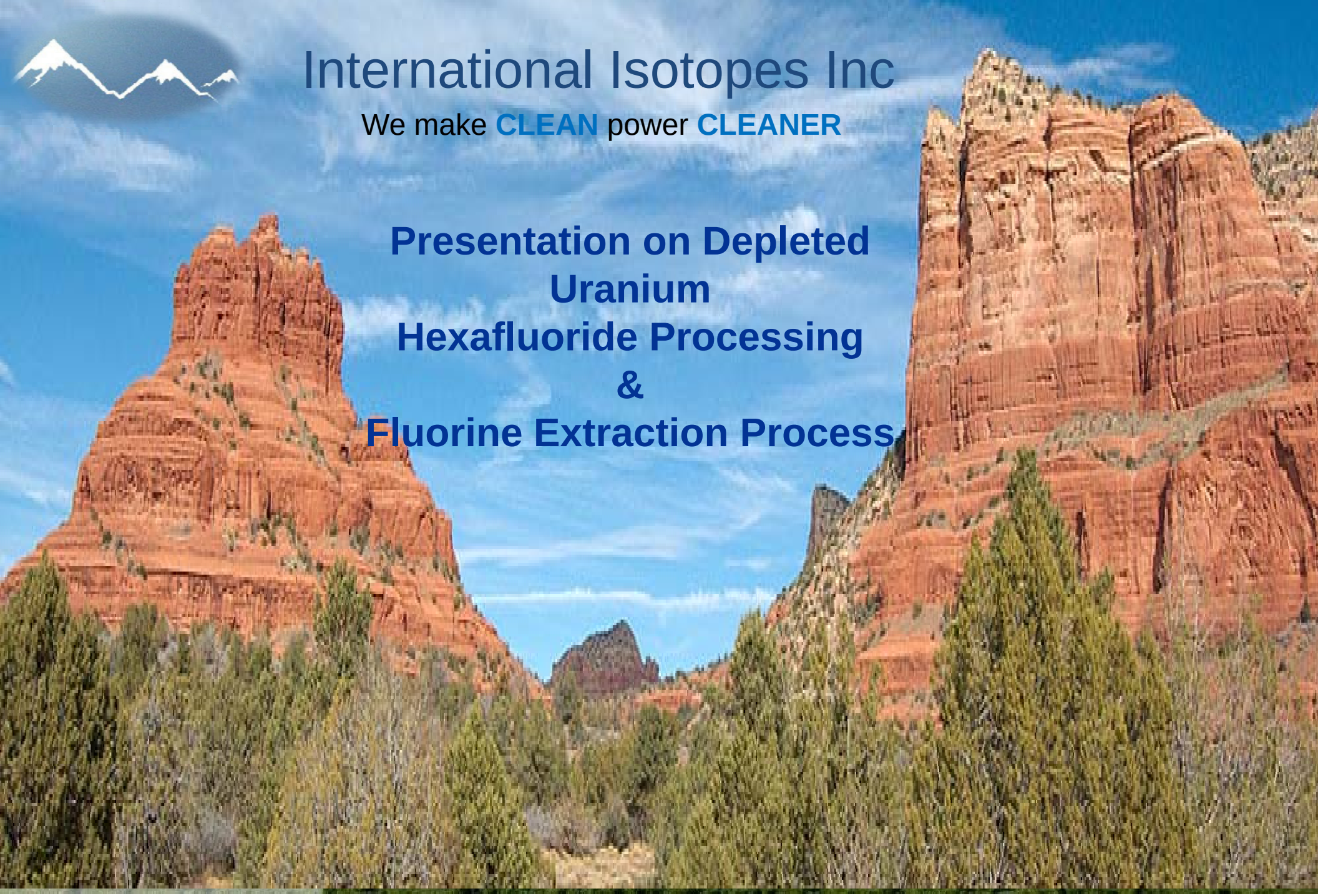


International Isotopes Inc

We make **CLEAN** power **CLEANER**

Presentation on Depleted Uranium Hexafluoride Processing & Fluorine Extraction Process

