

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St./ 11 rue, Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet STAINLESS STEEL LIFT-OFF BENCH		
Solicitation No. - N° de l'invitation 31184-124739/A	Date 2013-02-27	
Client Reference No. - N° de référence du client 31184-124739		
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-899-62305		
File No. - N° de dossier pv899.31184-124739	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-04-09		Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Gauthier, Martin		Buyer Id - Id de l'acheteur pv899
Telephone No. - N° de téléphone (819) 956-5469 ()	FAX No. - N° de FAX (819) 956-3814	
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: NATIONAL RESEARCH COUNCIL CANADA BLDG M50 1200 MONTREAL RD OTTAWA Ontario K1A0R6 Canada		

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Scientific, Medical and Photographic Division / Division de
l'équipement scientifique, des produits photographiques et
pharmaceutiques
11 Laurier St./ 11 rue, Laurier
6B1, Place du Portage
Gatineau, Québec K1A 0S5

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	8FT. STAINLESS STEEL SOLVENT LIFT- OFF WET BENCH THIS CLASS 100 (ISO 5) COMPATIBLE WET BENCH WILL PRIMARILY BE USED FOR PROCESSES INCORPORATING A COLLECTION OF HEATED PHOTORESISTS AND DEVELOPERS (PRIMARILY NMP AND PRS 1000-3000) ALONG WITH ACETONE AND ISOPROPONAL.	31184	31184	1	Each	\$	XXXXXXXXXXXX	See Herein	

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The requirement is detailed under the "Line Item Detail", and in accordance with the Mandatory Specifications at Annex "A". Manuals to be included.

3. Debriefings

After contract award, bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2012-11-19) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days
Insert: ninety (90) days

1.1 SACC Manual Clauses

B1000T	Condition of Material	2007-11-30
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2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario, Canada.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (two (2) copies)
Section II: Financial Bid (one (1) copy)
Section III: Certifications (one (1) copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

1.1 Section I: Technical Bid

The following applies to the Requirement and bidders must provide the following information in the bid where applicable:

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

1.1.1 Product(s) Offered

The Bidder must indicate the make and model number of the products offered (identify specific components which make up the system):

Name of Manufacturer: _____

Model/Part Number: _____

Literature attached: Yes (____) No (____)

1.1.2 Point of Manufacture/Shipping

The Bidder must state the point of manufacture/shipping of goods or where service is to be performed:

Location: _____

Postal Code: _____

1.1.3 Delivery

While delivery is requested by 29 March 2013, the best delivery that could be offered by the Bidder is _____.

1.1.4 Contacts

Bidders are requested to provide the following: Information pertaining to Article 5.3 Contractor Representatives under Part 6, Resulting Contract Clauses.

1.2 Section II: Financial Bid

The bidder must quote a firm lot price all inclusive of supply and manuals, DDP (Ottawa, Ontario), the Goods and Services Tax (GST) and/or the Harmonized Sales Tax (HST) extra, as applicable. Freight charges to destination and all applicable Customs duties and taxes must be included.

1.2.1 Exchange Rate Fluctuation

C3011T

Exchange Rate Fluctuation

2010-01-11

1.3 Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.
- (c) The evaluation team will determine first if there are three (3) or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than three responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

1.1 Technical Evaluation

All proposals submitted must be completed in full and provide all of the information requested in the Request for Proposal (RFP) package to enable a full and complete evaluation. If the requirement is not addressed in the bidder's proposal, the proposal will be considered incomplete or non-responsive and will be rejected. The onus is on the bidder to provide all the information necessary to ensure a complete and accurate assessment.

Factors for Evaluation

- 1. PRICING BASIS (MANDATORY): Prices must be firm, DDP Delivered Duty Paid.
- 2. ABILITY TO MEET THE TECHNICAL REQUIREMENT (MANDATORY):
 - a) For Items Defined by Specifications:

The bidder is requested to cross reference the mandatory technical criteria contained herein to their supporting technical documentation.
 - b) Provision of Supporting Technical Documentation:

Supporting technical documentation for the stores offered must be provided with the bid at time of bid closing.

Technical brochures or technical data MUST be provided to verify compliancy to the technical mandatory specifications.
- 3. COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS REQUEST FOR PROPOSAL (MANDATORY)

4. FOR CANADIAN SUPPLIERS ONLY: Please note that the requirements of the Federal Contractors Program for Employment Equity may apply - see herein. (MANDATORY if applicable)

1.1.1 Mandatory Technical Criteria

See Annex A.

