



**PRESS RELEASE (July 31, 2018)**  
**Rebuilding Their Future Foundation, Inc.**  
**Awarded Grant from the Alpha Foundation**

The Rebuilding Their Future Foundation (RTF) announced today that they received a \$249,320 grant from the Alpha Foundation for the Improvement of Mine Safety and Health. The award was part of a \$3.1 million round of new awards from the Alpha Foundation to address critical topics of priority interest. The research projects are directed towards fulfilling the Alpha Foundation's mission to improve mine safety and health through funding research and development projects by qualified academic institutions and other not-for-profit organizations. The Alpha Foundation was established as part of a non-prosecution agreement entered in December 2011 by the United States Attorney's Office for the Southern District of West Virginia, the United States Department of Justice and Alpha Natural Resources, Inc. and Alpha Appalachia Holdings, Inc. Pursuant to that agreement, Alpha agreed to establish an independent foundation with \$48,000,000 to fund projects designed to improve mine safety and health.

RTF's 12-month grant, Investigation of Improved Communication from Portable Refuge Alternatives to Facilitate Mine Escape and Rescue, is designed to develop and demonstrate the feasibility of improved means for reliable emergency communication between occupants of an underground refuge alternative (chamber) with mine personnel on the surface and/or approaching rescue teams or occupants of other nearby refuge alternatives located underground. Modest modifications to both refuge alternative construction and commercial communication systems would better permit occupants of the refuge alternative to share critical information such as their location, number, individual physical condition, refuge alternative status, and surrounding in-mine conditions to assist in coordinating their rescue or escape.

"The engineering and scientific skills of the RTF staff make us uniquely qualified to conduct research and develop solutions to difficult engineering problems. RTF staff offers more than 150 combined years of experience in the mining industry, which includes the conduct of sophisticated research projects, management of multimillion-dollar engineering projects, development of safety improvements, and delivery of useful products to the industry" said Michael A. Trevits, Foundation President. Work under the grant began on July 1, 2018.

About RTF: The Rebuilding Their Future Foundation, Inc. is a recognized 501(c)(3) not-for-profit corporation. RTF was founded on the belief that award of an educational scholarship could change the future of a family member recovering from the devastating loss of or severely disabling injury incurred by a loved one who was working to save the lives of others. RTF derives funding from three sources: a portion of overhead fees charged on sponsored research projects that have been competitively bid and won primarily aimed to improve the health and safety of miners, mine rescue team members, first responders and fire fighters, through direct donations from individuals, corporations, fraternal organizations, and through charitable giving programs.



**PRESS RELEASE (October 19, 2018)**  
**Rebuilding Their Future Foundation, Inc.**  
**Formal Presentation by a Board Member**

On Friday, October 19, 2018, Board Member John E. Urosek made a formal presentation at the SME/PCMIA Annual Joint Meeting at the Hilton Garden Inn Southpointe, Canonsburg, PA. The title of his presentation was “Development of an Underground Aerial Reconnaissance System”. An abstract of his presentation follows:

*“Mine rescue and recovery personnel require timely, accurate, and reliable information upon which to base their actions. An Underground Aerial Reconnaissance (UAR) system would be useful as it could convey sensors and/or communication equipment into the mine prior to and/or ahead of entry by rescue personnel to provide detailed information of underground conditions. An aerial system approach potentially offers a fast, agile, and potentially longer-range option. In August 2017, a project was initiated through funding by the Alpha Foundation to develop an aerial vehicle platform (AVP) design. This presentation presents the technical approach to this project that was founded upon thorough an understanding and analysis of actual UAR mission needs to develop and demonstrate an effective, mission-specific safe AVP design.”*

Work under this project was conducted by Mr. Urosek, owner of John Urosek Mine Consulting LLC, in conjunction with the United Mine Workers of America Career Center under grant AFC518-23 from the Alpha Foundation for the Improvement of Mine Safety and Health.



**PRESS RELEASE (June 19, 2019)**  
**Rebuilding Their Future Foundation, Inc.**  
**Formal Presentation by a Board Member**

On Wednesday, June 19, 2019, Board President Michael A. Trevits made a formal presentation at the 2019 Joint National Meeting and Training Seminar of the Joseph A. Holmes Safety Association in Virginia Beach, VA. The title of his presentation was “Development of an Underground Aerial Reconnaissance System Design to Assist in Mine Rescue”. The abstract of Mr. Trevits’ presentation follows.