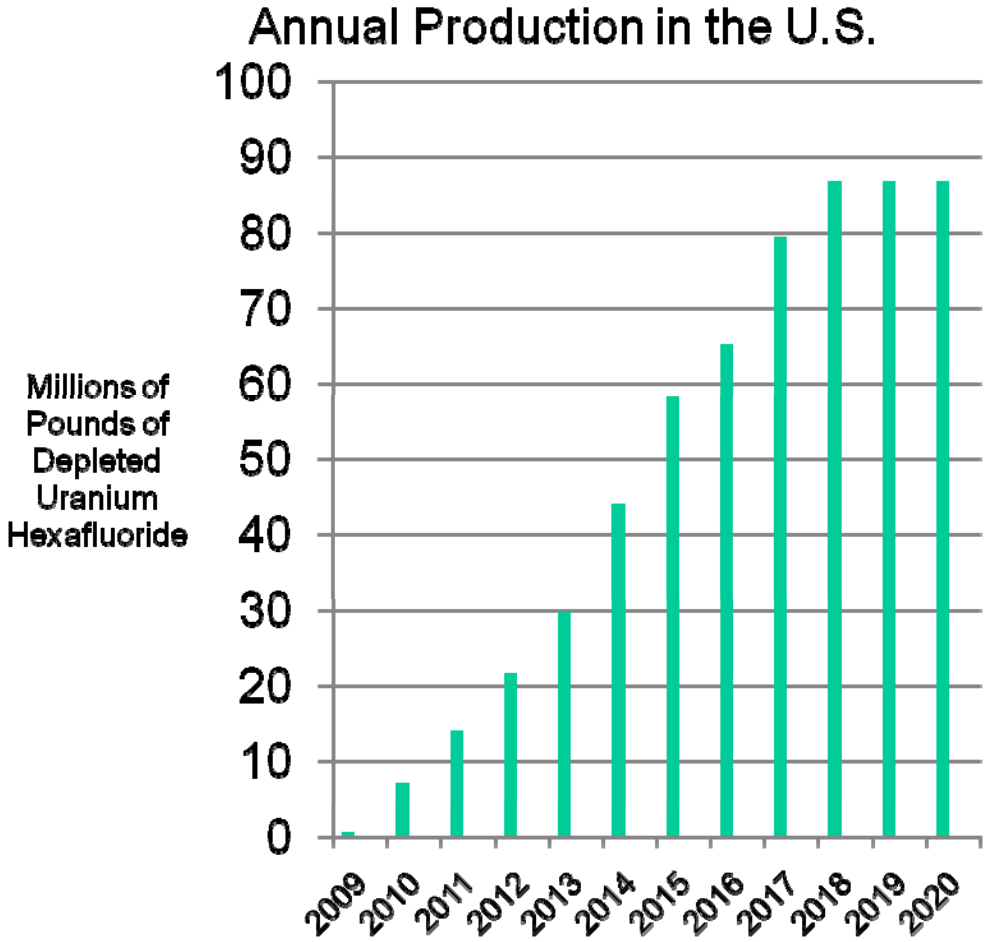
What We Intend to Do

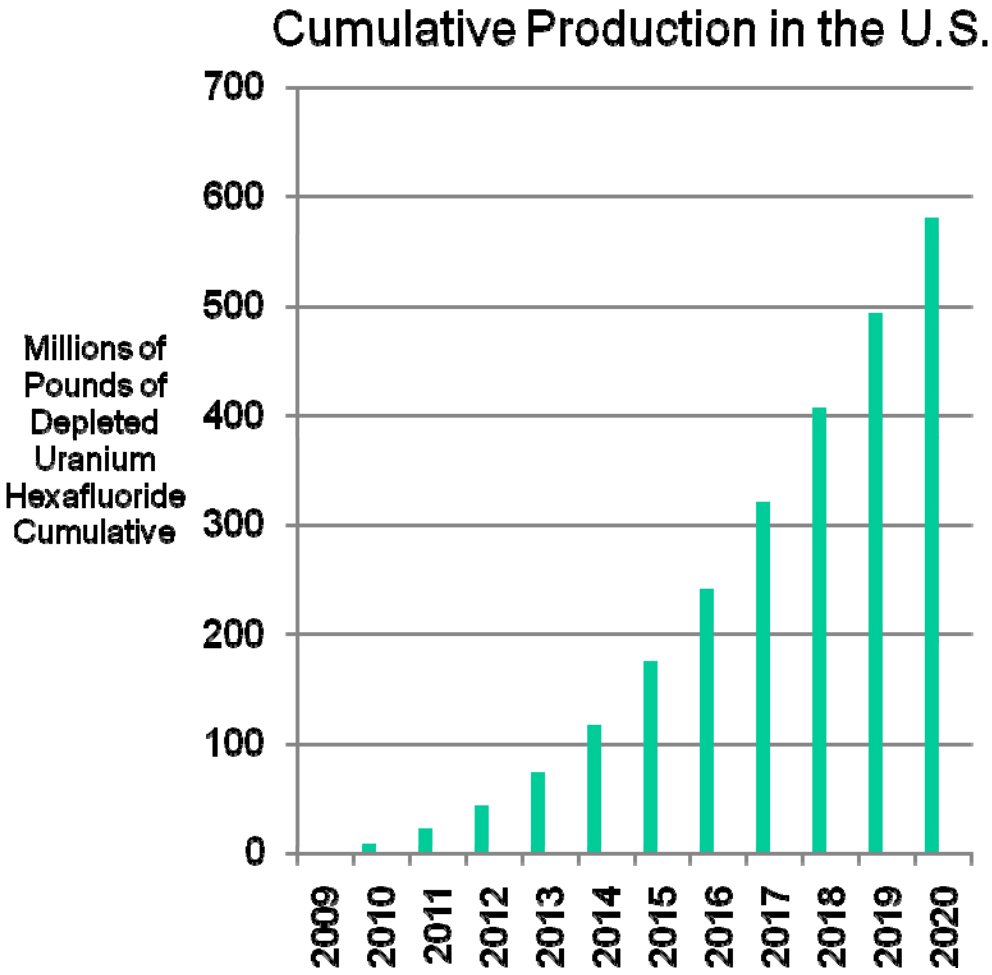
Construct the first commercial depleted uranium de-conversion facility in the US.

- Multi-Purpose Purpose Facility

  - DUF_6 off-take agreements for de-conversion
  - Fluorine Extraction Process – exclusive technology to INIS
  - Anhydrous HF Production – Patented Process

Estimated Depleted Uranium Hexafluoride Production in the U.S.

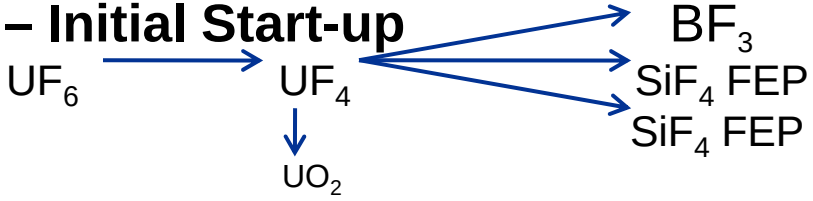


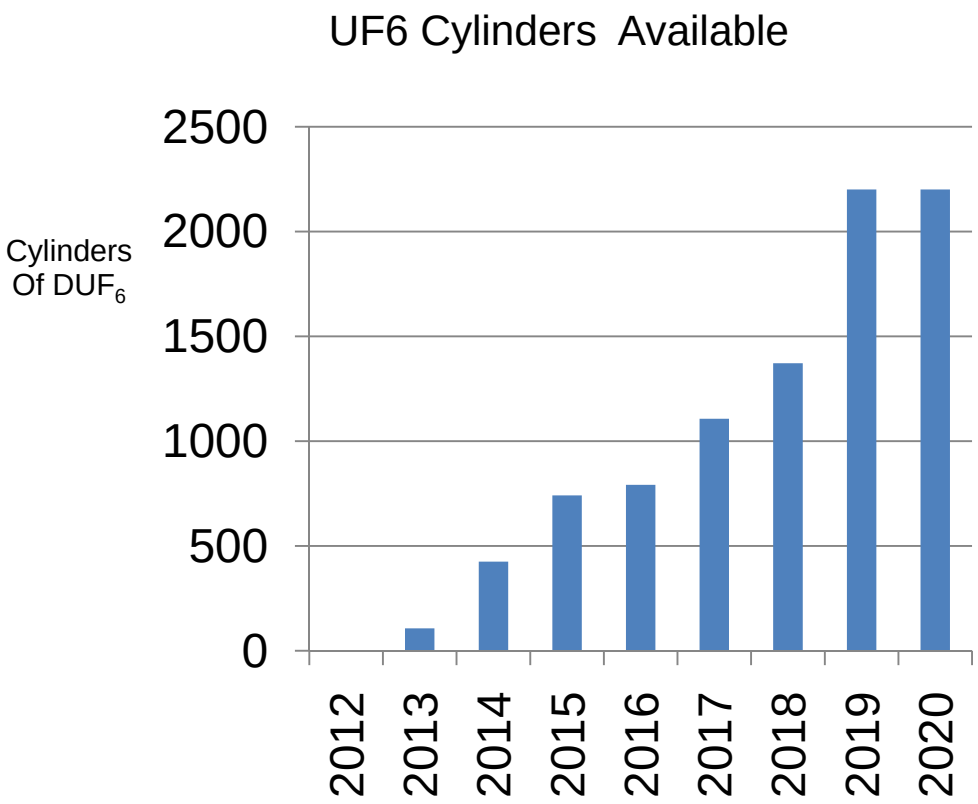


SCHEDULE GOING FORWARD

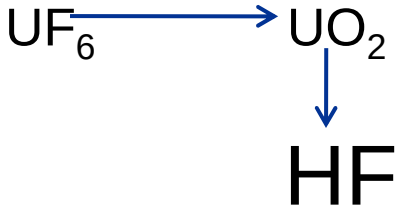
- Phased Expansion Correlated to DUF_6 Supply

Phase I – Initial Start-up





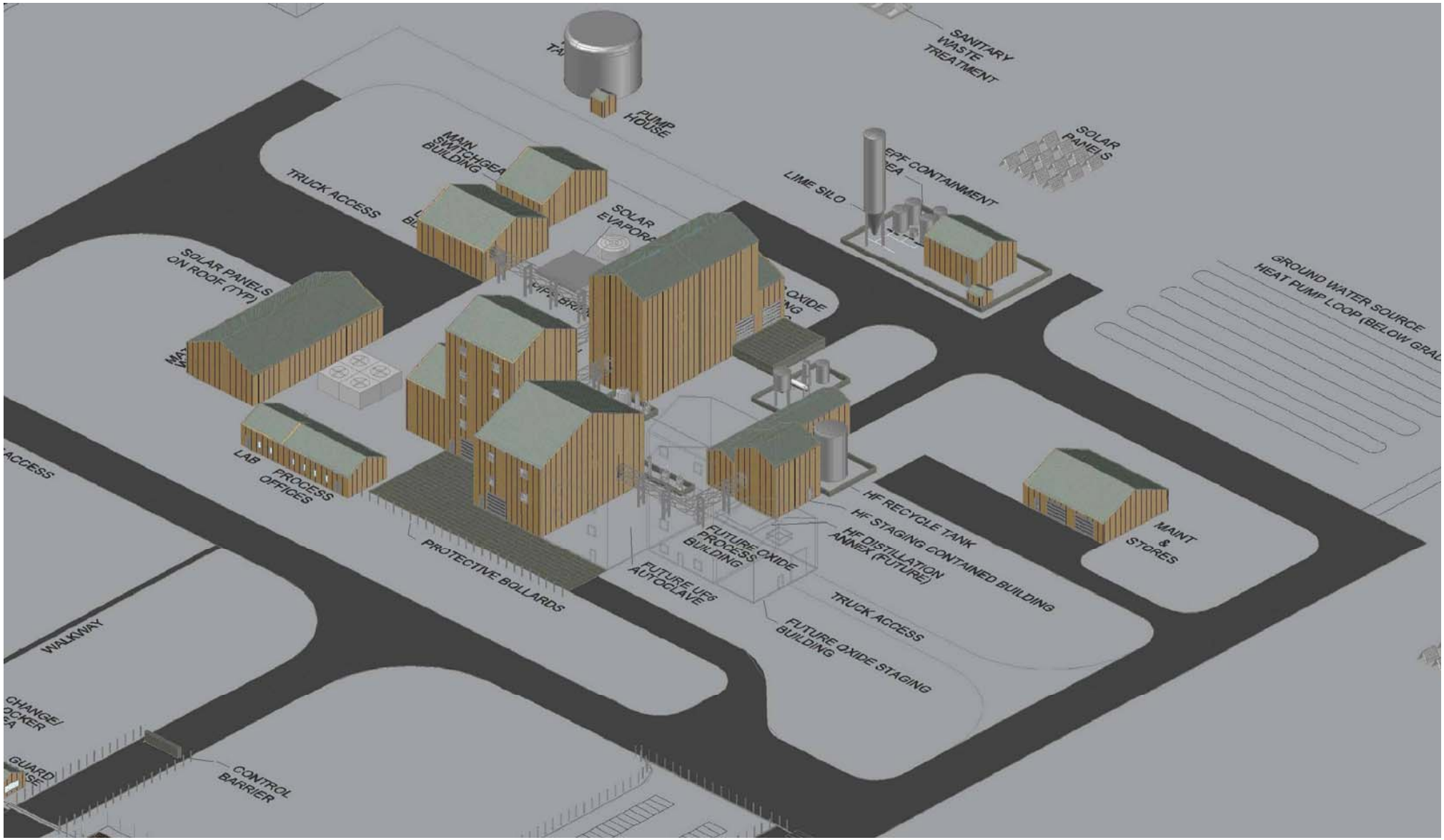
Phase II – 2016 Increase De-Conversion Capability to meet anticipated demand



