



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DEP15368

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
CHUCK BOWMAN 304-558-2157

VENDOR

OLYMPUS INNOV-X
 100 SYLVAN ROAD
 100 RADE CENTER SUITE 500
 WILBURN MA 01801

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 ENVIRONMENTAL ENFORCEMENT
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
02/17/2011				

BID OPENING DATE: 03/16/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	7	EA	845-81	Option 1 DELTA-50 Premium	\$35,025.-	\$245,175.-
				Option 2 DELTA-45 Classic	\$22,025.-	\$154,175.-
<p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING BIDS FOR SEVEN (7) THERMO SCIENTIFIC NITON XL2 500 X-RAY FLOURESCENCE ANALYZERS (OR EQUALS), PER THE FOLLOWING SPECIFICATIONS, BID REQUIREMENTS, TERMS & CONDITIONS, AND THE ATTACHED BID SCHEDULE.</p> <p>VENDORS BIDDING AN 'OR EQUAL' TO THE MANUFACTURER AND MODEL NUMBER NOTED ABOVE SHOULD IDENTIFY THE MANUFACTURER AND MODEL NUMBER BEING BID AS WELL AS SUBMITTING PERTINENT SPECIFICATION AND PERFORMANCE INFORMATION TO ALLOW THE AGENCY TO SUFFICIENTLY EVALUATE THE PROPOSED INSTRUMENT FOR EQUALITY TO THE SPECIFICATIONS AS ADVERTISED. THE AGENCY RESERVES THE RIGHT TO REQUEST ADDITIONAL INFORAMTION FROM ANY VENDOR AT ANY TIME DURING THE EVALUATION PROCESS. FAILURE OF ANY VENDOR TO PROVIDE THE REQUESTED INFORMATION WITHIN THE TIME FRAME REQUESTED MAY RESULT IN THE DISQUALIFICATION OF THE VENDORS BID AND ANY CONSIDERATION FOR AWARD.</p> <p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT</p>						

RECEIVED

2011 MAR 15 A 9:56

PURCHASING DIVISION
STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Duffy Kest</i>	TELEPHONE 781-938-5005 x328	DATE 3/14/11
TITLE Sales Associate	FEIN 04-3556816	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
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PAGE
 2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
 CHUCK BOWMAN
 304-558-2157

RFQ COPY
 TYPE NAME/ADDRESS HERE

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 ENVIRONMENTAL ENFORCEMENT
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
02/17/2011				

BID OPENING DATE: 03/16/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: CB-23</p> <p>RFQ. NO.: DEP15368</p> <p>BID OPENING DATE: 03/16/2011</p> <p>BID OPENING TIME: 1:30 PM</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p style="text-align: center;">Fax: 701-938-0120</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY):</p> <p style="text-align: center;">Geoff Koehn p: 701-938-5005 x 328</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Billy S. [Signature]</i>	TELEPHONE 701-938-5005 x 328	DATE 3/14/11	
TITLE Sales Associate	FEIN 04-3556816	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

TECHNICAL SPECIFICATIONS FOR X-RAY FLUORESCENCE (XRF) ANALYZERS

Description: Thermo Scientific Niton® XL2.500 X-RAY Fluorescence Analyzers (hereinafter "XRF units") or equivalent.

Quantity: Seven (7) units

Minimum Requirements:

1. 45 KV/2 Watt - Ag Anode X-Ray Tube
2. **XRF units must detect the following elements, at a minimum:** Sulfur (S), Potassium (K), Scandium (SC), Titanium (Ti), Vanadium (V), Chromium (Cr), Manganese (Mn), Iron (Fe), Cobalt (Co), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Rubidium (Rb), Strontium (Sr), Zirconium (Zr), Palladium (Pd), Silver (Ag), Cadmium (Cd), Tin (Sn), Antimony (Sb), Barium (Ba), Tungston (W), Gold (Au), Mercury (Hg), Lead (Pb), Niobium (Nb), Molybdenum (Mo), Hafnium (Hf), Tantalum (Ta), Rhenium (Re), Bismuth (Bi).
3. Two (2) rechargeable battery packs. Batteries must support up to 10 hours of continuous operation on a single charge.
4. Battery Charger
5. AC Power Supply
6. Carrying Case
7. Shielded Belt Holster
8. SpectraView Element Scanner
9. Integrated Angled Touch Screen with Large Intuitive Color Icons
10. Virtual Keyboard for Data Entry
11. Password-protected Set-up and Operation with multiple radiation safety features.
12. Niton Data Transfer (NDT©) Software Suite for easy data downloading and viewing, remote control with user personal computer (PC) and grade library modification.
13. PC connection cable
14. Certified reference material and/or standard per included calibration suite
15. Bluetooth Wireless Connectivity
16. RFID for test stand recognition
17. Spare Polypropylene (187-1555) window material (2)
18. No-charge, on-site operator training
19. Soil Analysis mode of operation with soil calibration for environmental assessments and metals in soils and sediments analysis at concentrations generally < 2%.
20. Mining Analysis mode of operation with easy to use calibration for rapid metal and mineral content analysis at concentrations > 0.1% in ore and concentrates. For analysis of mining samples including concentrates, slags, etc.
21. Twenty-four (24) Month Warranty

22. Garmin 10 Global Positioning System (GPS)
23. Calibration of XRF units must not require a docking station or computer interface
24. No-charge software updates for life of analyzer
25. No-charge firmware updates for life of analyzer
26. Must operate in a portable test stand without connection to a computer
27. Rapid RCRA metals analysis
28. Low RCRA metals detection limits
29. XRF shell must be constructed of durable LEXAN® plastic
30. The XRF unit must be dust-proof and waterproof

Bid Schedule

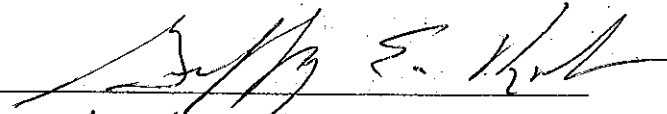
DEP15368

Company Name: Innov-X Systems, Inc (DBA Olympus Innov-X)
 Address: 100 Sylvan Rd; 100 TradeCenter suite 500
Woburn, MA 01801

The DEP reserves the right to request additional information and supporting documentation regarding unit prices when the unit price appears to be unreasonable.

