United States Securities and Exchange Commission Washington, D.C. 20549

Form S-3

Registration Statement under the Securities Act of 1933

Ultralife Batteries, Inc.

(Exact name of registrant as specified in its charter)

Delaware

16-1387013

(State or other jurisdiction of incorporation or organization)

(I.R.S. employer identification number)

2000 Technology Parkway Newark, New York 14513 (315) 332-7100

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Peter F. Comerford Vice President of Administration & General Counsel Ultralife Batteries, Inc. 2000 Technology Parkway Newark, New York 14513 Tel: (315) 332-7100

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(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. o

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413 (b) under the Securities Act, check the following box. o

CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered | Amount to be registered | Proposed maximum offering price per share | Proposed maximum aggregate offering price | Amount of registration fee |
|--|-------------------------|---|---|----------------------------|
| Common Stock, par value \$.10 per share | 4,029,580 | \$9.74(1) | \$39,248,109 (1) | \$4,200 |

(1) Pursuant to Rule 457(c) of the Securities Act of 1933, the proposed maximum offering price per share and the proposed maximum aggregate offering price have been computed on the basis of \$9.74 per share, the average of the high and low sales prices of the common stock of the registrant on The Nasdaq Global Market on August 16, 2006.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Subject to completion, dated August 18, 2006

Preliminary Prospectus

The information in this prospectus is not complete and may change. Neither the company nor the selling stockholders may sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and the company and the selling stockholders are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Ultralife Batteries, Inc.

4.029.580 Shares of Common Stock

This prospectus relates to the offer and sale of up to 4,029,580 shares of our common stock. We are offering up to 2,500,000 shares of our common stock in a public offering. In addition, the selling stockholders named in the "Selling Stockholders" section of this prospectus are offering up to 1,529,580 shares of our common stock, of which 100,000 of such shares are issuable upon exercise of warrants and up to 1,333,333 of such shares are issuable upon the conversion of a subordinated convertible promissory note. The shares being offered by the selling stockholders were initially sold, and the warrants and the subordinated convertible promissory note were initially issued, in two separate, unrelated private placement transactions.

We intend to sell shares of our common stock being offered by us at prevailing market prices or at other prices to be determined, as described in the "Plan of Distribution" section of this prospectus, and we will receive the net proceeds from such sales. The prices at which the selling stockholders may sell the shares being offered by them will be determined by the selling stockholders. Although we will receive approximately \$1,230,000 in cash if and when the warrants are exercised, we will not receive any proceeds from the sale of the shares of our common stock being offered by the selling stockholders.

Our common stock is quoted through the Nasdaq Global Market under the symbol "ULBI." The last reported sale price of our common stock on the Nasdaq Global Market on August 16, 2006 was \$9.65 per share.

Our principal executive offices are located at 2000 Technology Parkway, Newark, New York 14513, and our telephone number is (315) 332-7100.

Investing in our common stock involves a high degree of risk. Please see the section entitled "Risk Factors" beginning on page 3 of this prospectus to read about risks you should consider before buying our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

| The date of this prospectus is | , 2006. |
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INFORMATION CONTAINED IN THIS PROSPECTUS

You should rely only on the information provided or incorporated by reference in this prospectus or any prospectus supplement. Neither we nor the selling stockholders have authorized anyone to provide you with additional or different information. Neither we nor the selling stockholders are making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information in this prospectus and any prospectus supplement is accurate only as of the date on the front of the document and that information incorporated by reference in this prospectus or any prospectus supplement is accurate only as of the date of the document incorporated by reference. In this prospectus and any prospectus supplement, unless otherwise indicated, the terms "Ultralife Batteries," "we," "us" and "our" refer to Ultralife Batteries, Inc. and its subsidiaries, and do not refer to the selling stockholders.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made forward-looking statements in this prospectus and in documents that we incorporate by reference into this prospectus. We base these forward-looking statements on our expectations, assumptions, estimates and projections about our business and the industry in which we operate as of the date of this prospectus. These forward-looking statements are subject to a number of risks and uncertainties that cannot be predicted, quantified or controlled and that could cause actual results to differ materially from those set forth in, contemplated by, or underlying the forward-looking statements. Statements in this prospectus, and in documents incorporated into this prospectus, including those set forth below in "Risk Factors," describe factors, among others, that could contribute to or cause these differences. In light of these risks and uncertainties, there can be no assurance that the forward-looking statements contained in this prospectus will in fact transpire or prove to be accurate. We undertake no duty to update any of these forward-looking statements.

RISK FACTORS

You should carefully consider the risks described below before purchasing our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us, or that we currently deem immaterial, may also impair our business or cause the value of our common stock to drop. If any of the following risks actually occur, our business could be adversely affected. In those cases, the trading price of our common stock could decline, and you may lose the value of your investment.

Dependence on Continued Demand for our Existing Products

A substantial portion of our business depends on the continued demand for products using our batteries sold by original equipment manufacturers, which we refer to in this prospectus as OEMs. Therefore, our success depends significantly upon the success of those OEMs' products in the marketplace. We sell much of our products through OEM supply agreements and contracts. While OEM agreements and contracts contain volume-based pricing based on expected volumes, industry practices dictate that pricing is rarely adjusted retroactively when contract volumes are not achieved. Every effort is made to adjust future prices accordingly, but the ability to adjust prices is generally based on market conditions. We are subject to many risks beyond our control that influence the success or failure of a particular product manufactured by an OEM, including:

- competition faced by the OEM in its particular industry,
- · market acceptance of the OEM's product,
- the engineering, sales, marketing and management capabilities of the OEM,
- · technical challenges unrelated to our technology or products faced by the OEM in developing its products, and
- the financial and other resources of the OEM.

For instance, in the year ended December 31, 2005, 32% of our revenues were comprised of sales of our 9-volt batteries, and of this, approximately 21% pertained to sales to smoke alarm OEMs. In 2004, 22% of our revenues were comprised of sales of our 9-volt batteries, and of this, approximately 19% pertained to smoke alarm OEMs. If the retail demand for long-life smoke alarms decreases significantly, this could have a material adverse effect on our business, financial condition and results of operations.