- Public Acceptance
  - Over 40 public meetings held
  - No negative response
  - Phase 1 Environmental completed
  - Land Transfer in Progress

INIS Acquires FEP Patents	2004
INIS Focuses on Design of FEP Pilot Plant	2004-2007
GeF_4 Pilot Plant Begins Operation	2007
Acquisition of SFC DUF_6 – DUF_4 De-Conversion Equipment	Q2 2008
Contract with Licensing and Design Team (APTS)	Q3 2008
Site Selection – *completed*	Q1 2009
Conceptual Design Report - *completed*	April 2009
NRC License Application Submittal	Dec. 1, 2009
Land Transfer Process	Dec. 30, 2009
Begin Construction	Q2 2011
Begin Operation	Q2 2012

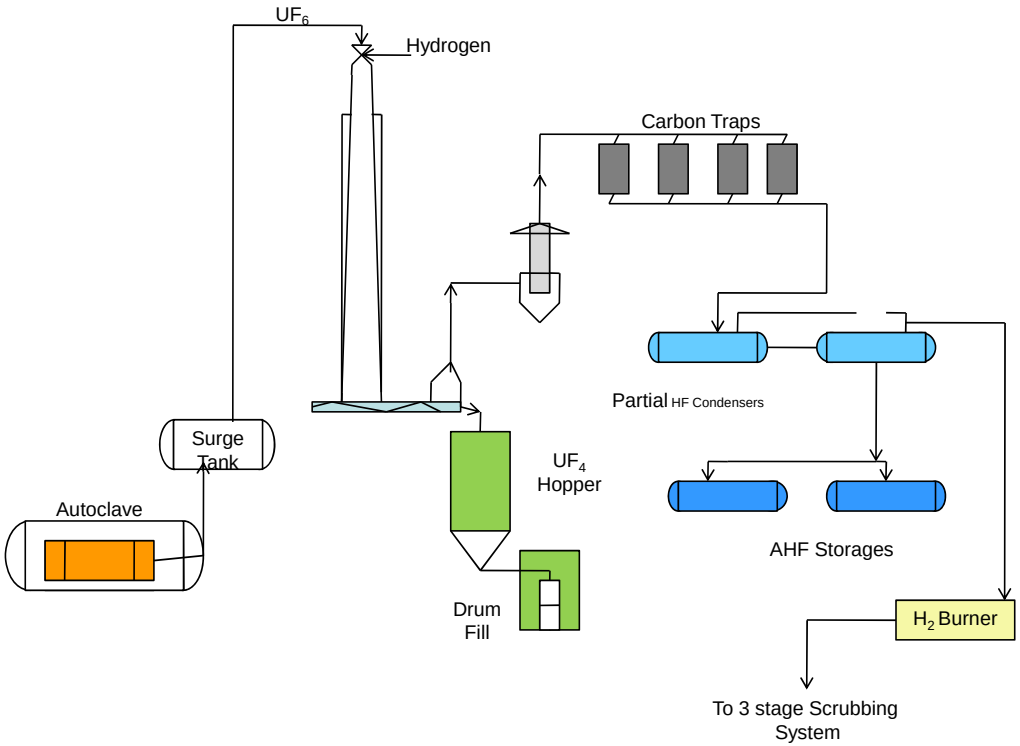
Illustrative Plant



Phase 1 De-Conversion – UF_6 to UF_4

- INIS acquired assets of the only complete de-conversion plant in the U.S. in 2008
  - Most key components can be re-used
  - Will relocate equipment

Phase 1 UF_6 to UF_4 De-conversion Process Flow



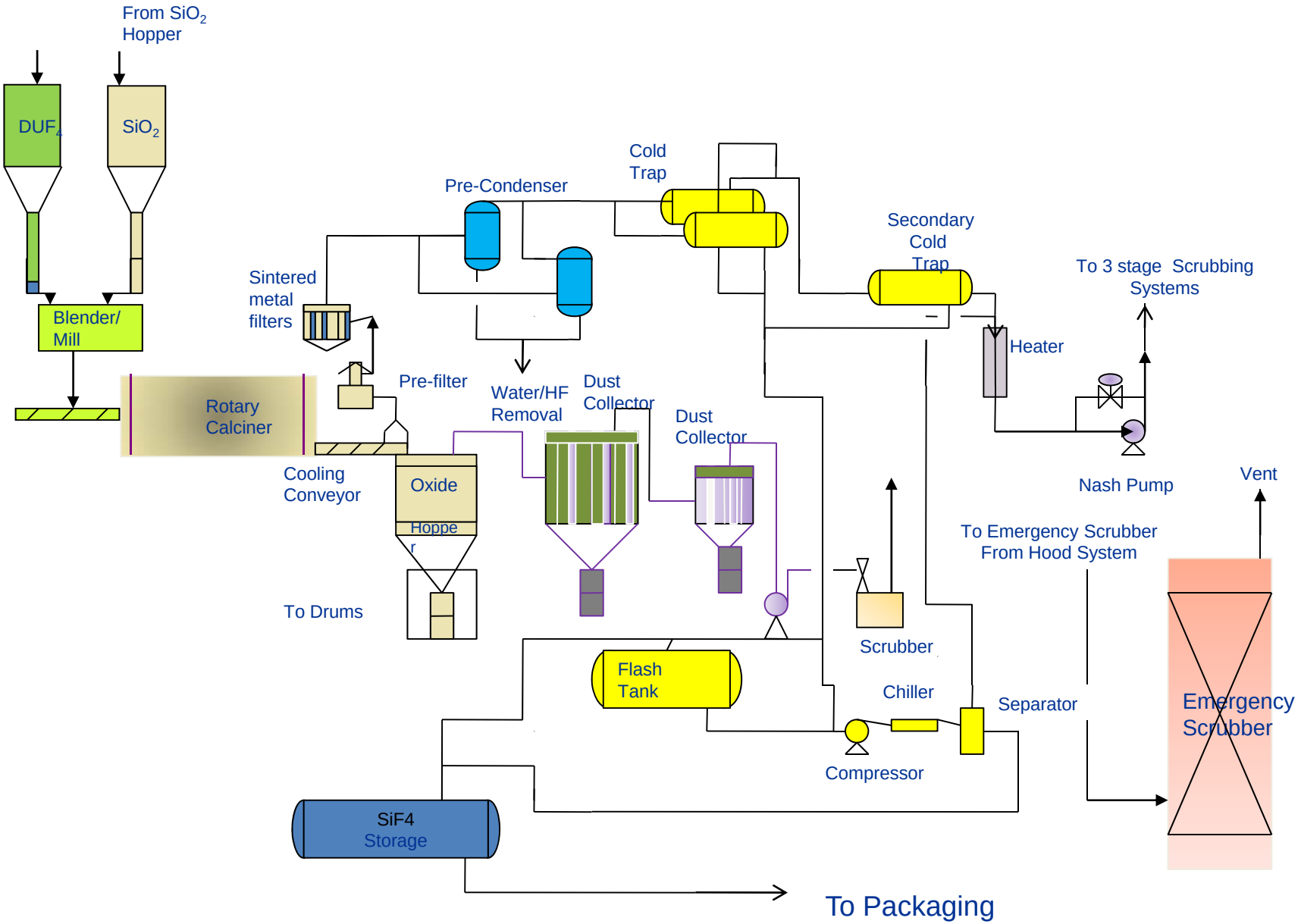
Phase 1 Fluorine Extraction Process

- The Fluorine Extraction Process (FEP) is a simple, one step reaction process between two granular solid materials
  - Depleted uranium tetrafluoride (DUF_4) and a metal oxide are heated in a reaction chamber to the appropriate temperature
  - Fluoride gas separates from uranium and combines with gaseous metal oxide
- Various ultra-pure, uranium-free, fluoride gases are produced while uranium remains in solid-state
- Exclusive U.S. Patent Technology held by INIS enhances commercial viability of de-conversion

