Government of India Bhabha Atomic Research Centre Metallic Fuels Division

Ref: MFD/AJ/OPA/064	Date: 29-10-2021
Го,	
M/s	

Dear Sir,

We request you to submit your quotation for "Fabrication, Supply, commissioning ans warranty of equipments and instruments (like dewaxing furnace, sandwich welding fixture with autorotation etc.) inside stainless steel housing under controlled dynamic flow of inert gas. The scope also includes mechanical and electrical subsystem (Details of sub systems, parts, technical specifications and dimensions are enclosed in Annexure-I)."

Yours Faithfully,

(U Sivakumar) Scientific Officer (D)

Encl.: 1.Annexure (11 pages)

ANNEXURE-1

SCOPE:

"Fabrication, Supply, commissioning ans warranty of equipments and instruments (like dewaxing furnace, sandwich welding fixture with autorotation etc.) inside stainless steel housing under controlled dynamic flow of inert gas. The scope also includes mechanical and electrical subsystem (Details of sub systems, parts, technical specifications and dimensions are enclosed in Annexure-I)."

This specification establishes the requirement for the fabrication, inspection, supply and installation of mechanical and electrical systems and process instruments inside stainless steel glove boxes as per drawings and specifications specified by the user. Further, the scope of the supply includes fabrication, supply and On-site installation of certain instruments and panels inside glove boxes as per the specification enclosed. No free issue material will be supplied by the purchaser to the contractor to execute this job. Conceptual drawing attached along with this document should be used for fabrication of the items which are mentioned in this Annexure. No modification to achieve the final requirement shall be considered within the scope of supply.

The scope of supply includes on site installation and integration of process equipments like 50T hydraulic press, cubical blender, welding setup inside the glove boxes. Ultrasonic testing, Radiography of welded and brazed components shall be in the scope of supply of this job.

Manufacturer shall follow all the instruction given in this annexure and inform the user about the manufacturing and inspection procedures, shall perform the shop-test, prepare for shipment. List of mechanical and electrical related items in the scope of supply are as follows

List of mechanical items:

Sr. No.	3 3 3 N	Material & Specification	Std Item / Drawing Reqd	Ttl QTY of Mtl. Reqd
	Lam. Gl. Panels with 6nos. Holes (914x1120) (6 holes)	Laminated Glass Panel	A4-BARC/NFG/ESS/1044	4nos.
2	Lam. Gl. Panels with 4 nos. holes (914x914)(4 holes)	Laminated Glass Panel	A4-PCF/M-997	2nos.
3	Lam. Gl. Panel (651x231) (Blank) (For Light)	Laminated Glass Panel	A4-PCF\M-759 4/5	4 nos.
4	U Gasket for Lam. Gl. Panel (914x1120)		Standard Item	2nos.
5	U Gasket for Lam. Gl. Panel (914x457)	As per Drawing	Standard Item	6nos.
6	U Gasket for Lam. Gl. Panel (914x914)	Neoprene	A4-BARC/NFG/ESS/1062	20nos.
7	U Gasket for Lam. Gl. Panel (914x457)	Neoprene	A4-PCF\M-1017	6nos.
8	U Gasket for Lam. Gl. Panel (651x231)	Neoprene	A4-PCF\M-998	12nos.
9	Metallic Side Panel (914x914)	SS	A2-BARC/NFG/EDⅅ/1135 A2-BARC/NFG/EDⅅ/1136	6nos.
10	Metallic Side Panel (914x457)	SS	A3-BARC/NFG/EDⅅ/1223	4nos.
	Ø 8" Glove Port	SS	A4-PCF/M-1014	24nos.
12	Ø 8" U Gasket	Neoprene	Drawing Required	40nos.
13	Ø 6" U Gasket	Neoprene	Drawing Required	14nos.
14	Ø 10" Bung	SS	A2-BARC/NFG/EDⅅ/1116	16nos.
15	Ø 8" Bung	SS	A3-BARC/NFG/EDⅅ/1120	46nos.
16	Ø 6" Bung	SS	A3-BARC/NFG/EDⅅ/1120	36nos.
17	O' Ring for 10" Bung	Neoprene	Standard Item	16nos.
18	O' Ring for 8" Bung	Neoprene	Standard Item	40nos.
19	O' Ring for 6" Bung	Neoprene	Standard Item	50nos.
20	Ø8" Neoprene Gloves	Neoprene	Standard Item	46nos.
21	Ø6" Neoprene Gloves	Neoprene	Standard Item	36nos.
22	PRV 1"NB	To be Fabricated	BARC/MRG/EDⅅ/1346	8nos.
23	HEPA Filter	Std	A3-BARC/NFG/EDⅅ/1148	12nos.
24	Ball Valve 1"NB	Brass/SS	Standard Item	14nos.
25	Ball Valve 1/2"NB	Brass/SS	Standard Item	2nos.
26	Solenoid Valve 0-9 bar	Std	Standard Item	2nos.
27	Rotameter 0-200 cc	Std	Standard Item	6nos.
28	Threaded Union for Rotameter	To be Fabricated	Drawing Required	8nos.
29	Instrument Panel	Aluminium	Drawing Required	6nos.
30	Pr. Gauge 0-4"	Magnehalic Pr. Gauge	Standard Item	6nos.
31	Pr. Gauge -2 to +2"	Magnehalic Pr. Gauge	Standard Item	6nos.
32	Pressure Switch	Std	Standard Item	6nos.
33	SS Elbow 1"NB	ASTM	Standard Item	40nos.
34	Threaded Union 1"NB	To be Fabricated	A3-PCF/M-939	30nos.
35	Vacuum Union 1"NB	To be Fabricated	A3-PCF/M-917	30nos.
36	SS Pipe 1/2"NB Sch40	ASTM	Standard Item	20mtrs
37	SS Elbow 1/2"NB	ASTM	Standard Item	30nos.
38	1/2" Copper tube	Copper	Standard Item	30mtrs
39	1/2" Brass Connector	Brass	Standard Item	45 no.
40	1/2" Tee Connector	Brass	Standard Item	5nos.
41	1/4" Copper tube	Copper	Standard Item	30mtrs
42	1/4" Brass Connector (with ferule &nut)	Brass	Standard Item	20nos.
43	Transfer Tunnel (250mm length)	SS	A3-BARC/NFG/ESS1046-2	8nos.
44	SS Allen Screw M6x15 lg	SS	Standard Item	50nos.
45	Cover for Electric Glands	SS	A2-BARC/NFG/ED&DS/1071	14nos.
46	O' Rings for Stubcloser	Neoprene	Standard Item	120nos.
47	Flanges for Header Connection	To fab as per hdr connectn	Drawing Required	5nos.
48	SS Filter Casing Assembly	SS	Standard Item	1nos.
49	HEPA Filter Cartridge		Standard Item	3nos.
50	Vacuum Union 1/2" NB	SS	Standard Item	5nos.
51	O' Rings for 10" Bung	Dia-12mmx ID-274mm / Dia-2.62xID-18.71	Standard Item	16nos
52		Dia-12mmx ID- mm / Dia-	Standard Item	40nos.
53	O' Rings for 8" Bung	2.62xID-18.72 Dia-12mmx ID- mm / Dia-	Standard Item	
	O' Rings for 6" Bung	2.62xID-18.72		40 nos.
54	O' Ring for Tunnel	Dia- mmx ID- mm	Standard Item	16nos
55	O' Ring for Threaded Union 1"NB	Dia- mmx ID- mm	Standard Item	50nos.
56	O' Ring for Threaded Union of Rotameter	Dia- mmx ID- mm	Standard Item	20nos.
	O' Ring for Vacuum Union 1" NB	Dia- mmx ID- mm	Standard Item	50nos.
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57 58	O' Ring for Vacuum Union 1/2" NB	Dia- mmx ID- mm	Standard Item	50nos.