*“In response to a major underground mine emergency, an Underground Aerial Reconnaissance (UAR) system would convey sensors into the mine prior to and/or ahead of entry by rescue personnel to provide timely, accurate, and reliable information upon which the mine rescue team can base their actions. The UAR could be used to make detailed measurement of underground atmospheric and ground conditions, assess the condition of mine ventilation controls, advance or re-establish damaged underground wireless communication or monitoring systems, and possibly locate trapped miners. An aerial system approach potentially offers a smaller, faster, more agile, longer range, and more economical means of information collection than ground-based reconnaissance options which may encounter impassible post-event conditions. Providing mine rescue teams with the ability to assess conditions well ahead of their current location should permit them to advance more rapidly and safely under circumstances where minutes may make the difference between life and death for any trapped miners. Four major subsystems have been identified as necessary to enable an effective UAR system: (1) an Aerial Vehicle Platform (AVP), (2) Underground Navigation, (3) Data Communications, and (4) Sensor Payload(s). A project was initiated through funding by the Alpha Foundation for the Improvement of Mine Safety and Health, Inc. to develop and demonstrate the feasibility of an appropriate design for the AVP necessary for effective overall UAR system performance. This presentation presents the technical approach to this project founded upon a thorough understanding and analysis of actual UAR mission requirements to develop a safe, mission-specific proof-of-concept AVP design.”*

Work under this project was conducted by Mr. Trevits, President of Xtraction Science and Technology, Inc., in conjunction with the United Mine Workers of America Career Center under grant AFC518-23 from the Alpha Foundation for the Improvement of Mine Safety and Health.



**PRESS RELEASE (January 1, 2020)**  
**Rebuilding Their Future Foundation, Inc.**  
**Grant Final Report Approved**

The Rebuilding Their Future Foundation (RTFF) announced today that their final report on work conducted under the grant Investigation of Improved Communication from Portable Refuge Alternatives to Facilitate Mine Escape and Rescue was accepted by the Alpha Foundation for the Improvement of Mine Safety and Health (Alpha Foundation). On July 31, 2018, RTFF announced that they had received grant AFC719-57 from the Alpha Foundation (refer to the July 31, 2018 RTFF Press Release). The award was part of the Alpha Foundation effort of funding research projects to address their mining safety and health priority interests. The research projects are directed towards fulfilling the Alpha Foundation's mission to improve mine safety and health through funding research and development projects by qualified academic institutions and other not-for-profit organizations.

RTFF's 12-month grant, Investigation of Improved Communication from Portable Refuge Alternatives (RA) to Facilitate Mine Escape and Rescue, was designed to develop and demonstrate the feasibility of improved means for reliable emergency communication between occupants of an underground refuge alternative (chamber) with mine personnel on the surface and/or approaching rescue teams or occupants of other nearby refuge alternatives located underground. Modest modifications to both refuge alternative construction and commercial communication systems would better permit occupants of the refuge alternative to share critical information such as their location, number, individual physical condition, refuge alternative status, and surrounding in-mine conditions to assist in coordinating their rescue or escape. This research demonstrated that miners taking shelter in a portable RA, post-event (assuming that the regularly used mine radio communication system was rendered inoperable by the event), could potentially use either of two existing voice commercial communications systems to provide information to their underground rescuers well before the rescuers could reach RA. Additional investigation is required to develop more effective through-the-earth (TTE) communication technology to enable miners sheltering at common current mining depths to communicate with rescuers above them at the ground surface. Interested parties may contact the Alpha Foundation directly about the AFC719-57 final report.

About RTF: The Rebuilding Their Future Foundation, Inc. is a recognized 501(c)(3) not-for-profit corporation. RTF was founded on the belief that award of an educational scholarship could change the future of a family member recovering from the devastating loss of or severely disabling injury incurred by a loved one who was working to save the lives of others. RTF derives funding from three sources: a portion of overhead fees charged on sponsored research projects that have been competitively bid and won primarily aimed to improve the health and safety of miners, mine rescue team members, first responders and fire fighters, through direct donations from individuals, corporations, fraternal organizations, and through charitable giving programs.

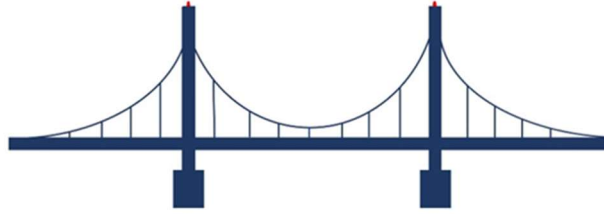


**PRESS RELEASE (February 26, 2020)  
Rebuilding Their Future Foundation, Inc.  
Formal Presentation by a Board Member**

On Wednesday, February 26, 2020, Board Member Steven A. Cotten made a formal presentation at the 2020 SME Annual Meeting in Phoenix Arizona. The title of his presentation was “Investigation of Improved Communication from Portable Refuge Alternatives to Facilitate Mine Escape and Rescue”. An abstract of Mr. Cotten’s presentation follows.

