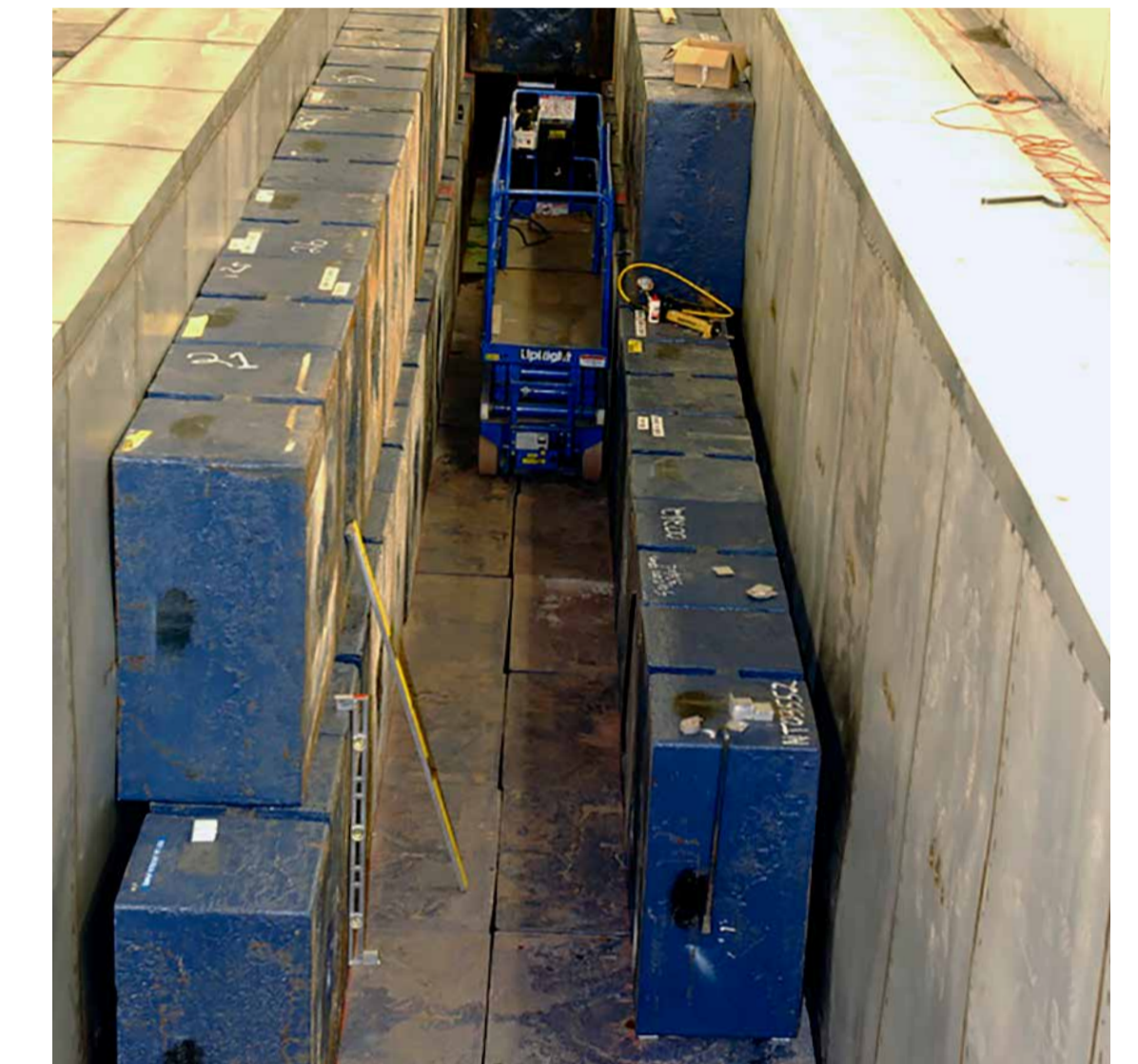


Beneficial Re-Use

Beneficial re-use of metal from decommissioning of power reactors offers potential cost savings compared to disposal for lightly activated or contaminated metal and also eliminates the risk of future increases in cost for alternative disposal or recycling procedures.



Metal Type Processed to Date	Mass (t)
Scrap re-cycled	62300
Scrap originating outside USA	3000
Product exported	3500

	Estimated Representative Costs	
	<500Bqg ⁻¹	<1000Bqg ⁻¹
	€kg ⁻¹	
Disposal	14.3	17.1
Beneficial Re-Use	9.4	10.3

Typical Acceptance Criteria (2014, PWR Nuclide Vector)	
	Activity Concentration Bqg ⁻¹
Total All Nuclides	≤1000
Co-60	≤40
Trans Uranics	≤20



Beneficial Re-Use: EnergySolutions' plant at Bear Creek, Tennessee, uses lightly-activated or contaminated ferrous scrap as the feedstock for manufacturing steel products such as radiation shielding blocks where a low level of residual radioactivity can be acceptable. This "Beneficial Re-Use" programme began in 1992.

- Products remain under control in licensed facilities (eg high energy physics research)
- Metal cannot enter unregulated general circulation
- International demand for these products.

Acceptance criteria vary with nuclide vector and an understanding of feedstock supply in the medium term – to ensure the radioactive content of the product is acceptable.

Key benefits in addition to potentially significant cost savings are:

- Less radioactive waste produced in the long term
- Original owner is relieved of uncertainty over the future costs of interim storage, disposal or recycling.

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