

Target Module Connection and Disconnection Procedure		
Document-141576	Release No. 3	Release Date.: 2019-10-23

7 Module Disconnection Checklist

SEQ	ITEM	NOTE	CHECK
Safety	Acknowledge and Activate Work Permit ✓	Call ISAC operators (x7500) Call Main Control Room if to notify of water shutoff or if supplied airhood is necessary (x.7333)	OK
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. 	OK
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.	OK
Prep	Check tools: <ul style="list-style-type: none"> • Hex Keys (3/16" & 3/8") ✓ • Side Cutter ✓ • Wipes ✓ • 10" Cable Ties ✓ • RAM ✓ 	<i>purging line ✓</i> <i>Aluminum foil ✓</i> <i>adjustable wrench ✓</i>	OK
Safety	P beam off for at least 30 min before entering target pit ✓ Check the General Field of ITW/ ITE ✓	RAM or pole monitor ($\leq 500 \mu\text{Sv/h}$)	OK
1	Switch off: <ul style="list-style-type: none"> • Heaters, Coil ✓ • Bias, Einzel Lens, Anode ✓ • EE ✓ • Turbo Pumps ✓ 	Check or confirm with ISAC operators	OK
2	Two HV Cover Keys ✓	Electrical room	OK
3	High Active Cooling Water	Close valves for water supply and return	
4	HV Cover and HV Fence on Module Top ✓	Limit switches and signal cable plugs	OK

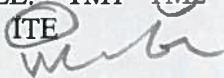
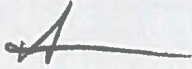
Target Module Connection and Disconnection Procedure		
Document-141576	Release No. 3	Release Date.: 2019-10-23

SEQ	ITEM	NOTE	CHECK
5	Compressed Air ✓	Release QC Release air cylinder back pressure	OK
6	Shutter ✓	Pull up bellows. Strap tie air cylinder	OK
7	Gas Line ✓	FEBIAD Target only Close two manual valves (station and module)	OK
8	Two 6-pin connectors (T,H) <i>anode</i>	Connect grounding wires to 60 kv bias	OK
9	Extraction Electrode (I)		OK
10	Einzel Lens (Y)		OK
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	b) Nitrogen purge at 90 PSI for 6 minutes to purge the Heat Shield (HS) line in station <i>90PSI nitrogen 10 minutes double check at SHC</i>	OK
12	High Current Cables: <ul 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 target only g) FEBIAD target only	OK
13	Vacuum System <ul 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) 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	Steers ITE: <ul style="list-style-type: none"> • Left • Top • Bottom (Right) ITW: <ul style="list-style-type: none"> • X • Y • Common 	a) Switch off IG1 ✓ b) ITE -TM2 <ul style="list-style-type: none"> • Left - Y • Top -X • Bottom (right) - Common c) ITW - TM4 <ul style="list-style-type: none"> • X - Top • Y - Left • Common - Bottom (right) 	OK

Target Module Connection and Disconnection Procedure		
Document-141576	Release No. 3	Release Date.: 2019-10-23

SEQ	ITEM	NOTE	CHECK
15	Final Check	Module is clear for move	<input checked="" type="checkbox"/>
16	Return Work Permit and E-log Entry		<input type="checkbox"/>

NOTES:

DATE: 2019-11-26
 TARGET: SIC # 38
 TARGET MOUDLE: TM1 TM2 TM3 TM4
 STATION: ITW ITE
 SIGNATURE 1:  0.141 MSV
 SIGNATURE 2:  0.106 MSV