



Eden Isotope Production Complex Construction Permit Application

Enclosure 1: General Information

Name of Applicant [10 CFR 50.33(a)]

Eden Radioisotopes, LLC

Address of Applicant [10 CFR 50.33(b)]

Eden Radioisotopes, LLC
9400 Holly Ave. NE, Suite 202
Albuquerque, NM 87122

Description of Business/Occupation of Applicant [10 CFR 50.33(c)]

Eden Radioisotopes, LLC (Eden), is a New Mexico limited liability company. Eden is majority owned by Abo Empire, whose roots are in oil and gas. Today, Abo Empire's mission is to invest in companies with the potential to positively and significantly impact New Mexico's economic development. Abo Empire, in turn, is owned by the Yates Family. In 2015, Forbes Magazine ranked the family's net worth at \$2.5 billion, making it one of the 115 richest in the nation.

Eden plans to build a dedicated nuclear fission reactor and collocated hot cell processing facility to serve the medical radioisotope market. This facility will address the expected future shortfalls and supply constraints for several of these key radioisotopes, with initial focus on Mo-99 and Lu-177.

Ownership Information [10 CFR 50.33(d)]

Eden Radioisotopes, LLC is a privately-owned business incorporated in New Mexico. The principal location of business, as well as for the directors and principal officers, is:

Eden Radioisotopes, LLC
9400 Holly Ave. NE, Suite 202
Albuquerque, NM 87122

The following are the members of the Eden Board of Directors:

Ryan Price (Chair)
John A. Yates, III a/k/a Trey Yates
Dan Lewis
Travis R. Steele (as Executive Manager)
Chris Wagner (as Eden Manager)

The principal officers of Eden are as follows:

Carrie Freeman, Chief Executive Officer
Chris Wagner, Chief Operating Officer and Co-founder
Ed Parma, Chief Technology and Science Officer and Co-founder

All of the directors and principal officers of Eden Radioisotopes, LLC are U.S. Citizens.

Eden is not owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. Eden is not acting as an agent or representative of another person in filing this application. Eden is a private company.

Class of License/Duration of License [10 CFR 50.33(e)]

This application is for a utilization facility construction permit under 10 CFR 50.23. The utilization facility will be a small, non-power, open-pool reactor with a primary purpose of generating medical isotopes. A Class 103 operating license for a 40-year period pursuant to 10 CFR 50.22 (for commercial and industrial facilities), as well as future licenses for byproduct material under 10 CFR Part 30, source material under 10 CFR Part 40, and special nuclear material under 10 CFR Part 70, are expected to be the subjects of future applications.

Construction Earliest and Latest Date for Construction Completion [10 CFR 50.33(h); 10 CFR 50.55(a)]

Eden currently expects to complete construction of the EIPC at the earliest thirty months after issuance of the construction permit and latest sixty months after issuance of the construction permit.

Agreement limiting access to Classified Information [10 CFR 50.37; 10 CFR 50.33(j)]

The application does not contain Restricted Data as defined in 10 CFR 50.2 or classified National Security Information as defined in 10 CFR 25.5 and 10 CFR 95.5. Eden will not allow access to Restricted Data or classified National Security Information until the individual and/or the facility has been approved for access under provisions of 10 CFR Part 25, "Access Authorization," and/or 10 CFR Part 95, "Facility Security Clearance and Safeguarding of National Security Information and Restricted Data."

Technical Qualifications [10 CFR 50.34(a)(9)]

Eden is technically qualified to design and license the facility. The primary basis for the technical qualifications is the technical acumen of the Eden senior management team, its consultants, and the technical qualifications of our architect engineering (AE) firm, Sargent and Lundy (S&L). S&L is a full-service nuclear AE firm providing comprehensive consulting, licensing, engineering, design, and analysis services to a worldwide client base. S&L is one of the oldest, largest, and most experienced nuclear engineering companies in the United States.

The Eden Senior Management Team experience and qualifications are described below:

Carrie Freeman, Chief Executive Officer, is a serial executive who has scaled frontier tech with Intel, NASA, and World Bank. Led global ventures across advanced manufacturing, climate/energy and data/technology innovation. Mobilized \$1.3B+ in capital and built operations in 160+ countries, delivering outcomes with governments, investors, corporations and philanthropy. Architect of high-impact global systems and cross-sector partnerships, aligning innovation, policy, and investment.

Chris Wagner, Chief Operating Officer, has 40 years of extensive global experience in medical imaging, including various senior executive leadership and policy making roles in the industry. Mr. Wagner has held Senior Vice President and Vice President leadership roles managing the nuclear medicine businesses with Nordion and Mallinckrodt (n/k/a Curium), with responsibilities in Sales, Marketing, Commercial & Manufacturing Operations, Corporate Communications, and Corporate Development, inclusive of global strategic planning and supply execution for Mo-99 at both companies. He also possesses deep commercial and technical working knowledge of the entire supply chain.

