

7 Module Disconnection Checklist

TMA with TIC #9

SEQ	ITEM	NOTE	CHECK
Safety	Acknowledge and Activate Work Permit	Call ISAC operators (x7500) Call Main Control Room to notify of water shutoff or if supplied airhood is necessary (x.7333)	✓
Safety	Hold Pre-Job Briefing	<ul style="list-style-type: none"> • Discuss hazards, safety protocols and work steps listed in this document and checklists. • All workers on the work permit shall be present. If there are concerns about the job, discuss with supervisors and re-plan if necessary. • If you become contaminated during the job, contact the Main Control Room at x7500 for assistance. 	✓
Safety	<ul style="list-style-type: none"> • Electronic Dosimeter • Tank Suit • Respirator • Overshoes (double) • Gloves (double) • Safety Glasses / Full Face Respirator 	Remove and replace second pair of overshoes when exiting the pit to reduce risk of spreading contamination.	✓
Prep	Check tools: <ul style="list-style-type: none"> • Hex Keys (3/16" & 3/8") • Side Cutter • Wipes • 10" Cable Ties • RAM 		✓
Safety	P beam off for at least 30 min before entering target pit Check the general field of ITW/ ITE	RAM or pole monitor ($\leq 500 \mu\text{Sv/h}$)	✓
1	Switch off: <ul style="list-style-type: none"> • Heaters, Coil • Bias, Einzel Lens, Anode • EE • Turbo Pumps and high vacuum gages 	Check or confirm with ISAC operators	✓
2	Two HV Cover Keys	Retrieve from electrical room	✓
3	High Active Cooling Water	Close valves for water supply and return	✓

Target Module Connection and Disconnection Procedure		
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SEQ	ITEM	NOTE	CHECK
4	HV Cover and HV Fence on Module Top	Limit switches and signal cable plugs	✓
5	Compressed Air	Release QC Release air cylinder back pressure	✓
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	Two 6-pin connectors (T,H)		✓
9	Extraction Electrode (I)		✓
10	Einzel Lens (Y)		✓
11	a) Water Lines: <ol style="list-style-type: none"> 1. Target Oven 2. Tube Heater 3. MSP 4. EE 5. HS 6. Window 7. Coil 1 b) HS line Purging c) Bypass fitting installation	b) Nitrogen purge at 90 PSI for 6 minutes to purge the Heat Shield (HS) line in station <i>Purged</i> c) Install bypass fittings to all above waterlines.	✓
12	Open valves for water supply and return.		✓
13	High Current Cables: <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 - 	f) FEBIAD or p2n target only g) FEBIAD or p2n target only	✓
14	Vacuum System <ol style="list-style-type: none"> a) TP1 Controller cable b) TP2 Controller cable c) TP1 BV1 d) TP2 BV2 e) IG1 f) TP1 TP2 Fans 	a) Connector on TP1 ✓ b) Connector on TP2 ✓ c) KF 25 between BV1, foil cover BV1, 24 VDC plug ✓ d) KF 25 between BV2, foil cover BV2, 24 VDC plug ✓ e) Beside the shutter, use PNG1 cable ✓ f) Switch off all fans (2 of 110 V plugs for ITW, extension bar for ITE) ✓	✓

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SEQ	ITEM	NOTE	CHECK
15	Steerers ITE: <ul style="list-style-type: none"> • Left • Top • Bottom (Right) ITW: <ul style="list-style-type: none"> • X • Y • Common 	a) ITE -TM2 <ul style="list-style-type: none"> • Left - Y • Top -X • Bottom (right) - Common b) ITW - TM4 <ul style="list-style-type: none"> • X - Top ✓ • Y - Left ✓ • Common - Bottom (right) ✓ 	
16	Final Check	Module is clear for move	
17	Return Work Permit and E-log Entry		

NOTES:

DATE: Oct-29-2024
 TARGET: T.C # 9
 TARGET MOUDLE: TM1 TM2 TM3 TM4
 STATION: ITW ITE
 SIGNATURE 1:
 SIGNATURE 2: