

September 22, 2016

Florida Department of Environmental Protection, Mining and Mitigation Program

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Re: Mosaic Pine Level-DeSoto Application

Dear FDEP and US Army Corps of Engineers Regulators:

We are writing on behalf of the Phosphate Committee of the Florida Sierra Club to ask that you reject the pending application for permitting of the Mosaic Pine Level mine in DeSoto County and that these comments be included in your records for this matter.

We have previously supplied extensive comments to the US Army Corps of Engineers on phosphate permitting and on the Areawide Environmental Impact Statement for phosphate mining in the Central Florida Phosphate District, the Bone Valley. We ask that the Corps consider those comments in connection with the DeSoto application and we are herewith supplying portions of those comments to the FDEP to be made part of the record and considered in connection with the pending application. The supplied materials, enclosed with the mailed copies of these comments, are:

-May 28, 2013 Comments to the Corps, with Exhibits A through E

-July 25, 2012 Comments to the Corps, pp.1-4, with Figure 4-61, Phosphate Lands Mined and Not Yet Reclaimed (Capture Area)

-Memo on Economic Dimensions of AEIS by Dr. Richard Weisskoff

Sierra Club has over 30,000 members in Florida, including many members in the watersheds and counties affected by the Mosaic mines and, in particular, by the proposed DeSoto mine. The Sierra

Phosphate Committee has been involved for many years in the process of reviewing and researching the issues involving phosphate mining and participating actively in the permitting and approval processes. We have studied the damage caused by mining, including the vast areas of clay settling areas with little economic or environmental value, the tragic history of CSA spills and downstream damage, the many square miles of unreclaimed moonscape replacing wetlands and streams, the reduced flows in the Peace River and its tributaries, the loss of historic springs and the growth of hazardous waste gypstacks with their seemingly regular spills of severely acidic wastewater. As a consequence, Sierra opposes phosphate strip mining and urges the state and the Federal authorities to reconsider their enabling of this seriously damaging activity.

In light of our concern that the permitting agencies will continue to permit these activities we ask that you consider the following comments on the pending DeSoto-Pine Level permit.

**The Application is Clearly Incomplete**-Although the state FDEP has decided to accept the Mosaic application as complete we ask that you review that decision as the application, on its face, reveals that it is incomplete.

Mosaic does not intend to start mining until 2021. Its application states explicitly that the plant is “not fully designed at this time” and it apparently won’t be designed for a number of years. As a consequence of the premature application a number of areas of the application simply don’t respond to the application requirements. For example, while the FDEP requests the names, locations and storage conditions for all chemicals to be used and for a description of how they are used, Mosaic simply says that “all petroleum and other regulated substances will be stored in accordance with FDEP regulations and future NPDES permits.” This is simply not responsive to the FDEP application request and may be explained by the fact that the plant has not in fact been designed and Mosaic’s application is premature.

Future but not yet available NPDES permits are also referenced in connection with requirements for groundwater and surface water monitoring.

There are other indications that the application is premature. The pipeline route has changed several times. The application indicates that data such as modeling of wetland hydroperiods SID 1-8, is not planned at this time (when the information is supplied in response to FDEP requests it apparently shows hydroperiods outside of appropriate ranges).

The FDEP itself recognizes, in the case of financial assurances for example, that data should not be over 2 years old and that applications with a duration of longer than 5 years must provide assurance that the impacts can be accurately assessed into the future. It makes no sense to apply for and issue permits in 2016, based on already dated information, for mining which will not even begin for 5 years and will continue for decades thereafter. We simply urge that the FDEP reject the current application as incomplete and require a full application which will allow informed review of the important issues involved.

One possible explanation for the decision to seek permits for the DeSoto-Pine Level mine at this time may be related to the improper purpose and need statement, which is discussed below.

