

दूरभाष :
TELEPHONE :
तार : बार्क-मुंबई, चेम्बुर.
TELEGRAMS: BARC-MUMBAI, CHEMBUR.
टेलिक्स : ०११-६१०१७/०११-६१०२२ बार्क ईन
TELEX: 011-61017/011-61022 BARC IN
फेक्स संख्या : ११-२२-५५०५१५१
FAX NUMBER: 91-22-5505151



सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
भाभा परमाणु अनुसंधान केन्द्र
BHABHA ATOMIC RESEARCH CENTRE

**Reactor Operations Division
Cirus**

ट्रम्बे,
मुंबई-४०० ०८५.
TROMBAY,
MUMBAI-400 085.

Ref: ROD/CIR/G-7/ 378 /2022

9th June , 2022

TENDER NOTICE

Sub: "Fabrication, installation and commissioning of piping (along with supports, valves and fittings), pumps, micro filter and MB for old apsara DM water recirculation system".

Sealed quotation is invited, for and on behalf of the President of India, for the above job as per the description and scope of work given below.

- 1.1 Tender offer is to be submitted in two parts viz. **Part-A** (Techno-commercial Bid) and **Part-B** (Price Bid).

In **Part-A** (Technical Bid) bidder must attach following documents;

- PAN No, GST certificate / Number.
- List of available plant & machinery.
- List of technical manpower along with organizational structure.
- Proof of having satisfactorily completed similar works.

In **Part-B** (Price Bid), the quotation shall be in the format of attached schedule-B and shall show the basic cost and GST separately, if applicable.

- 1.2 Bidders are required to submit in separate sealed envelopes, containing and indicating the following on outside:

First Envelope	Tender no.	Part-A (Technical Bid)
Second Envelope	Tender no.	Part-B (Price Bid)

The technical bid and the financial bid should be sealed by the bidder in separate covers duly super scribed and both these sealed covers are to be put in a bigger cover which should be sealed and duly super scribed with the name of the work, name and address of bidder, tender notice no. and due date.

- 1.3 Sealed and super scribed Tenders as mentioned above in 1.1 shall be sent to and will be received up to **15.00 hrs. of 11th July 2022, at the address given below. The quotation shall be sent through Indian postal services only by registered post / speed post.** Quotation delivered by person or through courier will not be accepted and not considered for bidding process.

To,
ROD Office, Dhruva
Kind Attn: Shri S.Pramanick, SO/F
ROD/ CIRUS
BARC, Trombay.
Mumbai-40085

- 1.4 After opening of Part-A of the tender, bidders shall be evaluated, for their techno-commercial capability to carry out the work based on;
- Technical capabilities in regard to tendered work
 - Organizational structure.
 - Available resources, skilled man power and previous experience of similar jobs.
 - Quality and safety consciousness.
 - Adherence to time schedule for the completed works.

Those who do not satisfy the conditions in **Part-A** shall not be considered for **Part-B**. Part-B (Price Bid) of tender will be opened at a later date only for the successful bidders who are qualified through technical evaluation.

- 1.5 The acceptance of tender will rest with Director, Reactor Group, BARC on behalf of The President of India who does not bind himself to accept the lowest tender and reserves to himself the authority to reject an or all of the tenders received, without assignment of any reason.
- 1.6 In the event of any conflict between or within the various sections of this specification or in case of any doubt, decision of the indenter shall be final.
- 1.7 The bidder shall quote clearly break up of basic price and taxes.
- 1.8 The quotation shall be given on vendor's letter head and properly signed in the format given in the Schedule of work. The vendor shall provide the PAN no. and GST no. along with quotation.
- 1.9 No advance or part payment is admissible.
- 1.10 The quality of workmanship shall conform to high standards and strictly as per specifications and drawings provided.
- 1.11 The contractor shall have experience in execution of similar jobs. Your quotation shall accompany suitable documents regarding this.

2.0 SCOPE OF WORK:

The scope of work mainly involves the following jobs:

- 2.1** Fabrication, supply, installation and commissioning of piping (along with supports, valves and fittings), pumps, micro filter and MB for old apsara DM water recirculation system as per drawing A-ASP-1/2022/001/SK, schedule of work and technical specification in annexure-I
- 2.2** The quantum of work will include fabrication using specified materials, quality checks, testing, supply, fabrication, installation, testing at site as per the approved drawings and technical specifications provided in annexure-1. All the material shall be arranged by the contractor.