List of electrical items

Sno.	Item	Qty
1	Hole saw cutter 32mm	1
2	hole saw cutter 35mm	1
3	hole saw cutter 45mm	2
4	tube cutter 4 to 28 mm	1
5	half inch hose pipe with SS breaded pipe on od with half inch EWD fittings & half inch connector	4
6	Engrave carbide point	2
7	copper coil	3
8	ITI drill bit set 1 to13 mm	1
9	Hole saw HSS 22mm	1
10	Hole saw HSS 28mm	1
11	half inch ball valve	20
12	Hole saw cutter 44mm	5
13	Neoprene rubber sheet 1220X610x10	1
14	SS trolley for electrical maintenance	3
15	Safety goggles	3
16	3/8 "I bolt	4
17	FLUKE 64 max infrared thermometer	1
18	BOSCH straight grinder	1
19	ANCHOR SOCKET 20A & 10A 2 box	20
20	1/8" & 3/8: Adapter	24
21	Beckdet terminal strip	15
22	Balluss cam switches	3
23	1/8 x6 mm pu tube connector	25
24	M12 X50 Hex. Bolts	25
25	M6 x16 SS cap Screw	300
26	M6 X16 SS Hex. Screw	100
27	M6 Washer	100
28	M6 Nut	100
29	SS plate	5
30	MS Adapter 1/8' to3/8"	1
31	Bosch metal cutting wheels of 355 x3	10
32	L UG 2.5 SqMM U Type	2
33	LUG 1.5 Sq mm round	2
34	LUG 2.5 mm round	2
35	LUG 4.0 sq mm Pin Type	1
36	LUG 4.0 Sq mm Round Type	1

37	Puc flex pipe 25 mm	2 roll
38	cable tie 100 -2.5	2
39	cable Tie 100-2.5	2
40	Cable Tie 200-2.5	2
41	Elect socket 15/A/230V	15
42	Araldite 36 g	10
43	Plug Top 15 A 230 V	20
44	Plug Top 5 A 230 V	20
45	Wire Stripper	1
46	Hack Saw mini frame	1
47	Hacksaw Blade	10
48	Combination Plier	1
49	Long Nose Plier	1
50	PVC Conduit 25 mm Pipe	15
51	PVC Elbow 25 mm	15
52	PVC T Joint 25 mm	10
53	PVC straight 25 mm	5
54	Ferule 2.5 sq mm numerical	1
55	Ferule 2.5 sq mm alphabet	1
56	Ferule 1.5 sq mm numerical	1
57	PVC FRLS Wire 1.5 sq mm copper	2 rolls
58	PVC FRLS Wire 2.5 sq mm copper	1 roll
59	PVC FRLS Cable 1.5 sq mm 4 Core copper	1roll
60	PVC FRLS Cable 2.5 sq mm 4 Core copper	1 roll
61	PVC FRLS Cable 1.0 sq mm 2 Core copper	1 roll
62	PVC FRLS Cable 1.5 sq mm 2 Core copper	1 roll
63	LUG 1.5 sq mm Pin Type	2
64	LUG 2.5 sq mm Pin Type	2
65	LUG 1.5 sq mm U Type	2
66	Hammer	1
67	Screw Driver 6"	2
68	Screw Driver 10"	1
69	ADJ Spanner 8"	1
70	1 Insulation Tape	20
71	Electrical Cutter	1
72	Drill Bit Set 2mm to 8mm	12
73	Allen key set mm	1
74	spanner set mm fix	1
75	Lamp Red Colour 15 W	10
76	Lamp Holder Pendant Type	10
77	Drill Machine	1

78	M.S Table 300*600*135 mm	2
79	M.S Pipe Fixture	3
80	Ferule 1.5 sq mm alphabet	1
81	LUG 1.5 sq mm Pin Type Insulated	2
82	LUG 2.5 sq mm Pin Type Insulated	2
83	LUG 2.5 sq mm round Type Insulated	2
84	LUG 1.5 sq mm <u>U</u> Type Insulated	2
85	LUG 1.5 sq mm round Type Insulated	2
86	LUG 4.0 sq mm pin Type Insulated	2
87	LUG 4.0 sq mm round Type Insulated	2
88	Ferule 1.5sq. Mm 0 to 9	1 Packet
89	Electrical tester	2
90	PVC insulated Tape (R,B,B,G)	. 60
91	Syska LED Lamp 7W	10
92	PLUG top 5A	40
93	PLUG top 15A	40
94	Multimeter Digital true RMS	2
95	Megger 500 Volt Analog	1
96	Clamp meter digital TRMS40	1
97	Crimping Tool	1
98	Terminal strip Backlite15 A/12 W	15
99	Terminal strip Backlite30 A/12 W	10
100	1/4"x1 mm copper coil	2
101	25x25x5 mm SS angle	3

Further, the connection of seven number of Glove box with header line at a pressure of -10"WC shall be in the scope of this work. Scope of supply also include leak testing of seven glove boxes already present at the site. The procedures for leak testing of the glove boxes is detailed below. This shall be strictly adhered to no deviation from these standards shall be tolerated.

