



EDEN

RADIOISOTOPES

Overview of Company

Who We Are

A new healthcare company, leveraging IP licensed from Sandia National Laboratories, with financial investment from the Yates Family

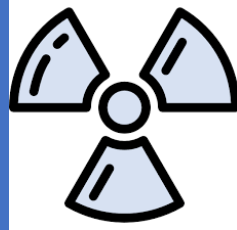


What We Do

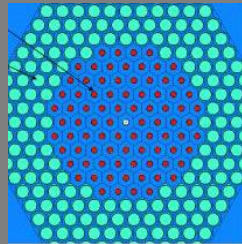
Eden is a healthcare company, producing medical isotopes for the \$4.2B radiopharmaceutical molecular imaging industry



Eden Radioisotopes



A new startup company, will build a small scale 2 Megawatt all LEU-target reactor and processing facility, solely dedicated to medical isotope production, with a year-round Moly production capacity to exceed the current entire global demand of 10,000 6-day Ci /wk, along with other medical isotopes.



*The GENESIS reactor design is a fully dedicated medical isotope reactor, utilizing an **all-LEU target/core**. This patented all-LEU target reactor technology, exclusively licensed from Sandia National Laboratories, will operate continuously year-round, at a fraction of the cost of other reactors.*

Genesis Design Features

Simple

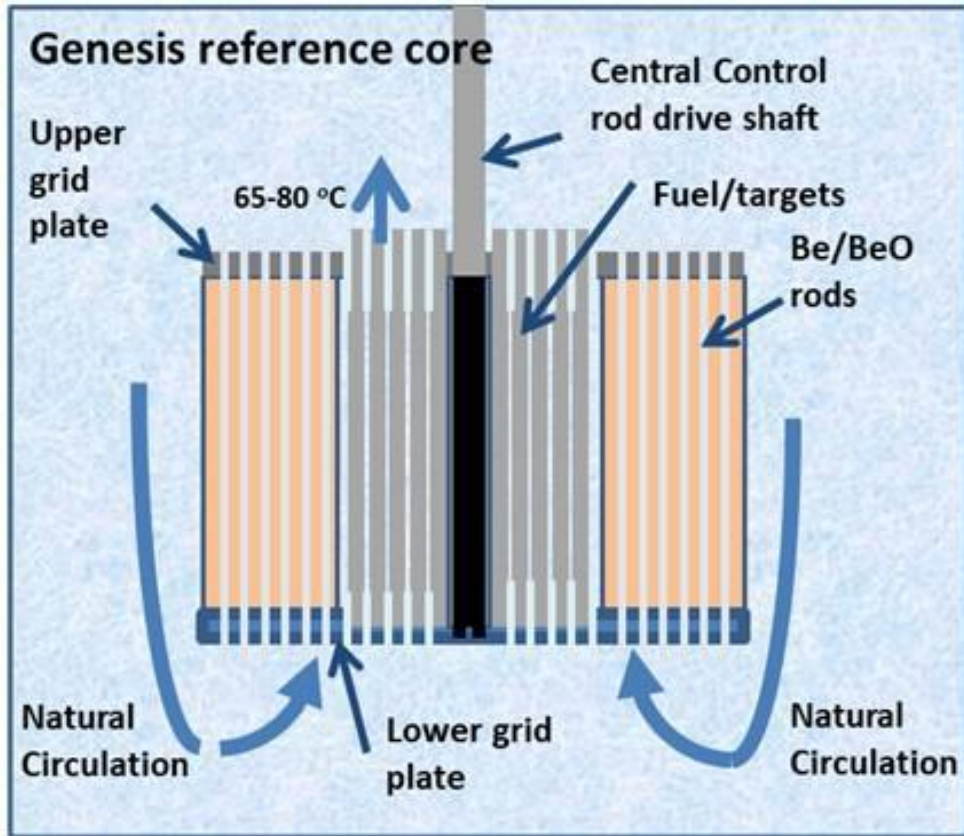
- Small, single purpose, medical isotope production
- Flexible core configuration & target irradiation
- All proven technology. Open pool system w/natural circulation cooling

