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**Re: Supplemental Scoping Comments to Corps of Engineers (Corps) for  
Area-Wide Environmental Impact Statement (AEIS) on Phosphate Mining**

Dear Ladies and Gentlemen:

On April 22, 2011, I submitted my initial comment letter for the scoping phase of the Area-wide Environmental Impact Statement (AEIS) on Phosphate Mining that you are conducting. Those comments began by noting an apparent conflict of interest with CH2M Hill, the contractor you hired to prepare the draft AEIS. As of the date of this letter, I have not received any public notice or response from your office identifying the new contractor, one not benefiting financially, either directly or indirectly from phosphate mining, selected to replace CH2M Hill. Therefore, I am providing an electronic copy of my supplemental comments to the CH2M Hill address provided for the original scoping comments in addition to the addresses of the relevant agencies.

## Supplemental Scoping Comments to Corps of Engineers (Corps) for Area-Wide Environmental Impact Statement (AEIS) on Phosphate Mining

Since supplemental comments are warranted when additional information becomes available after initial comments have been submitted and before the target document is completed and released, I am providing information on several important issues relevant to AEIS topics that have come to my attention since my initial comment letter was submitted in late April. Those issues are referenced below and I believe they should be addressed in the draft AEIS. The draft AEIS should address all direct, indirect and cumulative impacts of these issues to comply with the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Clean Water Act (CWA), the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (“Magnuson-Stevens Act”) and other applicable federal requirements.

### PHOSPHATE FLUORIDES TOXIC TORTS

1. The month after I submitted my initial scoping comments for the AEIS, a book titled “Phosphate Fluorides Toxic Torts” by Gary Pittman was released. This book describes the chemical poisoning, illnesses and death of people from phosphoric acid that results from phosphate mining in Florida. This book is available at: [http://www.lulu.com/browse/search.php?fSearchData\[author\]=Gary+Pittman&fSearchData\[lang\\_code\]=all&fSort=salesRankEver\\_asc&showingSubPanels=advancedSearchPanel\\_title\\_creator](http://www.lulu.com/browse/search.php?fSearchData[author]=Gary+Pittman&fSearchData[lang_code]=all&fSort=salesRankEver_asc&showingSubPanels=advancedSearchPanel_title_creator)
2. I have purchased an electronic copy of that book. Unfortunately the electronic copy is approximately 14 MB and too large to forward by email. Therefore, I am mailing a CD copy of the book to the Team AEIS address in Tampa as **Attachment K**.

### EFFECTS OF FLUORIDE ON THE CENTRAL NERVOUS

1. In addition to the significant harm that occurs from exposure to fluoride described in “Phosphate Fluorides Toxic Torts” inadvertent consumption of even small quantities of this waste product from phosphate mining also can cause significant harm. This month, a peer-reviewed paper by Valdez-Jiménez et al. was published in *Neurologia* (26(5):297-300). A copy of that peer-reviewed publication, titled “Effects of fluoride on the central nervous system,” is included as **Attachment L**.
2. The findings of that paper, included the following:  
Fluoride (F) is a toxic and reactive element...

Fluoride can accumulate in the body, and it has been shown that continuous exposure to it causes damaging effects on body tissues, particularly the nervous system directly without any previous physical malformations.

Several clinical and experimental studies have reported that the F induces changes in cerebral morphology and biochemistry that affect the neurological development of individuals as well as cognitive processes, such as learning and memory. F can be toxic by ingesting one part per million (ppm), and the effects they are not immediate, as they can take 20 years or more to become evident.

### CONTINUED CONTAMINATION FROM PINEY POINT PHOSPHATE PLANT

1. On June 4, 2011, the St. Petersburg Times reported that the shuttered Piney Point phosphate plant was leaking again and “millions of gallons of potentially polluted water are flushing into the bay.” A copy of the entire article is included as **Attachment M-1**. Additional excerpts from the article include the following:  
State officials feared the gypsum stack would collapse, dumping radioactive material and other contaminants into the bay. To relieve the pressure, the DEP issued an emergency order May 28 to dump the liquid into ditches that flow into Bishop Harbor, but monitor it for harmful pollutants.

The DEP took over the Piney Point plant just south of the Hills-borough-Manatee [sic] county line in 2001 when the owners went bankrupt and walked away. The DEP worked to drain off the watery waste atop the plant's mountainous gypsum stacks, but record rains in 2002 added more than 200 million gallons of waste, leading to fears it would spill into the bay and devastate sea life for miles around.

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So the DEP began discharging millions of gallons of ammonia-laden Piney Point waste into ditches flowing into nearby Bishop Harbor, spurring a large algae bloom.