Risks Relating to Growth and Expansion

Rapid growth of our battery business could significantly strain management, operations and technical resources. If we are successful in obtaining rapid market growth of our batteries, we will be required to deliver large volumes of quality products to customers on a timely basis at a reasonable cost to those customers. For example, the large contracts recently received from the U.S. military for our batteries using cylindrical cells could strain the current capacity capabilities of our U.K. facility and require additional equipment and time to build a sufficient support infrastructure at that location. This demand could also create working capital issues for us, as it may need increased liquidity to fund purchases of raw materials and supplies. We cannot assure, however, that business will rapidly grow or that our efforts to expand manufacturing and quality control activities will be successful or that we will be able to satisfy commercial scale production requirements on a timely and cost-effective basis.

In addition to organic growth, we have recently adopted a strategy to grow our business through the acquisition of complementary businesses. Our inability to acquire such businesses, or increased competition which could increase our acquisition costs, could impede our ability to close identified acquisitions, which could adversely affect our growth strategy and results of operations. In addition, our inability to improve the operating margins of businesses we acquire or operate such acquired businesses profitably or to effectively integrate the operations of those acquired businesses could also adversely affect our business and results of operations.

We will also be required to continue to improve our operations, management and financial systems and controls. The failure to manage growth and expansion effectively could have an adverse effect on our business, financial condition, results of operations, and liquidity.

Risks Related to Government Contracts

A significant portion of our business comes from sales of product to the U.S. military through various government contracts. These contracts are subject to procurement laws and regulations that lay out uniform policies and procedures for acquiring goods and services by the U.S. government. The regulations also contain guidelines for managing contracts after they are awarded, including conditions under which contracts may be terminated, in whole or in part, at the government's convenience or for default. Failure to comply with the procurement laws or regulations can result in civil, criminal or administrative proceedings involving fines, penalties, suspension of payments, or suspension or disbarment from government contracting or subcontracting for a period of time.

We have had certain "exigent", non-bid contracts with the government that have been subject to an audit and final price adjustment and have consequently resulted in decreased margins compared with the original terms of the contracts. As of December 31, 2005, there were no outstanding exigent contracts with the government. As part of its due diligence, the government has conducted post-audits of the completed exigent contracts to ensure that information used in supporting the pricing of exigent contracts did not differ materially from actual results. In September 2005, the Defense Contracting Audit Agency, which we refer to in this prospectus as the DCAA, presented its findings related to the audits of three of the exigent contracts, suggesting a potential pricing adjustment of approximately \$1,400,000 related to reductions in the cost of materials that occurred prior to the final negotiation of these contracts. We have reviewed these audit reports, have submitted our response to these audits and believe, taken as a whole, the proposed audit adjustments can be offset with the consideration of other compensating cost increases that occurred prior to the final negotiation of the contracts. While we believe that potential exposure exists relating to any final negotiation of these proposed adjustments, we cannot reasonably estimate what, if any, adjustment may result when finalized. Such adjustments could reduce margins and have an adverse effect on our business, financial condition and results of operations.

Dependence on U.S. Military Procurement of Batteries

We will continue to develop both non-rechargeable and rechargeable battery products to meet the needs of the U.S. military forces. We remain confident in our abilities to compete successfully in solicitations for awards of contracts for these batteries, as well as meeting delivery schedules for orders released under contract. The receipt of an award, however, does not usually result in the immediate release of an order. Any delay of solicitations or anticipated purchase orders by, or future failure of, the U.S. government to purchase batteries manufactured by us could have a material adverse effect on our business, financial condition and results of operations. Additionally, we are typically required to successfully meet contractual specifications and to pass various qualification-testing for the batteries under contract by the military. An inability by us to pass these tests in a timely fashion could have a material adverse effect on our business, financial condition and results of operations. When a government contract is awarded, there is a government procedure that allows for companies to formally protest such award if they believe they were unjustly treated in the evaluation process. As a result of these protests, the government is precluded from progressing under these contracts until the protests are resolved. A prolonged delay in the resolution of a protest, or a reversal of an award resulting from such a protest could have a material adverse effect on our business, financial condition and results of operations.

In the years ended December 31, 2005, 2004 and 2003, approximately 45%, 65%, and 56%, respectively, of our revenues were comprised of sales of batteries made directly or indirectly to the U.S. military. If the demand for batteries from the U.S. military were to decrease significantly, this could have a material adverse effect on our business, financial condition and results of operations.

Concentration of Credit Risk

We have one major customer, the U.S. Department of Defense, that comprised 25%, 56%, and 51% of our revenue in the years ended December 31, 2005, 2004, and 2003, respectively. There were no other customers that comprised greater than 10% of total company revenues in those years.

Currently, we do not experience significant seasonal trends in non-rechargeable battery revenues. However, a downturn in the U.S. economy, which affects retail sales and which could result in fewer sales of smoke detectors to consumers, could potentially result in lower sales by us to this market segment. The smoke detector OEM market segment comprised approximately 8% of total non-rechargeable revenues in 2005. Additionally, a lower demand from the U.S. and U.K. governments could result in lower sales to military and government users.

We generally do not distribute our products to a concentrated geographical area nor is there a significant concentration of credit risks arising from individuals or groups of customers engaged in similar activities, or who have similar economic characteristics. While sales to the U.S. military have been substantial during 2005, we do not consider this customer to be a significant credit risk. We do not normally obtain collateral on trade accounts receivable.

Risks Related to Development of Rechargeable Battery Business

Although we are involved with developing certain rechargeable cells and we are in production of rechargeable batteries, we cannot assure that volume acceptance of our rechargeable products will occur due to the highly competitive nature of the business. There are many new company and technology entrants into the marketplace, and we must continually reassess the market segments in which our products can be successful and seek to engage customers in these segments that will adopt our products for use in their products. In addition, these companies must be successful with their products in their markets for us to gain increased business. Increased competition, failure to gain customer acceptance of products, the introduction of disruptive technologies or failure of our customers in their markets could have a further adverse effect on our rechargeable battery business.

Risks Related to Product Warranty Claims

We typically offer warranties against any defects due to product malfunction or workmanship for a period up to one year from the date of purchase. We also offer a 10-year warranty on our 9-volt batteries that are used in ionization-type smoke alarms. We provide for a reserve for this potential warranty expense, which is based on an analysis of historical warranty issues. There is no assurance that future warranty claims will be consistent with past history, and in the event we experience a significant increase in warranty claims, there is no assurance that our reserves will be sufficient. This could have a material adverse effect on our business, financial condition and results of operations.

