

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 18

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. H92222-04-P-0004	2. DELIVERY ORDER/ CALL NO. H92222	3. DATE OF ORDER/CALL 2003 Dec 03	4. REQ./ PURCH. REQUEST NO.	5. PRIORITY
---	---------------------------------------	--------------------------------------	-----------------------------	-------------

6. ISSUED BY U.S. SPECIAL OPERATIONS COMMAND/SOAL-K 7701 TAMPA POINT BLVD ATTN: [REDACTED] MACDILL AFB FL 33621-5323	CODE H92222	7. ADMINISTERED BY SEE ITEM 6	CODE	8. DELIVERY FOB <input checked="" type="checkbox"/> DEST <input type="checkbox"/> OTHER (See Schedule if other)
--	----------------	---	------	--

9. CONTRACTOR ULTRALIFE BATTERIES, INC. 2000 TECHNOLOGY PARKWAY NEWARK NY 14613	CODE 0UU59	FACILITY	10. DELIVER TO FOB POINT BY (Date) SEE SCHEDULE	11. MARK IF BUSINESS IS <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED
			12. DISCOUNT TERMS	
13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15				

14. SHIP TO SEE SCHEDULE	CODE	15. PAYMENT WILL BE MADE BY DFAS OM/FP PO BOX 7020 BELLEVUE NE 68005-1920	CODE 525700	MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.
--	------	--	----------------	--

16. TYPE OF ORDER	DELIVERY/ CALL	This delivery order/call is issued on another Govt. agency or in accordance with and subject to terms and conditions of above numbered contract.
	PURCHASE	Reference your quote dated Furnish the following on terms specified herein. REF:

ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.

NAME OF CONTRACTOR	SIGNATURE	TYPED NAME AND TITLE	DATE SIGNED (YYYYMMDD)
<input checked="" type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:			1

17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE
See Schedule

18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES	20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT
SEE SCHEDULE					

* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.	24. UNITED STATES OF AMERICA TEL: [REDACTED] EMA: [REDACTED] BY: [REDACTED]	25. TOTAL \$79,860.00
--	--	--------------------------

26. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED DATE: _____ SIGNATURE OF AUTHORIZED GOVT. REP. _____	27. SHIP NO.	28. DO VOUCHER NO.	30. INITIALS	33. AMOUNT VERIFIED CORRECT FOR
	<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	32. PAID BY		34. CHECK NUMBER

36. I certify this account is correct and proper for payment. DATE: _____ SIGNATURE AND TITLE OF CERTIFYING OFFICER _____					
37. RECEIVED AT	38. RECEIVED BY	39. DATE RECEIVED (YYYYMMDD)	40. TOTAL CONTAINERS	41. S/R ACCOUNT NO.	42. S/R VOUCHER NO.

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	SBIR Topic SOCOM 03-013 Phase I FFP Phase I will include cell packaging efficiency studies and current collector modification; incorporation of high capacity cathode/anode active materials and non-flammable electrolytes to reach the capacity and performance requirements; and preparation and delivery of prototype cells to USSOCOM for evaluation in accordance with Section "C" of the schedule.		Lot		
NET AMT					\$0.00

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AA	Technical Data FFP Month One Status and Management Reports in accordance with CDRL A001. Request for Purchase 1DT50032950100.	1	Lot	\$10,560.00	\$10,560.00
NET AMT					\$10,560.00

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AB	Technical Data FFP Month Two Status and Management Reports in accordance with CDRL A001. Request for Purchase 1DT50032950100.	1	Lot	\$10,560.00	\$10,560.00

NET AMT	\$10,560.00
---------	-------------

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AC	Technical Data FFP Month Three Status and Management Reports in accordance with CDRL A001. Request for Purchase 1DT50032950100.	1	Lot	\$10,560.00	\$10,560.00

NET AMT	\$10,560.00
---------	-------------

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AD	Technical Data FFP Month Four Status and Management Reports in accordance with CDRL A001. Request for Purchase 1DT50032950100.	1	Lot	\$10,560.00	\$10,560.00

NET AMT	\$10,560.00
---------	-------------

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AE	Technical Data FFP Month Five Status and Management Reports in accordance with CDRL A001. Request for Purchase 1DT50032950100.	1	Lot	\$10,560.00	\$10,560.00

NET AMT	\$10,560.00
---------	-------------

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AF	Technical Data FFP Month Six Final Technical Report in accordance with CDRL A002. Request for Purchase 1DT50032950100.	1	Lot	\$10,560.00	\$10,560.00

NET AMT	\$10,560.00
---------	-------------

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AG	Prototypes FFP Ultralife Batteries, Inc. will prepare and deliver twenty (20) polymer pouch cells that are suitable for assembly of BA-5590 battery to USSOCOM for evaluation. Delivery will take place no later than six months after contract award.	1	Lot	\$16,500.00	\$16,500.00

NET AMT	\$16,500.00
---------	-------------

FOB: Destination

Section C - Descriptions and Specifications

SOW

CLIN 0001 and SLINs 0001AA-AG: The contractor shall provide all facilities, material, labor, and travel to conduct the research, design, development, test and delivery of twenty (20) prototype pouch cells to demonstrate the feasibility of replacing the lithium BA05590 with a rechargeable lithium polymer battery. All work performed shall be in accordance with the contractor's proposal dated 13 August 2003 submitted in response to SBIR topic SOCOM03-013 both of which are hereby incorporated by reference.

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

5652.247-9000 Packaging & Marking - F.O.B. Destination (1998)

The shipping, address, contract number, device number, and any other "MARK FOR" information shall be clearly marked on the outside of all packages shipped under this contract. Information shall be easily identified without opening the package. This information shall also be included on the inside of all packages.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	N/A	N/A	N/A	Government
0001AA	Destination	Government	Destination	Government
0001AB	Destination	Government	Destination	Government
0001AC	Destination	Government	Destination	Government
0001AD	Destination	Government	Destination	Government
0001AE	Destination	Government	Destination	Government
0001AF	Destination	Government	Destination	Government
0001AG	Destination	Government	Destination	Government

CLAUSES INCORPORATED BY REFERENCE

52.246-9	Inspection Of Research And Development (Short Form)	APR 1984
52.246-16	Responsibility For Supplies	APR 1984
252.246-7000	Material Inspection And Receiving Report	MAR 2003

CLAUSES INCORPORATED BY FULL TEXT

5652.246-9001 Material Inspection and Receiving Reports (DD 250) Addresses (2001)

Material Inspection and Receiving Reports shall be transmitted electronically in accordance with DFAR 252.246-7000 to the following addresses:

RAO/COR:

[REDACTED]
 Bldg. 2700, Rm. 2D301
 Ft. Monmouth, NJ 07703

Email:

Teleph:

PCO:

USSOCOM
 Attn: SOAL-KB [REDACTED]
 7701 Tampa Point Blvd.
 MacDill AFB, FL 33621

Email:

Teleph:

DFAS:

DFAS OM/FP
 P.O. Box 7020
 Bellevue, NE 68005-1920

Section F - Deliveries or Performance

DELIVERIES OR PERFORMANCE

CLIN 0001:

SLINS 0001AA-0001AE: Monthly submission of Progress reports for 5 months from date of contract award in accordance with CDRL A001.

SLIN 0001AF: Submission of the Final Technical Report at the end of month 6 from date of contract award in accordance with CDRL A002.

SLIN 0001AG: Delivery of the twenty (20) prototype pouch cells that are suitable for assembly of BA-5590 battery shall be completed not later than 6 months from the date of contract award.

SHIP TO ADDRESS:

CLIN 0001:

SLINS 0001AA-0001AE: In accordance with CDRL A001.

SLIN 0001AF: In accordance with CDRL A002.

SLIN 0001AG: *US ARMY RDECOM CERDEC*

Attn:

AMSRD-CER-C2-AP

Bldg. 2700, Rm. 2D301

Ft. Monmouth, NJ 07703

Email:

Teleph

CLAUSES INCORPORATED BY REFERENCE

52.242-15

Stop-Work Order

AUG 1989

52.247-34

F.O.B. Destination

NOV 1991

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 9730400.56SF SE3 52ST S050SB 000000 59200 046279 525700 F25700
AMOUNT: \$79,860.00

CLAUSES INCORPORATED BY FULL TEXT

5652.232-9003 Instructions to Paying Office (2001)

(a) The Contracting Office Point of Contact is:

PCO: USSOCOM
Attn: SOAL-KB [REDACTED]
7701 Tampa Point Blvd.
MacDill AFB, FL 33621
Email: [REDACTED]
Telephone: [REDACTED]

(b) The Contracting Officer's Representative is:

RAO/COR: US ARMY RDECOM CERDEC
Attn: [REDACTED]
AMSRD-CER-C2-AP
Bldg. 2700, Rm. 2D301
Ft. Monmouth, NJ 07703
Email: [REDACTED]
Telephone: [REDACTED]

(c) Payment will be made by the office designated in Block 12 on Standard Form 26, Block 25 on Standard Form 33, or Block 15 on DD form 1155, or otherwise designated paying office. Invoice(s) should be forwarded directly to the designated paying office.

(d) Payment to the contractor shall be made via electronic funds transfer (EFT) to following address (Contractor to insert mailing address if other than address shown on SF-26, SF-33 or DD Form 1155):

(e) Special Payment Instructions: (Insert special paying instructions if any).

5652.232-9004 Distribution of Vouchers/Invoices (2001)

- (a) The contractor shall forward vouchers/invoices to the addresses below in a simultaneous mailing.
 - (1) The original and six (6) copies shall be submitted to: SEE BLOCK 12 Standard Form 26.
 - (2) One copy shall be submitted to the COR at the address shown above.
 - (3) One copy shall be submitted to the Contracting Officer at the address shown above.

- (b) Contract Completion voucher shall be submitted to the COR and the Contracting Officer at the addresses shown above.

Section H - Special Contract Requirements

SPECIAL CONTRACT REQUIREMENTS
CLAUSES INCORPORATED BY FULL TEXT

5652.237-9001 Key Personnel Requirements (1998)

(a) Certain experienced professional and/or technical personnel are essential for successful accomplishment of the work to be performed under this contract. Such personnel are defined as "Key Personnel" and are those persons whose resumes were submitted for evaluation of the proposal. The contractor agrees that such personnel shall not be removed from the contract work or replaced without compliance with the following:

1) If one or more of the key personnel, for any reason, becomes or is expected to become unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall, subject to the concurrence of the Contracting Officer or an authorized representative, promptly replace personnel with personnel of equal ability and qualifications.

2) All requests for approval of substitutions hereunder must be in writing and provide a detailed explanation of the circumstances necessitating the proposed substitutions. The request must contain a resume for the proposed substitute, and any other information requested by the Contracting Officer. The Contracting Officer promptly notify the contractor of approval or disapproval in writing.

(b) If the Contracting Officer determines that suitable and timely replacement of Key Personnel who have been reassigned, terminated or have otherwise become unavailable for the contract work is not reasonably forthcoming or that the resultant reduction of productive effort would be so substantial as to impair successful completion of the contract, the Contracting Officer may terminate the contract for default or for the convenience of the Government, as appropriate, or make an equitable adjustment to the contract to compensate the Government for any resultant delay, loss or damage.