ITEM NO.	* QUANTITY	DESCRIPTION	EA	TOTAL
		<i>OPTION 1</i>		
1.0	7	Fluorescence (XRF) Analyzer		\$
	7	<i>DELTA-50 Premium Environmental Analyzer</i>	<i>\$35,025</i>	<i>\$ 245,175.-</i>
TOTAL				\$ 245,175.-

If bidding an "or equal" to the basis of the specification, please indicate the manufacturer and model number in the space provided below.

Signature: 
 Date: 3/14/11

Bid Schedule

DEP15368

Company Name: Innov-X Systems, Inc (DBA Olympus Innov-X)

Address: 100 Sylvan Rd; 100 TradeCenter suite 500
Woburn, MA 01801

The DEP reserves the right to request additional information and supporting documentation regarding unit prices when the unit price appears to be unreasonable.

ITEM NO.	* QUANTITY	DESCRIPTION	EA	TOTAL
		<i>OPTION 2</i>		
1.0	7	Fluorescence (XRF) Analyzer		\$
	7	<i>DELTA-45 Classic Environmental Analyzer</i>	<i>*22,025</i>	<i>*154,175</i>
TOTAL				\$ 154,175

If bidding an "or equal" to the basis of the specification, please indicate the manufacturer and model number in the space provided below.

Signature: *Jeffrey E. Korb*
 Date: 3/14/11

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Innov-X Systems, Inc. (DBA Olympus Innov-X)

Authorized Signature: [Signature] Date: 3/14/11

State of Massachusetts

County of Middlesex to-wit:

Taken, subscribed, and sworn to before me this 14 day of March, 2011

My Commission expires _____, 2017

AFFIX SEAL HERE



Laurie Poland
Notary Public
Commonwealth of Massachusetts
My Commission Expires
July 21, 2017
NOTARY PUBLIC

March 14, 2011

RFQ Number: DEP15368

Mr. Chuck Bowman
West Virginia Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, WV 25305-0130

Phone: 304-558-2157
Email: Charles.A.BowmanJr@wv.gov

Re: Olympus Innov-X Quotation # 52846-D50P (Option 1: DELTA-50 Premium)**RFQ Number DEP15368 for (ship to address):**

West Virginia Environmental Protection
Department of Environmental Enforcement
601 57th Street SE
Charleston, WV 25304
(304) 926-0499

Dear Mr. Bowman:

Thank you for expressing interest in Olympus Innov-X and our industry leading products. Innov-X introduced the first miniature x-ray tube handheld analyzer in 2001 and our system quickly became the de facto, "me too" industry standard. The *DELTA* represents another industry milestone and a quantum leap forward in terms of handheld technical performance, ease-of-use, productivity gains, and durability.

Olympus Innov-X is pleased to present alternative proposals for two DELTA models, each of which meets or exceeds RFQ DEP15368 specifications. In addition to representing the best field portable XRF analyzers on the market today, we sincerely believe our DELTA proposals will prove to offer the greatest *VALUE* to The West Virginia Department of Environmental Protection.

To summarize DELTA advantages:

Tough on the Outside

- Rugged industrial-grade body with an over-molded, inter-locked LEXAN® design
- Superior balance and ergonomics with comfortable rubberized grip
- Rear-facing, bright Blanview™ touchscreen display for superior visibility that adjusts automatically in bright or dim conditions
- External heat-sink engineered for extreme temperature, continuous high-power use
- True hot-swap battery capabilities – replace battery without restarting analyzer

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Smart on the Inside

- Ultra-fast measurements for high throughput
- State-of-the-Art technology and redesigned geometry for outstanding analytical performance, speed, and lower detection limits
- Excellent light element measurement capability
- Easy to use reporting and data management software

The **DELTA** is the ULTIMATE experience in portable XRF - the fastest measurements with the best accuracy, precision, detection limits, and light element measurement capability; all built into a compact single chassis frame, wrapped in a robust industrial-grade body, and backed by a world of support.

With over 9,000 units installed worldwide, Olympus Innov-X has rapidly become the global leader in real-time, on-the-spot, in-situ measurements. We are happy to provide State and Federal EPA references upon request.

On behalf of Olympus Innov-X, thank you again for this opportunity. We hope our proposals meet with your approval and you conclude the DELTA represents the best (American made) product with the best service, and at the best price to meet the needs of The West Virginia Department of Environmental Protection.

Sincerely,

Geoff Koehn

Geoffrey E. Koehn
Midwest/ Central Region Sales Associate
Olympus Innov-X
ph: 781-938-5005 ext.328
fax: 781-938-0128
geoff.koehn@olympusndt.com

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West Virginia Department of Environmental Protection**RFQ Number: DEP15368*****Olympus Innov-X Quotation #52846-D50P (Option 1)***

The DELTA analyzer includes the following standard hardware & accessories:

Handheld analyzer featuring miniature x-ray tube, Large Area SDD (< 165 eV) detector system, two Li-ion batteries, docking station, 10 spare windows, waterproof rugged carrying case, probe shield, wrist strap, and 316 calibration check reference sample, mini USB cable, PC Software, 2-year limited warranty. Service contracts also available.