Safety Risks; Demands of Environmental and Other Regulatory Compliance

Due to the high energy density inherent in lithium batteries, our batteries can pose certain safety risks, including the risk of fire. Although we incorporate safety procedures in research, development, manufacturing processes and the transportation of batteries that are designed to minimize safety risks, we cannot assure that accidents will not occur. Although we currently carry insurance policies that cover loss of the plant and machinery, leasehold improvements, inventory and business interruption, any accident, whether at the manufacturing facilities or from the use of the products, may result in significant production delays or claims for damages resulting from injuries. These types of losses could have a material adverse effect on our business, financial condition and results of operations.

National, state and local laws impose various environmental controls on the manufacture, storage, use and disposal of lithium batteries and/or of certain chemicals used in the manufacture of lithium batteries. Although we believe that our operations are in substantial compliance with current environmental regulations and that, except as noted below, there are no environmental conditions that will require material expenditures for clean-up at the present or former facilities or at facilities to which we have sent waste for disposal, there can be no assurance that changes in such laws and regulations will not impose costly compliance requirements on us or otherwise subject us to future liabilities. Moreover, state and local governments may enact additional restrictions relating to the disposal of lithium batteries used by our customers that could have a material adverse effect on our business, financial condition and results of operations. In addition, the U.S. Department of Transportation, which we refer to in the prospectus as the DOT, and certain international regulatory agencies that consider lithium to be a hazardous material regulate the transportation of lithium-ion batteries and batteries that contain lithium metal. We currently ship lithium batteries in accordance with regulations established by the DOT and other international regulatory agencies. There can be no

assurance that additional or modified regulations relating to the manufacture, transportation, storage, use and disposal of materials used to manufacture our batteries or restricting disposal of batteries will not be imposed or how these regulations will affect us or our customers.

In conjunction with our purchase/lease of our Newark, New York facility in 1998, we entered into a payment-in-lieu of tax agreement, which provides us with real estate tax concessions upon meeting certain conditions. In connection with this agreement, a consulting firm performed a Phase I and II Environmental Site Assessment, which revealed the existence of contaminated soil and ground water around one of the buildings. We, in conjunction with various environmental assessments of the property on which our Newark, New York facility is located, have submitted various work plans to the New York State Department of Environmental Conservation, which we refer to in this prospectus as NYSDEC, regarding further environmental testing and sampling in order to determine the scope of any additional remediation. We subsequently met with NYSDEC in March 2006 to present the test results, and we are now awaiting comments in response from NYSDEC. The ultimate resolution of this matter may result in us incurring additional costs.

Risks Related to Changes in Transportation Regulations

The transportation of non-rechargeable and rechargeable lithium batteries is regulated by the International Civil Aviation Organization, which we refer to in the prospectus as ICAO, and corresponding International Air Transport Association, which we refer to in the prospectus as IATA, Dangerous Goods Regulations and the International Maritime Dangerous Goods Code, which we refer to in the prospectus as IMDG. These regulations are based on the United Nations, or UN, Recommendations on the Transport of Dangerous Goods Model Regulations and the UN Manual of Tests and Criteria. We currently ship our products pursuant to ICAO, IATA and DOT hazardous goods regulations. New regulations that pertain to all lithium battery manufacturers went into effect in 2003 and 2004, and additional regulations are expected to go into effect later in 2006 or in 2007. The new regulations require companies to meet certain new testing, packaging, labeling and shipping specifications for safety reasons. We comply with all current U.S. and international regulations for the shipment of our products, and will comply with any new regulations that are imposed. We have established our own testing facilities to ensure that we comply with these regulations. If we were unable to comply with the new regulations, however, or if regulations are introduced that limit our ability to transport our products to customers in a cost-effective manner, this could have a material adverse effect on our business, financial condition and results of operations.

Limited Sources of Supply and Increases in Material Costs

Certain materials used in our products are available only from a single or a limited number of suppliers. As such, some materials could become in short supply resulting in limited availability and/or increased costs. Additionally, we may elect to develop relationships with a single or limited number of suppliers for materials that are otherwise generally available. Due to our involvement with supplying military batteries to the government, we could receive a government preference to continue to obtain critical supplies to meet military production needs. However, if the government did not provide us with a government preference in such circumstances, the difficulty in obtaining supplies could have a material adverse effect on our financial results. Although we believe that alternative suppliers are available to supply materials that could replace materials currently used and that, if necessary, we would be able to redesign our products to make use of such alternatives, any interruption in the supply from any supplier that serves as a sole source could delay product shipments and have a material adverse effect on our business, financial condition and results of operations. Although we have experienced interruptions of product deliveries by sole source suppliers, these interruptions have not had a material adverse effect on our business, financial condition and results of operations. We cannot guarantee that we will not experience a material interruption of product deliveries from sole source suppliers. Additionally, we could face increasing pricing pressure from our suppliers dependent upon volume, due to rising costs by these suppliers that could be passed on to us in higher prices for our raw materials, which could have a material effect on our business, financial condition and results of operations.

Dependence on Proprietary Technologies

Our success depends more on the knowledge, ability, experience and technological expertise of our employees than on the legal protection of patents and other proprietary rights. We claim proprietary rights in various unpatented technologies, know-how, trade secrets and trademarks relating to products and manufacturing processes. We cannot guarantee the degree of protection these various claims may or will afford, or that competitors will not independently develop or patent technologies that are substantially equivalent or superior to our technology. We protect our proprietary rights in our products and operations through contractual obligations, including nondisclosure agreements with certain employees, customers, consultants and strategic partners. There can be no assurance as to the degree of protection these contractual measures may or will afford. We have had patents issued and patent applications pending in the U.S. and elsewhere. We cannot assure (1) that patents will be issued from any pending applications, or that the claims allowed under any patents will be sufficiently broad to protect our technology, (2) that any patents issued to us will not be challenged, invalidated or circumvented, or (3) as to the degree or adequacy of protection any patents or patent applications may or will afford. If we are found to be infringing third party patents, there can be no assurance that we will be able to obtain licenses with respect to such patents on acceptable terms, if at all. The failure to obtain necessary licenses could delay product shipment or the introduction of new products, and costly attempts to design around such patents could foreclose the development, manufacture or sale of products.