LEAK TESTING (Procedures for leak testing)

Procedure: 1

The assembly and leak testing of the glove box shall be done in a clean closed room, free from any severe fluctuations of temperature. Special care shall be taken to clean the gasketing surface with alcohol or some other suitable solvent. All gaskets and "O" rings shall be fitted after application of a thin layer of silicone vacuum grease as sealant. All the sides and top shall have glass panels. All panels shall be tightened uniformly, the "O" rings/gaskets not being compressed more than 0.5 mm overall. All tubes, pipes and other outlets on the box shall be properly closed using suitable stoppers/rubber corks. The assembled box shall be evacuated by a pump/blower, to negative pressure of not less than 4" water gauge. Readings shall be taken at one-hour or half an hour interval to record the changing temperature and differential pressure over a period of 24 hours. Leak test records and calculation for the glove box is to be preserved till the assembly is delivered. The same shall be updated in the data record folders supplied with individual number of the

fabricated glove box/fume hood. However, it is to be noted that the glove box design pressure is not less than negative 10" water gauge.

Testing of glove box at negative 4" water column, hold time shall be at least 24 hrs or better without temperature consideration. If temperature correction is considered then, the hold time can be considered for 6 hrs and calculations can be done, accordingly.

The leak rate shall be determined from the pressure rise inside the glove box after taking into account the pressure fluctuations due to change of temperature of the air in the box. A centigrade thermometer graduated at 0.1°C and with a range of 0-50°C shall be placed inside the glove box to record the temperature change. The average temperature corrected leak rate of the fully assembled box over a period of 24 hours shall be equal to or lower than 0.05% of the box volume of air/argon gas per hour.

The preliminary leak test of the glove box shall be carried out by the manufacturer. In case, leak is found to be high, the contractor shall detect the leaking areas by approved methods and re-work on the assembly till the tests meet the requirement. No putty, M-seal etc is permissible for closure of any leakages.

Procedure: 2

The glove boxes are warranted in class 1 (ISO 10648-2) and tested through oxygen probe detection method. The leak rate criteria for the acceptance shall be same.

Note: The leak rates shall be evaluated for all the glove boxes.

General Requirement:

- a. The fabrication of the accessories of the glove boxes demands the highest standard of workmanship, particularly from the sheet metal worker and the welder. The desired finish and the leak-tightness of the GLOVE BOX, as specified by us, shall be of primary concern and as per certified tightness according to class 1 ISO 10648-2 and preferred leak rates shall be better than 0.05% box volume of air/hour. Any lowering of standards of workmanship, finish and the flatness in gasketting surface area will be evident in the final leak tests and thus, it is in the manufacturer's interest to ensure a high standard of workmanship and supervision.
- b. After completing the fabrication and installation the entire site should be properly cleaned.
- c. Unless otherwise specified all the material to be used is SS 304L and surface finish by mechanical polishing should be 0.3 < Ra < 0.35, which is equivalent/better than M3 buffed surface.
- **d.** All SS fittings viz aligning connections, elbows, tees, reducers, etc. shall be welded by certified welding process.
- e. Workmanship shall be in accordance with high-grade practice and adequate to achieve the accuracy and finish mentioned in the drawings. All sheet metal and structural work shall be of high quality. All rounded corners and channels in the box frame shall be made of defect-free pressings and shall have radius strictly as per drawings.
- f. Gasketting surface area on the glove box frame where panels will seat shall confirm to specified size and shape of polycarbonate view panels. In addition, they shall be finished smooth by grinding and shall be absolutely free from steps, pits, dents, scratches and spatters of weld metal. Adequate care shall be taken up to keep the box flat within the range of 0.5 mm and free from any waviness.

- g. In general, the number of welded joints should be reduced to a minimum utilizing the available sheet areas fully. Any route can be chosen for glove box sheet metal fabrication for main frame. Fabrication of glove box with trough design is acceptable to reduce the welding. Thus, chances of distortion can be minimized. Welding of the main frame sheet of the glove boxes should be avoided at the bottom. The supplier shall ensure the approval of fabrication drawings before start of fabrication.
- h. The diagonal measurements of the various faces of the box frame shall remain within specified tolerance (ASME boiler pressure vessel code) as shall be applicable unless specified otherwise.