2.3 Contractor shall also supply all the equipment, all welding consumables, tools & tackles required for piping welding, material handling, assembly & erection, arrangement of various in-situ testing requirements e.g. DP testing, hydrostatic testing etc. '.

2.4 Contractor shall also repair and/ or replace the parts damaged (if any) during fabrication, installation and handling by them free of cost.

2.5 Only electric power supply and water shall be provided as free issue materials.

3.0 WORK COMPLETION PERIOD:

Four months from the date of issue of work order.

4.0 MATERIALS AND WORKMANSHIP

4.1 Material:

Material required for the fabrication is stainless steel- 304L grade and shall be arranged by the contractor. The material shall bear mill stamp and proper co-relating mill certificates. In case, co-relating manufacturer's T.C (s) are not available, samples shall be drawn from the sheets and tested, as per the code requirements. In this case the supplier will arrange all materials and testing of the material in an approved laboratory for confirming to the properties of specified material at no extra cost. Supplier should produce the certificate in original in this regard.

4.2 Workmanship:

Workmanship shall be of first class, high grade quality and in accordance with the best approved method of fabrication and as per drawings. Welding shall be carried out by qualified welder and shall be smooth, continuous, uniform and of good quality. The indenter shall have the power to reject any works which in his judgment are not in full accordance therewith.

5.0 DRAWING REQUIREMENTS:

5.1 All the piping, equipment etc shall be fabricated as per technical specification and dimensions, tolerances and instructions/notes given in the drawing supplied. In the case of variations in drawing and specifications, the decision of the Purchaser shall be final. Should the Vendor in the execution of his work, find discrepancies in the information furnished by the Purchaser, he shall refer such discrepancies to the facility before proceeding with such work.

5.2 Indenter reserves the right to revise the drawings. Minor changes or modifications in the design that may be incorporated before fabrication to improve the performance of the product shall, be considered within the scope of specified work. Purchaser will issue such modified drawings to the successful Vendor after placement of purchase order.

6.0 WARRENTY CLAUSE:

The supplies should accompany a warranty for a period of one year against the material used and faulty workmanship.

7.0 GENERAL INFORMATION TO BIDDER

a. No advance or part payment is admissible.

b. In case any extension in the job completion period is required, the vendor has to write to BARC giving proper justification for the delay & it should be approved

by the concerned division in BARC.

- c. We reserve the right to terminate the contract at any stage of execution of the contract, without assigning any reasons.
- d. For any clarification bidders may contact Shri S .Pramanick on telephone no. 25599145 on all working days.

8.0 PENALTY:

Any delay which is attributable to the contractor is liable for penalty @ ½% per week (max 10%) to be imposed on the contractor.

9.0 PAYMENT:

By ECS within 3-4 weeks after satisfactory completion of works and submission of bills with advanced stamped receipt, bank details and Guarantee certificate and undertaking forms, previous year IT return etc.

10.0 DEDUCTION OF TAXES AND SURCHARGES:

Income tax @2% (or as applicable) will be deducted from the bill.

11.0 CONFIDENTIALITY CLAUSE:

Confidentiality:

No party shall disclose any information to any third party concerning the matter under this contract.

Restricted information:

Categories under section 18 of the Atomic Energy Act, 1962 and "official secrets" under section 5 of Official Secret Act, 1923 – Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, advisor or the employee of a contractor will invite penal consequences under the aforesaid legislation.

Prohibition against use of BARC's name without permission for publicity

The contractor or sub-contractor, consultant, advisor or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public media like press, radio, TV or internet without the prior written approval of BARC.

12.0 SECURITY INSTRUCTION:

- a) Security instructions should be strictly adhered to.
- b) **The contractor shall arrange Police verification certificates for the group of persons engaged by him for the above work as per the existing procedure at BARC.**
- c) All the personnel employed by the contractor will follow strict instruction given by RHC of reactor complex.
- d) Please indicate whether any of your relatives are employed in BARC or you or any of your employees were employed in BARC or any other units of DAE.

13.0 SAFETY:

- a) All the persons working at site shall be physically and mentally fit.