Dependence on Key Personnel

Because of the specialized, technical nature of the business, we are highly dependent on certain members of management, marketing, engineering and technical staff. The loss of these services or these members could have a material adverse effect on our business, financial condition and results of operations. In addition to developing manufacturing capacity to produce high volumes of batteries, we must attract, recruit and retain a sizeable workforce of technically competent employees. Our ability to pursue effectively our business strategy will depend upon, among other factors, the successful recruitment and retention of additional highly skilled and experienced managerial, marketing, engineering and technical personnel, and the integration of such personnel obtained through business acquisitions. We cannot assure that we will be able to retain or recruit this type of personnel. An inability to hire sufficient numbers of people or to find people with the desired skills could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Competition and Technological Obsolescence

We compete with large and small manufacturers of alkaline, carbon-zinc, seawater, and high-rate batteries as well as other manufacturers of lithium batteries, both rechargeable and non-rechargeable. We cannot assure that we will successfully compete with these manufacturers, many of which have substantially greater financial, technical, manufacturing, distribution, marketing, sales and other resources.

The market for our products is characterized by changing technology and evolving industry standards, often resulting in product obsolescence or short product lifecycles. Although we believe that our batteries are comprised of state-of-the-art technology, there can be no assurance that competitors will not develop technologies or products that would render our technology and products obsolete or less marketable.

Many of the companies with which we compete have substantially greater resources than us, and some have the capacity and volume of business to be able to produce their products more efficiently than us at the present time. In addition, these companies are developing batteries using a variety of battery technologies and chemistries that are expected to compete with our technology. If these companies successfully market their batteries before, during or after the introduction of our products, there could be a material adverse effect on our business, financial condition and results of operations.

Inability to Insure Against Losses

Because certain of our products are used in a variety of applications, including high risk scenarios, we may be exposed to liability claims if such a product fails to function properly. We maintain what we believe to be sufficient liability insurance coverage to protect against potential claims; however, there can be no assurance that liability insurance will continue to be available, or that any such liability insurance would be sufficient to cover any claim or claims.

Risks Related to Currency Fluctuations

We maintain manufacturing operations in the U.S. the U.K. and China, and export products to various countries. We purchase materials and sell our products in foreign currencies, and therefore currency fluctuations may impact our pricing of products sold and materials purchased. In addition, our foreign subsidiaries maintain their books in local currency, and the translation of those subsidiary financial statements into U.S. dollars for our consolidated financial statements could have an adverse effect on our consolidated financial results, due to changes in local currency relative to the U.S. dollar. Accordingly, currency fluctuations could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Limiting the Use of Net Operating Loss Carryforwards

At December 31, 2005, we had approximately \$82,418,000 of net operating loss carryforwards, which we refer to in the prospectus as NOLs, available to offset current and future taxable income. In addition, we reflected a net deferred tax asset of \$23,729,000 on our Consolidated Balance Sheet associated with the future tax benefit we expect to receive related to our U.S. operations. The amount of the net deferred tax asset could be reduced if actual or expected future U.S. income or income tax rates are lower than estimated, or if there are differences in the timing or amount of future reversals of existing taxable or deductible temporary differences. Achieving our business plan targets, particularly those relating to revenue and profitability, is integral to our assessment regarding the recoverability of our net deferred tax asset.

We have determined that a change in ownership, as defined under Internal Revenue Code Section 382, occurred during 2003 and again during 2005. As such, the domestic net operating loss carryforward will be subject to an annual limitation estimated to be in the range of approximately \$12,000,000. This limitation did not have an impact on income taxes determined for 2006. Such a limitation could result in the possibility of a cash outlay for income taxes in a future year when earnings exceed the amount of NOLs that can be used by us.

Quarterly Fluctuations in Operating Results and Possible Volatility of Stock Price

Our future operating results may vary significantly from quarter to quarter depending on factors such as the timing and shipment of significant orders, new product introductions, delays in customer releases of purchase orders, the mix of distribution channels through which we sell our products and general economic conditions. Frequently, a substantial portion of our revenue in each quarter is generated from orders booked and shipped during that quarter. As a result, revenue levels are difficult to predict for each quarter. If revenue results are below expectations, operating results will be adversely affected as we have a sizeable base of fixed overhead costs that do not vary much with the changes in revenue. In addition to the uncertainties of quarterly operating results, future announcements concerning us or our competitors, including technological innovations or commercial products, litigation or public concerns as to the safety or commercial value of one or more of our products, may cause the market price of our common stock to fluctuate substantially for reasons that may be unrelated to our operating results. These fluctuations, as well as general economic, political and market conditions, may have a material adverse effect on the market price of our common stock.

Risks Related to Our Ability to Finance Ongoing Operations and Projected Growth

While we believe that our revenue growth projections and our ongoing cost controls will allow us to generate cash and achieve profitability in the foreseeable future, there is no assurance as to when or if we will be able to achieve our projections. Our future cash flows from operations, combined with our accessibility to cash and credit, may not be sufficient to allow us to finance ongoing operations or to make required investments for future growth. We may need to seek additional credit or access capital markets for additional funds. There is no assurance that we would be successful in this regard.

We have certain debt covenants that must be maintained. There is no assurance that we will be able to continue to meet these debt covenants in the future. If we default on any of our debt covenants and we are unable to renegotiate credit terms in order to comply with such covenants, this could have a material adverse effect on our business, financial condition and results of operations. On November 1, 2005, we amended our \$25,000,000 credit facility to change the financial metrics that must be met to remain in compliance with the debt covenants for the third and fourth quarters of 2005 and thereafter, to accommodate our revised financial outlook. Effective July 3, 2006, in connection with our acquisitions of ABLE New Energy Co., Ltd. and McDowell Research, Ltd. (discussed elsewhere in this prospectus), we amended the credit facility to increase the amount of the revolving credit component from \$15,000,000 to \$20,000,000, extend the maturity date for revolving loans and revise the covenants regarding debt-to-earnings ratio and EBIT-to-interest-expense ratio. As a result of the uncertainty of our ability to comply with the financial covenants within the next year, we are continuing to classify all of the debt associated with this credit facility as a current liability on our balance sheet. While we believe relations with our lenders are good and have received waivers as necessary in the past, there can be no assurance that such waivers will always be obtained when needed. In such case, we believe we have, in the aggregate, sufficient cash, cash generation capabilities from operations, working capital and financing alternatives at our disposal, including but not limited to alternative borrowing arrangements and other available lenders, to fund operations in the normal course. If we are unable to achieve our plans or unforeseen events occur, we may need to implement alternative plans to provide us with sufficient levels of liquidity and working capital. While we believe we could complete our original plans or alter

Risks Related to Our Relationship with Ultralife Taiwan, Inc.