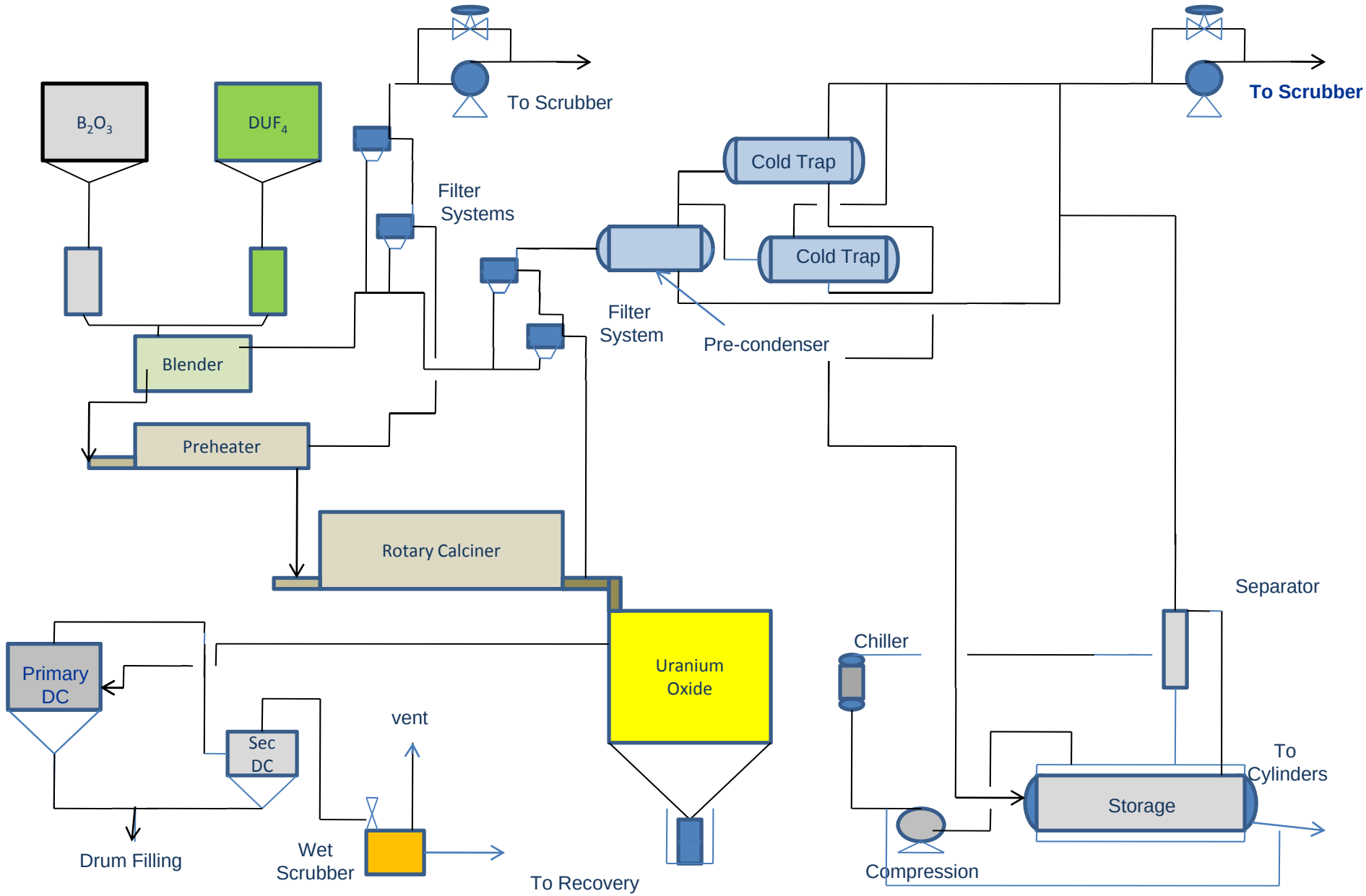
Example Reaction - SiF_4 Production

$$UF_4\ (solid) + SiO_2\ (solid) \xrightarrow{Heat} UO_2\ (solid) + SiF_4\ (gas)$$