(c) The follow positions are identified as Key Personnel:

Principal Investigator:

Co-Principal Investigator:

Section I - Contract Clauses

CONTRACT CLAUSES

CLAUSES INCORPORATED BY REFERENCE:

52.202-1	Definitions	OCT 1995
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.219-6	Notice Of Total Small Business Set-Aside	JUL 1996
52.222-26	Equal Opportunity	FEB 1999
52.227-20	Rights in Data - SBIR Program	MAR 1994
52.232-2	Payments Under Fixed-Price Research And Development Contracts	APR 1984
52.233-1 Alt I	Disputes (Dec 1998) - Alternate I	DEC 1991
52.243-1 Alt V	Changes--Fixed-Price (Aug 1987) - Alternate V	APR 1984
52.249-1	Termination For Convenience Of The Government (Fixed Price) (Short Form)	APR 1984
52.252-2	Clauses Incorporated By Reference	FEB 1998
252.201-7000	Contracting Officer's Representative	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.227-7018	Rights in Noncommercial Technical Data and Computer Software-- Small Business Innovation Research (SBIR) Program	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7036	Declaration of Technical Data Conformity	JAN 1997
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.246-7000	Material Inspection And Receiving Report	DEC 1991
5652.201-9000	Contracting Officer's Representative (1998)	MAY 1999
5652.204-9002	Communication Security Monitoring (1998)	MAY 1999

CLAUSES INCORPORATED BY FULL TEXT

52.213-4 TERMS AND CONDITIONS--SIMPLIFIED ACQUISITIONS (OTHER THAN COMMERCIAL ITEMS) (JUL 2000)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses that are incorporated by reference:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-3, Convict Labor (Aug 1996) (E.O. 11755).

(ii) 52.225-13, Restrictions on Certain Foreign Purchases (July 2000) (E.O.'s 12722, 12724, 13059, 13067, 13121, and 13129).

(iii) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(2) Listed below are additional clauses that apply:

(i) 52.232-1, Payments (Apr 1984).

(ii) 52.232-8, Discounts for Prompt Payment (May 1997).

(iii) 52.232-11, Extras (Apr 1984).

(iv) 52.232-25, Prompt Payment (Jun 1997).

(v) 52.233-1, Disputes (Dec 1998).

(vi) 52.244-6, Subcontracts for Commercial Items and Commercial Components (Oct 1998).

(vii) 52.253-1, Computer Generated Forms (Jan 1991).

(b) The Contractor shall comply with the following FAR clauses, incorporated by reference, unless the circumstances do not apply:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-20, Walsh-Healey Public Contracts Act (DEC 1996) (41 U.S.C. 35-45) (Applies to supply contracts over \$10,000 in the United States).

(ii) 52.222-26, Equal Opportunity (FEB 1999) (E.O. 11246) (Applies to contracts over \$10,000).

(iii) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (APR 1984) (38 U.S.C. 4212) (Applies to contracts over \$10,000).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (APR 1984) (29 U.S.C. 793) (Applies to contracts over \$10,000).

(v) 52.222-37, Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (JAN 1999) (38 U.S.C. 4212) (Applies to contracts over \$10,000).

(vi) 52.222-41, Service Contract Act, As Amended (May 1989) (41 U.S.C. 351, et seq.) (Applies to services performed on Federal facilities).

(vii) 52.223-5, Pollution Prevention and Right-to-Know Information (APR 1998) (E.O. 12856) (Applies to services performed on Federal facilities).

(viii) 52.225-1, Buy American Act--Balance of Payments Program--Supplies (Feb 2000) (41 U.S.C. 10a-10d) (Applies to contracts for supplies, and to contracts for services involving the furnishing of supplies, for use within the United States if the value of the supply contract or supply portion of a service contract exceeds the micro-purchase threshold and the acquisition--

(A) Is set aside for small business concerns; or

(B) Cannot be set aside for small business concerns (see 19.502-2), and does not exceed \$25,000.)

(ix) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (May 1999). (Applies when the payment will be made by electronic funds transfer (EFT) and the payment office uses the Central Contractor Registration (CCR) database as its source of EFT information.)

(x) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (May 1999). (Applies when the payment will be made by EFT and the payment office does not use the CCR database as its source of EFT information.)

(2) Listed below are additional clauses that may apply:

(i) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JULY 1995) (Applies to contracts over \$25,000).

(ii) 52.211-17, Delivery of Excess Quantities (SEPT 1989) (Applies to fixed-price supplies).

(iii) 52.247-29, F.o.b. Origin (JUN 1988) (Applies to supplies if delivery is f.o.b. origin).

(iv) 52.247-34, F.o.b. Destination (NOV 1991) (Applies to supplies if delivery is f.o.b. destination).

(c) FAR 52.252-2, Clauses Incorporated by Reference (FEB 1998). This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil>

(d) Inspection/Acceptance. The Contractor shall tender for acceptance only those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights--

(1) Within a reasonable period of time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(e) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence, such as acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(f) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges that the Contractor can demonstrate to the satisfaction of the Government, using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred that reasonably could have been avoided.

(g) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination

for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(h) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(End of clause)

252.235-7011 Final Scientific or Technical Report. (SEP 1999)

The Contractor shall submit two copies of the approved scientific or technical report delivered under this contract to the Defense Technical Information Center (DTIC), Attn: DTIC-OC, 8725 John J. Kingman Road, Suite 0944, Fort Belvoir, VA 22060-6218. The Contractor shall include a completed Standard Form 298, Report Documentation Page, with each copy of the report. For submission of reports in other than paper copy, contact the Defense Technical Information Center, Attn: DTIC-OC, 8725 John J. Kingman Road, Suite 0944, Fort Belvoir, VA 22060-6218.

(End of clause)

5652.235-9000 Conduct of Research (1998)

- (a) The contractor shall bear primary responsibility for the research to be conducted under this contract.
- (b) The contractor shall change the phenomenon under study, the stated objectives of the research, or the methodology, only after obtaining the Contracting Officer's written approval.
- (c) The contractor shall change the principal investigator or project leader only after obtaining the Contracting Officer's written approval.
- (d) The contractor shall advise the Contracting Officer if the principal investigator or project leader will, or plans to, devote substantially less effort to the work than anticipated.