**Project Purpose and Need Are Self Justifying, Circular and Improper**-We have commented extensively in the AEIS process that the use of a purpose and need statement which defines the project purpose as Mosaic does, to mine phosphate to replace phosphate rock currently mined by the applicant in order to

maintain production and continue to utilize infrastructure, recognizing that the mining and beneficiation must be within a practicable distance to a new or existing beneficiation plant, is self-justifying, circular and improper. It is simply a statement that the applicant will be allowed to continue doing what it has done in the past, without regard to the facts that a new mine and new permit are involved and that past practices were demonstrably damaging and dangerous, and without recognition of the clear direction in the environmental statutes that mining be done in an environmentally protective manner.

In fact, the ludicrous length and specificity of the purpose and needs statement reveal that it is intended to be so narrow as to allow only one result, continued mining. Such a statement which does not allow for consideration of alternatives, as required by law, is improper.

We have urged that any analysis of purpose and need recognize the need for applicable environmental protections as well as the reality that decades of damaging mining should call for renewed review of the activity.

At South Pasture Extension the purpose and need statement was used to justify rejection of every alternative which was another mine (as those would be needed in the future) and to reject alternatives calling for less mining because the applicant somehow had the right to expect to have a new mine at least as large as its old mine, presumably because the old size was what the beneficiation infrastructure would support. This is clearly improper (there was not even an attempt to relate the decision to the economic investment in the infrastructure and whether it had been fully recouped) but the argument fails entirely when a new mine and new beneficiation plant are involved.

**Moreover, this idea that Mosaic is allowed to continue replacing its depleted mines with new mines as a matter of purpose and need puts the lie to the pretense by Mosaic and the state that mining is temporary. It's hardly temporary if each new mine, with its decades of activity, is allowed to piggyback on a prior mine which it replaces.**

**The Mosaic application, in addressing the public interest considerations to be addressed, says simply that mining is not contrary to the public interest because, according to the legislature, the extraction of phosphate is important to the economic well-being of the state and the needs of society. Citing 378.202 Florida Statutes. Clearly that is not the end of the story, however; if unconstrained mining were being approved by the legislature there would be no state permit application process at all. It is perfectly consistent with this legislative finding to require that mining be conducted in an environmentally responsible way and any purpose and need statement should identify the purpose as to conduct mining in an environmentally responsible way.**

The purpose and need justification are clearly improper. We made extensive comments to the Corps of Engineers on this issue at every stage of the AEIS process and understand that those comments are incorporated into the Corps record for the permits relying on that AEIS. We are providing a copy of our May 28, 2013 AEIS comments to the Corps for the record of the FDEP in considering the pending DeSoto permit.

**The Economic Value of Phosphate Mining is Misstated**-In the AEIS process Sierra retained an economist, Dr. Richard Weisskoff, to analyze and review the economic benefit of phosphate mining. Dr. Weisskoff's analysis was provided to the Corps of Engineers and a copy is provided with these comments for consideration in the FDEP record as well.

**Dr. Weisskoff debunks the common claim that phosphate mining is an economic engine that drives the economies of the counties impacted and demonstrates that, in fact, agriculture and related businesses are the main sources of economic benefit to the region. And mining is not a major source of state severance tax income, especially when contrasted with the enormous public costs of regulating, monitoring and cleaning up after the phosphate industry. Arguments about public benefit should not be overstated and public costs must be fully considered.**

**Further, the data available at the time demonstrates that the reclamation costs assumed by Mosaic are only \$8015/acre, certainly not enough to restore mined lands to full productivity. The groundwater flows are never restored, many wetlands (e.g. bay swamps) cannot be effectively restored, and the acres of clay settling areas are never restored to their past productivity. Mining should not be permitted until the true costs of reclamation are included and adequately bonded by the mining company.**

**Fertilizer Plant and Gypstack Impacts Have Not Been Considered-** Sierra commented extensively in the AEIS process regarding the need to consider the impacts of the Mosaic fertilizer plant and gypstack disposal systems which are part of the Mosaic mining and production system. Those impacts were excluded from the AEIS and have been excluded from the consideration of this permit. This exclusion is arbitrary and unreasonable.