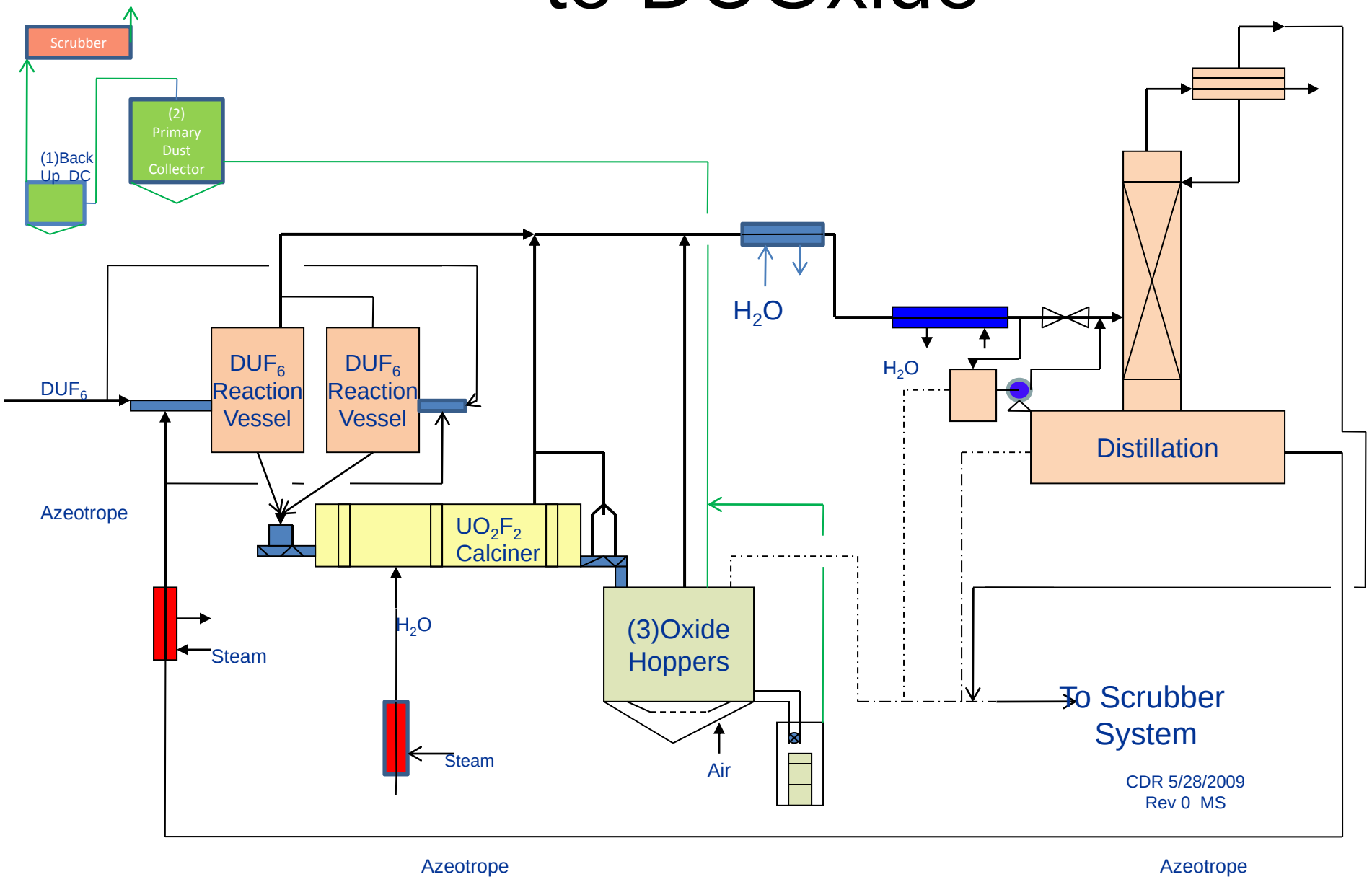
SiF_4 Production



BF_3 Production



Phase 2 De-Conversion – DUF_6 to DUOxide

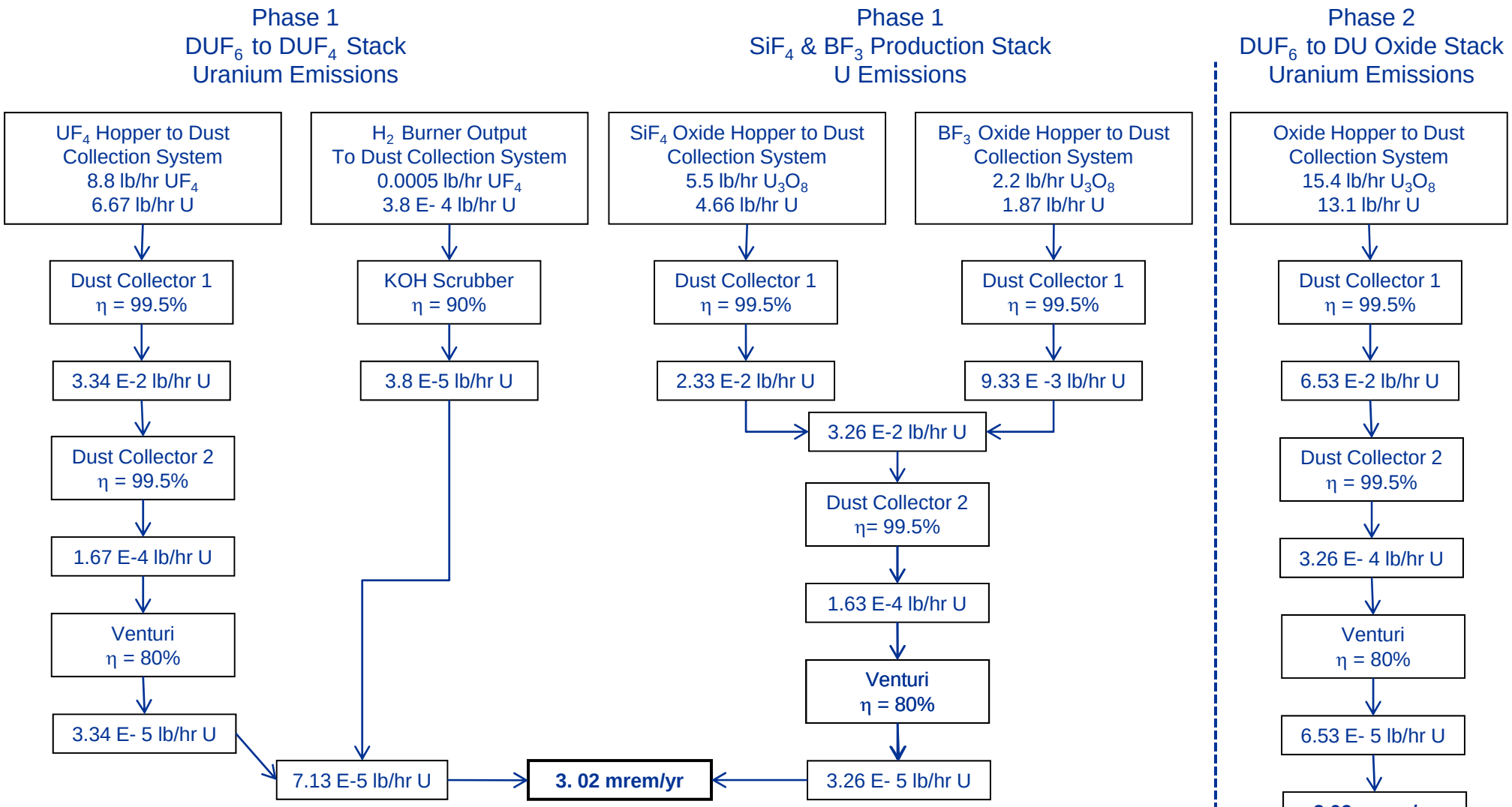


Environmental and Safety Concerns

- Air Emissions

  - Uranium – Conservative estimate of 5.11 mrem per year at 30 acre fence line with Phase 1 and 2 Operations
  - Fluorine – Conservative estimate of 13.8 lb per year HF with Phase 1 & 2 Operations.

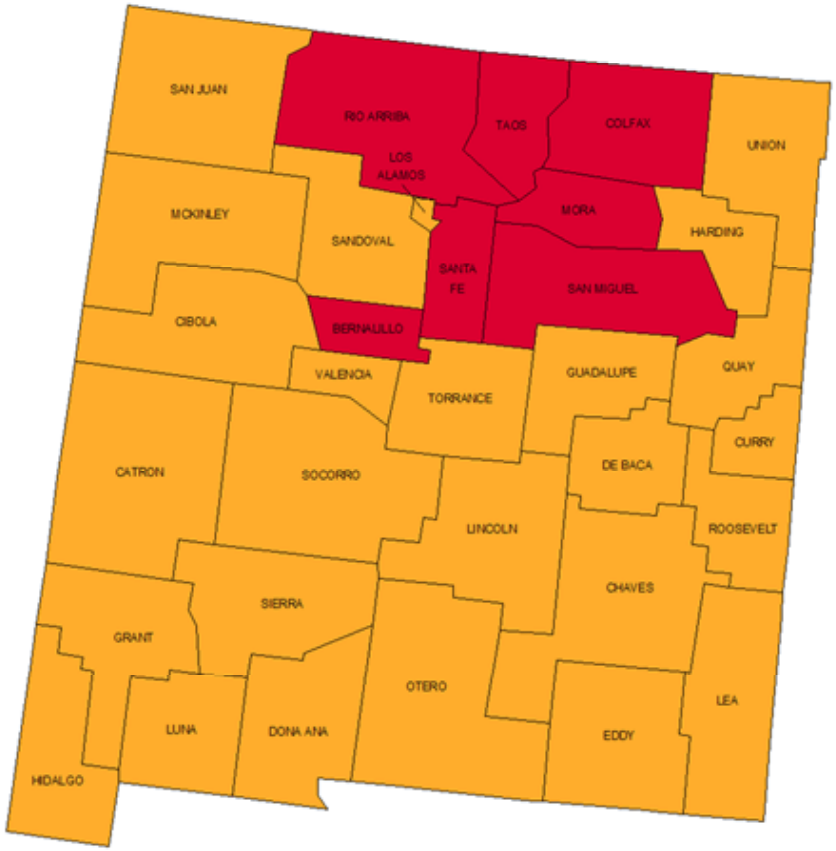
Uranium Release Evaluation – 24/7 Operations



Total Annual Dose at 30 acre fence line resulting from Phase 1 Operational U releases = **3.02 mrem/yr**

Total Annual Dose at 30 acre fence line resulting from Phase 1 & 2 Operational U releases = **5.11 mrem/yr**