SECTION K Certifications and Representations

- (a) Certifications and representations will not be distributed with the contract, however Section K is hereby incorporated by reference.

Section J - List of Documents, Exhibits and Other Attachments

CDRLS

CONTRACT DATA REQUIREMENTS LIST						Form Approved OMB No. 0704-0188		
A. CONTRACT LINE ITEM NO. A001		B. EXHIBIT A		C. CATEGORY TDP _____ TM _____ OTHER _____ MISC _____				
D. SYSTEM/ITEM Battery Modulation For Communications Equipment Phase I, SOCOM03-013			E. CONTRACT/PR NO.		F. CONTRACTOR Ultralife Batteries, Inc.			
1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM PROGRESS REPORT				3. SUBTITLE			
4. AUTHORITY (Data Acquisition Document No.) DI-MGT-80368			5. CONTRACT REFERENCE		6. REQUIRING OFFICE SOAL-T			
7. DD 250 REQ YES	9. DIST STATEMENT REQUIRED See Blk 16	10. FREQUENCY MTHLY		12. DATE OF FIRST SUBMISSION 30DAC		14. DISTRIBUTION		
8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION		a. ADDRESSEE		b. COPIES		
16. REMARKS <i>Standard Form 298 entitled "Report Documentation Page": The first page of the progress report shall be the Standard Form 298. Block 12 shall state: "Distribution B: The report is authorized for distribution to U. S. Government agencies only as it may contain proprietary information (date of determination). Other requests for this document shall be referred to USSOCOM, ATTN: SOAL-T, SBIR Program Manager." Standard Form 298 is located at www.dtic.mil (go to "Submitting Information" and then to "How to Submit"). The subsequent "Form Instructions" section provides guidance on completing the form.</i> <i>The progress reports will not be acceptable to the Government unless the Standard Form 298 is included as the first page and is satisfactorily completed.</i> <i>Contractor's format is acceptable. Include an executive summary that addresses overall status of the program. Within the body identify</i>				[Redacted]		Draft	Final	
						Reg	Repr	
						1	1	
						1	1	
						1	1	

17. PRI
18. EST
TO

Ultralife Batteries, Inc.
2000 Technology Parkway
Newark, New York 14513

SBIR TITLE:
Battery Modulation for Communications Equipment
SOCOM 03-013

Abstract: The proposed Phase I work is to develop soft pack lithium polymer batteries with high energy density [REDACTED] and superior temperature performance. Ultralife has been engaged in lithium polymer battery research, development and manufacturing since 1996. Ultralife has achieved several milestones in improving lithium polymer battery performance over the past year. The current Ultralife 34106102 polymer battery has an energy density of [REDACTED] with excellent cycling performance and high temperature storage performance (see the attached graphs). The Phase I project will incorporate [REDACTED] to reach the capacity and performance requirements. The improved lithium polymer battery could be used in the hybrid portable power system for military and commercial applications. Ultralife will provide 20 cells for SOCOM qualification at the end of the Phase I project.

Solicitation Description:

US Special Operations Command (USSOCOM) requires safe, lighter-weight, reduced cost, high-energy density waterproof power source to replace the Lithium BA-5590 battery used for man-portable power. To reduce operations costs and allow for extended mission operations, a rechargeable battery design is required. The current BA-5590 is a throwaway primary battery with a limited energy density of [REDACTED]. Development of a rechargeable battery having [REDACTED] would provide for a direct replacement battery that can be charged in the field and allow for extended operations. Current commercial rechargeable batteries are limited to energy densities to about 120 Watt-hrs/kg. Development of polymer pouch cell designs would enable rechargeable batteries to exceed [REDACTED] and provide for an inherently safer design due to their use of nonflammable polymer electrolytes.

Phase I Technical Objectives:

Ultralife will demonstrate lithium polymer batteries with the following characteristics during the phase I stage:

- 1) Specific energy density greater than [REDACTED]
- 2) Operation temperatures between [REDACTED]
- 3) Capacity loss less than [REDACTED] days desert cycle testing
- 4) Complete safety assessment review (SAR) package for the submitted cells.
- 5) 20 deliverables for SOCOM evaluation

Phase I work plan:

[Redacted]

The proposed Phase I work will focus on the following five sequential stages. Each stage will realize incremental energy density enhancement and overall performance improvement to the proposed objectives.

1) [Redacted]

2) [Redacted]

3) [Redacted]

4) [Redacted]

5) [Redacted]

[Redacted]

[REDACTED]

[REDACTED]

Key Personnel:

[REDACTED]

Co-P.I.: [REDACTED]

Relationship with Future Research or Research and Development

UBI anticipates the work performed in Phase 1 of this SBIR will result in [REDACTED] [REDACTED] Data collected on the materials and processing requirements to produce these cells will be used in Phase II of the SBIR to further evaluate material and performance possibilities and establish a baseline to assure that the solutions obtained [REDACTED]

Commercialization Strategy

The information gained will put in place the technology required to allow efficient and effective development of [REDACTED] Any commercial application [REDACTED] will benefit from this technology. Examples of commercial applications that will benefit from this technology are, [REDACTED]

Facilities and Equipment

Ultralife Batteries has a 60 acre primary campus located at 2000 Technology Parkway in Newark NY 14513. The buildings that house production, engineering, product development, and various indirect functions encompass approximately 120,000 square feet. All proposed work will be completed at this location.

The facilities of Ultralife Batteries, Newark, NY meets environmental laws and regulations of federal, state (New York), and local government laws for, but not limited to, airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.