As hurricane season loomed, DEP officials got federal permission for an unprecedented step: loading millions of gallons of treated waste onto barges that sprayed it across a 20,000 square mile area in the Gulf of Mexico.

2. The St. Petersburg Times article did not mention that Bishop Harbor had been designated an Outstanding Florida Water (OFW). The impacts on Bishop Harbor from that phosphate plant, abandoned by the owners after they filed for bankruptcy, are described in more detail in a subsequent article by Glenn Compton dated June 10, 2011, which is included in my supplemental comment letter as **Attachment M-2**. Following are excerpts from that article:

Piney Point is a hazard to the surface water and groundwater of Tampa Bay, Terra Ceia Bay and Bishop Harbor. Bishop Harbor is located immediately downstream of Piney Point and is an Outstanding Florida Water. An OFW designation is intended to provide additional protection to special waters recognized for their ecological significance, by providing the highest degree of protection under state permitting policies.

As reported by the DEP, the millions of gallons of water leaking daily from the former phosphate plant contain elevated levels of cadmium and high levels of nitrogen and phosphorus.

Cadmium is toxic to the marine environment and can have lethal and sublethal effects on the growth and reproduction of invertebrates such as the blue crab and shrimp. Cadmium does not break down in the environment, so any cadmium leaked from Piney Point will be an environmental hazard for Bishop Harbor for many years to come.

3. A synopsis of more than 40 years of disasters associated with only the Piney Point phosphate plant is included in **Attachment M-3**.

4. The AEIS should address the cumulative environmental and financial impacts of derelict phosphate plants such as those described above, in addition to the impacts of the phosphate mining companies filing for bankruptcy after they have finished mining, leaving all costs and burdens of the possible land-based and water-based damage scenarios to be borne by the general populace.

### **MAGNITUDE OF CUMULATIVE IMPACTS ON OCEAN GREATER THAN ANTICIPATED**

1. On June 20, 2011, the International Programme on the State of the Ocean (IPSO) released the summary report by Rogers and Laffoley titled, International Earth system expert workshop on ocean stresses and impacts. The findings are the result of the first interdisciplinary international workshop examining the combined impact of all of the stressors currently affecting the oceans, including pollution, warming, acidification, overfishing and hypoxia. A copy of that report is included as **Attachment N** and is available at the following url:

[http://www.stateoftheocean.org/pdfs/1906\\_IPSO-LONG.pdf](http://www.stateoftheocean.org/pdfs/1906_IPSO-LONG.pdf)

2. One of the key conclusions of the IPSO report was that the magnitude of cumulative impacts on ocean greater than previously understood. Examples of interactions resulting in cumulative impacts included: “combinations of overfishing, physical disturbance, climate change effects, **nutrient runoff and introductions of non-native species leading to explosions of these invasive species, including harmful algal blooms, and dead zones.**...” (emphasis added).

3. Another key conclusion of the IPSO report was that the resilience of the ocean to climate change impacts is severely compromised by the other stressors from human activities, such as pollution from “nutrient runoff.” One of the most significant sources of nutrient runoff pollution in the US is from agricultural fertilizers that include components from phosphate mining, such as those proposed and the subject of the AEIS. See:

[http://www.huffingtonpost.com/2011/06/14/gulf-dead-zone-predicted-largest-in-history\\_n\\_877188.html](http://www.huffingtonpost.com/2011/06/14/gulf-dead-zone-predicted-largest-in-history_n_877188.html)

4. Changes called for in the IPSO report include (emphasis added):

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universal implementation of the precautionary principle so "**activities proceed only if they are shown not to harm the ocean singly or in combination with other activities.**"

5. Therefore, the conclusions and recommendations of the IPSO experts expressed in the re report are relevant to the AEIS. These cumulative adverse impacts deserve a hard look by your agencies as you consider the cumulative adverse impacts of the proposed phosphate mine expansions in conjunction with all direct, indirect and cumulative impacts of past and current phosphate mining.

### **NEW GEOPOLITICS OF FOOD - LOST EMPIRES OF FOOD**

1. On May 18, 2011, an interview with Lester Brown, founder of the World Watch Institute and the Earth Policy Institute was aired on National Public Radio's Fresh Air. The topic of the interview was World Food Shortage and his New Article, "The New Geopolitics of Food," which was published in Foreign Policy Magazine and adapted from his book, "World on the Edge." A copy of that Foreign Policy article by Brown is included as **Attachment O-1**.

