Continuation in Helping the Start-Up of the ASU-GGNP Applied Science Degree in Radiation Safety Education, Training, and Technology

Executive Summary

Nuclear power plants are most commonly placed away from population centers. Experience has shown that closeness to family and friends; to the area where one grew up; job satisfaction; and the opportunity for advancement are strong factors that employees consider when deciding to remain in an industrial position. Realizing this, GGNP, with the help of local academia, are maximizing the retention of experienced workforce by training qualified individuals from the indigenous population. Alcorn State University (ASU) is a Historical Black University (HBCU) within the Mississippi State-University system located 12 miles from GGNP. ASU and GGNP have devised a strategic plan to train and educate GGNP employees as well as qualified individuals from the indigenous population in Health Physics (HP). ASU has agreed to recruit, train, and educate a group of qualified individuals starting with high school (HS) students from local school systems. The plan starts with HS students in their junior year and has provisions for advancement all the way to the supervisory, management, and policy-making level in a format called “Strategic Visioning for 2+2+2+2 Competency-Based Workforce Development & Health Physics (HP) Initiative”.

These students will have dual enrollment in HS and in the MS Workforce Development program. The training is a combination of instruction during the year and a summer internship at either ASU or at GGNP. After two years of HP training, they can either enter a local community college (CC) or the ASU program. Those who chose the CC or ASU Associate degree program in HP can either start to work or continue their education towards a B.S. degree in HP at ASU. There are also graduate degree programs in different science fields and the MBA program at ASU. Those who wish to further their education and think they can assume a supervisory or management position can pursue those degrees with an emphasis on HP and Radiation Safety Management and Policy Making. The curriculum is designed to be ABET accredited and to satisfy AAHP requirements. Thus, graduates can be certified by the HP society and AAHP.

Among the achievements in the first year is the development of a curriculum for a certificate and degree program in HP and Radiation Technology (RT); recruitment of students; publication and distribution of brochures and recruiting material at local HSs; visiting and explaining this opportunity to HS students; efforts to recruit a new faculty member; establishing a Radiation Detection and Measurement lab; participating in a workshop about radiation equipment calibration and maintenance; continuing the existing agreements with local CCs; subscribing to several professional magazines in health physics, radiation safety, and radiation technology; and a preliminary study to seek accreditation of the program. The accomplishments in the first year are described in more detail in the proposal.

The benefits of this project include a technically trained workforce that is willing to remain at the nuclear power plant location during their professional lifetime; it enables ASU to establish an HP program and start training and educating a workforce in HP; it allows GGNP and the nuclear industry to have a more diverse pool of technically trained health physicists; it saves cost of repeated recruitment; it provides employees the opportunity to remain close to and enjoy the structural support of family, relatives, and friends which in turn eliminates many illnesses that a lack of such supports produce, including absenteeism, etc.

The program is providing an opportunity for the most economically under privileged segment of society, the Mississippi Delta. The Delta is the poorest region of the state of Mississippi.

Additionally, Mississippi has the lowest per-capita income in the nation. This project will also provide seed money to help start an academic program that is acutely needed in industry, especially in the minority segment where a technically trained workforce is highly desired and an acute shortage exists.