Ultralife has a complete [REDACTED] battery production line and state-of-the art development facility at its Newark, NY facility. The analytical center is equipped with [REDACTED]

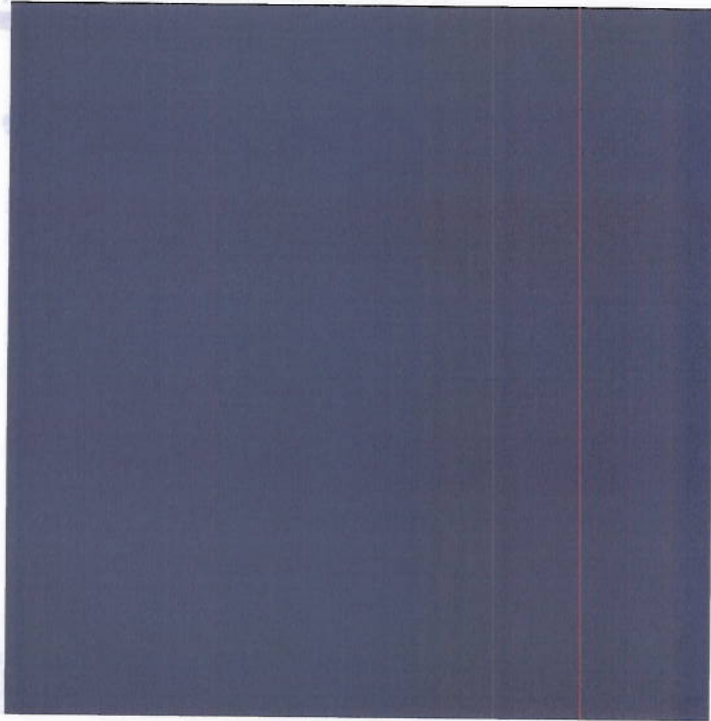
Ultralife Batteries has a large scale test facility with over [REDACTED]

Consultants

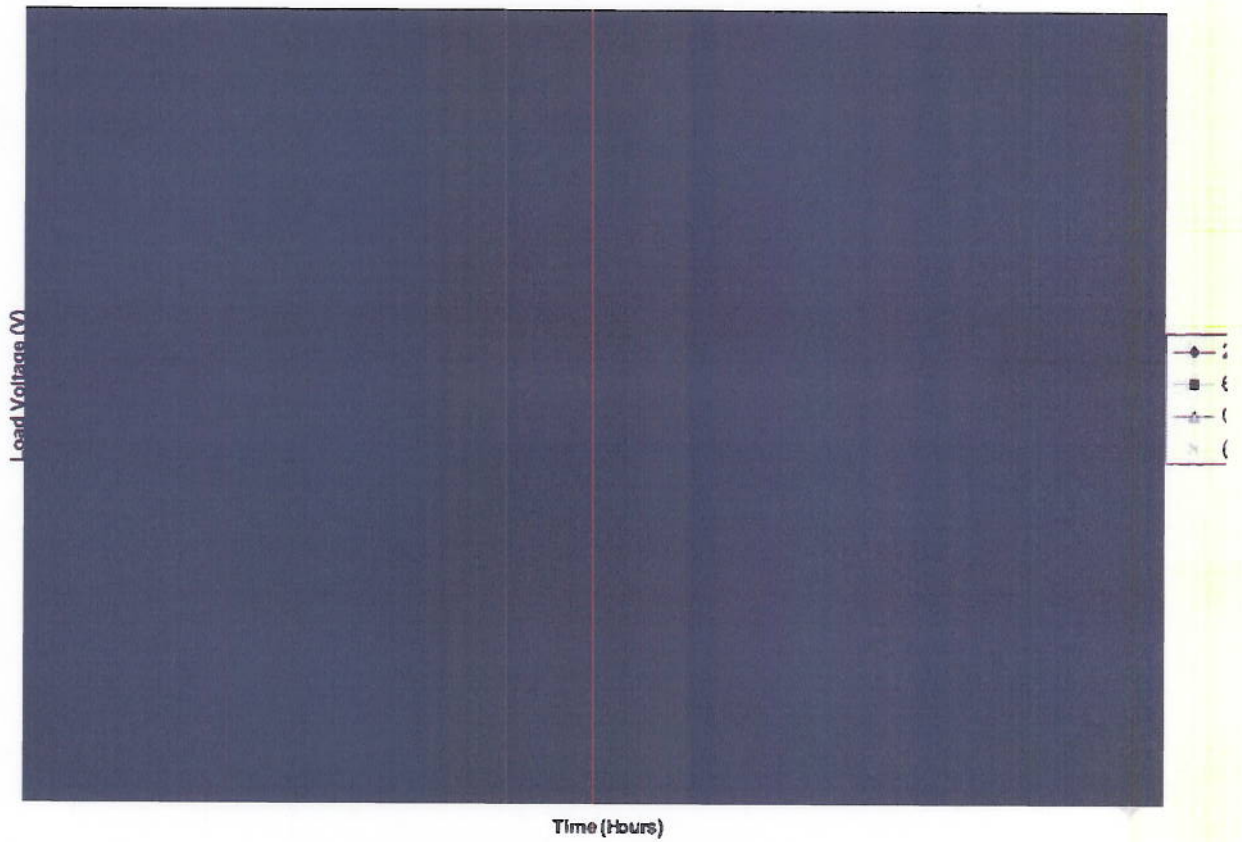
UBI personnel will perform all work for this program.