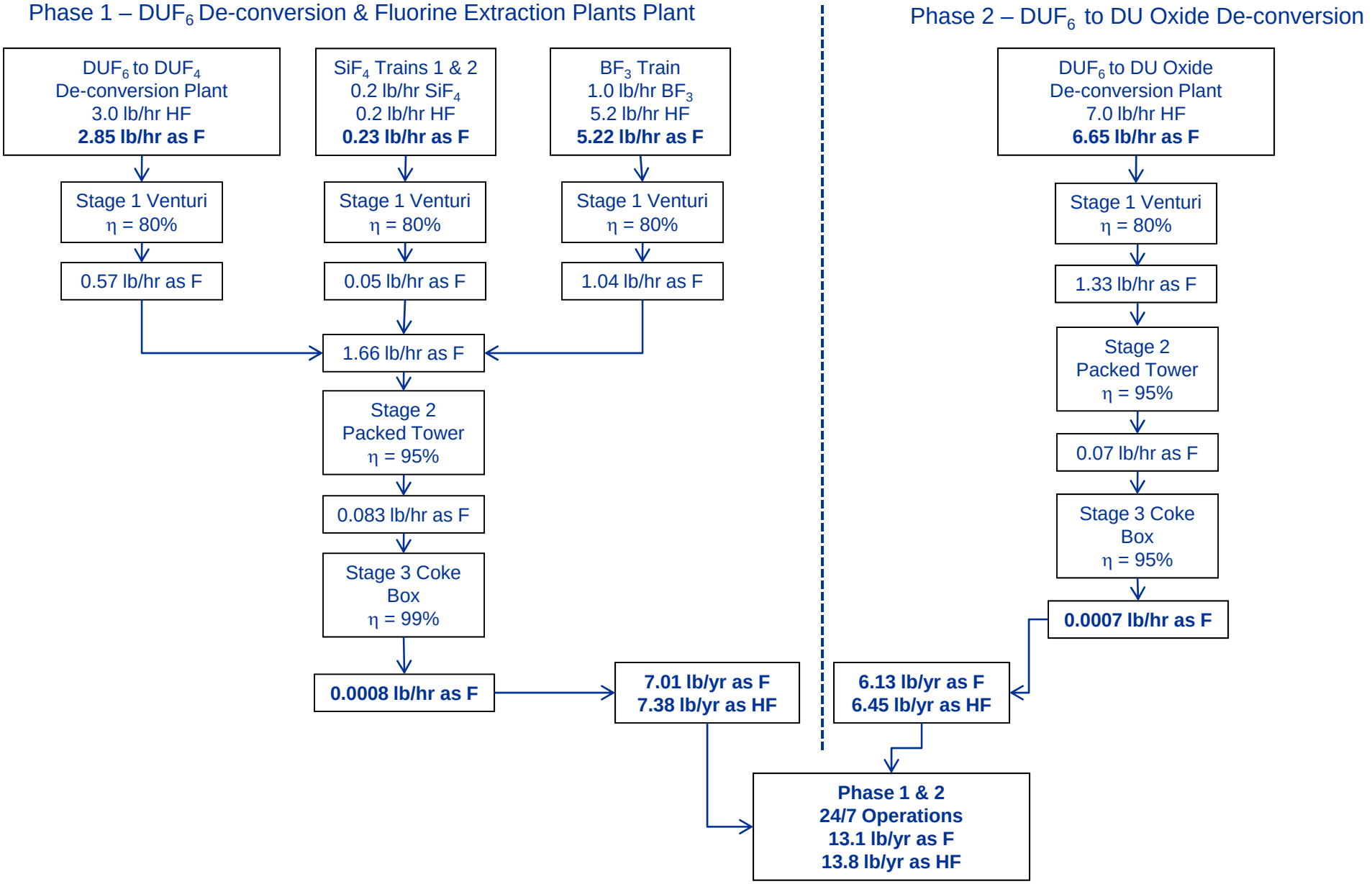
Radon Levels - New Mexico



	Zone 1 counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) **(red zones)**	**Highest Potential**
	Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L **(orange zones)**	**Moderate Potential**
	Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L **(yellow zones)**	**Low Potential**

The North Central region (Albuquerque area) exhibits an average annual absorbed dose 0.75 mGy (75 mrad); while the southeastern corner of the State (Carlsbad area), which includes the IIFP site area in Lea County, measures annual average absorbed dose of about 0.30 mGy (30 mrad), due to terrestrial radiation (NCRP, 1987a).

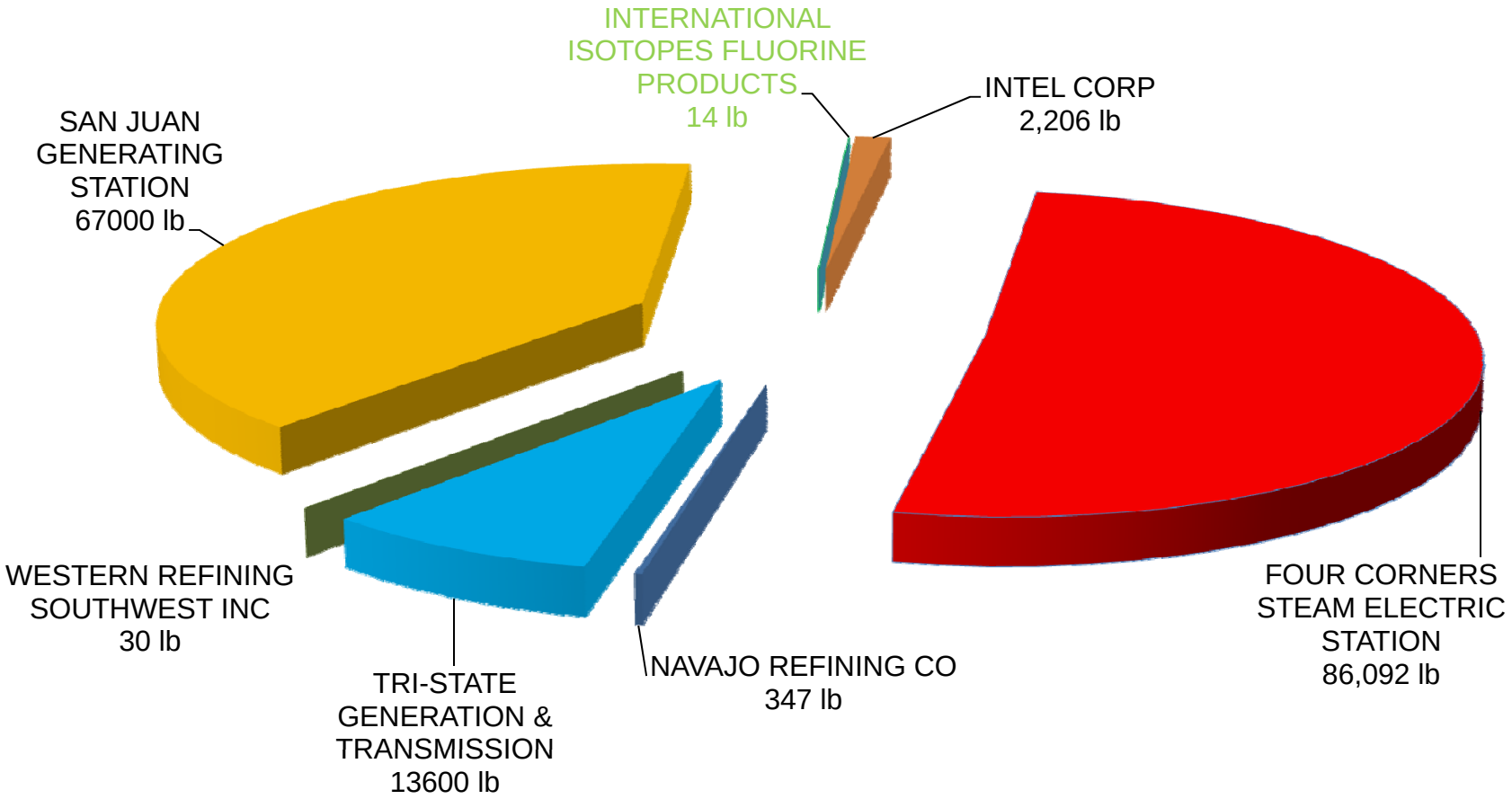
Fluorine Release Evaluation – 24/7 Operations