Dr. Ed Parma, Chief Technology and Science Officer, directs all nuclear reactor and processing-related activities including fuel/target development, Cintichem process development and improvement, and laboratory experimentation and testing, as well as all the work performed with the DOE national laboratories. Dr. Parma invented the unique all-target reactor concept and co-developed other Eden technologies. Dr. Parma's 30+-year career at Sandia National Laboratories included responsibility for the successful reactor modification in support of the 1990s DOE-sponsored Mo-99 medical isotopes production program, in addition to supporting other aspects of that program.

Paul Schlavin, Project Engineering Manager, responsible for directing the Eden project and construction activities. Mr. Schlavin's 35+ year career at Sandia National Labs, included a wide range of projects in design, construction and project management of laboratory facilities. Mr. Schlavin was the Project Manager for design and construction of the 1990s DOE Medical Isotopes Production Project. Mr. Schlavin is a Licensed Professional Engineer in the State of New Mexico and a Certified Project Management Professional.

Paul Helmick, Nuclear Engineering Director, directs Eden's engineering program to ensure the facility design incorporates applicable regulatory requirements into the design, design criteria, and design basis of the facility. Mr. Helmick's 30+ year career at Sandia National Laboratories included management of the nuclear facilities Cognizant Safety System Engineering Program ensuring operability and reliability of safety-related structures, systems, and components for reactor controls, and plant protection systems. Mr. Helmick supported the design, development and construction of the DOE/SNL Mo-99 hot cell and isotope production facility, processing line, and supporting systems.

The Eden Senior Management Team is augmented by the following key consultants:

Alexander Adams Jr, Consultant: Former Branch Chief, U.S. Nuclear Regulatory Commission, 52 years of experience with research and test reactors (RTRs), including 33 years of experience in RTR licensing at the U.S. Nuclear Regulatory Commission; Retired 2019 after 33 years; Directed all aspects of licensing for all 31 RTRs. Oversaw the development, review and approval of two construction permits for medical isotope production facilities.

Anthony Mendiola, Consultant: Former Branch Chief, U.S. Nuclear Regulatory Commission, 35+ years of experience in the Research and Test Reactor (RTR) Licensing Branch U.S. Nuclear Regulatory Commission; Retired 2019 after 35 years; Directed all aspects of regulatory oversight for all 31 RTRs, specifically, operational, security and reactive inspections; physical facility security programs, and RTR licensed

operator programs. Responsible for the development and implementation of these regulatory programs for new facilities undergoing initial licensing to produce medical isotopes (Mo-99).

Rick Weis, Consultant, Eden Quality Assurance Director: Former Nuclear Industry QA Executive; 35+ years NRC Licensing QA experience; completed large and small projects during power plant construction, operation and performing oversight of manufacturing activities. Developed programs and procedures, knowledgeable in construction and fabrication processes and various codes and requirements as well as plant installation requirements.

Jim Saldarini, Consultant, Eden Licensing Director: Former Chief Nuclear and Environmental Engineer for Bechtel Corporation. Over 50 years of experience in USNRC licensing, project management, project engineering and architectural & engineering design and construction for a wide cadre of nuclear projects. Mr. Saldarini has led the development of NRC license applications and safety analyses in support of a wide variety of nuclear facilities, including large light water reactors, small modular reactors, advanced non-light water reactor designs, as well as independent spent fuel storage facilities. He has extensive experience interfacing directly with the NRC, DOE, national laboratories, other government agencies, and the local communities.

Dale Simpson, Consultant, Executive & Senior Leader in Manufacturing & R&D Program Management; 35+ years at Mallinckrodt; directed the activities of U.S. and International Nuclear Medicine finished radiopharmaceutical and Molybdenum-99 production operations including U.S. based radiopharmacy network comprised of 1200 employees with a combined budget over \$250 million.

Jerry Head, Consultant: Nuclear Power Plant Engineering, Operations, and Licensing, Sr. Vice President for GE Hitachi Nuclear Energy, 30+ years of experience including Nuclear Safety Culture, Corrective Action Program, Emergency Planning and Security, Design, Systems and Component Testing, Systems Engineering, Engineering Analysis and Nuclear Fuel. Experience includes both BWR (GE) and PWR (Westinghouse, CE, and B&W) reactor plant designs.

Paul Dunn, Consultant: Former DOE Division Leader, Los Alamos National Laboratories; 35+ years of experience with emphasis in nuclear weapon and actinide component process development, materials characterization and component fabrication of nuclear weapons, reactor fuel and intelligence programs, with progressively increased responsibility in project, program and line management, nuclear fuel metallurgy assessment and component fabrication.

Ryan Marcum, Consultant: Principal of I&C Operative; over 16 years of experience in instrumentation and control systems for 10 CFR Part 50 and NUREG-1537 licensed non-power utilization facilities. Mr. Marcum has served as the principal I&C authority on multiple reactor licensing efforts, including a molten-salt research reactor and an isotope production reactor.