1.2 Financial Evaluation

The lowest evaluated price will be established using the following criteria:

- a) prices will be evaluated in Canadian Funds including any applicable Taxes and Canadian Customs Duty (if applicable) and excluding the Goods and Services Tax (GST) or Harmonized Sales Tax (HST). For evaluation purposes, bids received in a foreign currency will be converted to Canadian funds using the appropriate rate of exchange using the rate quoted by the Bank of Canada as being in effect on date of bid closing.
- b) prices will be evaluated on a DDP Ottawa, Ontario Incoterms 2000.

2. Basis of Selection

A0031T

Basis of Selection -
Mandatory Technical Criteria Only

2010-08-16

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and related documentation to be awarded a contract. Canada will declare a bid non-responsive if the required certifications and related documentation are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications, to provide the related documentation or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

- 1.1.1 By submitting a bid, the Bidder certifies, for himself and his affiliates, to be in compliance with the Code of Conduct and Certifications clause of the Standard instructions. The related documentation hereinafter mentioned will help Canada in confirming that the certifications are true. By submitting a bid, the Bidder certifies that it is aware, and that its affiliates are aware, that Canada may request additional information, certifications, consent forms and other evidentiary elements proving identity or eligibility. Canada may also verify the information provided by the Bidder, including the information relating to the acts or convictions specified herein, through independent research, use of any government resources or by contacting third parties. Canada will declare non-responsive any bid in respect of which the information requested is missing or inaccurate, or in respect of which the information contained in the certifications is found to be untrue, in any respect, by Canada. The Bidder and any of the Bidder's affiliates, will also be required to remain free and clear of any acts or convictions specified herein during the period of any contract arising from this bid solicitation.

Bidders who are incorporated, including those bidding as a joint venture, must provide with their bid or promptly thereafter a complete list of names of all individuals who are currently directors of the Bidder. Bidders bidding as sole proprietorship, including those bidding as a joint venture, must provide the name of the owner with their bid or promptly thereafter. Bidders bidding as societies, firms, partnerships or associations of persons do not need to provide lists of names. If the required names have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

Canada may, at any time, request that a Bidder provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification form- PWGSC-TPSGC 229)
(<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>) for any or all individuals aforementioned within the time specified. Failure to provide such Consent Forms within the time period provided will result in the bid being declared non-responsive.

2. Additional Certifications Required with the Bid

Bidders must submit the following duly completed certifications with their bid.

2.1 Federal Contractors Program for Employment Equity - Certification

2.1.1 Federal Contractors Program - over \$25,000 and below \$200,000

Suppliers who are subject to the Federal Contractors Program (FCP) and have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive federal government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

- (a) () is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, or temporary employees having worked 12 weeks or more in Canada;
- (b) () is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;
- (c) () is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;
- (d) () has not been declared an ineligible contractor by HRSDC, and has a valid certificate number as follows: _____.

Further information on the FCP is available on the HRSDC Web site:

[Http://www.hrsdc.gc.ca/eng/labour/equality/fcp/index.shtml](http://www.hrsdc.gc.ca/eng/labour/equality/fcp/index.shtml)

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2.1 Requirement

The requirement is detailed under the "Line Item Detail", and in accordance with the Mandatory Specifications at Annex "A". Manuals to be included.

2.2 Manuals

One complete set of Shop Drawings Successful Vendor must provide shop drawings including a dimensioned Facilities Connections Requirement to NRC for approval prior to manufacturing Wet bench.

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2012-11-19) General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before _____ (to be filled in only at contract award).

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Martin Gauthier
Public Works and Government Services Canada
Acquisitions Branch
Commercial Consumer Products Directorate
11 Laurier Street, 6A2, Phase III
Place du Portage, Hull, Quebec, K1A 0S5
Telephone: (819) 956-5469
Facsimile: (819) 956-3814
E-mail address: martin.gauthier@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

5.2 Technical Authority (to be filled in only at contract award)

The Technical Authority for the Contract is:

Name: _____
Telephone: (____) _____
Facsimile: (____) _____
E-mail address: _____

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 Accounts Payable Contact:

Name: Susan Larocque
Telephone: 613-993-1158
E-mail address: susan.larocque@cnrc-nrc.gc.ca

5.4 Contractor's Representative (fill in)

The telephone number of the person responsible for:

General enquiries

Name: _____
Telephone No. _____
Facsimile No. _____
E-mail address: _____

Delivery Follow-up

Name: _____
Telephone No. _____
Facsimile No. _____
E-mail address: _____

6. Payment

6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm unit price, as specified in the contract for a cost of \$_____ **(to be filled in only at contract award)**. Customs duties are included, and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.2 SACC Manual Clauses

C2000C	Taxes - Foreign-Based Contractor	2007-11-30
C2602C	Customs Duty - NRC	2008-05-12
H1000C	Single Payment	2008-05-12

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

8. Certifications

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario, Canada.