[REDACTED]

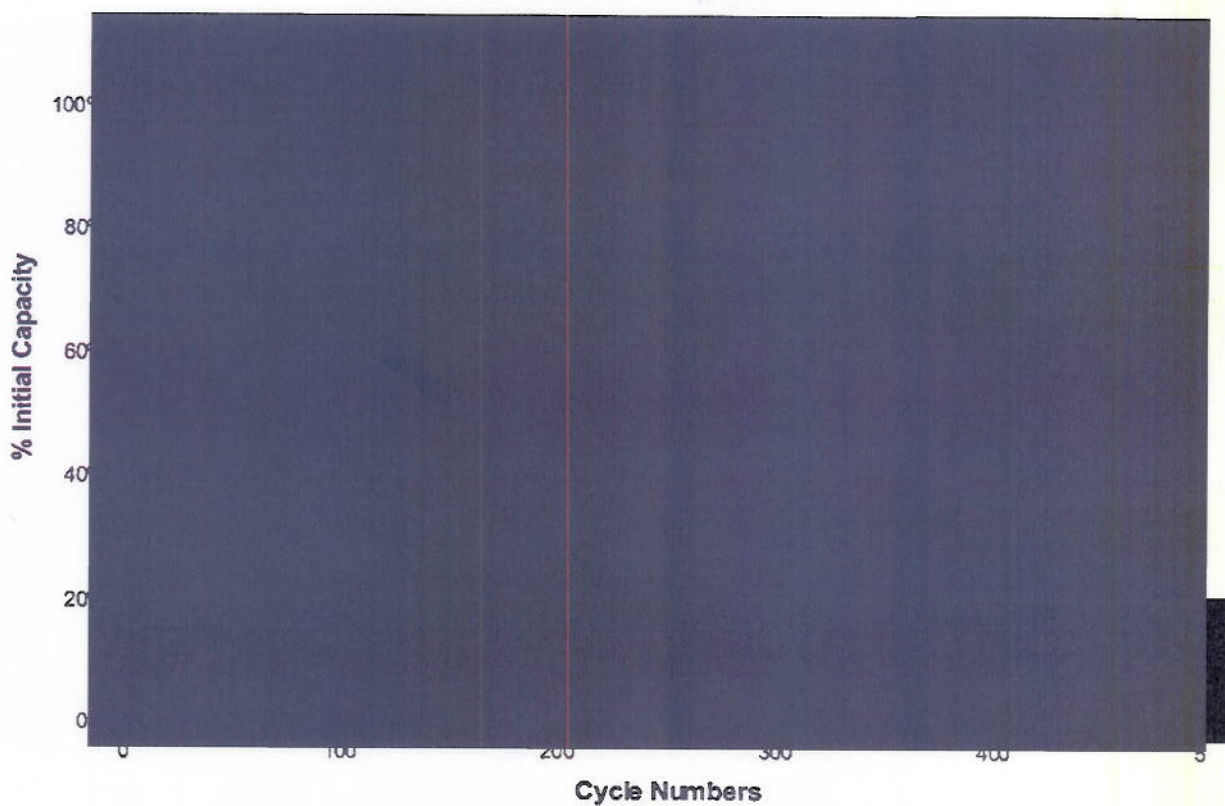
[REDACTED]



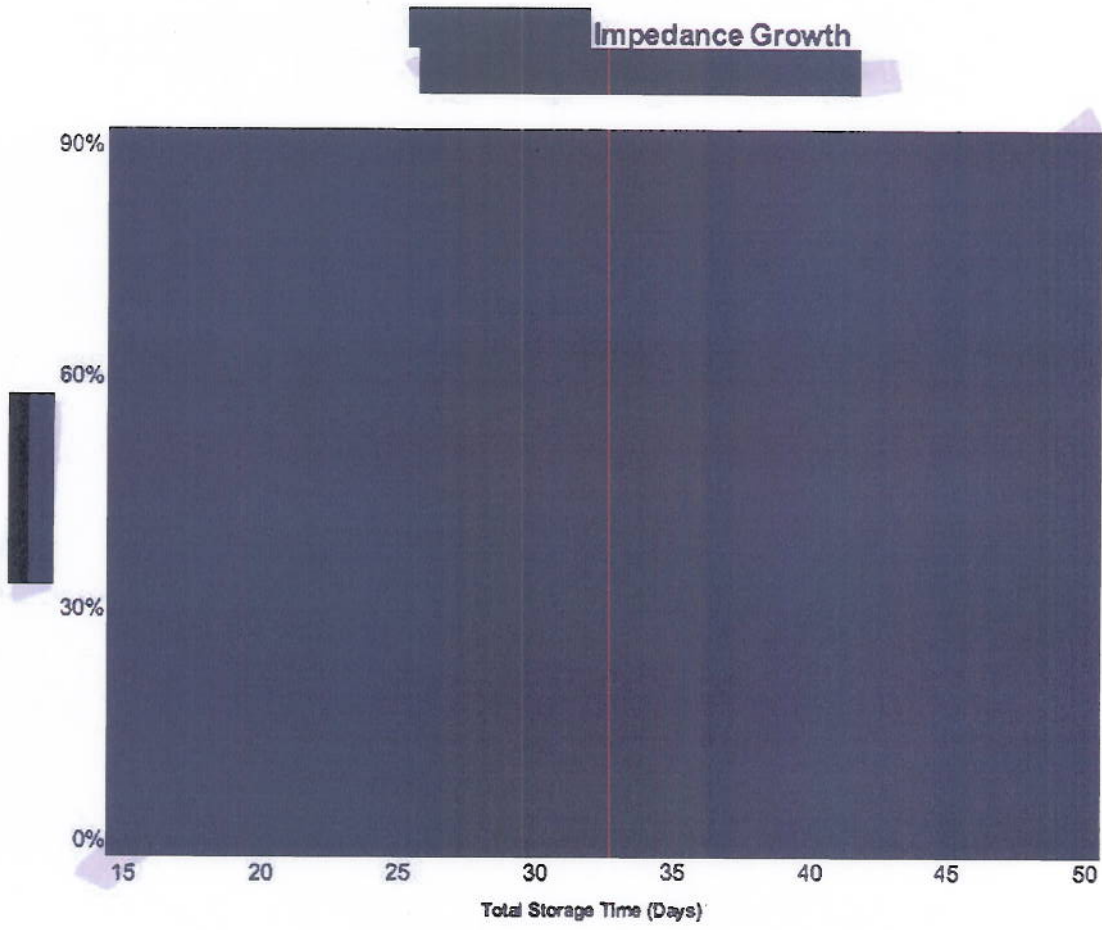
UL BL34106102 Cell



1C Rate Cycling [REDACTED]



[REDACTED]



[Redacted text block]

(go to "Submitting Information" and then to "How to Submit"). The subsequent "Form Instructions" section provides guidance on completing the form.