Safe & Readily Licensable

- Annular hexagonal array of targets and drivers
- Targets & Drivers interchangeable (equivalent nuclear & thermal)
- Maintain design within domain of NRC familiarity
- Genesis benefits from extensive reactor development and operation experience from Sandia NL

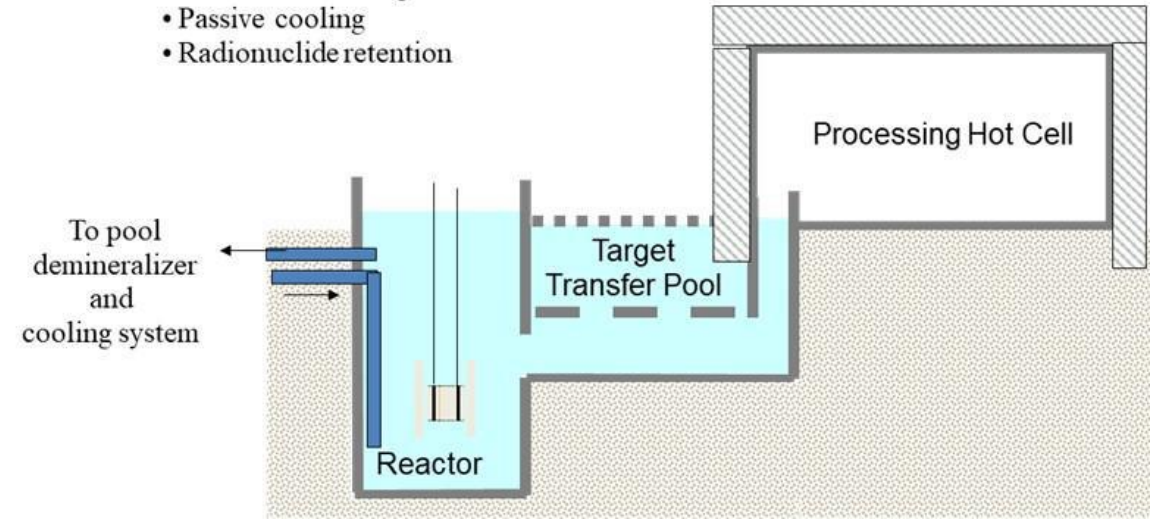
Cost Effective

- Operates continuously 22/7/365, with 2 hrs/day for maintenance & target extraction/replacement
- Maximum ⁹⁹Mo production per unit reactor power
 - Why pay the cost of construction and operation of a 10 to 100 MW system when you only need 1.5 MW to satisfy WD
- Maximum ⁹⁹Mo production per unit LEU used