**QUOTE IS VALID FOR 60 DAYS**

Part #	Qty	Descriptions	Price each	Price Total
D50P	7	DELTA-50 Premium Environmental Analyzer	\$34,900.00	\$244,300.00
P4000EX	7	Soil Mode - K, Ca, Sc, S, P, Cl, Ti, Cr, Mn, Fe, Ni, Cu, Zn, Au, Hg, As, Pb, Se, Rb, Sr, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Ba, Sb, PLUS V, Co, Hf, Ta, W, Re, Bi, Th, U (elements may be customized on request) Compton Normalization algorithm designed for achieving lowest Limit of Detection (LOD) possible for exploration samples. 3-beam mode standard.		Included
P6000DB	7	Mining Plus - P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ba, Hf, Ta, W, Re, As, Se, Au, Hg, Pb, Bi, Rb, Sr, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Sb (elements may be customized on request)		Included
A104	7	Docking Station Rugged docking station charges DELTA analyzer battery and an extra battery pack and runs an automatic calibration check. (NOTE: Docking Station included as standard with DELTA analyzers) Value of \$699.00		Included
A103	7	DELTA PC SOFTWARE Facilitates remote analyzer control, data downloading, spectral overlay and review, and report generation. (NOTE: Comes standard with all DELTA Analyzers) Value of \$500		Included
training	7	Factory Authorized On-site Training		Included
shipping	7	FedEx, next day insured <u>FOB: Charleston, WV</u>	\$125.00	\$875.00
			Total Purchase Price =	\$245,175.00

Applicable sales taxes will be added

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To place an order for the items, pricing, and delivery outlined above, please sign below and return fax this and preceding 2 pages to Olympus Innov-X, Attn: Geoff Koehn (ph: 781-938-5005 x328), Fax: 781-938-0128 or geoff.koehn@olympusndt.com. Thank you.

Name (signature): _____

Date: _____

Name & Title (please print): _____

Ordering Instructions:

1. Payment: NET 30 days on approved accounts
2. Shipping: prepay & add freight, itemized fee listed above;
3. Standard Delivery: 4 weeks after receipt & acceptance of order.
4. Please send orders to: **Innov-X Systems**, 100 Sylvan Road;
100 TradeCenter, Suite 500; Woburn, MA 01801
Attn: Sales -- Phone: 866-4-Innov-X (866-446-6689) Fax: 781-938-0128

This quote is only valid for delivery, training, after-sale support and warranty service within the United States of America and Canada. For any Innov-X instruments purchased for permanent use outside of the USA and Canadian regions, an international delivery and support fee applies. This fee covers on-site installation training, local support and warranty service. Not included in this fee are any regulatory compliance costs, import duties, VAT or other tariffs or duties. Customers that purchase an analyzer in the US or Canada and station it overseas are required to disclose the destination country so that Innov-X Systems is able to comply with any local regulations that may apply to our XRF equipment, and so that we can assure compliance with Export Regulations.

1.0 New Instrument Warranty Policy

All new DELTA analyzers, WorkStations, and Docking Stations are covered under warranty for 2 years including Parts and Labor. Exceptions include batteries and battery chargers which are covered 30 days, and wireless printers and barcode readers which are covered for 6 months. Analyzer warranty will be voided if deemed abused or damaged.

Innov-X Systems US Sales Terms and Conditions

1. PRODUCTS AND SERVICES - These terms and conditions govern the sale of all products ("Products") and/or services ("Services") by Innov-X Systems, Inc. ("Seller") and apply notwithstanding any conflicting, contrary or additional terms and conditions in any purchase order or other document or communication ("Purchase Order") from buyer. Upon Seller's acceptance of buyer's order, a firm contract for the purchase and sale of the Products and/or Services will be formed between Seller and Buyer and shall incorporate all the terms set forth herein. These terms and conditions may only be waived or modified in a written agreement signed by an authorized representative of Seller. Neither Seller's acknowledgment of a Purchase Order nor Seller's

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failure to object to conflicting, contrary or additional terms and conditions in a Purchase Order shall be deemed an acceptance of such terms and conditions or a waiver of the provisions hereof.

