

RESOURCE OWNERS & INDUSTRIAL HOSTS

Turn an industrial-residue challenge into a structured development opportunity.

ARE evaluates industrial phosphogypsum stacks, phosphate-industry byproducts, coal-combustion residues and other above-ground unconventional mineral resources that may support a protected strategic-material project.

BRING US A RESOURCE

REQUEST AN INITIAL SCREEN

HOST VALUE FRAMEWORK

Certainty before scale.

A host needs a defensible answer to five questions before a residue project becomes investable.

RESOURCE What is there? Representative composition, volume and variability.	PATHWAYS Where does it go? Products, controlled material, toxics and residual mineral.
EVIDENCE What proves it? Bench, mass balance, qualification and approvals.	ECONOMICS What is the net cost? Treatment cost less qualified recovered value.

PHOSPHATE-INDUSTRY LENS

A long-lived stack and land-use problem.

A phosphogypsum host must address stored volume, ongoing generation, water and site conditions, radiological constituents, environmental obligations, infrastructure and the absence of a single qualified end-use path. Strategic-material recovery can become part of a broader resource and liability strategy only after the full material balance is addressed.

COAL / CCR UTILITY LENS

A certainty-of-mitigation problem.

A coal-residue owner needs more than a promising technology. It needs auditable certainty about the tonnage treated, constituents isolated, residual material, testing and disposition route, schedule, and predictable net cost. Rare-earth and qualified co-product value may reduce that net cost; they do not replace the host's evidence, compliance or stewardship obligations.

THE COMMERCIAL OBJECTIVE

Design a project in which strategic-material and qualified co-product value offsets a defined share of the host's treatment and long-term mitigation cost - creating a lower net-cost pathway without relying on an unqualified recovery or market assumption.

HOST FRAMEWORK

The first screen is practical, not promotional.

01 - AUTHORITY

Who controls the resource?

Owner, operator, receiver, Government or authorized sponsor.

02 - EVIDENCE

What do the data show?

Assay, mineralogy, moisture, PSD and radiological basis.

03 - INFRASTRUCTURE

Can a project operate?

Land, utilities, access, logistics and environmental controls.

04 - STRUCTURE

How does value flow?

Treatment, recovered value, host participation and risk gates.

WHAT A HOST ENGAGEMENT REQUIRES

Bring the resource, authority and infrastructure into one controlled screen.

The initial form is non-confidential. ARE establishes the NDA, secure data room, sampling rights and chain-of-custody process before technical files are exchanged.

WHAT ARE NEEDS FROM THE HOST

- Legal owner or authorized sponsor
- Country, state or province and site region
- Resource type, history and operating status
- Stored volume and annual generation range
- Assays, mineralogy, moisture and particle-size data
- Uranium, thorium, radium and other radiological data
- Land, geotechnical and stack-access constraints
- Power, water, gas, wastewater and compressed air
- Road, rail, port, customs and material movement
- Permits, notices, orders, closure or monitoring obligations
- NDA readiness, sampling rights and data authority
- Preferred commercial participation structure

WHAT ARE BRINGS

- Protected Patriot One process architecture
- Feed, sampling and analytical requirements
- Engineering and OEM package coordination
- Controls, data and digital-twin architecture
- Environmental and radiological workstream definition
- Prospective buyer, processor and licensed-recipient pathways
- Project-company, financing and Government-engagement architecture
- Evidence-based development terms and decision gates

POTENTIAL HOST VALUE - SUBJECT TO PROOF

A qualified project may reduce long-term residue liabilities, improve land and infrastructure utilization, support local industrial activity, create strategic-material and co-product value, and provide an agreed form of project participation. No benefit is established before site-specific diligence, testing, approvals and definitive agreements.

ENGAGEMENT SEQUENCE

01 Opportunity screen Non-confidential resource and site summary.	02 Authority + NDA > Ownership, authorization and secure channel.	03 Data + gaps > Assays, obligations, site data and missing evidence.	04 Sampling + site > Chain of custody, infrastructure and constraints.	05 Project structure > Roles, economics, rights, work plan and risk gates.	06 Development agreement > Bench, subsystem, pilot and definitive terms.
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NET-COST LENS

Treatment cost less qualified recovered value

The commercial model can credit rare-earth, other strategic-material and qualified co-product value against host treatment cost. The amount is project-specific.

CONTROL LENS

Host rights do not transfer Patriot One

Resource ownership, local operating rights, project equity, technology licensing, know-how access and Patriot One ownership remain separate rights.

EVIDENCE LENS

No final classification before testing

A residual mineral fraction remains an intermediate until analytical, regulatory and end-use qualification is complete.

Submit a resource or host opportunity.

Begin with the resource type, site region, volume, annual generation, available assay, radiological data, utilities, logistics, authority and a non-confidential summary.

ARE's host model is a development architecture, not a promise of liability elimination, zero-cost remediation, a qualified product, an approved beneficial use, a permit, financing, offtake or project participation. Each outcome requires project-specific evidence and written agreement.