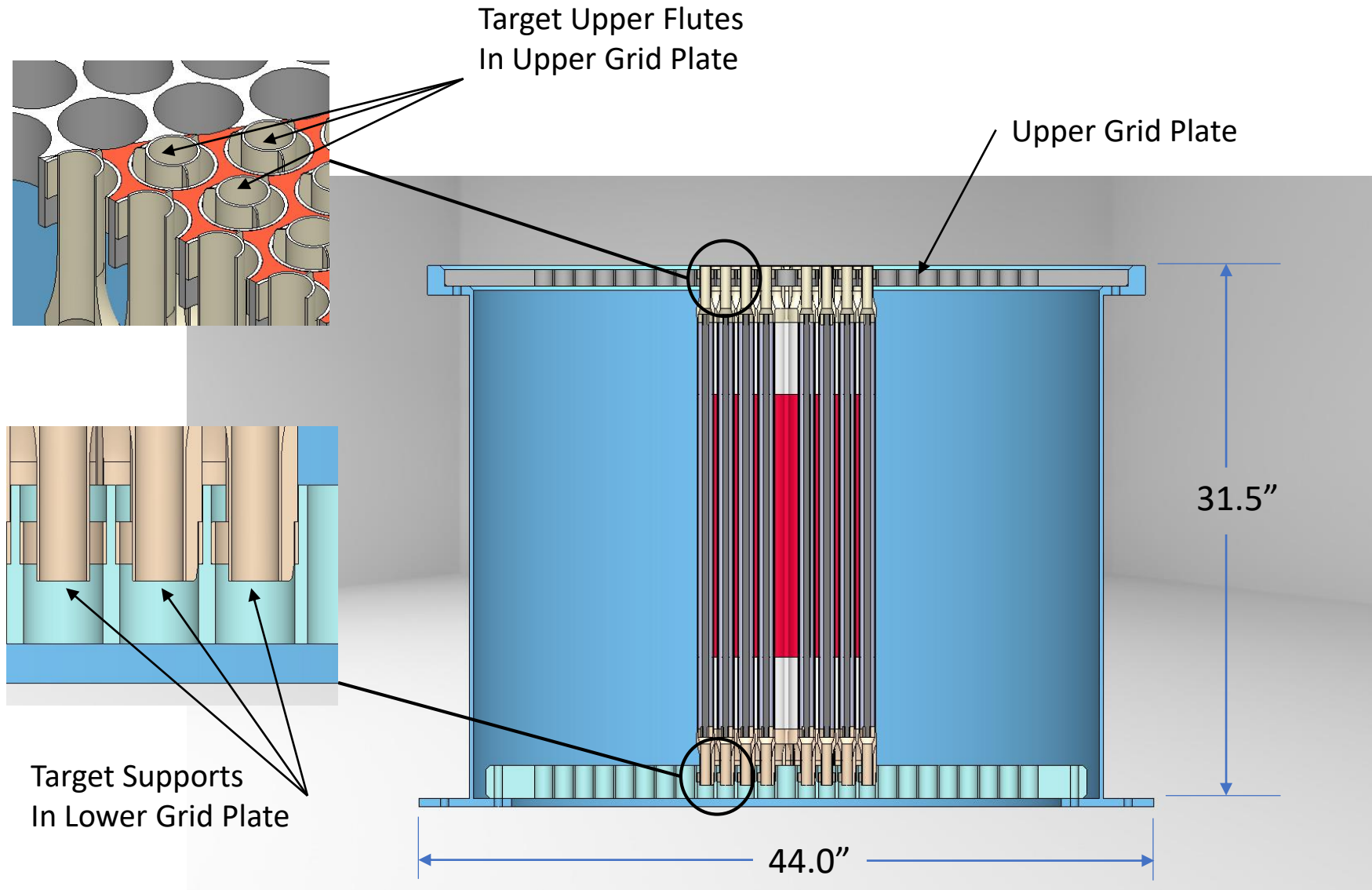
Swimming Pool Concept provides:

- Accessibility
- Radiation shielding
- Passive cooling
- Radionuclide retention

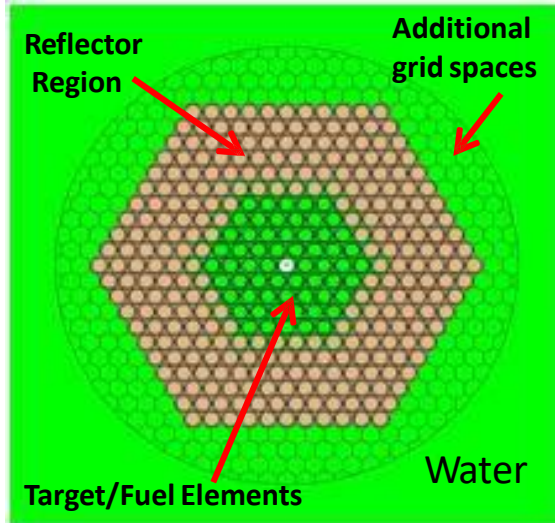


Eden Genesis Reactor & Process Facilities Interface

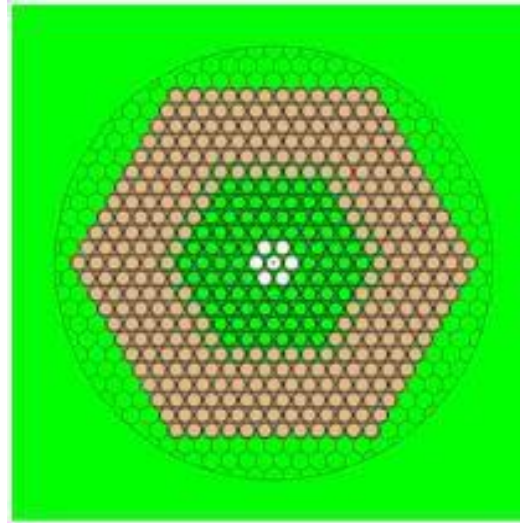
Genesis Reactor Core Cut-Away



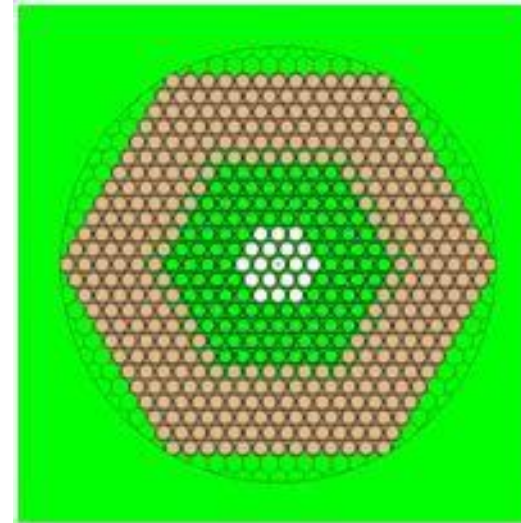
All-Target Core Flexible Configurations



60 element configuration, A
1.2 MW operation capability
Satisfies current USD
USD≈4500 6d Ci/week



84 element configuration, B
1.7 MW operation capability
Satisfies current WD
WD≈10,000 6d Ci/week



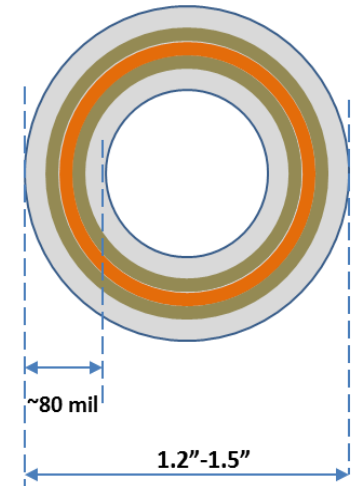
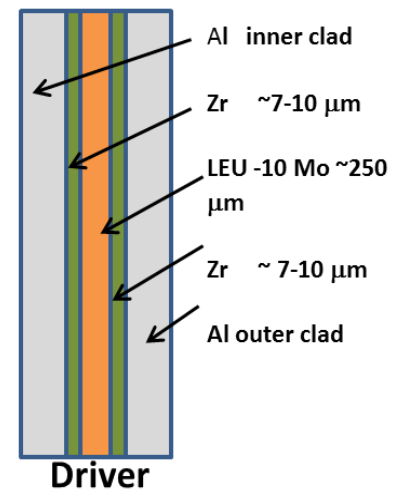
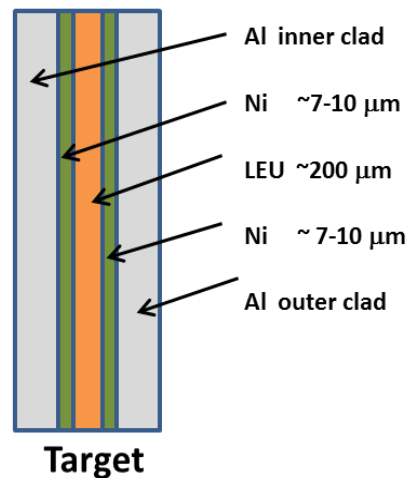
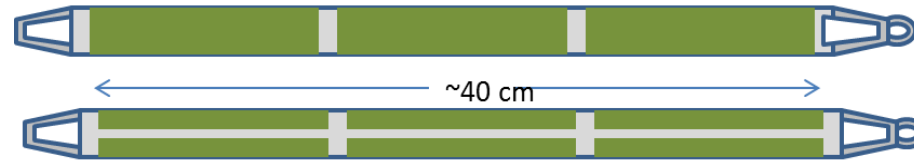
108 element configuration, C
2.0 MW operation capability
Satisfies future WD