**Sierra refers the Corps and the FDEP to its prior AEIS comments. It is manifest that the fertilizer plant/gypstack problem is one of the most outrageous part of a seriously damaging industry.** Gypstacks are massive and qualify as hazardous wastes under the applicable regulatory programs. They are prone to serious mismanagement as revealed by the recent USEPA consent decree with Mosaic, which, aside from an \$8 million fine, and hundreds of millions in trust fund to remedy gypstack violations and begin to cover closure costs. The consent decree also addressed operating procedures with unprecedented Federal oversight of gypstack operations after a finding that Mosaic has been improperly managing hazardous wastes in such systems. Clearly Mosaic has been doing it wrong for years. And the history of gypstack spills in Florida reveals an inadequately regulated and controlled system, with massive cleanup costs borne by the public and ongoing dead zone damage to the Gulf of Mexico where gypstack acid wastes were dumped to avoid further gypstack spills.

**Mosaic and the regulatory agencies have sought to pretend that fertilizer plants and gypstacks are separate from mining. These issues are addressed in our AEIS comments which demonstrate that mining and gypstacks are inextricably linked, not only as a matter of the use of the mined material, which is useless without fertilizer plant processing, but also as a matter of the economics of the industry. Significantly, the AEIS finds it impossible to make an argument in favor of mining without reference to the fertilizer product itself. That product comes from the fertilizer plant/gypstack process.**

As we write there is an ongoing environmental tragedy at the Mosaic New Wales gypstack where a sinkhole has developed which is pouring hazardous wastes from the top of the gypstack into the Floridan aquifer. See, for example,

<http://www.sierraclubfloridanews.org/2016/09/sierra-club-florida-calls-out-army.html>

<http://abc13.com/news/sinkhole-sends-radioactive-water-into-florida-aquifer/1513906/>

The pictures are devastating and the public at large is asking how this could happen and why the authorities have been so complacent.

Unfortunately, this is not the first debacle affecting the New Wales facility. Sierra provided the Corps an Administrative Order on Consent between USEPA and Mosaic, Docket, No. RCRA-04-2011-4252, which required Mosaic to investigate the movement of hazardous waste and hazardous waste constituents into the environment from New Wales.

Gypstacks spill, and they do it pretty frequently when it rains a lot, a circumstance which occurs relatively frequently in the summer in Florida. And when they spill they cause enormous environmental damage.

Mosaic doesn't sell phosphate rock or beneficiated phosphate rock. It sells fertilizer, the product of their fertilizer plants and gypstacks. Gypstacks must be considered in mine permitting.

Permitting by the Corps of Engineers must not proceed until there is full consideration of the fertilizer plant-gypstack issues in a supplemental AEIS, and permitting by the FDEP must consider the issues as part of its public interest review of the requested permits.

### **Watershed Impacts Are Substantial and Should Call for Greater Watershed Protection**

**-RAI Issues.** The issues raised in the FDEP RAI of September 24, 2015 are of real concern and have not been adequately addressed. Beyond the lack of clarity as to the watersheds involved, it appears that significant offsite impacts have been identified, offsite wetlands severed by mining and by postmining reclamation, and clay settling area impacts insufficiently considered. See e.g. March 9, 2015 RAI.

The FDEP has called out very substantial impacts on post reclamation flows, Item 13 of March 19, 2015 RAI. The impacts are troubling especially given the effect on Horse Creek, a significant relatively pristine stream least impacted by mining to date. See the discussion below about AEIS concerns.

The deeper mining anticipated at DeSoto, up to 80 feet bls, also leads to additional concerns regarding the Mandatory Mitigation Distance required by the IWUP permit which is based on an average depth of 42 feet bls. And we question whether adequate consideration has been given to the impact of the use of a water supply originating at Fort Green, many miles to the north. The anticipation to date has been that Fort Green pumping would cease as mining moved south. The effect of that continued pumping on the aquifer and the local economy must be considered.