2. **RESERVATION OF RIGHTS** - Innov-X Systems reserves the right to change at any time without notice these terms and conditions of sale.
3. **PAYMENT** - Buyer shall pay Innov-X Systems the price(s) stated in the quotation; shipping and transportation charges, and applicable taxes, if any, are additional unless otherwise specified in the proposal or quotation. If credit is granted for invoice payments against a 30-day quotation, payment terms are net thirty (30) days from date of invoice, subject to approval of Buyer's credit. A service charge of two (2%) per month (24% per annum) or portion thereof, or the maximum rate allowed by law, whichever is less, will be made on past due accounts. If Buyer fails to pay any invoice when due, or if Seller believes in good faith that Buyer's ability to make payments may be impaired, Seller may suspend delivery of any order or remaining installment thereof until such payment is made, or may cancel the remaining installments thereof, and Buyer shall remain liable to pay for any Products or Services already shipped or delivered. Buyer agrees to submit such financial information from time to time as may be reasonably requested by Seller for the establishment and/or continuation of credit terms. Buyer agrees to pay any and all legal fees associated with payment collection.
4. **WARRANTY** - Only the warranties set forth in the Warranty documentation are applicable. SAID WARRANTY SUPERSEDES ALL INCONSISTENT PROVISIONS OF ANY AND ALL PURCHASE ORDERS, INVOICES, ACKNOWLEDGMENTS, OR OTHER WRITINGS OR STATEMENTS, WRITTEN OR OTHERWISE. INNOV-SYSTEMS DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES AND PRODUCT LIABILITY, SPECIFICALLY INCLUDING THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.
5. **LIMITATION OF LIABILITY** - Notwithstanding anything to the contrary, in no event will Innov-X Systems be liable for any indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory, including, without limitation, loss of data or its use, loss of profits, loss of business, or other economic damages, even if advised of the possibility of such loss or damage.
6. **DELIVERY AND TITLE** - All shipments of Products by Seller are F.O.B. point of origin and all transportation charges shall be paid by Buyer in addition to the price of the Products. Insurance, if desired, shall be responsibility of Buyer. Seller may, at seller's discretion, add insurance to the delivery method and include its costs in shipping costs. Subject to Seller's right of stoppage in transit, delivery of the Products to the carrier shall constitute delivery to Buyer and title and risk of loss shall thereupon pass to Buyer. Selection of the carrier and delivery route shall be made by Seller unless specified by Buyer. Buyer acknowledges that delivery dates provided by Seller are estimates only and that Seller is not liable for failure to deliver on such dates. Delivery of a quantity that varies from the quantity specified shall not relieve Buyer of the obligation to accept delivery and pay for the Products delivered. Delay in delivery of one installment shall not entitle Buyer to cancel other installments.
7. **ACCEPTANCE OF PRODUCTS AND PRODUCT RETURNS** - Inspection and acceptance of Products shall be Buyer's responsibility. Buyer is deemed to have accepted the Products unless written notice of rejection is received by Seller within ten (10) days after delivery of the Products. Buyer waives any right to revoke acceptance thereafter. Buyer shall report any discrepancy in shipment quantity or damage within ten (10) days after delivery. No return of Products shall be accepted by Seller without a Return Material Authorization ("RMA") Number, which may be issued by Seller in its sole discretion. Returned Products must be in original manufacturer's shipping cartons complete with all packing materials. All Products for return shall be returned freight prepaid. Products must be packaged appropriately so as not to incur physical damage during return shipping; failure to do so may invalidate both the RMA and the warranty. If returned Products are claimed to be defective, a complete description of the nature of the defect must be included with the returned Products. Products not eligible for return shall be returned to Buyer, freight collect. A 15% restocking fee is associated with all Returns.
8. **FORCE MAJEURE** - Seller shall not be liable for failure to fulfill its obligations herein or for delays in delivery due to causes beyond its reasonable control, including but not limited to acts of God, natural disasters, acts or omissions of other parties, acts or omissions of civil or military authority, Government priorities, changes in law, material shortages, fire, strikes, floods, epidemics, quarantine restrictions, riots, war, acts of terrorism, delays in transportation or inability to obtain labor or materials through its regular sources. Seller's time for performance of any such obligation shall be extended for the time period of such delay or Seller may, at its option, cancel any order or remaining part thereof without liability by giving notice of such cancellation to Buyer.
9. **LIMITATION OF LIABILITIES** - BUYER SHALL NOT IN ANY EVENT BE ENTITLED TO, AND SELLER SHALL NOT BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE INCLUDING, WITHOUT LIMITATION, BUSINESS INTERRUPTION COSTS, REMOVAL AND/OR REINSTALLATION COSTS, REPROCUREMENT COSTS, LOSS OF PROFIT OR REVENUE, LOSS OF DATA, PROMOTIONAL OR MANUFACTURING EXPENSES, OVERHEAD, INJURY TO REPUTATION OR LOSS OF CUSTOMERS, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Buyer's recovery from seller for any claim shall not exceed buyer's purchase price for the product or \$5000, whichever is less, giving rise to such claim irrespective of the nature of the claim, whether in contract, tort, warranty, or otherwise. Seller shall not be liable for and buyer shall indemnify, defend and hold seller harmless from any claims based on seller's compliance with buyer's designs, specifications or instructions, or modification of any products by parties other than seller, or use in combination with other products.

Buyer assumes all responsibility for product and service selection. Buyer affirms that the performance of the product is affected by many factors unique to their environment, over which Innov-X Systems has no insight or control. Innov-X Systems is not an

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insurer; the buyer ("you") will obtain from an insurer any insurance he/she desire(s). The amount you pay us is based upon the products values or for any services we perform. The limited liability we assume under these sales terms is unrelated to the value of your property or property of others located in your premises. In the event of loss or injury, you agree to look exclusively to your insurer to recover damages. You waive all subrogation and other rights of recovery against us that any insurer or other person may have as a result of paying any claim for loss or injury to any other person. You agree that we and our agents, employees, subsidiaries, affiliates and parent companies are exempt from liability for any loss, damage, injury or other consequence arising directly or indirectly from the services we perform or the systems we provide under this contract.

10. **EXPORT CONTROLS/NOT FOR RESALE** - Customer agrees and represents that it is buying for its own internal use only and not for resale. The sale, resale or other disposition of Products and any related technology or documentation are subject to the export control laws, regulations and orders of the United States and may be subject to the export and/or import control laws and regulations of other countries. Buyer agrees to comply with all such laws, regulations and orders and acknowledges that it shall not directly or indirectly export any Products to any country to which such export or transmission is restricted or prohibited. Buyer acknowledges its responsibility to obtain any license to export, re-export or import as may be required.
11. **GOVERNING LAW; REMEDIES; FORUM SELECTION** - This Agreement shall be construed in accordance with, and disputes shall be governed by, the laws of the District of Columbia, excluding any law or principle which would apply the law of any other jurisdiction. Buyer agrees that the courts of the District of Columbia, including the federal courts located in the District of Columbia, shall have exclusive jurisdiction over any disputes arising under or relating to this Agreement or its alleged breach, and Seller irrevocably consents to the jurisdiction of those courts. If Buyer fails to make payment when due, Seller may pursue any legal or equitable remedies, in which event Seller shall be entitled to reimbursement of its costs of collection, including reasonable attorneys' fees.
12. **GENERAL** - This Agreement is the complete and exclusive statement of the terms of the Agreement between the parties and supersedes any and all other prior and contemporaneous negotiations and agreements, whether oral or written, between them relating to its subject matter. This Agreement may not be varied, modified, altered, or amended except in writing, including a purchase order or a change order issued by Seller. Buyer's rights, duties, agreements or obligations hereunder may not be assigned or transferred without the prior written consent of Seller; any attempted or purported assignment shall be void. The obligations of Buyer shall be binding on its successors and assigns. Seller's waiver of any provision of the Agreement, or of any breach or default, shall not be deemed a waiver of any other provision, nor of any other breach or default. Any provision of this Agreement held unenforceable in any jurisdiction shall not affect the remaining provisions of this Agreement in that jurisdiction, nor the validity or enforceability of such provision in any other jurisdiction.