For configuration A to meet USD: 60 each 20 kW targets* need be processed per week

* 7-day irradiation, 24-hour shipment preparation time (SPT)

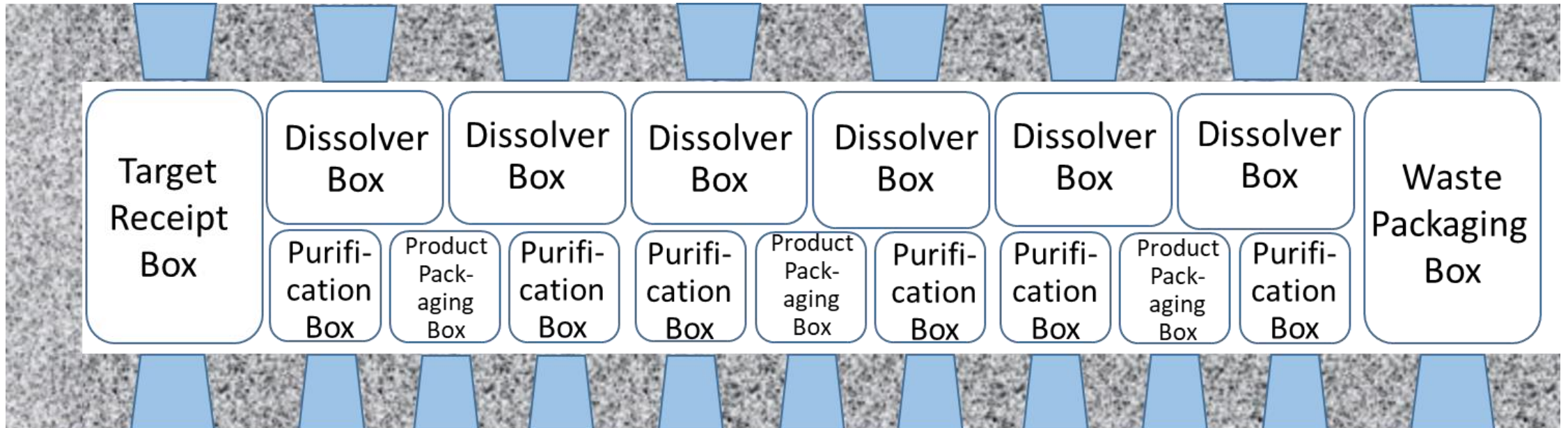
Genesis Reactor Target & Driver Design

- Based upon over a decade of research and testing performance of Argonne's Mo-99 target
- Driver elements, with a useful life of 6 months to a year, are used in addition to targets for early low market share to avoid non-productive reduction of target inventory.
- Goal following start of commercial production is to fabricate targets in-house