1. MACHINING:

In general, machining shall be as specified. Care shall be taken to ensure that chatter marks, scratches and burrs are removed from the machined surfaces. All sharp corners are to be rounded off inside glove box and wherever possible at outside also. All tolerances, sizes and finishes shall be as per the approved drawings. Surface finish: mechanical polishing: 0.3 < Ra < 0.35

2. WELDING:

Glove boxes should be made by certified welding process preferably by TIG process. Welding procedure to be followed shall be recorded in detail and qualified as per ASME Section IX. Welding procedure qualification shall be carried out in accordance with ASME Section IX. If fillet welding is being used, ASME Section IX QW-183(Macro-Micro) should also be met for welding qualification. This test ensures the weld is clear from cracks and lack of fusion. Visual examination of the cross sections of the weld metal and heat affected zone shall show complete fusion and freedom from cracks.

In general the fabricator/supplier shall ensure the approval of Welding Procedure Specification (WPS)/ Procedure Qualification Record (PQR) and welder qualification. These have to be evolved separately against this purchase order.

3. <u>INSPECTION AND TESTING:</u>

User department shall have access at all reasonable times to all shops and the sub-contractors where material is being fabricated and assembled and all reasonable facilities for such inspection shall be provided in mutually agreeable time. A certificate shall be issued along with each glove box including inspection records and test results. The detailed QAP shall be prepared and submitted by the manufacturer (Department's QAP is indicative only for reference) for approval and the inspection shall be carried out as per the approved QAP.

i) Inspection of Raw Materials

The bidder shall assure that all materials used comply with the requirements of respective codes. The mill test reports (for chemical and physical properties) in correlation with material markings shall be provided for review. The same shall be approved before fabrication starts.

All the raw materials to be used in fabrication such as plates, forgings, tubes, bars etc., should be ultrasonically examined for defects.

For S.S.304L, the bidder should perform IGCT (inter granular corrosion test/ sensitization test) on all feed stock and present the results for verification. IGCT as per ASTM, Practice (A) & practice (E), if required will also be performed at the users end and coupons for the same should be made available to the department from all the feed material stock.

The fabricator should submit the chemical and mechanical test reports of the feed material to the user for verification/ acceptance.

NOTE to bidder:

The GLOVE BOX is designed to achieve the leak-tightness by sealing of the compression of gaskets alone. Use of putties, caulking compounds, paints, adhesives, plastics, cements shall NOT be allowed in the final assembly.

"Post supply inspection in respect of supplies made is not permitted. Any offer containing the condition of post supply inspection will be out-rightly rejected. It is therefore, mandatory for the bidders, while quoting, to indicate in clear terms the requirement of post supply inspection by any outside agency."

Other general requirements:

- 1. All the points stated above should be addressed in the quotation. In case of any doubt, clarification should be obtained at the earliest.
- 2. The terms of guarantee/ warranty should clearly be stated.
- 3. Representative of the supplier shall be present during the actual delivery of material at RLG zonal Stores, at BARC Mumbai.
- 4. The indent includes the Onsite Supply, installation and commissioning of the equipment (as per the requirement by the indenting officer).
- 5. Pre dispatch inspection of the equipment is required at the supplier site.
- 6. The guarantee of the item should be for a minimum period of one year.
- 7. Only consolidated bid of all the items mentioned in Annexure -1 will be accepted. Quotations with Part bidding will be out-rightly rejected.

List of general instructions

- 1. Bidder should quote according to the DPS purchase rules, terms and conditions.
- 2. It is to inform, that all the persons entering BARC, Mumbai premises are required to hold valid "Police Verification Certificate" or government issued photo identity card (Passport/Aadhaar) failing which they will not be allowed to enter inside BARC, during supply of material (If required).
- 3. The tentative working hours for mechanics shall be 09.00 hrs to 17.30 hrs of all BARC working days.
- 4. All material shall be new and of best quality confirming to the relevant Standards/ specification wherever applicable. Material test certificate has to be submitted along with material wherever applicable. All material shall be inspected by the department representatives before delivery.

- 5. Insurance: The manufacturer shall insure all the material during transit from factory to delivery site.
- 6. Rates quoted by the bidder should specifically include all taxes, freight, levies, duties etc. and shall remain firm throughout the currency of the contract.

"Post supply inspection in respect of supplies made is not permitted. Any offer containing the condition of post supply inspection will be out-rightly rejected. It is therefore, mandatory for the bidders, while quoting, to indicate in clear terms the requirement of post supply inspection by any outside agency."