2. The most relevant point of this article was that WATER – not fertilizer - is the key to food production now. Currently people are being fed by over-pumping and depletion of the aquifers. Phosphate mining pumps from and depletes our aquifer even more severely than agricultural pumping. Additional burdens are being placed on our aquifer systems with the conversion of agricultural lands from food production to the production of biofuel. That increases pumping/irrigation and the **use of mined fertilizers** while significantly decreasing food production. According to Brown, production of biofuels, derived primarily from corn, has increased from 20 tons a year to 40 tons a year. More water and mined fertilizers are used to produce corn than to produce many other crops.

3. This program also emphasized the fact that the food shortages, caused by over-pumping, a shift to ag-production of biofuels and subsequent global climate disruption, will not result only in world hunger but also global uprisings, as we have witnessed recently.

4. Clearly the food crisis cannot be resolved by expanding phosphate mining. In fact, as Brown has established, continued depletion of our aquifers (which is a result of phosphate mining) will **increase** the food crises. Therefore, alternatives to expanding phosphate mining must be found and any impetus to do so would be undermined by permitting expansion of phosphate mining.

5. A critical component of every EIS is the alternatives analysis. Brown addresses several alternatives that can reduce the food crisis, none of which include increasing mining for phosphate to produce fertilizer. Brown's alternatives are listed below and should be addressed in the AEIS:

- a. shift to non-animal product diet, which significantly reduces both the amount of water and the amount of fertilizer needed to feed people;
- b. shift to smaller families, which significantly reduces the number of people the world must feed; and
- c. initiate immediate actions to stop climate disruption, such as halting the use of fossil fuels to mine phosphates, similar to the ban on the sale of autos during World War II initiated so we could reach goal of arms production.

6. Lester Brown is not alone in warning of the impending collapse of the global food supply. On May 24, 2011, Cambridge Forum featured a program with Andrew Rimas author of "Empires of Food: Feast, Famine, and the Rise and Fall of Civilizations" discussing food security in our warming world (<http://www.cambridgeforum.org/wordpress/?p=371>). Although a written transcript of this broadcast is not available, I have purchased an audio transcript to be included as **Attachment O-2**. A copy of that audio CD will be mailed to the Team AEIS address in Tampa with **Attachment K**.

7. Rimas also addressed the problems associated with the use of artificial chemical fertilizers, particularly the reliance on fossil fuels associated with the uses of these mined fertilizers and the false security perpetuated by the use of these fertilizers.

8. Also addressed was the fact that climate change is making it difficult to maintain our grain crops. As indicated previously, I believe that expanding phosphate mining to produce fertilizer will *exacerbate* climate change, not reduce its' adverse impacts.

9. The loss of our soils also was addressed by Rimas as a critical factor in the decline of our food crops. The role of mining, including phosphate mining, in the loss of soils by direct and indirect means has been documented.

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10. In closing, Rimas shared Aristotles' analysis of their crumbling food empire, as Aristotle noted that "areas that used to grow food now was growing rocks." Obviously that is what is happening in Florida where phosphate mining has made it impossible for sustainable agriculture to flourish in mining areas because of the depleted aquifer system.

**SOLASTALGIA**

1. Each Friday, "To the Best of Our Knowledge" releases a program for airing via Public Radio International. This week's program included an interview with Professor Glenn Albrecht who coined the term "solastalgia" to describe the deep depression that people in New South Wales, Australia were suffering from because open-pit mining was destroying their environment, polluting their rivers and fouling their ocean. This program also described how that same type of deep depression is occurring in our country from similar environmental destruction.

2. I am not aware of any detailed studies evaluating the degree of solastalgia caused by phosphate mining in Florida at this time. Despite the paucity of information related to solastalgia caused by phosphate mining in Florida, the agencies should take a hard look at the impact of solastalgia caused by phosphate mining and address these impacts in the AEIS.

Thank you for the opportunity to provide these supplemental scoping comments. I look forward to your acknowledged receipt of my comments.

Sincerely,

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Attachments:

- K. Phosphate Fluorides Toxic Torts book by Gary Pittman
- L. Effects of fluoride on the central nervous system by Valdez-Jiménez et al.
- M- 1. Piney Point phosphate plant leaking again, threatening Tampa Bay by Craig Pittman
- M- 2. DEP's errors at Piney Point by Glenn Compton
- M- 3. Piney Point 1966-2011: A Retrospective by John Rehill
- N. Ocean Stresses and Impacts – Summary Report by Rogers and Laffoley
- O-1. The New Geopolitics of Food by Lester Brown
- O-2. Empires of Food audio CD of Cambridge Forum interview with Andrew Rimas

cc:

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