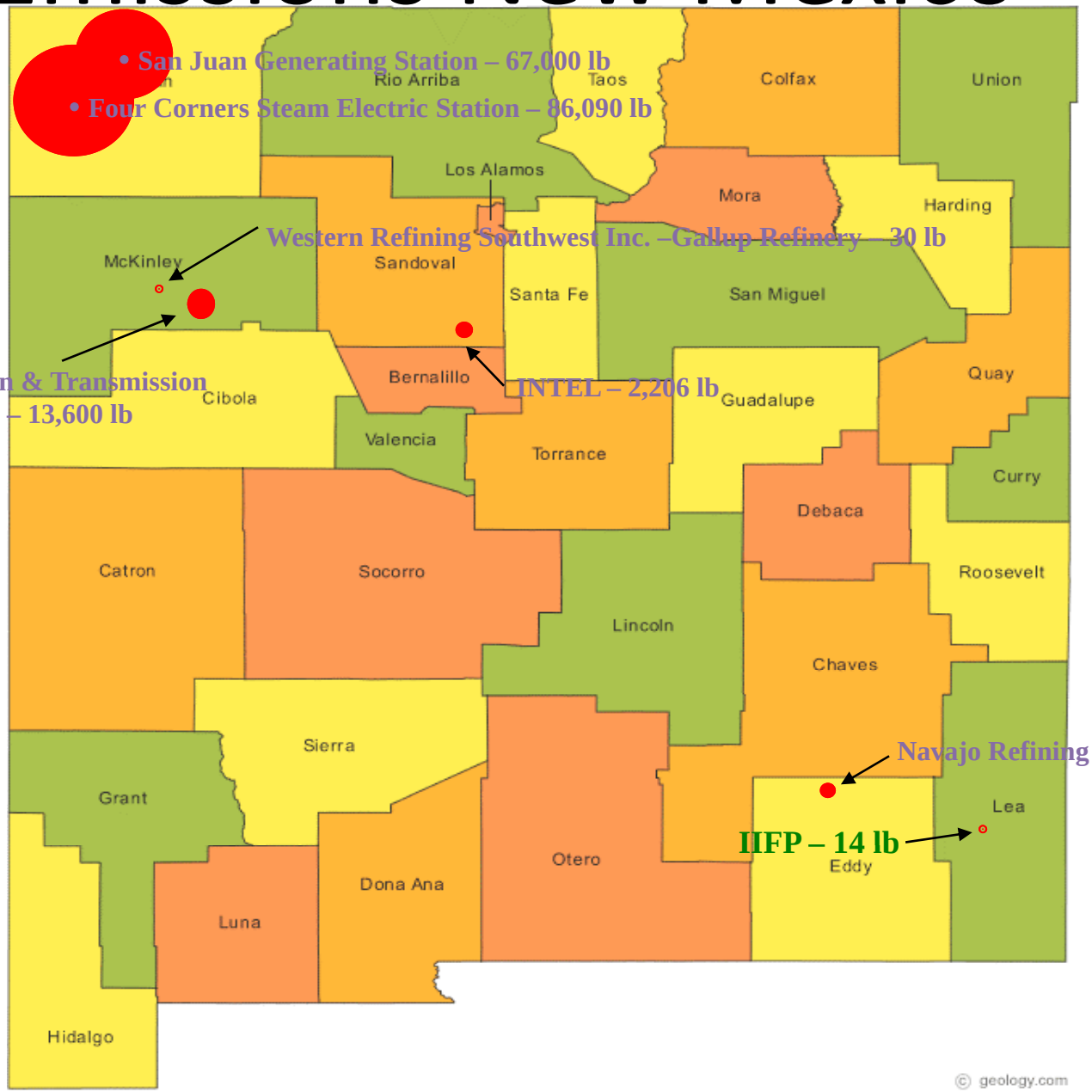
Point Source and Fugitive HF Release – New Mexico

Facility	TRI – 2006 (lb)	TRI – 2007 (lb)
Four Corners Steam Electric Station	90,090	86,090
Giant Refining Co.(1)	58	30
INTEL Corp.	3,465	2,206
Navajo Refining Co.	347	347
San Juan Generating Station	58,000	67,000
Tri-State Generation & Transmission – Escalante Station	10,600	13,600
Total:	162,560	169,273
	IIFP Calculated:	14 lb/year
(1) Name Change to Western Refining Southwest Inc. for 2007		
US EPA Toxic Release Inventory		

HF Emissions in New Mexico in 2007



HF Emissions New Mexico - 2007



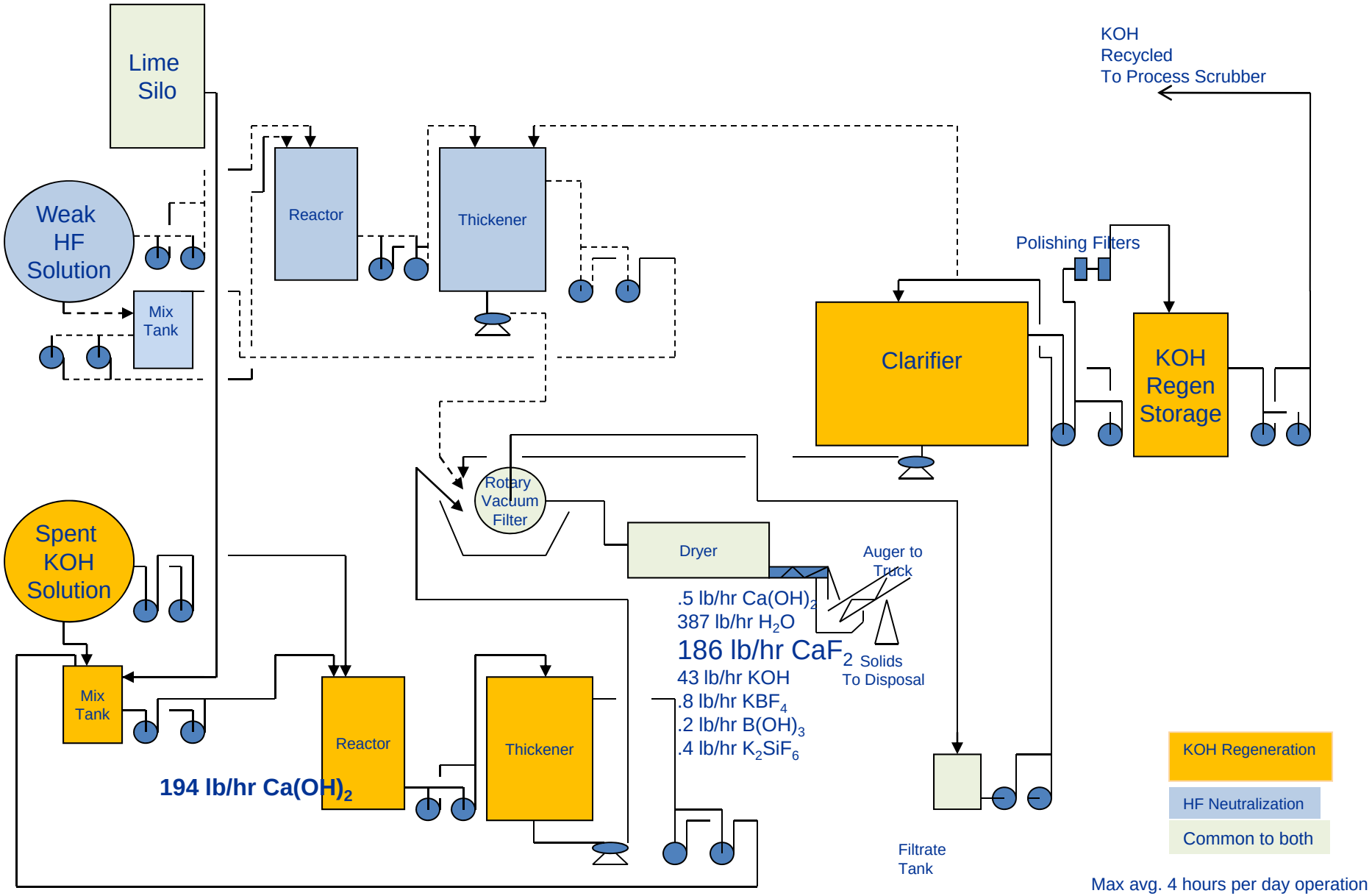
- Water Usage

  - Minimized thru process water recycling – estimated usage < 10,000 gallon per day.