Packaging & shipment: All the Accepted "Dampener assemblies" shall be suitably packed to avoid any damage to the assemblies before final dispatch; it shall be dispatched to

RLG Stores Officer Radiological Zonal Stores. Bhabha Atomic Research Centre Mumbai- 400 085

- The inspected and accepted Assemblies shall be delivered to:

RLG Stores Officer Radiological Zonal Stores. Bhabha Atomic Research Centre Mumbai- 400 085

You shall send your offer in a sealed envelope (strictly by registered post/Speed post only) indicating delivery period, price inclusive of taxes and other relevant information, to:

Arihant Jain Metallic Fuels Division Bhabha Atomic Research Centre Trombay, Mumbai 400 085

- Quotation shall reach us by speed post/register post only on or before 11-11-2021 before 11.30 hrs.
- Please send "REGRET" if not quoting.
- On top left corner of the sealed envelope please indicate

"Fabrication, Supply, commissioning ans warranty of equipments and instruments (like dewaxing furnace, sandwich welding fixture with autorotation etc.) inside stainless steel housing under controlled dynamic flow of inert gas. The scope also includes mechanical and electrical subsystem (Details of sub systems, parts, technical specifications and dimensions are enclosed in Annexure-I)."

All applicable taxes should be clearly mentioned.

 Overwriting, scratching etc. must be avoided in the quotation. Rewriting the whole figure shall carry out any alteration in the figure. The authorized person from the firm shall countersign such figure.

- The delivery period mentioned in the quotation shall be strictly adhered to. If the contractor
 fails to supply and secure extension of delivery date before effecting delivery of the supply
 against the contract, acceptance of such item by the purchaser will in no way prejudice the
 right of the purchaser to levy liquidated damage nor will it be entitled to the contractor for
 payment of statutory levies that comes into force after the expiry of the delivery date.
- Guarantee / Warranty of the material supplied for one year.
- Early delivery schedule will be given a consideration.
- You may contact Shri U Sivakumar (25590672) for any clarification.

PLACE OF DELIVERY:

- The inspected and accepted assemblies shall be delivered to:

Stores Officer Radiological Zonal Stores Bhabha Atomic research centre BOMBAY 400 085

INSPEPCTION AND TESTING:

The purchaser will have access at all reasonable times to all shops of the contractor and the sub contractors where material is being fabricated and assembled and all reasonable facilities for such inspection shall be provided. Prior to the supply of item the manufacture has to get it approved from the purchaser.

PAYMENT TERMS:

Full payment will be made only after the satisfactory completion of Work order and delivery of "Fabrication, Supply, commissioning an warranty of equipments and instruments (like dewaxing furnace, sandwich welding fixture with autorotation etc.) inside stainless steel housing under controlled dynamic flow of inert gas. The scope also includes mechanical and electrical subsystem (Details of sub systems, parts, technical specifications and dimensions are enclosed in Annexure-I)." Please note that income tax @ 2% will be deducted from your bill. No part payment or advance payment will be made. For this mode of payment, you are required to draw your invoice in the name of Director, Nuclear Fuels Group, Bhabha Atomic Research Centre, Mumbai 400085, in triplicate along with_Advance Stamp receipt and to be submitted along with "Fabrication, Supply, commissioning ans warranty of equipments and instruments (like dewaxing furnace, sandwich welding fixture with autorotation etc.) inside stainless steel housing under controlled dynamic flow of inert gas. The scope also includes mechanical and electrical subsystem (Details of sub systems, parts, technical specifications and dimensions are enclosed in Annexure-I)."

- Company's PAN No. should be furnished along with the bill.
- Company's copy of Sales Tax /Service Tax Registration Certificate has also to be furnished along with the bill.

DELAY CLAUSE:

Any delay which is attributable to the contractor is liable for penalty @0.5% per week (max. 5%) to be imposed on the contractor.

CONFIDENTIALITY:

No, party shall disclose any information to any third party, concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractors, consultants, advisers or the employees engaged by a party with equal force. "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "official Secrets" under section 5 of the official secrets act, 1923:- Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation. Prohibition against use of BARC's name without permission for publicity purposes:- The contractor or sub-contractor, consultant, adviser or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public medial like press, radio, T.V. or Internet without the prior written approval of BARC.

U Sivakumar

Scientific officer (D)

(On behalf of the President of India)