

7 Module Disconnection Checklist

SEQ	ITEM	NOTE	CHECK
Safety	Acknowledge and Activate Work Permit	Call RIB operators (ext. 7500) Call Main Control Room to notify of water shut-off (ext. 7333)	✓
Safety	<ul style="list-style-type: none"> • Electronic dosimeter ✓ • Tank Suit ✓ • Respirator ✓ • Overshoes ✓ • Gloves(double) ✓ • Safety Glasses / Full Face Respirator ✓ 	Remove and replace overshoes when exiting the pit to reduce risk of spreading contamination.	OK
Safety	Check the General Field of ITW/ ITE	RAM or pole monitor ($\leq 500 \mu\text{Sv/h}$) ²	250 $\mu\text{Sv/h}$
Prep	Check Tools: <ul style="list-style-type: none"> • Hex keys (3/16" & 3/8") ✓ • Wrenches (two 1/2") • Side Cutter ✓ • Wipes ✓ • 10" Cable Ties ✓ • Aluminum Foil ✓ 	Aluminum foil: Four folded square pieces <i>Purge line</i>	OK
1	Switch off: <ul style="list-style-type: none"> • Heaters, Coil ✓ • Bias, Einzel Lens, Anode ✓ • EE ✓ • Turbo Pumps ✓ ON • Ion gauges ✓ 	Check or confirm with ISAC operators <i>vacuum disconnection later</i>	OK
2	Two HV Cover Keys	Electrical room	Vok
3	High Active Cooling Water	Close valves for water supply and return	Vok
4	HV Cover and HV Fence on Module Top	Use grounding rod Limit switches and signal cable plugs	OK
5	Compressed Air	Release QC Release air cylinder back pressure	OK
6	Shutter	Pull up bellows. Strap tie air cylinder	
7	Gas Line	FEBIAD Target only Close two manual valves (station and module)	N/A
8	52 Pin Connector (H)	Disconnect grounding wire from 60 kV bias	OK
9	Extraction Electrode (I)		OK
10	Einzel Lens (Y)		OK

switch off TP fans

Purge all water lines out at 2 ✓


OK

² Ref Dose Estimate Form, Document-19905

Target Module Connection and Disconnection Procedure		
Document-141576	Release No. 2	Release Date: 2018-02-21

11	<p>a) Water Lines:</p> <ol style="list-style-type: none"> 1. Target Oven ✓ 2. Tube Heater ✓ 3. MSP ✓ 4. EE ✓ 5. HS ✓ 6. Window ✓ 7. Coil 1 ✓ 8. Coil 2 (ITE only) ✓ <p>b) HS line Purging</p>	<p>a) Water Lines</p> <ol style="list-style-type: none"> 1. Leave bypass loop on 2. Leave bypass loop on 8. Leave bypass loop on for TM2 <p>b) 5 minutes 50 psi inert gas</p>	OK
12	<p>High Current Cables:</p> <ol style="list-style-type: none"> a) (A)Target Oven + ✓ b) (B)Target Oven - ✓ c) (C)Tube heater - ✓ d) (D)Tube Heater + ✓ e) (H)60KV Bias ✓ f) (PQ)Coil + ✓ g) (RU)Coil - ✓ 	<p>f) FEBIAD target only</p> <p>g) FEBIAD target only</p>	OK
13	<p>Vacuum System</p> <ol style="list-style-type: none"> a) TP1 Controller cable ✓ b) TP2 Controller cable ✓ c) TP1 BV1 ✓ d) TP2 BV2 ✓ e) IG1 ✓ f) PNG4 (TM4 only) ✓ N/A TP1 TP2 Fans ✓ 	<ol style="list-style-type: none"> a) Connectors on pumps c) KF 25 between BVs. Foil cover BVs, 24 V DC plug d) KF 25 between BVs Foil cover BVs, 24 V DC plug e) Beside the shutter, use PNG1 cable f) Switch off all fans (2 of 110 V Plugs for ITW, Switch on Extension bar for ITE) 	OK
14	<p>Steers</p> <p>ITE:</p> <ul style="list-style-type: none"> • Left • Top • Bottom • Right <p>ITW:</p> <ul style="list-style-type: none"> • X ✓ • Y ✓ • Common ✓ 	<p>3 HV connectors (Ion gauge should be switched off as it will be hot to the touch if left on)</p>	OK
15	Final Check	Module is clear for move ✓	OK
16	Return Work Permit and E-log Entry	Call RIB operators (ext. 7500) ✓ Call Main Control Room (ext. 7333) ✓	OK

NOTES:

TARGET: ~~UCx 25~~ UCx 25
 TARGET MOUDLE: TM1 TM2 TM3 TM4
 STATION: ITW ITE
 SIGNATURE 1: 
 SIGNATURE 2:

DATE: 2018-01-04

DOSE 1: 0.04 mSv
 DOSE 2: mSv