

Self-Sustainable Mine Water Treatment through Passive Iron Oxide Recovery

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Self-Sustaining Mine Water Treatment: IOR Approach

- Revenue from sale of iron product
- Cost control through passive technologies
- Effective treatment through good design



Howe Bridge

Jefferson County
58 tons, existing system



Lowber

Westmoreland County
1,610 tons, pond/channel



Schwabenbauer

Clarion County
89 tons, artesian deposit



2,400 tons sold from 6 sites



Keystone

Armstrong County
239 tons, existing system



Scrubgrass

Allegheny County
48 tons, existing system



Horner

Clarion County
367 tons, artesian deposit

... recovery is occurring at two construction sites...



Farmington



Wilson

...and being considered at many other sites.

Honeypot



Hoyman



Hall



Pigment Value Varies between Iron Sludge Sources

- Sludges from chemical treatment are too impure
- Sludges from accelerated oxidation systems make weak pigment

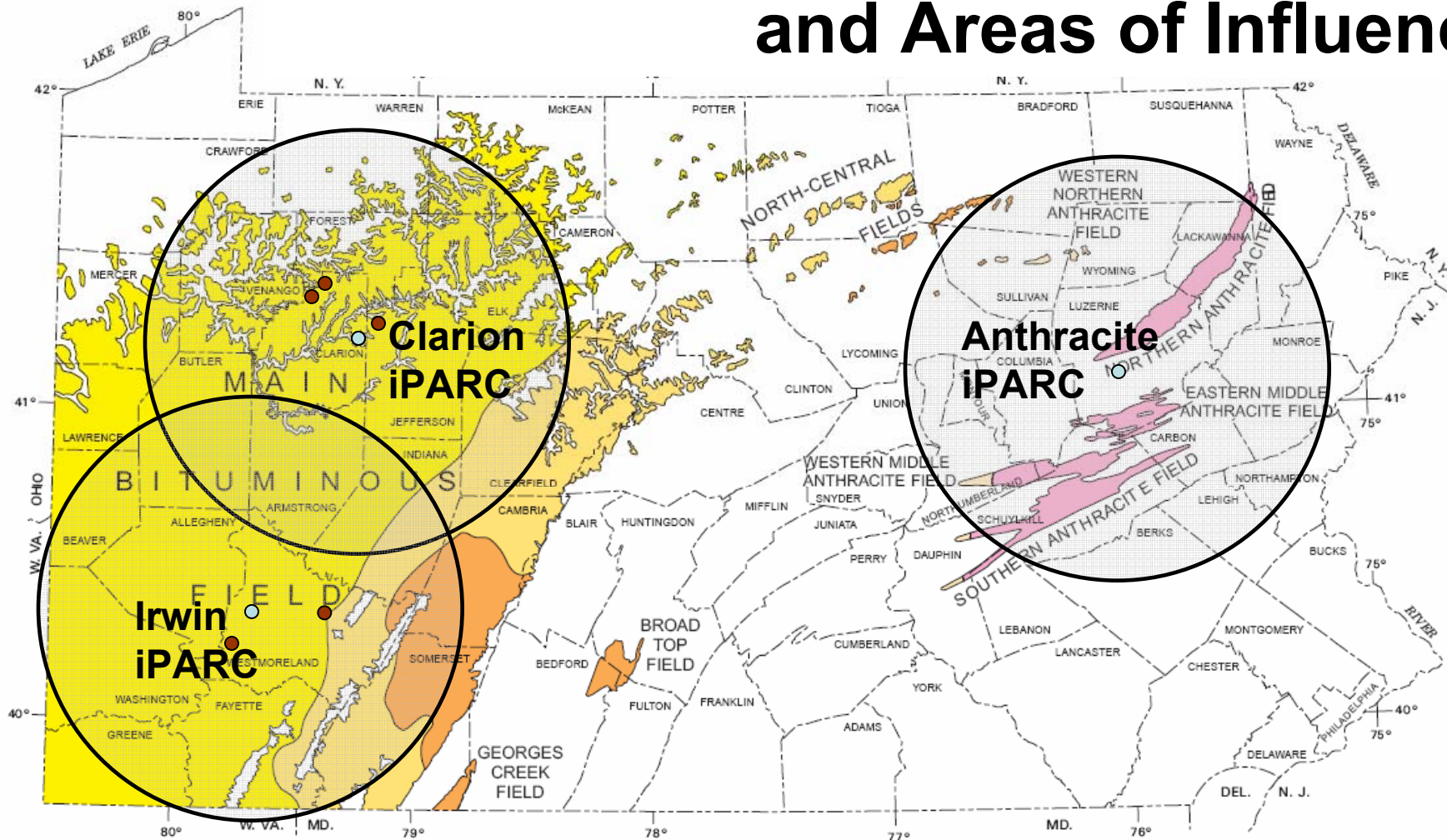
IOR Processing Center

- Located near I-80 in Clarion County
- Abandoned glass recycling site
- Iron sludge will be dried, screened, and blended
- Highest quality product will be sold to existing customer
- Lower quality products will be marketed for lower-value uses

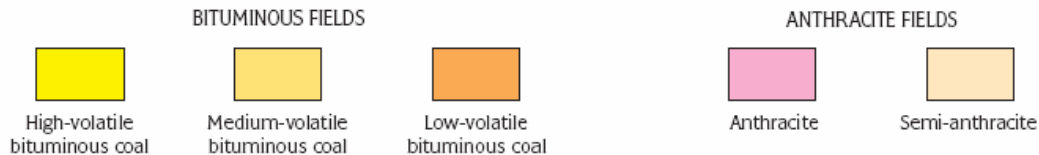
IOR Processing Center

- 2007 Progress
 - Site cleanup and improvements
 - 300 tons of iron sludge delivered
 - Passively dried sludge to 60% solids
 - 200 tons dried material stored under cover
 - preparing for soil reclamation pilot test

iPARC Network (3 sites) and Areas of Influence



EXPLANATION



Next Steps

Short-Term

- Open PC and develop processing procedures
- Establish new markets for bulk unfinished products
- Develop market for iron sludge

Mid-Term

- Establish sludge recovery feasibility across PA
- Increase iron sludge production

Long-term

- Advance processing capabilities: produce finished products
- Develop other PCs in PA

Questions?