The FDEP has also called out pre and post mining flow and drainage area discrepancies. March 9, 2015 letter at 5 and 12. Post mining hydroperiods are described as high. September 24, 2015 RAI at 8.

Further, the FDEP analysis notes that impacts to the Myakka watershed through the Big Slough are present. These are in addition to impacts to the Peace. These impacts to different basins and their cumulative effects should be considered. It is not clear that this has been done.

Many of the FDEP's comments and requests are mirrored in the issues raised in the Corps of Engineers' AEIS. **In fact, frequently the Corps decides that it need not address an issue because it will be dealt with by the state. It is time for the FDEP to do just that and some of these issues are discussed below.**

**-Issues raised in AEIS.** Sierra Club provided a detailed analysis of the expected water and watershed impacts from mining in its comments on the AEIS. A copy of the May 28, 2016 comments with this discussion is being provided for the FDEP. The AEIS demonstrates that the mines, including the DeSoto mine, will have a significant impact on surface water flows in the Peace. The Peace River Monitoring Plan, discussed in Sierra's AEIS comments and an attachment to the comments, shows the impacts and demonstrates that the mine will capture flows. **Impacts are severe enough that there will be additional days when the Peace River Manasota Water Supply Authority will not be able to withdraw water from the Peace to serve its customers.**

**The AEIS dismissed the damage by refusing to consider impacts to streams for which Minimum Flows and Levels had not been established, thus dismissing Myakka and all of the Peace tributaries. It then imposes a 20% margin of error which allows it to dismiss the predicted 18% loss in the Peace. Our AEIS comments demonstrate why this "don't worry about it" calculation is bogus.**

**Sierra points out that the US Geological Survey has commented that mining will destroy the surficial aquifer and its baseflow to streams and wetlands. Reclamation never reclaims those systems.**

**The AEIS includes a devastating chart, Figure 4-61, Phosphate Lands Mined and Not Yet Reclaimed, which demonstrates that all of the self-congratulation about the improvements in phosphate mining over the years is simply false.** Impacts are somewhat less than in the past because the amount of lands mined and not reclaimed, sometimes referred to as the capture area because it is the area from which surface and groundwaters have been captured, have been going down since the early 90s. This effect will turn around in 2019 with the beginning of permitting of new mines. The capture area will increase substantially, almost to the high points of the "bad old days" in the late 80s/early 90s. The AEIS chart is provided and discussed in comments by Sierra on the AEIS on July 25, 2012 and this chart and the Sierra discussion are being provided to the FDEP with these comments.

This capture area chart demonstrates further that it is improper to judge the impacts of proposed mines by comparison to a baseline which represents the already degraded state of the river and the aquifer, with their lowered flows and lowered levels. The chart shows damage from 1975 to 2059 (when the chart cuts off, but damage does not). This is not a temporary use of the land but continuing damage to tens of thousands of acres and the Peace and Myakka watersheds.

Sierra prepared an analysis of the Peace River Monitoring Plan (PRMP) results which it supplied to the Corps of Engineers with its May 28, 2013 AEIS comments, Ex. B. This analysis demonstrated the significant changes to flow as a result of mine capture. The impacts on flow translate to impacts on water quality as well.

Numerous data points discussed in the AEIS comments reveal significant impacts on water systems during and post mining. Permitting should not go forward until these issues are resolved and impacts properly controlled.

**-Water quality impacts are likely to be serious. The AEIS dismisses water quality impacts because the state will address them and because water quality is addressed as a 5 year average issue. Clear evidence of exceedances from existing mines are ignored. All of these arguments are bogus (water quality standards are applied in terms of grab samples, 24 hour averages or maybe 7 day or 30 day averages-never 5 year averages).**

Sierra's analysis of the PRMP monitoring demonstrates significant water quality issues associated with mining activities. Again, the ball is in the FDEP's court to look closely at these issues.