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March 14, 2011

RFQ Number: DEP15368

Mr. Chuck Bowman
West Virginia Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, WV 25305-0130

Phone: 304-558-2157
Email: Charles.A.BowmanJr@wv.gov

Re: Olympus Innov-X Quotation # 52846-D45C (Option 2: DELTA-45 Classic)

RFQ Number DEP15368 for (ship to address):

West Virginia Environmental Protection
Department of Environmental Enforcement
601 57th Street SE
Charleston, WV 25304
(304) 926-0499

Dear Mr. Bowman:

Thank you for expressing interest in Olympus Innov-X and our industry leading products. Innov-X introduced the first miniature x-ray tube handheld analyzer in 2001 and our system quickly became the de facto, "me too" industry standard. The **DELTA** represents another industry milestone and a quantum leap forward in terms of handheld technical performance, ease-of-use, productivity gains, and durability.

Olympus Innov-X is pleased to present alternative proposals for two DELTA models, each of which meets or exceeds RFQ DEP15368 specifications. In addition to representing the best field portable XRF analyzers on the market today, we sincerely believe our DELTA proposals will prove to offer the greatest *VALUE* to The West Virginia Department of Environmental Protection.

To summarize DELTA advantages:

Tough on the Outside

- Rugged industrial-grade body with an over-molded, inter-locked LEXAN® design
- Superior balance and ergonomics with comfortable rubberized grip
- Rear-facing, bright Blanview™ touchscreen display for superior visibility that adjusts automatically in bright or dim conditions
- External heat-sink engineered for extreme temperature, continuous high-power use
- True hot-swap battery capabilities – replace battery without restarting analyzer

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Smart on the Inside

- Ultra-fast measurements for high throughput
- State-of-the-Art technology and redesigned geometry for outstanding analytical performance, speed, and lower detection limits
- Excellent light element measurement capability
- Easy to use reporting and data management software

The **DELTA** is the **ULTIMATE** experience in portable XRF - the fastest measurements with the best accuracy, precision, detection limits, and light element measurement capability; all built into a compact single chassis frame, wrapped in a robust industrial-grade body, and backed by a world of support.

With over 9,000 units installed worldwide, Olympus Innov-X has rapidly become the global leader in real-time, on-the-spot, in-situ measurements. We are happy to provide State and Federal EPA references upon request.

On behalf of Olympus Innov-X, thank you again for this opportunity. We hope our proposals meet with your approval and you conclude the DELTA represents the best (American made) product with the best service, and at the best price to meet the needs of The West Virginia Department of Environmental Protection.

Sincerely,

Geoff Koehn

Geoffrey E. Koehn
Midwest/ Central Region Sales Associate
Olympus Innov-X
ph: 781-938-5005 ext.328
fax: 781-938-0128
geoff.koehn@olympusndt.com

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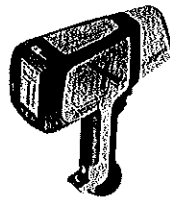
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West Virginia Department of Environmental Protection**RFQ Number: DEP15368*****Olympus Innov-X Quotation #52846-D45C (Option 2)***

The DELTA analyzer includes the following standard hardware & accessories:

Handheld analyzer featuring miniature x-ray tube, SiPIN (<200 eV) detector system, two Li-ion batteries, docking station, 10 spare windows, waterproof rugged carrying case, probe shield, wrist strap, and 316 calibration check reference sample, mini USB cable, PC Software, 2-year limited warranty. Service contracts also available.

**QUOTE IS VALID FOR 60 DAYS**

Part #	Qty	Descriptions	Price each	Price Total
D45C	7	DELTA-45 Classic Environmental Analyzer	\$21,900.00	\$153,300.00
P4000EX	7	Soil Mode - K, Ca, Sc, S, P, Cl, Ti, Cr, Mn, Fe, Ni, Cu, Zn, Au, Hg, As, Pb, Se, Rb, Sr, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Ba, Sb, PLUS V, Co, Hf, Ta, W, Re, Bi, Th, U (elements may be customized on request) Compton Normalization algorithm designed for achieving lowest Limit		Included
P6000DB	7	Mining Plus - P, S, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ba, Hf, Ta, W, Re, As, Se, Au, Hg, Pb, Bi, Rb, Sr, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Sb (elements may be customized on request)		Included
A104	7	Docking Station Rugged docking station charges DELTA analyzer battery and an extra battery pack and runs an automatic calibration check. (NOTE: Docking Station included as standard with DELTA analyzers) Value of \$699.00		Included
A103	7	DELTA PC SOFTWARE Facilitates remote analyzer control, data downloading, spectral overlay and review, and report generation. (NOTE: Comes standard with all DELTA Analyzers) Value of \$500	\$500.00	Included
training	7	Factory Authorized On-site Training		Included
shipping	7	FedEx, next day insured FOB: Charleston, WV	\$125.00	\$875.00
			Total Purchase Price =	\$154,175.00

**Applicable sales taxes will be added**

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To place an order for the items, pricing, and delivery outlined above, please sign below and return fax this and preceding 2 pages to Olympus Innov-X, Attn: Geoff Koehn (ph: 781-938-5005 x328), Fax: 781-938-0128 or geoff.koehn@olympusndt.com. Thank you.

Name (signature): _____

Date: _____

Name & Title (please print): _____

Ordering Instructions:

1. Payment: NET 30 days on approved accounts
2. Shipping: prepay & add freight, itemized fee listed above;
3. Standard Delivery: 4 weeks after receipt & acceptance of order.
4. Please send orders to: **Innov-X Systems**, 100 Sylvan Road;
100 TradeCenter, Suite 500; Woburn, MA 01801
Attn: Sales -- Phone: 866-4-Innov-X (866-446-6689) Fax: 781-938-0128

This quote is only valid for delivery, training, after-sale support and warranty service within the United States of America and Canada. For any Innov-X instruments purchased for permanent use outside of the USA and Canadian regions, an international delivery and support fee applies. This fee covers on-site installation training, local support and warranty service. Not included in this fee are any regulatory compliance costs, import duties, VAT or other tariffs or duties. Customers that purchase an analyzer in the US or Canada and station it overseas are required to disclose the destination country so that Innov-X Systems is able to comply with any local regulations that may apply to our XRF equipment, and so that we can assure compliance with Export Regulations.