10. Priority of Documents

If there is a discrepancy between the wordings of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) 2010A (2012-11-19) General Conditions - Goods (Medium Complexity);
- (c) Annex A, Mandatory Specifications for the Stainless Steel Lift-Off Bench;
- (d) Annex B, Stainless Steel Solvent Lift-off Bench Specifications
- (e) the Contractor's bid dated (to be filled in at contract award).

11. SACC Manual clause

A2000C Foreign Nationals (Canadian Contractor)	2006-06-16
A2001C Foreign Nationals (Foreign Contractor)	2006-06-16
B1501C Electrical Equipment	2006-06-16

12. Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:

Delivered Duty Paid (DDP) Ottawa, Ontario Incoterms 2000 for shipments from a commercial contractor.
2. The Contractor will be responsible for all delivery charges, administration, costs and risk of transport and customs clearance, including the payment of customs duties and taxes.

ANNEX A**MANDATORY SPECIFICATIONS****STAINLESS STEEL SOLVENT LIFT-OFF BENCH**

Vendors must cross reference the mandatory technical criteria in a concise format by using page, paragraph(s) & sub-paragraphs as applicable to their supporting technical documentation.

1. Successful vendor must have at least 7 yrs experience in the manufacturing of wet benches for Class 100/1000 (ISO Class 5/6) clean room applications.

Reference in Contractors Proposal: _____

2. Successful vendor must provide a list showing a minimum of twenty (20) similar benches currently in service in the semiconductor/microelectronics industries.

Reference in Contractors Proposal: _____

3. Successful vendor must have a minimum of five (5) Liftoff benches currently in service utilizing similar chemistries.

Reference in Contractors Proposal: _____

4. Successful vendor must have a demonstrated ability to manufacture SS Cleanroom compatible Wet benches to meet or exceed all applicable Canadian Standards (CSA) and/or Ontario electrical codes.

Reference in Contractors Proposal: _____

5. The Bidders must provide company/organisation names, addresses and contact person(s) (with both telephone numbers and facsimile numbers) for a minimum of five (5) instances including one(1) residing in Ontario, Canada where the Bidder has supplied same/similar Wet Benches as articulated in this bid. The equipment referenced must also be currently in operation.

Reference in Contractors Proposal: _____

ANNEX B**STAINLESS STEEL SOLVENT LIFT-OFF BENCH SPECIFICATIONS****1. Lift-off Bench Mandatory Specifications**

1. Class 100/1000 (ISO 5/6) clean room suitable design
2. Cabinet and working deck must be fully exhausted
3. Overall cabinet dimension must be no greater than 36"D x 96" W x 80" H
4. Bench must be exhausted towards the back of the bench and must exhaust in the 1200CFM range
5. 304/316 grade polished stainless steel construction with no.8 bright finish
6. Chassis must be equipped with heavy duty casters with recessed leveling feet
7. There must be drained secondary containment sump (under tanks)
8. The working deck is comprised of the following:
 - 4 temperature controlled heated baths
 - 1 ambient bath
 - 1 dump/rinser
 - 1 waste cup sink
9. Process and rinse tanks will each be sized to easily accommodate one(1) 100mm x 25 wafer cassette (Entegris A72-40)
 - De-ionized water spray guns on each side of bench (see layout drawing)
 - Nitrogen spray guns on each side of bench (see layout drawing)
 - Two(2) solvent waste streams must be directed to separate in-house waste collection systems
 - Wet Bench must be CSA certified or accepted Field Evaluation Marks
 - Each facility service must be single point of entry to the machine

Reference in Contractors Proposal: _____

2. Wet Bench Materials Specification

1. **Water Piping:** polypropylene headers with PFA distribution tubing. **Flaretek** fittings for all connections
2. **Solvent Plumbing:** stainless steel tubing and stainless steel valves
3. **Shell and frame:** 304/316 grade stainless steel with no.8 bright finish
4. **Nitrogen distribution:** 316 Stainless steel tubing and PFA tubing . **Swagelok** fittings for all connections
5. Clean Dry Air (CDA) Distribution: polyethylene tubing (red). Swagelok fittings for all connections
6. Process chemistry tanks: electro-polished 316 stainless steel
7. Solvent waste plumbing: 304 stainless steel
8. Dump/rinser tank: natural Polypropylene
9. Wiring: Teflon coated wire meeting all Ontario, Canada electrical standards

Reference in Contractors Proposal: _____

3. Electrical Specifications

1. Bench must be fully CSA compliant or have accepted Field Evaluation Marks
2. All electrical control components will be located in a separate enclosure within the bench above the work deck for easy visibility and access
3. 24vdc control voltage
4. All wiring must be Teflon coated of appropriate gauge
5. Master EPO mushroom button located on front panel to shutdown entire bench
6. Exhaust monitor interlocked to machine power
7. All maintenance panels interlocked with machine power-switches must be "pull-to-cheat" style to allow servicing when required
8. All servicing of Wet bench must be via service panels from the front of the bench.
9. Waste collection interlock input must disable solvent pot drains when collection system is full
10. Main power disconnect must be capable of lock-out
11. All control logic is PLC based
12. Electrical cabinet is nitrogen purged
13. Electrical areas of heated pots are nitrogen purged