**Of course a cumulative impact analysis is required in any event under Federal law. Where the DeSoto application reveals significant impact to the flows of Horse Creek, and the South Pasture Extension Supplemental EIS, p. 27, shows moderate Horse Creek impacts due to South Pasture Extension alone, an analysis of the combined impact of the two mines is clearly required. And this is true of water quality as well where the South Pasture extension analysis shows a minor to moderate impact on surface water quality, p. 27, and the Mosaic DeSoto-Pine Level applications shows existing water quality violations. March 9, 2015 letter at 15.**

**Impact of Reagents and Chemicals Used Are Not Sufficiently Addressed-** The application describes the numerous chemicals and reagents used in mining and beneficiation but dismisses their impact, noting that they will be diluted by the enormous quantities of water used in mining.

***While dilution should not be the solution to pollution, it is notable that there is no actual testing confirming the conclusion that the chemicals involved have no water quality impacts.*** They are used in enormous quantities and the only testing of their post mining presence dates from a single test performed in 1978 which is discussed in the AEIS. It is hard to believe the mining industry which touts its technological prowess, is not embarrassed by the need to rely on a single almost 40 year old test. These chemicals should not be dismissed without a comprehensive testing program.

**Monitoring and Testing Should Begin Promptly-***The sole advantage from this very premature application is that the state can require a period of background monitoring to confirm impacts of mining and require adaptive management or corrective action if appropriate.* This monitoring, and any monitoring during the mining period, must be performed close enough to the area of mine impact to identify mine problems without dilution.

**Small tooth sawfish and the value of Charlotte Harbor-** Changes in water flows in the Peace and Myakka will impact Charlotte Harbor and its estuaries. The Harbor is associated with an amazing and diverse series of ecosystems and important fish populations. Changing the salinity gradients in the Harbor, e.g. with greater or lesser river flows, will have impacts on species using the Harbor and estuary. While many species are important, **the small tooth sawfish is a federally listed endangered species and the Harbor has been identified as one of its two critical habitats.**

Consideration of the public interest should take into account these important species, including endangered species, as well as the economic importance of the environmental value of the Harbor and surrounding systems, which is substantial.

**Preservation is Not Sufficient-**The Framework map of the DeSoto mine reveals important, highly ranked Framework wetlands associated with the site rivers and streams. Protection for these wetlands through preservation is insufficient under the Framework guidance. And protection for Framework wetlands serves to provide protections for groundwaters which provide base flow to the surface water streams. (See the USGS comments on the AEIS). The area of preservation for these Framework wetlands associated with onsite streams should be expanded, a step which will protect wildlife corridors as well.

**Offsite Railroad and Pipeline Impacts Are Not Considered-** A distinctive element of the DeSoto mine is its reliance on construction of railroad access and a pipeline to supply water from the Fort Green mine

**to meet the substantial water needs of a mining systems which transports its materials by slurry. *This railroad and pipeline construction and its implications does not appear to have been discussed in the application.***

**Allowance of Grazing and Logging in Conservation Easements-**The application appears to want it both ways when it comes to conservation easements. It contrasts the advantages gained by avoiding grazing and logging but then appears to allow those activities. Both can't be true.

**A Supplemental AEIS is Required to Remedy the Deficiencies in the Existing AEIS-**We have previously commented to the Corps of Engineers on the deficiencies of the existing AEIS. The current application reveals the significance and importance of those deficiencies and underlines the importance of a supplemental AEIS to address the issues, including the impact of fertilizer plants and gypstacks and the impact on Charlotte Harbor, and we renew our call for a supplemental AEIS.

**For the reasons stated above, and in our prior comments to the Corps of Engineers on the AEIS, we ask that both FDEP and the Corps of Engineers deny the requested permits for the Mosaic DeSoto-Pine Level mine. We further request a hearing on the permit application to allow the public to participate in this very important application.**

We thank you for your service and for your consideration of these comments.

Percy Angelo, on behalf of the Phosphate Committee of the Florida Sierra Club

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