1.0 New Instrument Warranty Policy

All new DELTA analyzers, WorkStations, and Docking Stations are covered under warranty for 2 years including Parts and Labor. Exceptions include batteries and battery chargers which are covered 30 days, and wireless printers and barcode readers which are covered for 6 months. Analyzer warranty will be voided if deemed abused or damaged.

Innov-X Systems US Sales Terms and Conditions

1. **PRODUCTS AND SERVICES** - These terms and conditions govern the sale of all products ("Products") and/or services ("Services") by Innov-X Systems, Inc. ("Seller") and apply notwithstanding any conflicting, contrary or additional terms and conditions in any purchase order or other document or communication ("Purchase Order") from buyer. Upon Seller's acceptance of buyer's order, a firm contract for the purchase and sale of the Products and/or Services will be formed between Seller and Buyer and shall incorporate all the terms set forth herein. These terms and conditions may only be waived or modified in a written agreement signed by an authorized representative of Seller. Neither Seller's acknowledgment of a Purchase Order nor Seller's failure to object to conflicting, contrary or additional terms and conditions in a Purchase Order shall be deemed an acceptance of such terms and conditions or a waiver of the provisions hereof.

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2. **RESERVATION OF RIGHTS** - Innov-X Systems reserves the right to change at any time without notice these terms and conditions of sale.
3. **PAYMENT** - Buyer shall pay Innov-X Systems the price(s) stated in the quotation; shipping and transportation charges, and applicable taxes, if any, are additional unless otherwise specified in the proposal or quotation. If credit is granted for invoice payments against a 30-day quotation, payment terms are net thirty (30) days from date of invoice, subject to approval of Buyer's credit. A service charge of two (2%) per month (24% per annum) or portion thereof, or the maximum rate allowed by law, whichever is less, will be made on past due accounts. If Buyer fails to pay any invoice when due, or if Seller believes in good faith that Buyer's ability to make payments may be impaired, Seller may suspend delivery of any order or remaining installment thereof until such payment is made, or may cancel the remaining installments thereof, and Buyer shall remain liable to pay for any Products or Services already shipped or delivered. Buyer agrees to submit such financial information from time to time as may be reasonably requested by Seller for the establishment and/or continuation of credit terms. Buyer agrees to pay any and all legal fees associated with payment collection.
4. **WARRANTY** - Only the warranties set forth in the Warranty documentation are applicable. SAID WARRANTY SUPERSEDES ALL INCONSISTENT PROVISIONS OF ANY AND ALL PURCHASE ORDERS, INVOICES, ACKNOWLEDGMENTS, OR OTHER WRITINGS OR STATEMENTS, WRITTEN OR OTHERWISE. INNOV-SYSTEMS DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES AND PRODUCT LIABILITY, SPECIFICALLY INCLUDING THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.
5. **LIMITATION OF LIABILITY** - Notwithstanding anything to the contrary, in no event will Innov-X Systems be liable for any indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory, including, without limitation, loss of data or its use, loss of profits, loss of business, or other economic damages, even if advised of the possibility of such loss or damage.
6. **DELIVERY AND TITLE** - All shipments of Products by Seller are F.O.B. point of origin and all transportation charges shall be paid by Buyer in addition to the price of the Products. Insurance, if desired, shall be responsibility of Buyer. Seller may, at seller's discretion, add insurance to the delivery method and include its costs in shipping costs. Subject to Seller's right of stoppage in transit, delivery of the Products to the carrier shall constitute delivery to Buyer and title and risk of loss shall thereupon pass to Buyer. Selection of the carrier and delivery route shall be made by Seller unless specified by Buyer. Buyer acknowledges that delivery dates provided by Seller are estimates only and that Seller is not liable for failure to deliver on such dates. Delivery of a quantity that varies from the quantity specified shall not relieve Buyer of the obligation to accept delivery and pay for the Products delivered. Delay in delivery of one installment shall not entitle Buyer to cancel other installments.
7. **ACCEPTANCE OF PRODUCTS AND PRODUCT RETURNS** - Inspection and acceptance of Products shall be Buyer's responsibility. Buyer is deemed to have accepted the Products unless written notice of rejection is received by Seller within ten (10) days after delivery of the Products. Buyer waives any right to revoke acceptance thereafter. Buyer shall report any discrepancy in shipment quantity or damage within ten (10) days after delivery. No return of Products shall be accepted by Seller without a Return Material Authorization ("RMA") Number, which may be issued by Seller in its sole discretion. Returned Products must be in original manufacturer's shipping cartons complete with all packing materials. All Products for return shall be returned freight prepaid. Products must be packaged appropriately so as not to incur physical damage during return shipping; failure to do so may invalidate both the RMA and the warranty. If returned Products are claimed to be defective, a complete description of the nature of the defect must be included with the returned Products. Products not eligible for return shall be returned to Buyer, freight collect. A 15% restocking fee is associated with all Returns.
8. **FORCE MAJEURE** - Seller shall not be liable for failure to fulfill its obligations herein or for delays in delivery due to causes beyond its reasonable control, including but not limited to acts of God, natural disasters, acts or omissions of other parties, acts or omissions of civil or military authority, Government priorities, changes in law, material shortages, fire, strikes, floods, epidemics, quarantine restrictions, riots, war, acts of terrorism, delays in transportation or inability to obtain labor or materials through its regular sources. Seller's time for performance of any such obligation shall be extended for the time period of such delay or Seller may, at its option, cancel any order or remaining part thereof without liability by giving notice of such cancellation to Buyer.
9. **LIMITATION OF LIABILITIES** - BUYER SHALL NOT IN ANY EVENT BE ENTITLED TO, AND SELLER SHALL NOT BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE INCLUDING, WITHOUT LIMITATION, BUSINESS INTERRUPTION COSTS, REMOVAL AND/OR REINSTALLATION COSTS, REPRODUCTION COSTS, LOSS OF PROFIT OR REVENUE, LOSS OF DATA, PROMOTIONAL OR MANUFACTURING EXPENSES, OVERHEAD, INJURY TO REPUTATION OR LOSS OF CUSTOMERS, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Buyer's recovery from seller for any claim shall not exceed buyer's purchase price for the product or \$5000, whichever is less, giving rise to such claim irrespective of the nature of the claim, whether in contract, tort, warranty, or otherwise. Seller shall not be liable for and buyer shall indemnify, defend and hold seller harmless from any claims based on seller's compliance with buyer's designs, specifications or instructions, or modification of any products by parties other than seller, or use in combination with other products.