- b) All applicable industrial & safety precautions shall be taken by the contractor in respect of their personnel working at site.
- c) Contractor personnel shall also abide by the radiation safety precautions as directed by the Health physicist of the site.
- d) All workers, supervisors & engineers of the contractor shall wear necessary protective clothing, safety belts with harness, helmets & canvas/safety shoes properly laced & follow the safety requirements strictly, while working at site.
- e) The personal protective equipment to contract workers, supervisors & engineers shall be supplied by the contractor at his cost.
- f) The contractor & his persons shall strictly observe all security and safety regulations prevailing at the site.
- g) Safe industrial practices are to be followed for use of portable ladders & step ladders by Contractor & his team, wherever applicable.
- h) All workers should be insured at the cost of the contractor for risk of working at BARC & no claim will be payable by BARC.
- i) The contractor shall arrange medical certificates of their personnel from a registered medical practitioner certifying that the personnel are medically fit to work in a radiation area.
- j) Above work shall be carried out with strict adherence to safe work practice. BARC shall not be responsible for any damage, injury, death etc of any contractor's personnel under any circumstances. No compensation claim shall be admitted in this regard.

Encl:

- 1) Schedule of work
- 2) Annexure-1 (technical specification)
- 3) Drawing(A-ASP-1/2022/001/SK)

Siddhanta Ramonick


7. 6. 22

(C G Karhadkar)
Director Reactor Group

For and on behalf of the President of India

सी.जी. कर्हाडकर / C G Karhadkar
निदेशक, रिएक्टर वर्ग, भा.प.अ. केंद्र
Director, Reactor Group, BARC

Cc:

1. AO (Works)
2. DS (Cirus & Apsara)
3. ROD Office

Schedule of Work

Name of work: "Fabrication, supply, installation and commissioning of piping (along with supports, valves and fittings), pumps, micro filter and MB for old apsara DM water recirculation system."

1	2	3	4
Sl. No.	Particulars	Qty	Cost (Rs.)
1	SS 304L 80 NB , SCH-40 SEAMLESS PIPE-	55 m	
2	SS 304L 100 NB , SCH-40 SEAMLESS PIPE	06 m	
3	SORF flange (100NB-150 LBS)	02 no	
4	90° ELBOW (100 NB, SCH-40)	03 no	
5	REDUCER (100 NB x 80 NB, SCH 40)	02 no	
6	UNEQUAL TEE (100 NB x 80 NB, SCH 40)	01 no	
7	GASKET (FOR 100 NB SORF FLANGE)	04 no	
8	SORF flange(80NB-150 LBS)	31 no	
9	90° ELBOW (80 NB, SCH-40)	26 no	
10	TEE (80 NB, SCH-40)	07 no	
11	FLANGED INLET NOZZLE (FOR 80NB)	01 no	
12	FLANGED GLOBE VALVE (80NB-150 LBS)	2 no	
13	FLANGED GATE VALVE (80NB-150 LBS)	6 no	
14	GASKET (FOR 80 NB SORF FLAGE)	21 no	
15	PIPE SUPPORT-1	4	
16	PIPE SUPPORT-2	1	
17	PIPE SUPPORT-3	3	
18	PIPE SUPPORT-4	3	
19	PIPE SUPPORT-5	2	
20	PIPE SUPPORT-6	1	
21	ANCHOR FASTENER SET (HST M10X90 LG)	28	
22	BOLT (M 16X 2PX70 LG)	120	
23	NUT (M16X 2P)	120	
24	WASHER (M16)	240	
25	END PLATE(Ø125x 5 THK)	01	
26	PUMP (WITH MOTORS AND STARTER)	02 SETS	
27	Filter with replaceable cartridge (mesh size 10 micron) with one set of spare cartridge.	01 set	
24	Mixed bed with resin replacement provision. And with 60 lit resin	01 set	
25	FABRICATION, SUPPLY , INSTALLATION, TESTING OF ABOVE ALL AT OLD APSARA SITE		
Total Basic cost			

Basic cost:

GST :

Other charges (if any):

Total (including all of above): Rupees

(In figures & words)

Date:

Authorised Signature & Seal of Vendor

Annexure-1

Technical specifications

1. Technical specification for Fabrication, installation and commissioning of piping (along with supports, valves and fittings), pumps, micro filter and MB for old apsara DM water recirculation system shall be as per drawing A-ASP-1/2022/001/SK.

