Total Containment Vessel and sampling unit of TCV.	OEM to provide certificate from a National/International accredited laboratory for the same and BOO to verify.		
	(c)	The treatment system should decontaminate explosive blast remanants in case of normal explosives blast.	BOO to check by conducting a physical blast using explosive and verify decontamination of the system as well as the sampling unit.		

DRAFT TRIAL DIRECTIVES FOR TCV TREATMENT SYSTEM (Contd...)

Ser No	QRs		Trial Directives	Response from the firm	
				Compliant (Mention Yes or No)	Comments/suggestion (in case non compliant)
	(d)	The treatment system must remain completely sealed throughout treatment including containment of potential high pressures in the Total Containment Vessel.	To be physically checked by the BOO. Pressurize TCV and demonstrate transfer of pressurized atmosphere completely from the TCV to the treatment system. Also demonstrate neutralization of hazardous atmosphere once it is in the treatment system. OEM to provide certificate from a National/International accredited laboratory for the same.		
3.	Systems				
	(a)	The treatment system should have a liquid solution reactor with 1.5 times the Total Containment Vessel volume.	To be physically checked by the BOO. Measure reactor size and compare to TCV volume.		
	(b)	The treatment system should have vacuum capacity to recirculate atmosphere inside Total Containment Vessel through solution reactor.	To be physically checked by the BOO. Demonstrate vacuum capabilities and show how atmosphere is moved through the system and what role the vacuum takes in the movement of air in the system.		
	(c)	The treatment system should have compressor to purge liquid from Total Containment Vessel.	To be physically checked by the BOO. Operate compressor and demonstrate the role the pressurized air takes on during the decontamination process.		
	(d)	The treatment system should have an adsorbent filter for final filtration.	To be physically checked by the BOO. Operate the system and show how the adsorbent filtration fits in the decontamination strategy to provide a final filtering step. OEM to provide certificate from a National/International accredited laboratory for the same.		
	(e)	The treatment system should have pneumatic or electric controls for operational valves	To be physically checked by the BOO. Operate the valves and system components as need to demonstrate simple control panel operation.		

DRAFT TRIAL DIRECTIVES FOR TCV TREATMENT SYSTEM (Contd...)

Ser No	QRs		Trial Directives	Response from the firm	
				Compliant (Mention Yes or No)	Comments/suggestion (in case non compliant)
4.	<u>Power Supply</u>				
	(a)	The treatment system should have an onboard generator to supply all necessary electrical power for the system for min 2 hrs.	To be physically checked by the BOO. Start power supply and cycle the entire equipment to ensure adequate power.		
	(b)	The treatment system should have capability to operate from 110/220VAC 50/60 Hz external electric supply.	Certificate to be provided by the OEM. Vendor should show generator power specifications.		
5.	<u>Spares, Supplies, Accessories and Tools.</u> For use of the Treatment System with Total Containment Vessel				
	(a)	Hoses	To be physically checked by the BOO.		
	(b)	Fittings	To be physically checked by the BOO. Check necessary fittings and how they facilitate operation of the treatment system.		
	(c)	Connections	To be physically checked by the BOO. Check necessary connections and how they facilitate operation of the treatment system.		
	(d)	Tool Box	To be physically checked by the BOO. Check tool box with tools and show how the tools provided can complete all routine maintenance and operation.		
	(e)	Two complete sets of spares	To be physically checked by the BOO by a demonstration by the vendor. Check all spare parts and show how the parts provided can completely recycle treatment system and prepare the unit for another treatment operation.		

DRAFT TRIAL DIRECTIVES FOR TCV TREATMENT SYSTEM (Contd...)

Ser No	QRs		Trial Directives	Response from the firm	
				Compliant (Mention Yes or No)	Comments/suggestion (in case non compliant)
6.	Controls				
	(a)	A control system that operates the operational valves, pumps, and compressor on the Treatment System.	To be physically checked by the BOO. Operate the valves and system components as need to demonstrate simple control panel operation.		
	(b)	Control panel should be located centrally where exposure to Total Containment Vessel door and Treatment System exhaust are minimized.	To be physically checked by the BOO. Check control panel location and relationship to threats from TCV and treatment system.		
7.	Sampling. The treatment system should have ports and controls for sampling the liquid and vapor to verify complete decontamination of the Total Containment Vessel.		To be physically checked by the BOO. Demonstrate how sampling can be completed for both liquid and vapour materials in the treatment system after the treatment process has been completed.		
8.	Platform. The treatment system should be mounted on a mobile platform or trailer that has all terrain wheels, tyres and suspension and can be towed by a medium range vehicle.		To be physically checked by the BOO. Check trailer system and demonstrate ability to tow treatment system with medium size Indian truck in various terrains for a distance of min 20 Kms.		
9.	Treatment system should integrate directly with all type of Total Containment Vessel held with all forces.		To be physically checked by the BOO. Undertaking to be provided by the firm that the equipment is safe to use.		