Buyer assumes all responsibility for product and service selection. Buyer affirms that the performance of the product is affected by many factors unique to their environment, over which Innov-X Systems has no insight or control. Innov-X Systems is not an insurer; the buyer ("you") will obtain from an insurer any insurance he/she desire(s). The amount you pay us is based upon the products values or for any services we perform. The limited liability we assume under these sales terms is unrelated to the value of your property or property of others located in your premises. In the event of loss or injury, you agree to look exclusively to your

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insurer to recover damages. You waive all subrogation and other rights of recovery against us that any insurer or other person may have as a result of paying any claim for loss or injury to any other person. You agree that we and our agents, employees, subsidiaries, affiliates and parent companies are exempt from liability for any loss, damage, injury or other consequence arising directly or indirectly from the services we perform or the systems we provide under this contract.

10. **EXPORT CONTROLS/NOT FOR RESALE** - Customer agrees and represents that it is buying for its own internal use only and not for resale. The sale, resale or other disposition of Products and any related technology or documentation are subject to the export control laws, regulations and orders of the United States and may be subject to the export and/or import control laws and regulations of other countries. Buyer agrees to comply with all such laws, regulations and orders and acknowledges that it shall not directly or indirectly export any Products to any country to which such export or transmission is restricted or prohibited. Buyer acknowledges its responsibility to obtain any license to export, re-export or import as may be required.
11. **GOVERNING LAW; REMEDIES; FORUM SELECTION** - This Agreement shall be construed in accordance with, and disputes shall be governed by, the laws of the District of Columbia, excluding any law or principle which would apply the law of any other jurisdiction. Buyer agrees that the courts of the District of Columbia, including the federal courts located in the District of Columbia, shall have exclusive jurisdiction over any disputes arising under or relating to this Agreement or its alleged breach, and Seller irrevocably consents to the jurisdiction of those courts. If Buyer fails to make payment when due, Seller may pursue any legal or equitable remedies, in which event Seller shall be entitled to reimbursement of its costs of collection, including reasonable attorneys' fees.
12. **GENERAL** - This Agreement is the complete and exclusive statement of the terms of the Agreement between the parties and supersedes any and all other prior and contemporaneous negotiations and agreements, whether oral or written, between them relating to its subject matter. This Agreement may not be varied, modified, altered, or amended except in writing, including a purchase order or a change order issued by Seller. Buyer's rights, duties, agreements or obligations hereunder may not be assigned or transferred without the prior written consent of Seller; any attempted or purported assignment shall be void. The obligations of Buyer shall be binding on its successors and assigns. Seller's waiver of any provision of the Agreement, or of any breach or default, shall not be deemed a waiver of any other provision, nor of any other breach or default. Any provision of this Agreement held unenforceable in any jurisdiction shall not affect the remaining provisions of this Agreement in that jurisdiction, nor the validity or enforceability of such provision in any other jurisdiction.

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**RESPONSE TO TECHNICAL SPECIFICATIONS FOR X-RAY FLUORESCENCE (XRF)
ANALYZERS**

West Virginia Environmental Protection, Department of Environmental Enforcement

WV DEP/EE/HW

RFQ Number: DEP15368

Description: Thermo Scientific Niton® XL2 500 X-RAY Fluorescence Analyzers (hereinafter "XRF units") or equivalent.

Quantity: Seven (7) units

Minimum Requirements:

1. 45KV/ 2 Watt – Ag Anode X-Ray Tube

Please note, Olympus Innov-X has two separate products that meet or exceed the specifications listed in RFQ Number: DEP15368

Option #1. DELTA-50 Premium handheld X-RAY Fluorescence Analyzers meets and often exceeds all specifications. The DELTA-50 Premium we are proposing can run at a max of 50KeV and is equipped with a Ta X-ray tube. The higher performance of the DELTA-50 Premium is due to the detector upgrade package. The Ta anode material is a better option and VALUE for the WV DEP as the X-ray output does not interfere with detections limits of elements such as Ag, Cd, and Sn. A Ta X-ray tube is simply better than an Ag X-ray tube for the analysis of elements specified in RFQ Number: DEP15368 especially Ag, Cd, and Sn (Ag anode material interferes with Cd and Sn K lines).

Option #2. DELTA-45 Classic handheld X-RAY Fluorescence Analyzers meets all specifications. The DELTA-45 Classic we are proposing can run at a max of 50KeV and is equipped with a Ta X-ray tube. Again, Ta anode material is a better option and VALUE for the WV DEP as the X-ray output does not interfere with detections limits of elements such as Ag, Cd, and Sn. A Ta X-ray tube is simply better than an Ag X-ray tube for the analysis of elements specified in RFQ Number: DEP15368 especially Ag, Cd, and Sn (Ag anode material interferes with Cd and Sn K lines).

2. **XRF units must detect the following elements, at a minimum:** Sulfur (S), Potassium (K), Scandium (Sc), Titanium (Ti), Vanadium (V), Chromium (Cr), Manganese (Mn), Iron (Fe), Cobalt (Co), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Rubidium (Rb), Strontium (Sr), Zirconium (Zr), Palladium (Pd), Silver (Ag), Cadmium (Cd), Tin (Sn), Antimony (Sb), Barium (Ba), Tungsten (W), Gold (Au), Mercury (Hg), Lead (Pb), Niobium (Nb), Molybdenum (Mo), Hafnium (Hf), Tantalum (Ta), Rhenium (Re), Bismuth (Bi)

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The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

3. Two (2) rechargeable battery packs. Batteries must support up to 10 continuous hours of operation on a single charge.

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

Additionally, continuous operation time is infinite with unique, DELTA "hot swap" battery feature

4. Battery Charger
Included

5. AC Power Supply
Included

6. Carrying Case
Included

7. Shielded Belt Holster
Included

8. SpectraView Element Scanner

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

The DELTA-50 Premium & DELTA-45 Classic are both equipped with an on-board spectrum analyzer with peak identification.