Reference in Contractors Proposal: _____

4. Operator Control Panel Specifications

1. Four(4) process pot temperature controllers with displays
2. Adjustable temperature set points
3. Five(5) digital counters, one for each pot
4. Counters must shutdown heated pots when cycle is completed
5. EPO mushroom button conveniently located
6. Interlock status lights for waste collection system, door panels ,leak detection, alarms
7. Dump/Rinser programmable controller display

Reference in Contractors Proposal: _____

5. Process Tanks Specifications - Four(4) heated

1. Tanks must be sized for one (1) 100mm x 25 wafer cassette
2. Tanks must be constructed of 316L electro-polished stainless steel
3. All tanks must be setback from front of bench by at least 10 inches and not more than 12 inches
4. Tanks must be bottom drained with a pneumatic operated drain valve
5. Four (4) heated non-recirculating tanks with double wall insulated construction with a nitrogen purge
6. Tank temperatures must be maintained during processing +/- 1 degree Centigrade
7. Tank temperature range ambient to 200 degrees Centigrade
8. Secondary "overtemp" controllers with independent temperature probes interlocking to the heaters
9. Mica strip heaters externally mounted to the tanks for heating
10. Tank tops are nitrogen purged
11. Tank drain to solvent waste collection system(external in-house system)
12. Dual low level indicators for all heated tanks
13. Tanks have tight fitting lid and flush deck cover lid
14. Tanks will have nitrogen bubbler with a separate regulator and flow meter for each Tank.
15. Bubbler ring must be 316 stainless steel.
16. All valves and fittings will be **Swagelok™**

Reference in Contractors Proposal: _____

6. Process Tank Specification (ambient)

1. Tank must be sized for one (1) 100mm x 25 wafer cassette
2. Tanks must be setback from front of bench by at least 10 inches and not more than 12 inches
3. Tank must be constructed of 316L electro-polished stainless steel
4. Tank to be single wall construction-not insulated
5. Tank drain to separate waste solvent collection (independent of heated tanks)
6. All valves and fittings will be Swagelok™
7. Tank to have tight fitting lid and flush deck cover lid
8. Tank will have nitrogen bubbler with a separate regulator and flow meter .
9. Bubbler ring must be stainless steel.

Reference in Contractors Proposal: _____

7. Dump/Rinser Station Specification

1. Must be capable of handling one (1) 100mm wafer cassette
2. Natural polypropylene construction
3. Tank has side wall spray nozzles(both sides) along with bottom-fill feature
4. Spray and fill pressure must be adjustable via valves
5. All DI water tubing must be PFA construction with Flaretek fittings
6. Water must drain into a separate collection basin isolated from the solvent basin.
7. Separate water waste drain is required

Reference in Contractors Proposal: _____

8. Interlock LED Display Specification

1. Low nitrogen
2. Clean Dry Air (CDA) present
3. Low exhaust
4. Tank low liquid level
5. Waste collection status
6. Door panel interlocks
7. Main power
8. 24vdc power

Reference in Contractors Proposal: _____

9. Waste Collection Drains

Tank draining is interlocked with "waste collection FULL" signal(external in-house) to prevent overfilling waste tank (this line is there but everything after was omitted)

1. Audible alarm for Waste collection Tank FULL
2. Tank will not drain if temperature is too high (USER SETTABLE)
3. All waste lines are stainless steel with Swagelok fittings
4. Located on the working deck will be a small 3" x 5" solvent cup sink that is connected to the solvent drain
5. Cup sink must have a pneumatic drain valve that is interlocked to the solvent waste collection system
6. Two Solvent waste streams : IPA/Acetone will be drained via a dedicated 3/4" OD stainless steel tube
7. NMP/PRS will be drained via a dedicated 3/4" OD stainless steel tube

Reference in Contractors Proposal: _____

10. Additional Notes

1. Secondary containment of solvents and water for leaks within the bench
2. (2) DI water spray guns -one located on each side of the bench
3. (2) nitrogen guns-one located on each side of the bench
4. (1) hand eyewash gun with a separate connection to house tempered water
5. Rear exhaust connections –two (2) to be 6" x 10" flanged connections
6. Removable deck sections for ease of maintenance
7. Complete documentation package including drawings and control software details
8. Vendor supplied start-up and commissioning
9. Facility connections and drain connections will be performed by NRC in-house personnel

Reference in Contractors Proposal: _____