*“This investigation explored and evaluated the feasibility of improved means for reliable emergency communication between occupants of an underground refuge alternative (chamber) with mine personnel on the surface and/or approaching rescue teams or, possibly, occupants of other nearby refuge alternatives located underground. The premise for the study was that modest modifications to both portable refuge alternative construction and commercially available mine radio communication system equipment might better permit occupants of a refuge alternative to share critical information such as their location, number, individual physical condition, refuge alternative status, and surrounding in-mine conditions to assist in coordinating their rescue or escape. Interoperability and potential use scenarios for three commercially available mine radio communication systems that operate in three widely different frequency bands (5 kHz, 450 KHz, and 900 MHz) was demonstrated in an operating underground coal mine. This project was conducted with funding provided by the Alpha Foundation for the Improvement of Mine Safety and Health, Inc.”*

Work under this project was conducted by the Rebuilding Their Future Foundation (RTFF) under grant AFC719-57 from the Alpha Foundation for the Improvement of Mine Safety and Health. The Foundation was seeking proposals with a pro-active approach to empower the barricaded miner to more actively engage in the escape process. The 12-month grant responded to one the Alpha Foundation’s general topics of priority interest, “Improvement of Mine Rescue, Escape, and Training”. The funded investigation focused on the Alpha Foundation objective of “developing escape strategies and technologies to aid in escape including systems that provide for sheltering when escape is not immediately attainable” by specifically “using refuge alternatives as a base of operations”. The RTFF effort developed and demonstrated the feasibility of improved means for reliable emergency communication between occupants of an underground refuge alternative (chamber) with mine personnel on the surface and/or approaching rescue teams or occupants of other nearby refuge alternatives located underground (for more information please refer to Foundation Press Release dated 07/31/2018).



**PRESS RELEASE (September 26, 2022)  
Rebuilding Their Future Foundation, Inc.  
Notice of Inaugural Scholarship Awards**

The Board of Directors of the Rebuilding Their Future Foundation (RTFF) announced that they have awarded inaugural RTFF scholarships to Larkin Garden of Weaverville, NC and Frank Fouts VI of Bourbonnais, IL (photos and bio sketches of the scholarship award winners follow below). The value of each scholarship is \$2,500. RTFF Board President Michael Trevits said “that the Board is pleased to make the first RTFF scholarship awards to both Larkin and Frank and wished them success in their scholastic endeavors.”

The nonprofit Rebuilding Their Future Foundation (RTFF) was established in 2018. The mission of the Foundation is to provide scholarships to surviving family members of mine rescue team members, fire fighters, or other emergency first responders who perished or became severely disabled and are unable to execute their job duties. The Board of Directors believe that providing opportunities to reach an educational goal could change the future of a family or family members recovering from the devastating loss or disabling injury of a loved one who was working to save the lives of others. Our focus is to award scholarships for all levels of secondary and post-secondary education to individuals with the desire and intention to earn a high school diploma, complete an approved program of vocational education or training, or acquire a degree from an approved four-year college or university. More information about the Foundation can be found at their website: [rebuildingtheirfuturefoundationinc.org](http://rebuildingtheirfuturefoundationinc.org)

**2022 RTFF Scholarship Award Winners**



**Larkin Garden** is a 2022 graduate of The Martin L. Nesbitt, Jr. Discovery Academy in Ashville, NC near her hometown of Weaverville, NC. Larkin excelled in school while engaging in a rigorous science, technology, engineering, and math (STEM) curriculum, working part time, and participating in many volunteer activities in her community. Notable among her many accomplishments to date is Larkin’s development of a successful on-line small business to design, make, photograph, and sell high-end dresses and other garments. While her business employs her creative and artistic skills, Larkin is inspired and motivated by her love of nature and the outdoors. After her father, a former firefighter, was recently disabled by a life-threatening medical condition, Larkin has also assumed additional family-related

responsibilities. Larkin will attend Catawba College where she intends to take courses related to environmental science in anticipation of developing an outdoor career requiring hands-on research.



**Frank Fouts VI** (a.k.a. “Grant”) of Bourbonnais, IL has been guided by the examples of dedication, industry, and sacrifice maintained by his parents. His fireman father suffered a line-of-duty death in 2010. His mother is a nurse who then had work long hours while raising Frank and a younger sibling with a disability as a single parent. Frank has done exceedingly well academically, athletically, and socially in high school maintaining a high grade point average, competing at the conference level in basketball and state level in both track and cross-country, and serving as his class president for three consecutive years. Frank’s inherited passion to serve others has been exhibited through his past volunteer assistance for youth sports camps and his desire to pursue a career in a medical-related field. To that end, he has enrolled at the University of Iowa beginning in fall semester of 2022 to major in biology with a possible minor in business.