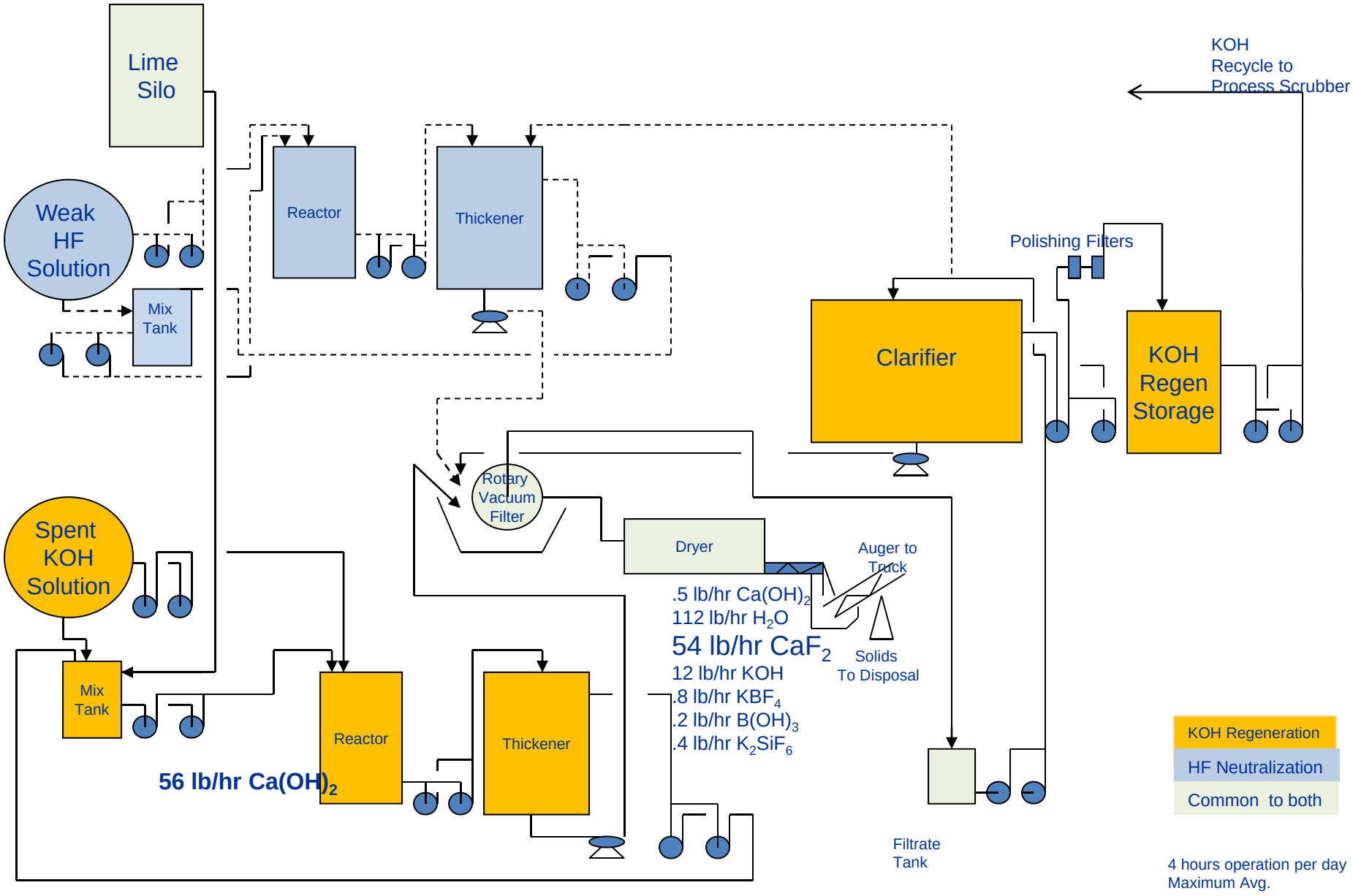
- Ground Water Protection

  - Permit will be Issued though NMED.
  - Storm water basins designed for 100 year rain fall
  - Segregated yard for DUF6 cylinder storage.
  - Zero discharge of process waters

Phase 1 Environmental Protection Process
Waste Water Treatment Flow Diagram



Phase 2 Environmental Protection Process
Waste Water Treatment Flow Diagram



Sanitary Waste Water Treatment Flow Diagram

Primary Treatment

Secondary Treatment

Tertiary Treatment

150 People
Peak Hydraulic Load
3000-4500 Gallon Per Day

Plant Process Makeup Water

Use for (Facility Shrubs, trees & Grass)

Maximum Inventories

Material	Phase 1 (Kg)	Phase 2 (Kg)
Uranium as “U”	750,000	2,200,000
Anhydrous HF	15,900	17,700
SiF_4	32,000	32,000
BF_3	15,000	15,000
CaF_2	128,500	37,200
KOH(with recycle)	8,100	2,700

- Depleted uranium oxides are chemically stable
- Uranium waste is shipped to licensed disposal site

  Utah – Energy Solutions

  Texas – WCS (after NRC Rulemaking)
- The by-products of chemical scrubbing are neutralized (RCRA waste same sites as above)

Transportation Impact - Construction and Operations

Average Annual Daily Traffic Highway 62/180			
	Year	Average No. Vehicles per Day	Average No. Com. Truck
Baseline	2008	5672	1645
	2007	6124	1776
	2006	6035	1750
During Construction IIFP Facility:		17 Deliveries & site prep + 350 Construction workers(14-18 Mos.)	
During Operations IIFP Facility:		10 deliveries + 75-150 Employees	

State Permitting Submittal Schedule

Potentially Required State Permits

Potential Requirement	Agency	Comment/Status	Submittal Time Frame
Access Permit	NMDOT	INIS and/or Lea County would coordinate to obtain approval, if necessary, for adding an entry point from U. S. Highways 62/180 or NM Highway 483. The permit, if issued, would stipulate any safety enhancements necessary to the highway.	2 Q, 2010
Air Construction Permit	NMED/AQB	An air construction permit may not be required because proposed INIS emissions would be below Federal and State regulatory limits depending on credits for stack heights and control equipment. Need determination with State.	If required, submit by 2 Q, 2010.
Air Operation Permit	NMED/AQB	An air operation permit may not be required because proposed INIS emissions would be below the Federal and State regulatory limits depending on above credits. Need determination with State.	If required, would submit 2 Q, 2011.
NESHAP Permit	NMED/AQB	A NESHAP permit is likely not required because the proposed INIS emissions would be below Federal and State regulatory limits. Need to determine with State.	If required, submit by 2 Q, 2011.
Groundwater Discharge Permit/Plan	NMED/WQB	INIS will submit Groundwater Discharge Permit / Plan application to the NMED/WQB.	4 Q, 2010
NPDES Industrial Stormwater	NMED/WQB	INIS has the option of claiming “No Exposure” exclusion.	Make determination by 3 Q, 2010. If required, submit by 1 Q, 2011.
NPDES Construction Stormwater Permit	NMED/WQB	INIS will file for coverage under the General Construction Permit for all construction activities onsite. INIS will develop a Stormwater Pollution Prevention Plan and file a Notice of Intent.	2 Q, 2010
Hazardous Waste Permit	NMED/HWB	INIS would be classified as a generator; therefore, a hazardous waste permit would be required.	3 Q. 2011
EPA Waste Activity EPA ID Number	NMED/HWB	This number is required for the storage and use of hazardous chemicals.	3 Q, 2011

Potentially Required State Permits

Potential Requirement	Agency	Comment/Status	Submittal Time Frame
Machine-Produced (X-Ray Inspection)	NMED/RCB	Registration is required for security nondestructive inspection (x-ray) machines. The RCB will be notified that equipment would be registered, but the registration would be deferred until equipment specifications are available. May be required by contractor with their own permit.	Decide who holds permit by 1Q, 2011.
Rare, Threatened, & Endangered Species Survey Permit	NMDFG	This permit would be required for conducting surveys of the U.S. Bureau of Land Management (BLM) lands.	4 Q, 2009
RCRA Operations Permit	EPA May Involve NMED/HWB	Permit likely not required for the EPP operation, but need to confirm with the State.	If required, would submit permit application 4 Q, 2011.
Right-of-Entry Permit	NMSLO	INIS has obtained this permit for entry onto Section 26, 27, 34, or 35.	Completed.
State Land Swap Arrangement	NMSLO	This arrangement requires that an environmental assessment and a cultural resources survey be conducted on lands offered for exchange. .	Both surveys have been completed
Class III Cultural Survey Permit	NMSHPO	INIS has obtained this permit to conduct surveys on Section 26, 27, 34, or 35.	Completed

NPDES – National Pollutant Discharge Elimination System; EPA – U.S. Environmental Protection Agency;

NESHAP –National Emissions Standards for Hazardous Air Pollutants; NMDOT – New Mexico Department of Transportation;

NMED/AQB – New Mexico Environment Department /Air Quality Bureau; NMED/HWB – New Mexico Environment Department/Hazardous Waste Bureau;

NMED/RCB – New Mexico Environment Department/Radiological Control Bureau;

NMED/WQB – New Mexico Environment Department/Water Quality Bureau; NMDGF – New Mexico Department of Game and Fish;

NMSLO – New Mexico State Land Office; NMSHPO – New Mexico State Historic Preservation Office.

- Fills a “Void” in the Nuclear Fuel Cycle by addressing tails
- Recycles and recovery fluorine for important products
- Plant with an emphasis upon environmental protection
- “Green” nature of this project is complimentary to New Mexico
- Robust opportunities for growth