9. Integrated Angled Touch Screen with Large Intuitive Color Icons

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

10. Virtual Keyboard for Data Entry

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

11. Password-protected Set-up and Operation with multiple radiation safety features.

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

12. Niton Data Transfer (NDT[©]) Software Suite for easy data downloading and viewing, remote control with user personal computer (PC) and grade library modification.

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

The DELTA-50 Premium & DELTA-45 Classic are each packaged with our PC Software which has all the tools specified in the RFQ.

13. PC connection cable
Included.

14. Certified reference material and/ or standard per included calibration suite
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
15. Bluetooth Wireless Connectivity
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
16. RFID for test stand recognition
**The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
When paired with a workstation (test stand), both the DELTA-50 Premium & DELTA-45 Classic are interlocked with the workstation (test stand).**
17. Spare Polypropylene (187-1555) window material (2)
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
18. No-charge, on-site operator training
Included
19. Soil Analysis mode of operation with soil calibration for environmental assessments and metals in soils and sediments at concentrations generally < 2%.
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
20. Mining Analysis mode of operation with easy to use calibration for rapid metal and mineral content analysis at concentrations > 0.1% in ore and concentrates. For analysis of mining samples including concentrates, slags, etc.
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
21. Twenty-four (24) Month Warranty
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
22. Garmin 10 Global Positioning System (GPS)
Meets or exceeds specification.
23. Calibration of XRF units must not require a docking station or computer interface
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
24. No-charge software updates for life of analyzer
Included
25. No-charge firmware updates for life of analyzer
Included
26. Must operate in a portable test stand without connection to a computer
The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.
27. Rapid RCRA metals analysis

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

28. Low RCRA metals detection limits

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

Please see attached Limits of Detection for the elements specified in the RFQ.

29. XRF shell must be constructed of durable LEXAN plastic

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.

30. The XRF unit must be dust-proof and waterproof

The DELTA-50 Premium & DELTA-45 Classic both meet or exceed specification.



Soil Limits of Detection (ppm)

Element of Interest	DELTA-50 Premium 3-Beam Soil Ta/Au Tube, SDD	DELTA-45 Classic 3-Beam Soil Au Tube, SiPIN
P	500 - 700	1 - 5%
S	100 - 250	0.1 - 0.5%
Cl	60 - 100	500 - 1000
K	30 - 50	150 - 250
Ca	20 - 30	150 - 250
Ti	7 - 15	20 - 50
Cr	5 - 10	10 - 30
V	7 - 15	10 - 30
Mn	3 - 5	10 - 30
Fe	5	10 - 30
Co	10 - 20	20 - 40
Ni	10 - 20	20 - 40
Cu	5 - 7	15 - 30
Zn	3 - 5	10 - 15
Ga	3 - 5	10 - 15
As	1 - 3	4 - 8
Se	1 - 3	4 - 8
Br	1 - 3	4 - 8
Rb	1	3 - 5
Sr	1	3 - 5
Zr	1	3 - 5
Mo	1	3 - 5
Ag	3-5	20 - 30
Cd	2-3	20 - 30
Sn	5-8	30 - 40
Sb	5-7	30 - 40
Ba	20-25	40 - 60 significant interference w/ Ti
Hg	2 - 4	10 - 15
Tl	2 - 4	10 - 15
Pb	2 - 4	5 - 10

LODs, reported in PPM unless otherwise noted, are optimal. Measurements were taken in air for 120 seconds per beam. Standards used were in a clean, homogenous SiO₂ matrix without interfering elements.

Limits of detection for handheld XRF instrumentation are typically determined using well defined and easily reproduced parameters:

Optimized hardware settings

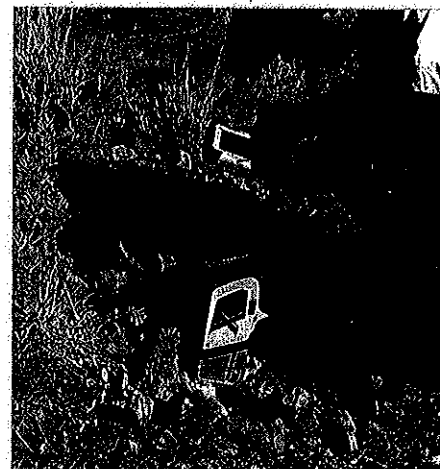
- X-ray tube target material
- Power (kV, uA)
- Filters
- Background subtraction and/or normalization

Measurement times

- 60 to 120 seconds depending on the element of interest

Interference-free standards

- Standards used to determine instrumentation detection limits typically do not contain anything that introduces other variables, such as interfering elements, unless the hardware settings used eliminate or significantly reduce the interference.



The determination of detection limits for all methods of analysis depend on numerous factors including the instrumentation and its settings, the standards that are utilized to determine the limits of detection, and the actual working samples analyzed.

LODs reported here are based on Innov-X's DELTA-50 Premium XRF with a large area SDD and the DELTA-45 Classic XRF with a SiPIN diode detector; automatically selected kV-uA-Filter settings; SiO₂ blank measurements; Compton normalization; 120 seconds measurement time; standards that are pure elemental oxides, and NIST standards with some common soil matrices. All measurements were done in air.

These parameters allow the determination of the best LODs for the handheld XRF being calibrated. Actual working samples may contain interfering elements that the hardware settings or selection of analyte lines do not correct for; therefore, the actual working LODs for "real-world" samples may be higher than those determined with the interference-free standards.

NOTE:

Common, well-known inter-element interferences for environmental real-world soil samples are as follows:

- High levels of Fe can interfere with low levels of Cr
- High levels of Pb can interfere with low levels of As