In June 2004, we recorded a non-cash, non-operating charge of \$3,951,000 related to our ownership interest in Ultralife Taiwan, Inc., which we refer to in this prospectus as UTI, that consisted of a write-off of our \$2,401,000 note receivable from UTI, including accrued interest, and the book value of our \$1,550,000 equity investment in UTI. We decided to record this charge due to events that had caused increasing uncertainty over UTI's near-term financial viability, including a failure by UTI to meet commitments made to us and its other creditors to secure additional financial support before July 1, 2004. Based on these factors, and UTI's operating losses over several years, we determined that our investment had an other-than-temporary decline in fair value and we believe that the probability of being reimbursed for the note receivable is remote. We continue to hold a 9.2% equity interest in UTI. UTI is no longer supplying products to us and we have established alternate sources of supply.

Risks Related to Effectiveness of Internal Controls

We maintain and monitor various internal control processes over our financial reporting. While we work to ensure a stringent control environment, it is possible that we may fail to adequately maintain and monitor our various internal control processes over our financial reporting. Any such failure could result in internal control deficiencies that might be considered to be material weaknesses. Such material weaknesses in internal controls would be indicative of potential factors that could impact the financial results we report.

Our Acquisitions May Not Result In The Benefits And Revenue Growth We Expect

During the second quarter of our current fiscal year we acquired ABLE New Energy Co., Ltd., a manufacturer of lithium batteries located in Shenzhen, China, and during the beginning of third quarter of our current fiscal year we acquired substantially all of the assets of McDowell Research, Ltd., a manufacturer of military communications accessories located in Waco, Texas. We are now in the process of integrating these acquisitions into our business and assimilating their operations, services, products and personnel with our management policies, procedures and strategies. We cannot be sure that we will achieve the benefits of revenue growth that we expect from these acquisitions or that we will not incur unforeseen additional costs or expenses in connection with these acquisitions. To effectively manage our expected future growth, we must continue to successfully manage our integration of these companies and continue to improve our operational systems, internal procedures, accounts receivable and management, financial and operational controls. If we fail in any of these areas, our business could be adversely affected.

USE OF PROCEEDS

We will receive the net proceeds from the sale of the shares of our common stock being offered by us. We will use the net proceeds from the sale of the shares of our common stock being offered by us for general corporate purposes. General corporate purposes may include capital expenditures, possible acquisitions, investments, repurchase of our capital stock, debt repayment and any other purposes that we may specify in any prospectus supplement. We may invest the net proceeds from this offering temporarily until we use them for their stated purpose.

The selling stockholders will receive the net proceeds from the sale of the shares of our common stock being offered by them. We will not receive any proceeds from sales of our common stock by the selling stockholders. However, if and when all of the warrants held by the selling stockholders are exercised, we will receive approximately \$1,230,000, which amount represents the aggregate exercise price that would be paid by the selling stockholders in connection with such exercises. See the "Selling Stockholders" and "Plan of Distribution" sections of this prospectus.

SELLING STOCKHOLDERS

The selling stockholders received the shares of our common stock being offered by them pursuant to this prospectus in two separate, unrelated transactions, each of which is described, in turn, below.

The ABLE Transaction

On May 22, 2006, in connection with our acquisition of all the outstanding shares of ABLE New Energy Co., Ltd., a manufacturer of lithium batteries located in Shenzhen, China, which we refer to in this prospectus as ABLE, for an aggregate purchase price of approximately \$4,077,000, we issued 96,247 shares of our common stock and warrants to purchase a further 100,000 shares of our common stock at an exercise price of \$12.30 per share to the three owners of ABLE. Specifically, we issued 48,123 shares of our common stock and a warrant to purchase a further 50,000 shares of our common stock to Huang Deyong, 24,062 shares of our common stock and a warrant to purchase a further 25,000 shares of our common stock to Li Xiaochun and 24,062 shares of our common stock and a warrant to purchase a further 25,000 shares of our common stock to Zhu Dehong. The exercise price of the warrants was the closing price per share of our common stock on January 25, 2006, the date when the parties executed the purchase agreement for the acquisition. The shares and warrants were issued in a private placement transaction, and we committed to register the resale of both the shares and the shares issuable upon any exercise of the warrants. There are no material relationships between us or our affiliates and ABLE or its affiliates, Huang Deyong, Li Xiaochun or Zhu Dehong, other than in respect of the acquisition.

The McDowell Transaction

Effective on July 3, 2006, we completed our acquisition of substantially all of the assets of McDowell Research, Ltd., a Texas limited partnership engaged in the business of manufacturing military communications accessories, which we refer to in this prospectus as McDowell. We also assumed certain liabilities of McDowell in connection with the acquisition. At the closing of the transaction, subject to certain adjustments and a holdback, we paid McDowell \$25,000,000 for the assets. We anticipate that the final amount of the purchase may rise to \$29,000,000 based on a final valuation of trade accounts receivable, inventory and trade accounts payable that were acquired or assumed on the date of the closing. We paid the purchase price by delivering a subordinated convertible promissory note in the principal amount of \$20,000,000 and tendering a single cash payment for the balance of the purchase price. Subject to certain limitations, the subordinated convertible promissory note is convertible into shares of our common stock at any time prior to the time the outstanding principal amount of the promissory note is paid in full. The initial per share conversion price is \$15.00, and the conversion price is subject to customary anti-dilution adjustments. The promissory note has a five-year term. We have the right to compel McDowell to convert the promissory note at any time after the 30-day average closing price of our common stock exceeds \$17.50 per share.

The promissory note was issued in a private placement transaction, and we agreed to file a registration statement with the Securities and Exchange Commission to register the resale of the shares issuable upon any conversion of the promissory note. As of the date of this prospectus, the promissory note has not been converted into shares of our common stock. However, the number of shares listed in the "Selling Stockholder" table below assumes the full conversion of the promissory note by McDowell at a conversion price of \$15.00 per share.

