HPS II Phosphate Mining Project

FREQUENTLY ASKED QUESTIONS

In a message to the United States Congress in 1938, President Franklin D. Roosevelt underscored the importance of phosphate to agriculture and people:

"The phosphorus content of our land, following generations of cultivation, has greatly diminished. It needs replenishing. I cannot over-emphasize the importance of phosphorus not only to agriculture and soil conservation but also the physical health and economic security of the people of the nation. Many of our soil deposits are deficient in phosphorus, thus causing low yield and poor quality of crops and pastures…"

The same is true today as increasing yields from intensive agriculture extract essential nutrients (phosphorus, nitrogen and potassium) and move them into the crops which feed an ever-growing population.

What is Phosphate Mining?

After a mine site is permitted and reclamation plans are in place, the land is prepared for mining. Measures are taken to protect wetlands, protected wildlife and other sensitive areas. In addition, systems are put in place to offset any impact to water levels and flow in the surrounding waterways.

A typical annual mining block will be 200 to 300 acres. The top two to three feet of the soil horizon (the root zone) will be removed and stored for use in reclamation. The remaining 15 to 20 feet of overburden will be removed by a large dragline and stacked adjacent to the mining area.
The dragline will then excavate the phosphate zone (the matrix), which consists of about equal parts phosphate rock, clay, and sand. At this point the advanced mining technique departs from the conventional procedure – the matrix will be stacked in windrows parallel to the mining cut. A high-solids material handling system will transfer the matrix to the beneficiation plant, which may be several miles away. Our system will not require large volumes of high pressure water, large pumps, and large diameter steel pipes.

What is Phosphate Beneficiation?

Beneficiation is the process of separating the phosphate rock from the sand and clay by washing, screening, and flotation. The resulting pebble and concentrate is stored and shipped as the final mining product. The sand and clay are used as reclamation material.

What is Flotation?

Flotation is a widely used processing step used to separate the phosphate from unwanted minerals. The procedure causes one mineral to attach to an air bubble and float to the top of the water-filled compartment, while the unwanted mineral (sand) sinks to the bottom.

WATER

Will HPS Enterprises release dirty water from mining and beneficiation into local waterways?

No. Water quality and conservation are monitored and governed by the rules and regulations of the Suwanee River Water Management District, the State, and the Federal government. Permits will require HPS Enterprises to abide by all applicable rules.

Will the HPS II Phosphate Mining Project use groundwater in the mining and beneficiation processes, and will it deplete local and domestic wells?

Groundwater withdrawal will be governed by the Suwanee River Water Management District (SRWMD). The water will be withdrawn from an aquifer and will be far below what is used by homeowners for household water supply.

How will HPS Enterprises manage the water supply used for the project?

The quantity of water delivered and used for households is an important aspect of domestic water supplies. State permits require HPS Enterprises to follow a specific plan that will prevent negative impacts to water wells.

Will phosphate mining and beneficiation be the largest user of groundwater in the SRWMD?

No. In central Florida, the heart of the phosphate industry, the Southwest Florida Water Management District (SWFWMD) reports that mining of all types accounts for approximately 2% of water use.

Will the HPS II operation adversely affect groundwater in the region?

No. The SRWMD governs the use of water, and requires extensive evaluation and permitting prior to authorization of use. The Florida Department of Environmental Protection will also review and require assurances that the groundwater will not be adversely affected.

HEALTH

Have there been studies to assess radiation and other potential health risks from phosphate mining in communities where phosphate is mined?

Yes. The Florida Department of Health has monitored radiation levels on pre- and post-mined lands for nearly 30 years. Their monitoring results indicate levels on post-mined lands are within naturally occurring variations in soils and are not considered harmful.

Additionally, there have been at least two extensive studies regarding the health of phosphate workers (a 1985 study of 3,199 workers over a 23 year period and 22,992 workers over a 43 year period). Neither study linked an increase in cancer or other diseases to workplace exposures in the phosphate industry.

RADIATION

Is it true that even after mined land is reclaimed, the mining process causes higher levels of radiation and radon gas, increasing the risk for those who live there?

No. The Florida Department of Health has monitored radiation levels on pre- and post-mined lands for nearly 30 years. Their monitoring results indicate levels on post-mined lands are within naturally occurring variations in soils and are not considered harmful.

GYPSUM

Does phosphate mining create radioactive gypsum stacks?

No, the HPS II Phosphate Mining Project is a phosphate mining and beneficiation activity and will create no gypsum.

RECLAMATION AND WILDLIFE

How will HPS Enterprises reclaim the land and make it better?

During the operation of the HPS II Phosphate Mining Project, a process of continuous reclamation will take place. Sand and clay will be combined, dewatered, and mixed with overburden and topsoil to create a soil with better agricultural properties than native soil.

Our plan is to create useful landscapes and to ensure the restoration of productive ecosystems. Protecting wetlands, wildlife, and natural habitats will be at the forefront of the HPS II Phosphate

Mining Project. We will always implement wetland best management practices to reduce adverse impacts of construction and operation activities on these lands.

How long will the reclamation process take?

A pilot plant demonstration project is underway with the Florida Industrial and Phosphate Research Institute and private funding to prove the reclamation process.

What will happen to all wildlife in the prospective mining areas?

The mining operation will disturb 250 to 300 acres per year, thus the impact on wildlife will be small. Movement into and through the mining area will be unrestricted to wildlife.

Is Wetland, Upland, and Stream reclamation a requirement and how are they restored?

The state will require the mined land be restored to proper land use, roughly the same elevations as before, and natural habitat functions.

LOW INCOME COMMUNITIES

Are low income and minority residents victims of pollution from nearby gypsum stacks?

No, Gypsum will not be generated by the HPS II Phosphate Mining Project.

ECONOMICS

What is the impact of phosphate mining to the local economies/communities?

On top of the jobs provided by HPS Enterprises, property tax revenue from the lands mined is projected to have a taxable value of $60.1 million, and generate $631,332 in annual operating ad valorem revenue for Union County by 2022. This represents an increase in ad valorem revenue of about 28 percent. The net fiscal impact is significant at $1.0 million. The 30-year Net Present Value of the net fiscal impact exceeds $12.5 million. The economic study determined that the project will generate approximately 570 direct and indirect jobs.

CLAY SETTLING AREAS (CSA)

Is it true that clay settling areas are full of waste and serve no purpose?

Initiation of the HPS II Phosphate Mining Project will depend on the development of the sand-clay-overburden mix technique, which will eliminate the use of conventional clay settling areas (CSAs).

DUST AT MINING SITES

Will there be dust at the mining sites?

The dust generated during the removal of overburden – arguably the dustiest part of mining – would be the same as the dust generated from plowing a field. The U.S. Army Corps of Engineers found during the Area-wide Environmental Impact Statement process that dust at mining sites remains on the mining sites. This is because the combination of dust particle sizes at phosphate mines and wind speeds result in the dust settling to the ground in less than about 300 feet.

How will air quality be managed?

Our team will always be cognizant of air quality during construction and operation phases of the HPS II Phosphate Mining Project. We will develop a final set of air quality mitigation measures during the project development process to mitigate any dust related issues that may arise during construction and operation of the project.