1.1 SPECIFICATION OF PIPELINE, FITTING AND FIXTURE:

- a) Material: SS304L, ASTM A 312,
- b) Size: 80 NB SCH40, and 100NB SCH 40.
- c) Length: 55 m for 80 NB SCH40 and 6 m for 100NB SCH 40.
- d) Flange : SORF
- e) Gasket: AS PER DRAWING FOR FLANGED JOINT.
- f) Washer: As per Drawing.
- g) NUT, BOLT, FITTINGS AND FASTNERS: As per drawing or as per site requirement.
- h) Suction pipe inside the pool of water shall have syphon break facility at the elevation as per drawing(ie 4 m above the pool bottom)..
- i) Discharge pipe inside pool shall have distributor as per drawing.
- j) All dimensions and tolerances are as per accepted and approved drawing.
- k) All weld joints are to be 100% DP tested at site by vendor and it will inspected by the department (BARC).
- l) All the material test certificates are to be provided.

1.2 SPECIFICATION OF FLANGED GLOVE VALVE:

- a) Size: 80NB
- b) Design: CLASS 150, ASME B16.34,
- c) Material: ASTM A351. GRADE: CF3
- d) Number: as per drawing.

1.3 SPECIFICATION OF FLANGED GATE VALVE:

- a) Size: 80 NB
- b) Design: CLASS 150, ASME B16.34
- c) Material: ASTM A351. GRADE: CF3
- d) Number: as per drawing.

1.4 SPECIFICATION OF PUMP AND MOTOR:

- a) Single stage, centrifugal, volute pump with axial suction port, radial discharge port and horizontal shaft , and coupled to enclosed fan-cooled motor.
- b) Flow:100 lpm.
- c) Head :15 m
- d) Flange: compatible with pipe flange.
- e) Number: Two PUMP-MOTOR Set.
- f) Material of Pump housing and shaft : SS
- g) Motor rating: 5 kw each , 3 phase AC 450 v
- h) RPM:1500 rpm, ,
- i) Insulation: F class insulation.

1.5 SPECIFICATION OF FILTER:

- a) Flow:100 lpm
- b) Type: Cuna filter(preferable), replaceable cartridge.
- c) Filter Mesh: 10micron size
- d) Material of Body of Filter Bed: SS304L

1.6 SPECIFICATION OF Mixed Bed:

- a) Flow:100 lpm
- b) BED VOLUME: approx..60 lit
- c) Provision must be kept to replace resin as and when required.
- d) Material of Body of Mixed Bed: SS304L