We acquired the assets of McDowell pursuant to an asset purchase agreement, dated as of May 1, 2006, and amended as of July 5, 2006. In addition to us and the wholly-owned subsidiary we formed for the purpose of the acquisition, the parties to the agreement were McDowell, Thomas Hauke, Earl Martin, Sr., James Evans and Frank Alexander. Together, Hauke, Martin, Evans and Alexander beneficially own all of the limited partner interests of McDowell and, through such ownership, they indirectly control McDowell. There are no material relationships between us or our affiliates and McDowell, Hauke, Martin, Evans or Alexander, other than in respect of the McDowell acquisition. Following the completion of the McDowell acquisition, Mr. Hauke joined us as an executive officer. In addition, we and the wholly-owned subsidiary we formed for the purpose of the acquisition entered into a lease agreement for real property located in Waco, Texas with a partnership owned by Messrs. Hauke and Martin.

Selling Stockholder Information

The following table presents information regarding the selling stockholders and the shares that they may offer and sell from time to time under this prospectus. This table is prepared based on information that has been supplied to us by the selling stockholders. The term "selling stockholders" includes the stockholders listed below as well as their transferees, pledgees, donees and other successors. For purposes of the following table, we have assumed that the selling stockholders will sell all of the shares of common stock covered by this prospectus (including all of the shares of common stock issuable upon exercise of the warrants and conversion of the promissory note (without regard to limitations on exercise or conversion)), and that, therefore, there will be no shares beneficially owned by the selling stockholders after the offering. However, because the selling stockholders may offer all or some of their shares under this prospectus or in any other manner permitted by law, no assurances can be given as to the actual number of shares that will be sold by the selling stockholders or that will be held by the selling stockholders after their sales. Information concerning the selling stockholders may change from time to time. Changed information will be presented in a supplement to this prospectus as necessary and required by the rules of the Securities and Exchange Commission. This prospectus also covers any additional shares of common stock that become issuable in connection with the shares being registered by reason of any stock dividend, stock split, recapitalization or other similar transactions effected without the receipt of consideration that results in an increase in the number of outstanding shares of our common stock. Except as noted above under "The ABLE Transaction" and "The McDowell Transaction," each selling shareholder has advised us that he, she or it has had no material relationship with us or any of our predecessors or affiliates during the past three years.

The ownership percentages shown in the table below were calculated based on the 15,005,188 shares of our common stock actually issued and outstanding as of August 16, 2006. We believe the information below under the column "Shares Owned Before the Offering" reflects all shares of our common stock owned by each selling shareholder shown.

| | Shares Owned Before the | Number of | Shares Owned After the Offering | |
|-------------------------|----------------------------|-----------------------|------------------------------------|---------|
| Name | Offering | Shares Offered | Number | Percent |
| Huang Deyong | 98,123 | 98,123 | 0 | * |
| Li Xiaochun | 49,062 | 49,062 | 0 | * |
| Zhu Dehong | 49,062 | 49,062 | 0 | * |
| McDowell Research, Ltd. | 1,333,333 | 1,333,333 | 0 | * |
| Total: | 1,529,580 | 1,529,580 | | |

^{*} Less than one percent.

PLAN OF DISTRIBUTION

Sales by the Company

We may sell shares of our common stock through underwriters, agents, dealers, or directly to one or more purchasers. We may distribute these securities from time to time in one or more transactions, including block transactions and transactions on The Nasdaq Global Market or any other organized market where the securities may be traded. The securities may be sold at a fixed price or prices, at market prices prevailing at the times of sale, at prices related to these prevailing market prices or at negotiated prices. Any such price may be changed from time to time.

As required by the rules and regulations of the Securities and Exchange Commission, we will file a prospectus supplement to describe:

- the identity of any underwriters, dealers or agents who purchase securities, as required; the amount of securities sold, the public offering price and consideration paid, and the proceeds we will receive from that sale;
- the place and time of delivery for the securities being sold;
- · whether or not the securities will trade on any securities exchanges or The Nasdaq Global Market;
- the amount of any compensation, discounts or commissions to be received by underwriters, dealers or agents, any other items constituting underwriters' compensation, and any discounts or concessions allowed or re-allowed or paid to dealers;
- · the terms of any indemnification provisions, including indemnification from liabilities under the federal securities laws; and
- any other material terms of the distribution of securities.

Use of Underwriters, Agents and Dealers

We may offer the securities to the public through one or more underwriting syndicates represented by one or more managing underwriters, or through one or more underwriters without a syndicate. If underwriters are used in the sale, we will execute an underwriting agreement with those underwriters relating to the securities that we will offer and will name the underwriters and describe the terms of the transaction in a prospectus supplement. The securities subject to the underwriting agreement will be acquired by the underwriters for their own account and may be resold by them, or their donees, pledgees, or transferees, from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Subject to conditions to be specified in the underwriting agreement, underwriters will be obligated to purchase all of these securities if any are purchased or will act on a best efforts basis to solicit purchases for the period of their appointment, unless we state otherwise in the prospectus supplement.

We may authorize underwriters to solicit offers by institutions to purchase the securities subject to the underwriting agreement from us at the public offering price stated in the prospectus supplement under delayed delivery contracts providing for payment and delivery on a specified date in the future. If we sell securities under delayed delivery contracts, the prospectus supplement will state that as well as the conditions to which these delayed delivery contracts will be subject and the commissions payable for that solicitation.

Underwriters may sell these securities to or through dealers. Alternatively, we may sell the securities in this offering directly to one or more dealers, who would act as a principal or principals. Dealers may then resell such securities to the public at varying prices to be determined by the dealers at the time of the resale.

We may also sell the securities offered with this prospectus through other agents designated by us from time to time. We will identify any agent involved in the offer or sale of these securities who may be deemed to be an underwriter under the federal securities laws, and describe any commissions or discounts payable by us to these agents, in the prospectus supplement. Any such agents will be obligated to purchase all of these securities if any are purchased or will act on a best efforts basis to solicit purchases for the period of their appointment, unless we state otherwise in the prospectus supplement.

In connection with the sale of the securities offered with this prospectus, underwriters, dealers or agents may receive compensation from us or from purchasers of the securities for whom they may act as agents, in the form of discounts, concessions or commissions. These discounts, concessions or commissions may be changed from time to time. Underwriters, dealers and/or agents may engage in transactions with us, or perform services for us, in the ordinary course of business, and may receive compensation in connection with those arrangements.

Underwriters, dealers, agents or purchasers that participate in the distribution of the securities may be deemed to be underwriters under the Securities Act. Broker-dealers or other persons acting on behalf of parties that participate in the distribution of the securities may also be deemed to be underwriters. Any discounts or commissions received by them and any profit on the resale of the securities received by them may be deemed to be underwriting discounts and commissions under the Securities Act.