Nominal dimensions

Eden Process Facility Box Configuration



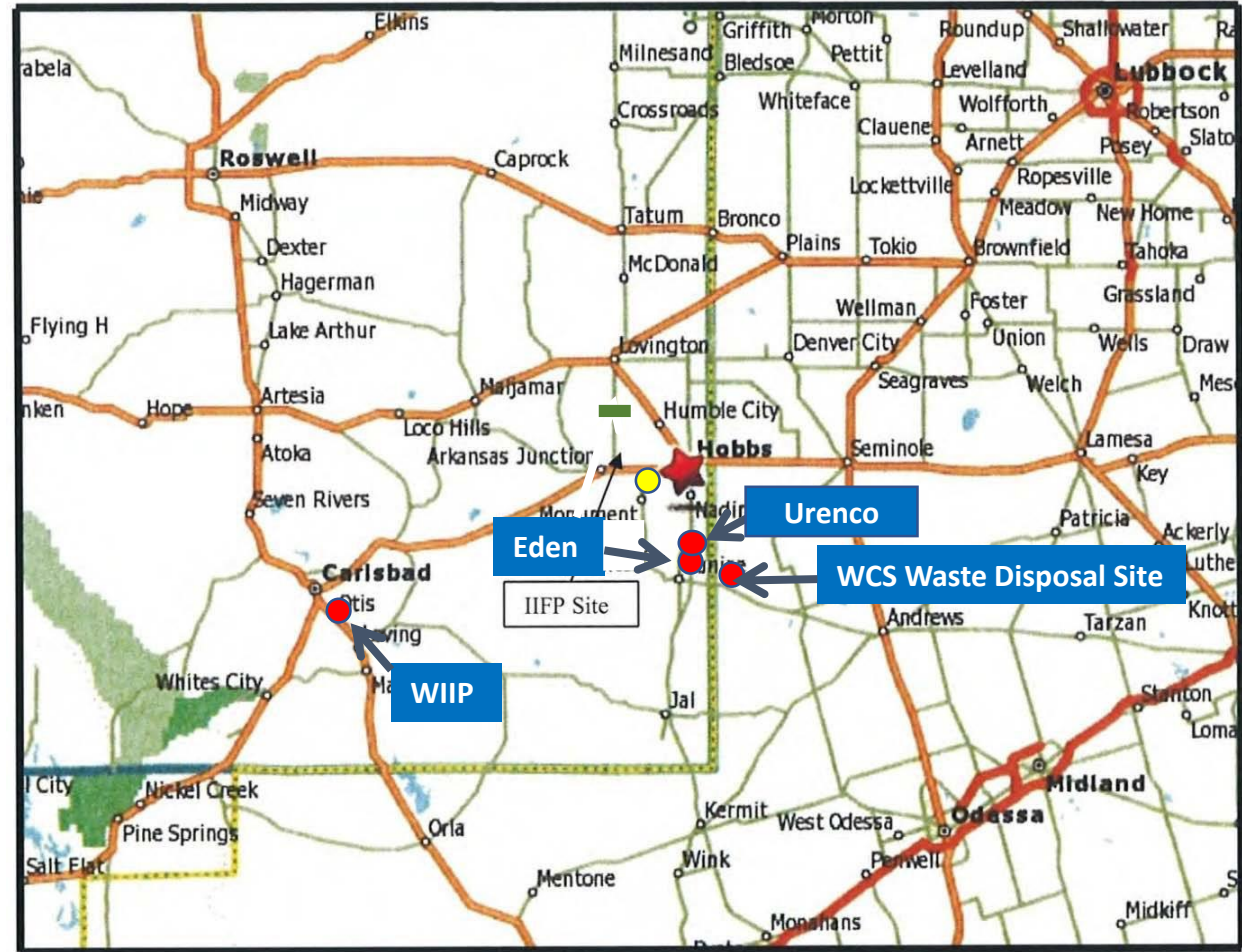
Isotope Processing Facility will have 6 independent processing lines.

- 4 processing lines for moly production, capacity for each of 2500 Ci/wk (6-day precal)
- 2 processing lines for other isotopes, such as Xe-133, I-131, Lu-177 & others, along with back up capability of any moly production line

Why New Mexico

Advantages of New Mexico:

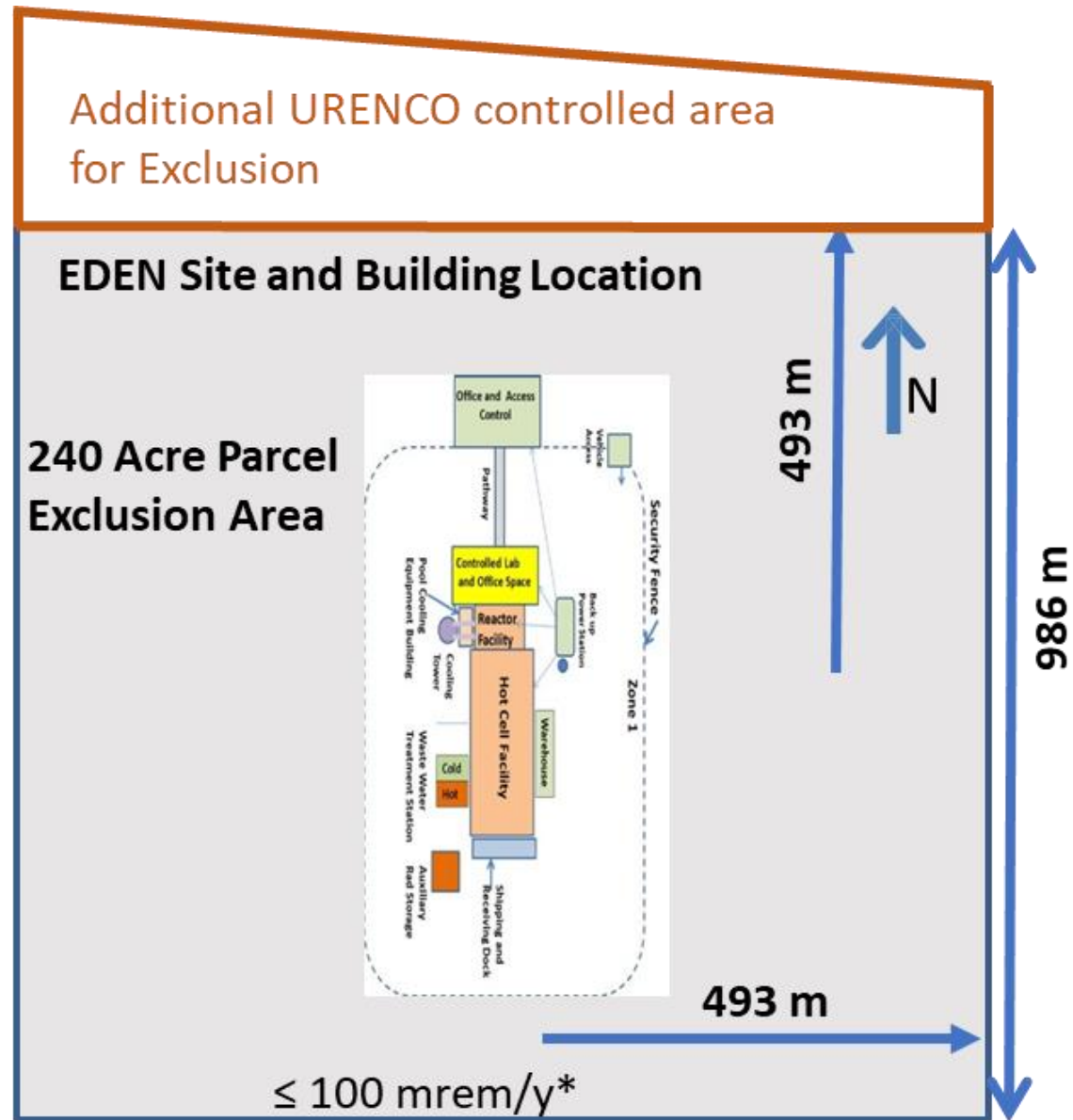
- Transportation logistics
- Nuclear-friendly community
- Ease of waste disposal
- Yates family support of NM
- Ability to contribute to and pull from an educated work force



Property & Facility Configurations

ER & PSAR to be submitted by end of 2019

Commercial Mo-99 production within 4 yrs



Federal Laboratory
Consortium (FLC)
Mid-Continent Region
Technology Transfer
Competition

*2019 Excellence in
Technology Transfer
Award*



“... your nomination, Small Reactor to Help Solve Worldwide Medical Isotope Shortage, has been selected to receive the 2019 Award for Technology Transfer. Thank you for submitting this nomination. Your proposal stood out in a highly competitive category.”



The FLC, Mid-Continent Region, spans 14 states and over 100 federal laboratories & facilities and is the largest of the six FLC regions. Laboratories in the Mid-Continent Region perform cutting-edge research for agencies that include the Department of Defense (DOD), Department of Energy (DOE), and Department of Agriculture (USDA), to name a few.



FLC Objective - Technology transfer is the process by which existing knowledge, facilities, or capabilities developed under federal R&D funding are utilized to fulfill public and private needs.



Thank You