The final technical report will not be acceptable to the Government unless the Standard Form 298 is included as the first page and is satisfactorily completed.

Contractor's format is acceptable. The final technical report shall include a detailed technical description of the work accomplished and supporting test protocols and data, technical drawings, and specifications.

The report is due at the end of the contract. The Government has 15 days after receipt to request changes, and the contractor shall submit a revised report within 15 days receipt of the Government request.

The final report shall be transmitted electronically to the email addresses listed in Block 14. Hard copies will not be accepted.

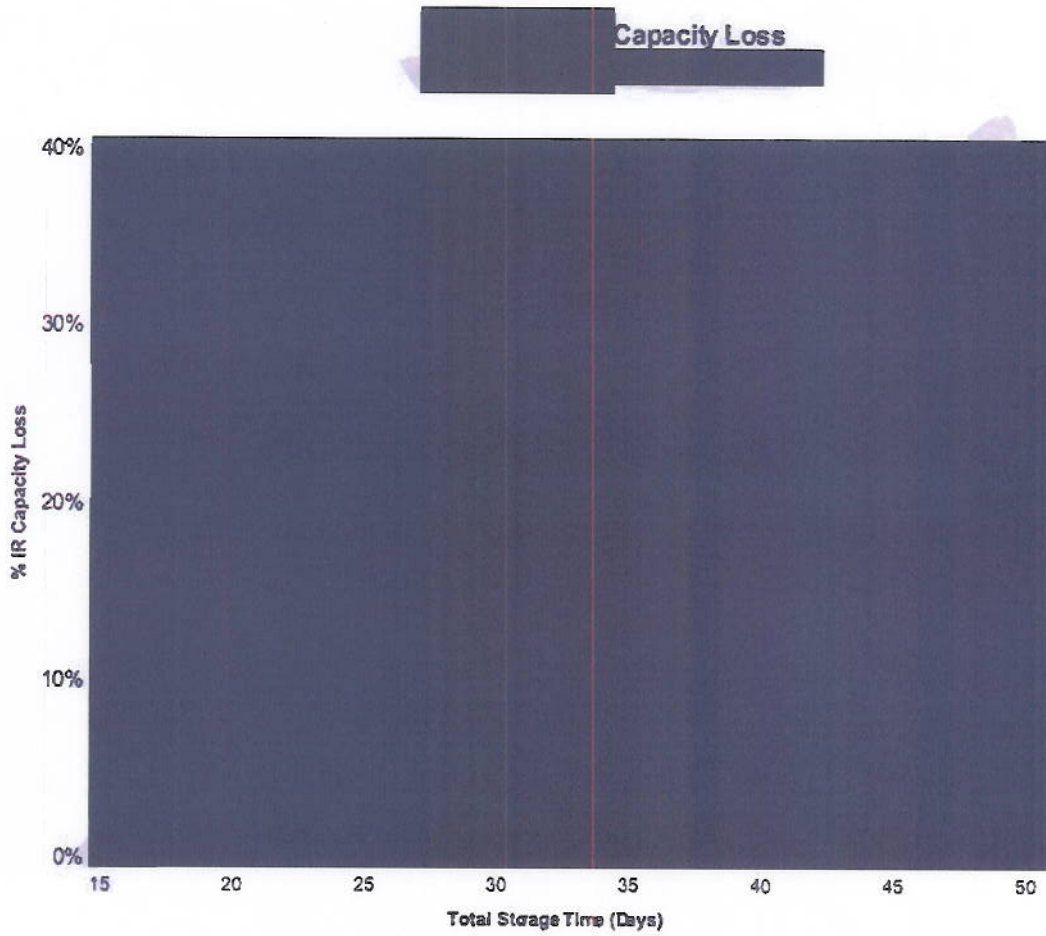
The "Material Inspection and Receiving Report (DD FORM 250) shall be submitted after the final technical report is accepted by the Government. The DD Form 250 is located at www.e-publishing.af.mil (go to "Electronic Forms" then to "Department of Defense Forms Site" then to "Department of Defense" then to the first bracket "DD00001 to DD0999". For an example of a completed DD Form 250 as well as instructions on how to complete the form, see www.dfas.mil/compay/contractorpayment/appendix1.htm.

Telephone numbers for the Defense Accounting and Finance System are also available at this web site for additional assistance. Block 23 of the DD250 shall state "ORIGINAL INVOICE" in 16 pitch type and bolded.

The Procurement Technical Assistance Center (PTAC) is available to assist vendors complete forms associated with Federal Government contracts. PTAC centers are located across the United States (www.sellingtothegovernment.net/ptac_map.asp). The closest PTAC office to MacDill AFB is located at 1101 Channelside Drive, Tampa, Florida. This office can be reached at 1 800 733 7232 or (813) 905 5800, 8AM to 5PM (Eastern Standard Time). When the receptionist answers, state that your question deals with a Federal Government contract.