Underwriters and purchasers that are deemed underwriters under the Securities Act may engage in transactions that stabilize, maintain or otherwise affect the price of the securities, including the entry of stabilizing bids or syndicate covering transactions or the imposition of penalty bids. Such purchasers will be subject to the applicable provisions of the Securities Act and the Securities Exchange Act of 1934 and the rules and regulations thereunder, including Rule 10b-5 and Regulation M. Regulation M may restrict the ability of any person engaged in the distribution of the securities to engage in market-making activities with respect to those securities. In addition, the anti-manipulation rules under the Exchange Act may apply to sales of the securities in the market. All of the foregoing may affect the marketability of the securities and the ability of any person to engage in market-making activities with respect to the securities.

Indemnification and Contribution

We may provide underwriters, agents, dealers or purchasers with indemnification against civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the underwriters, agents, dealers or purchasers may make with respect to such liabilities.

Sales by the Selling Stockholders

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- · an exchange distribution in accordance with the rules of the applicable exchange;
- · privately negotiated transactions;
- short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the Securities and Exchange Commission;
- · through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share; and
- · a combination of any such methods of sale.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act.

Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and satisfied.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

LEGAL MATTERS

Harter Secrest & Emery LLP, of Rochester, New York, will pass upon the validity of the shares of common stock being offered pursuant to this prospectus.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2005 have been so incorporated in reliance on the report(s) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

INCORPORATION BY REFERENCE

This prospectus is part of a registration statement (Registration No. 333-___) we filed with the Securities and Exchange Commission. The Securities and Exchange Commission allows us to "incorporate by reference" the information in documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we later file with the Commission will automatically update and supersede previously filed information, including information contained in this prospectus.

We incorporate by reference the documents listed below and any future filings we make with the Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, until this offering has been completed:

- (1) Our Annual Report on Form 10-K for the fiscal year ended December 31, 2005, filed with the Securities and Exchange Commission on March 23, 2006:
- (2) Our Quarterly Report on Form 10-Q for the quarter ended April 1, 2006 filed with the Securities and Exchange Commission on May 11, 2006; and our Quarterly Report on Form 10-Q for the quarter ended July 1, 2006 filed with the Securities and Exchange Commission on August 10, 2006;
- (3) Our Current Report on Form 8-K filed with the Securities and Exchange Commission on January 26, 2006; our Current Report on Form 8-K containing disclosure under Item 5.02 thereof filed with the Securities and Exchange Commission on April 20, 2006; our Current Report on Form 8-K filed with the Securities and Exchange Commission on May 2, 2006; our Current Report on Form 8-K filed with the Securities and Exchange Commission on May 31, 2006; our Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2006; both of our Current Reports on Form 8-K filed with the Securities and Exchange Commission on June 14, 2006; our Current Report on Form 8-K filed with the Securities and Exchange Commission on June 14, 2006; our Current Report on Form 8-K filed with the Securities and Exchange Commission on July 10, 2006, as amended by Form 8-K/A filed on July 21, 2006;
- (4) Our Definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on April 28, 2006; and
- (5) The description of our common stock, par value \$.10 per share, contained in our Registration Statement on Form S-1 (Registration No. 33-54470), filed with the Securities and Exchange Commission on December 23, 1992.

Any statement contained in a document incorporated by reference will be modified or superseded for all purposes to the extent that a statement contained in this prospectus (or in any other document that is subsequently filed with the Commission and incorporated by reference) modifies or is contrary to that previous statement. Any statement so modified or superseded will not be deemed a part of this prospectus except as so modified or superseded.

You may request free copies of these filings by writing or calling us at:

Ultralife Batteries, Inc. 2000 Technology Parkway Newark, New York 14513 Attention: <u>Corporate Secretary</u> (315) 332-7100

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file at the public reference facilities of the Securities and Exchange Commission located at Station Place, 100 F Street NE, Washington D.C. 20549. You may obtain information on the operation of the Securities and Exchange Commission's public reference facilities by calling the Commission at 1-800-SEC-0330. You can also access copies of this material electronically on the Securities and Exchange Commission's home page on the World Wide Web at http://www.sec.gov.

[Outside Back Cover of Prospectus]

Dealer Prospectus Delivery Obligation

| Until, | 2006 (25 days from the date of this prospectus), all deale | ers that effect transactions in these securities, | whether or not participants in this offering, |
|---------------|--|---|---|
| may be requir | red to deliver a prospectus. | | |
| | | | |
| | | | |

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table provides information regarding the various anticipated expenses payable by us in connection with the issuance and distribution of the securities being registered. We are paying the expenses incurred in registering the shares, but all selling and other expenses incurred by the selling stockholders will be borne by the selling stockholders. All amounts shown are estimates, except the Securities and Exchange Commission registration fee.

| Nature of Expense | Amount |
|------------------------------|-----------|
| Registration fee | \$ 4,200 |
| Accounting fees and expenses | \$ 20,000 |
| Legal fees and expenses | \$125,000 |
| Transfer agent fees | \$ 1,000 |
| Printing and related fees | \$100,000 |
| Miscellaneous | \$ 10,000 |
| Total | \$260,200 |

Item 15. Indemnification of Directors and Officers.

With respect to indemnification of directors and officers, Section 145 of the Delaware General Corporation Law ("DGCL") provides that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. Under this provision of the DGCL, the termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.

Furthermore, the DGCL provides that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

The Company's Certificate of Incorporation provides for limitation of the liability of directors to the Company and its stockholders and for indemnification of directors, officers, employees and agents of the Company, respectively, to the maximum extent permitted by the DGCL.