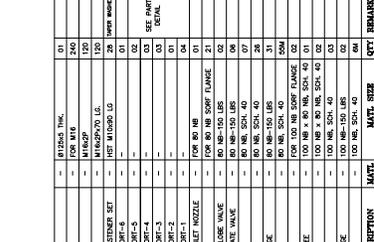
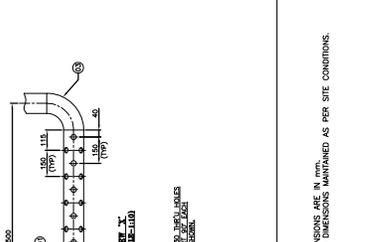
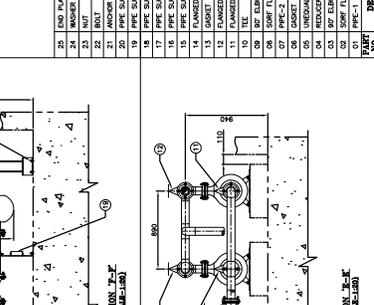
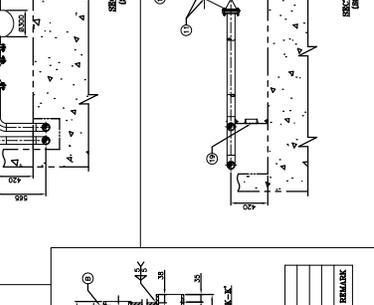
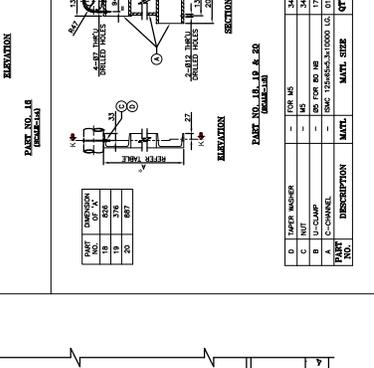
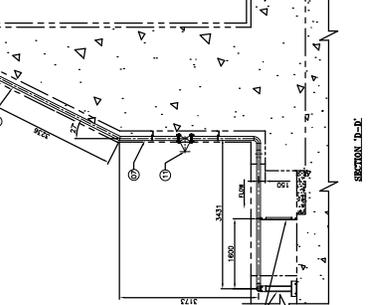
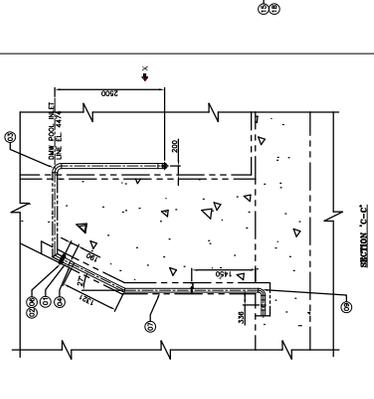
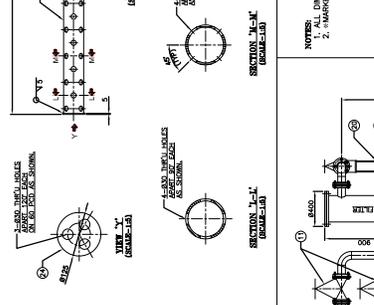
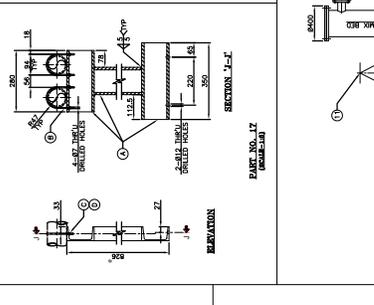
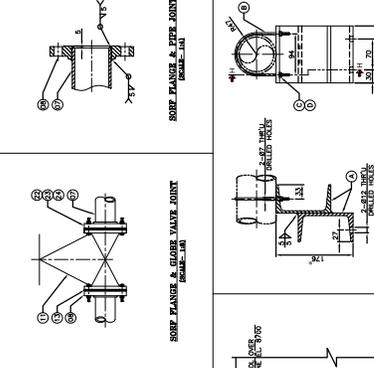
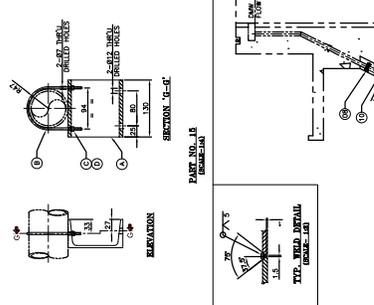
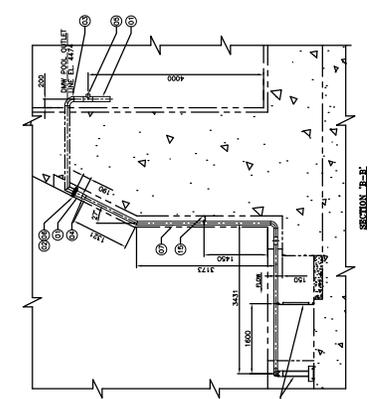
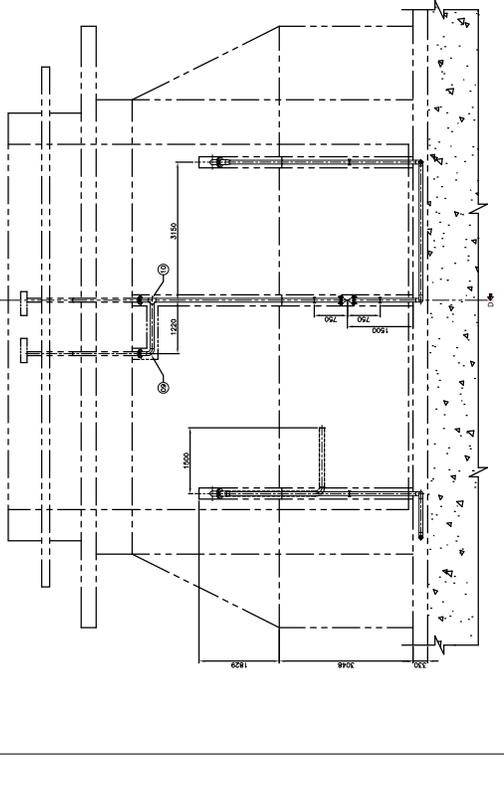
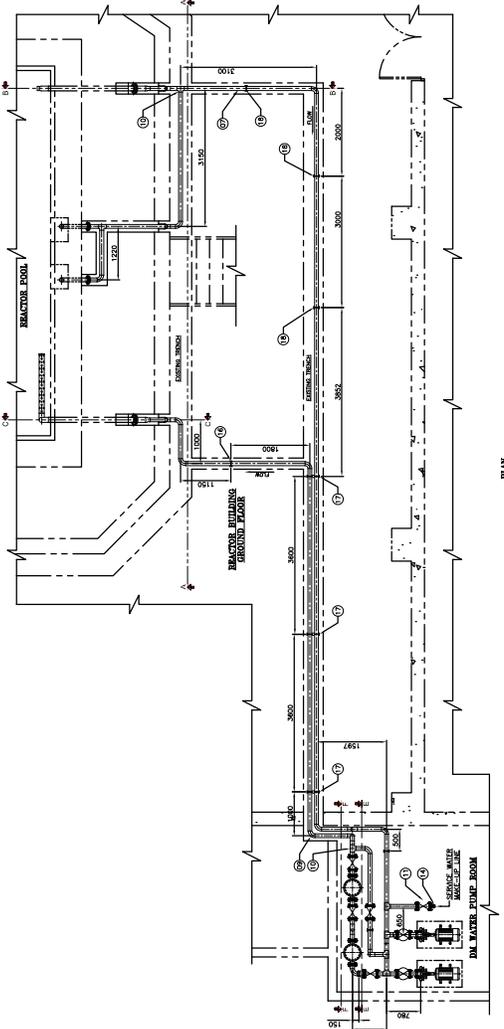
1.7 SPECIFICATION OF WELD:

All the welding shall be carried out by the qualified welders and method shall be SMAW with coated electrode E308L. All welded joints shall be examined by 100% DPT (as per ASME Section V) and be ensured to be free of porosity, cracks and other defects. Weld splatters should be ground and removed

1.8 INSPECTION AND TESTING: All fabricated, finished assemblies shall be submitted for inspection & testing by indenter or his representative at old Apsara site as follows:

- a) All welded joints shall be examined by 100% DPT and all weld joint are to be offered to be inspected by departmental representative and weld will be accepted only after satisfaction of department. .
- b) Pressure hold test of piping, pumps, filter and MB shall be carried out at 3 Kg/cm² for around 30 min. There should not be any leak and pressure should hold for 30 min.

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NOTES: DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. WARGED DIMENSIONS MAINTAINED AS PER SITE CONDITIONS.

NO.	DESCRIPTION	MATERIAL	SIZE	QTY	REMARK
25	END PLATE	ST 304	THK.	01	
26	WASHER	FOR W/TS		240	
27	NUT	M16X20	1.5	150	
28	NUT	M16X20	1.5	150	
29	ANCHOR FASTENER SET	1ST M16X20	1.5	20	
30	PIPE SUPPORT-1			02	
31	PIPE SUPPORT-2			02	
32	PIPE SUPPORT-3			02	
33	PIPE SUPPORT-4			02	
34	PIPE SUPPORT-5			02	
35	PIPE SUPPORT-6			02	
36	PIPE SUPPORT-7			02	
37	PIPE SUPPORT-8			02	
38	PIPE SUPPORT-9			02	
39	PIPE SUPPORT-10			02	
40	PIPE SUPPORT-11			02	
41	PIPE SUPPORT-12			02	
42	PIPE SUPPORT-13			02	
43	PIPE SUPPORT-14			02	
44	PIPE SUPPORT-15			02	
45	PIPE SUPPORT-16			02	
46	PIPE SUPPORT-17			02	
47	PIPE SUPPORT-18			02	
48	PIPE SUPPORT-19			02	
49	PIPE SUPPORT-20			02	
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51	PIPE SUPPORT-22			02	
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