15. TOTAL →			2	6	

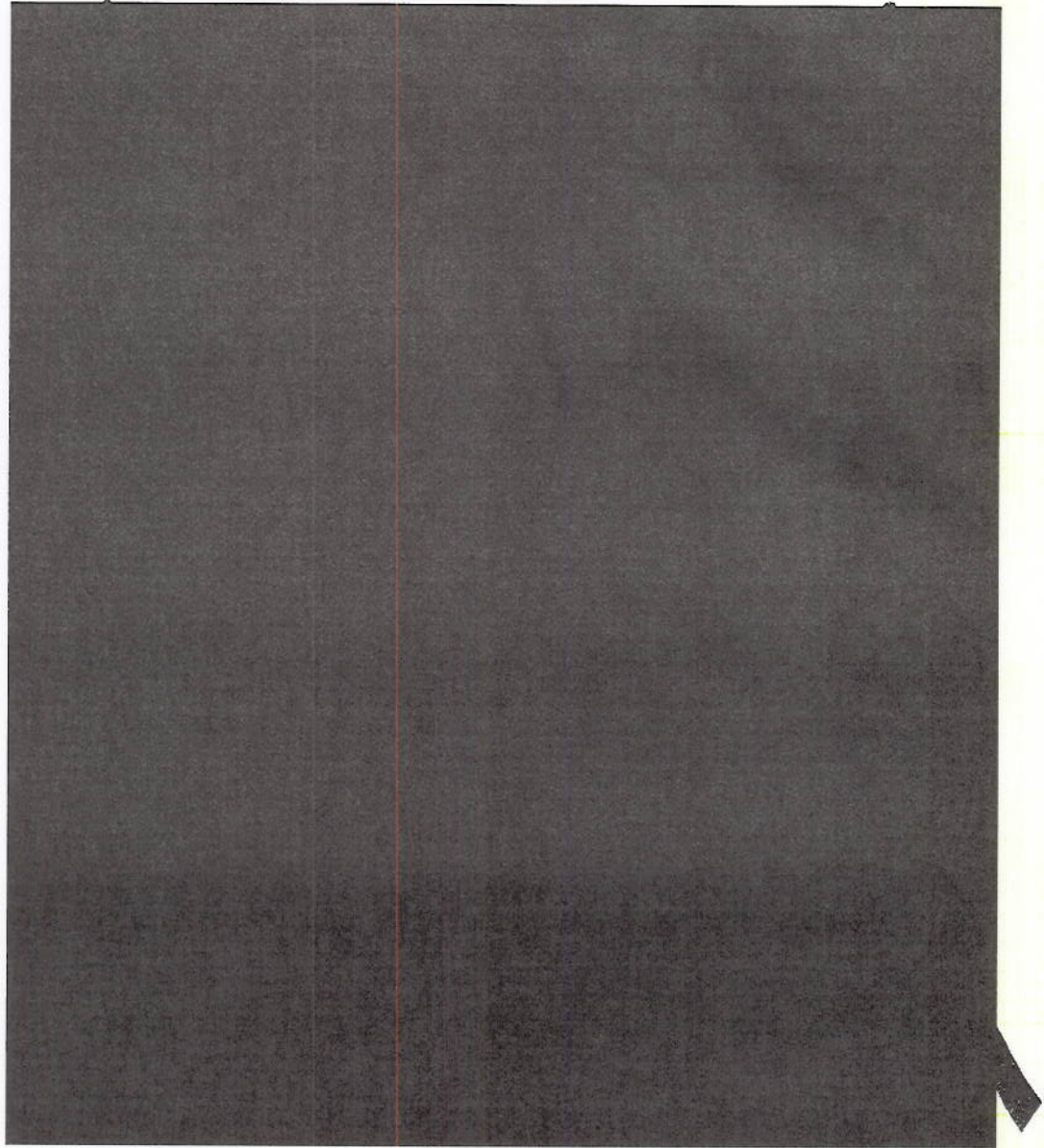
G. PREPARED BY [Redacted] //signed//	H. DATE 20 Oct 03	I. APPROVED BY [Redacted] //signed//	J. DATE 20 Oct 03
---	----------------------	---	----------------------



Resume

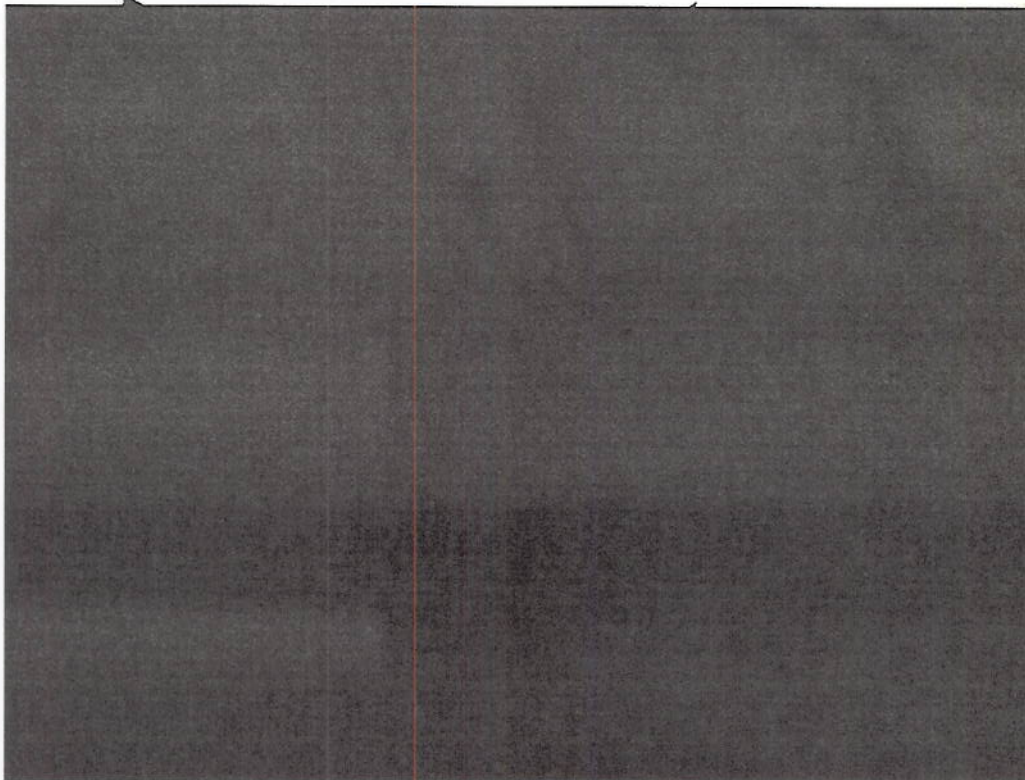


Employment





Education



Awards

List of Publications and patents is available upon request