The Certificate of Incorporation provides that directors are not liable to the Company or its stockholders for monetary damages for breaches of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to the Company or its stockholders, (b) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (c) for dividend payments or stock repurchases in violation of Delaware law, or (d) for any transaction from which the director derived any improper personal benefit.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers or persons in control pursuant to the foregoing provisions or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 16. Exhibits.

| | | | | | Incorporated by | Reference |
|----------------|--|---------------------|-------------------|------|-----------------|--------------------------|
| Exhibit No. | Exhibit Description | Filed Previously | Filed Herewith | Form | Exhibit | Filing Date/ Reg. No. |
| 4.1 | Restated Certificate of Incorporation of the Registrant | X | | S-8 | 4.3 | 333-60984 |
| 4.2 | Amendment to Certificate of Incorporation | X | | 10-Q | 3.1 | 02-13-2001 |
| 4.3 | Bylaws of the Registrant | X | | S-1 | 3.2 | 33-544701 |
| 4.4 | Form of Common Stock Certificate of the Registrant | X | | S-1 | 4.1 | 33-544701 |
| 5.1 | Opinion of Counsel of Harter Secrest & Emery LLP | | X | | | |
| 23.1 | Consent of PricewaterhouseCoopers LLP | | X | | | |
| 23.2 | Consent of Harter Secrest & Emery LLP (contained in Exhibit 5.1) | | X | | | |
| 24.1 | Power of Attorney (see signature page of registration statement) | | X | | | |

Item 17. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933.
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low and high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement.

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to section 13 or section 15(d) of the Securities and Exchange Act of 1934 that are incorporated by reference in the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
 - (5) That for the purposes of determining liability under the Securities Act to any purchaser:
 - (ii) If the Registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of the registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchase with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (e) The undersigned Registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.
- (h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

In accordance with the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Newark, State of New York, as of August 18, 2006.

Ultralife Batteries, Inc.

/s/ John D. Kavazanjian

John D. Kavazanjian

President and Chief Executive Officer

POWER OF ATTORNEY

Each of the undersigned, being an officer or director, or both of Ultralife Batteries, Inc. (the "Company"), in his or her capacity as set forth below, hereby constitutes and appoints John D. Kavazanjian, Robert W. Fishback and Peter F. Comerford and each of them, his or her true and lawful attorney and agent, to do any and all acts and all things and to execute any and all instruments which said attorney and agent may deem necessary or desirable to enable the Company to comply with the Securities Act of 1933, as amended (the "Act"), and any rules, regulations and requirements of the Securities and Exchange Commission thereunder, in connection with the registration under the Act of the common stock (the "Securities"), including, without limitation, the power and authority to sign the name of each of the undersigned in the capacities indicated below to the Registration Statement on Form S-3 to be filed with the Securities and Exchange Commission with respect to such Securities, to any and all amendments or supplements to such Registration Statement, whether such amendments or supplements are filed before or after the effective date of such Registration Statement, to any related Registration Statement filed pursuant to Rule 462 under the Act, and to any and all instruments or documents filed as part of or in connection with such registration statement or any and all amendments thereto, whether such amendments are filed before or after the effective date of such Registration Statement; and each of the undersigned hereby ratifies and confirms all that such attorney and agent shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Date | Signature | Title |
|-----------------------|-------------------------|---|
| As of August 18, 2006 | /s/ John D. Kavazanjian | President and Chief Executive Officer and Director (Principal |
| | John D. Kavazanjian | Executive Officer) |
| As of August 18, 2006 | /s/ Robert W. Fishback | Vice President-Finance and Chief Financial Officer (Principal |
| | Robert W. Fishback | Financial Officer and Principal Accounting Officer) |
| As of August, 2006 | | Director |
| | Carole L. Anderson | |
| As of August, 2006 | | Director |
| | Patricia C. Barron | |
| | | |
| | | |

| As of August 18, 2006 | /s/ Anthony J. Cavanna | Director |
|-----------------------|------------------------------|----------|
| | Anthony J. Cavanna | |
| As of August 18, 2006 | /s/ Paula H. J. Cholmondeley | Director |
| | Paula H. J. Cholmondeley | |
| As of August 18, 2006 | /s/ Daniel W. Christman | Director |
| | Daniel W. Christman | |
| As of August 18, 2006 | /s/ Ranjit C. Singh | Director |
| | Ranjit C. Singh | |
| | | |

[Letterhead of Harter Secrest & Emery LLP]

1600 Bausch & Lomb Place Rochester, New York 14607 Phone: 585-232-6500 Fax: 585-232-2152

August 18, 2006

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

Ladies and Gentlemen:

We are acting as counsel to Ultralife Batteries, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), of a registration statement on Form S-3 (the "Registration Statement") relating to (i) the sale by the Company of up to 2,500,000 shares (the "Company Shares") of the Company's common stock, \$0.10 par value per share (the "Common Stock"), and (ii) the sale by the selling stockholders named in the Registration Statement (the "Selling Stockholders") of up to 1,529,580 shares of Common Stock, of which 100,000 shares are issuable upon the exercise of outstanding warrants and up to 1,333,333 shares are issuable upon the conversion of an outstanding convertible promissory note (the "Selling Stockholders' Shares" and, together with the Company Shares, the "Shares").

In connection with the rendering of this opinion, we have examined originals or copies of such documents, corporate records and other instruments as we have deemed relevant, including, without limitation: (i) the certificate of incorporation of the Company, as amended to date; (ii) the by-laws of the Company, as amended to date; (iii) the resolutions of the Board of Directors of the Company, adopted as of June 8, 2006; and (iv) the Registration Statement, together with the exhibits filed as a part thereof.

We have made such examination of law as we have deemed necessary to express the opinion contained herein. As to matters of fact relevant to this opinion, we have relied upon, and assumed without independent verification, the accuracy of certificates of public officials and officers of the Company. We have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of documents submitted to us as originals, the conformity to the original documents of all documents submitted to us as certified, facsimile or photostatic copies, and the authenticity of the originals of such copies.

Based upon the foregoing, and subject to the limitations, qualifications, exceptions and assumptions expressed herein, it is our opinion that, as of the date hereof, when sold pursuant to and as described in the Registration Statement, the Shares will be duly authorized, legally issued, fully paid and non-assessable.

This opinion is limited in all respects to the General Corporation Law of the State of Delaware, and we express no opinion as to the laws, statutes, rules or regulations of any other jurisdiction.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the prospectus contained in the Registration Statement. In giving the foregoing consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act, or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

This opinion letter is rendered as of the date first written above and we disclaim any obligation to advise you of facts, circumstances, events or developments that hereafter may be brought to our attention and that may alter, affect or modify the opinion expressed herein. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Selling Stockholders or the Shares.

Respectfully submitted,

/s/ Harter Secrest & Emery LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 22, 2006 relating to the financial statements, financial statement schedule, management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting, which appears in Ultralife Batteries, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2005. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Rochester, New York August 16, 2006