

**MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS  
WORK SESSION  
BRADENTON AREA CONVENTION CENTER, LONGBOAT KEY ROOM  
One Haben Boulevard  
Palmetto, Florida  
February 2, 2021**

Meeting video link: <https://www.youtube.com/channel/UCUlgjuGhS-qV966RU2Z7AtA>

Present were:

Vanessa Baugh, Chairman  
George Kruse, First Vice-Chairman  
Kevin Van Ostenbridge, Second Vice-Chairman  
Reggie Bellamy, Third Vice-Chairman  
Misty Servia  
James A. Satcher III  
Carol Whitmore

Also present were:

Cheri Coryea, County Administrator  
William E. Clague, County Attorney  
Robin Toth, Deputy Clerk, Clerk of the Circuit Court

 Chairman Baugh called the work session to order at 1:00 p.m.

**AGENDA**

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3. **PINEY POINT EMERGENCY WATER TREATMENT PROJECT**

 Cheri Coryea, County Administrator, stated this is an update on the Piney Point Emergency Water Treatment Project. Backup documents include the executed Administrative Agreement with the Florida Department of Environmental Protection (FDEP), regarding acceptance of wastewater from Piney Point reservoirs under Manatee County's Industrial Pretreatment Program (approved 1/12/21), as well as correspondence from FDEP, regarding the disposal of treated process water using an Underground Injection Control (UIC) well and water management options for HRK Holdings LLC (HRK).

Chairman Baugh asked the Board to wait until the end of the presentation to ask questions.

 Jeff Goodwin, Utilities Deputy Director, stated HRK has been working diligently to get infrastructure in place in order to commence the discharge of process water from the Piney Point site. Staff received/reviewed the industrial, pre-treatment permit application from HRK and has visited as of today. The draft permit authorizing HRK to begin the water discharge process is under review in the County Attorney's office.

 Upon question as to whether staff foresees any issues with water contamination during the discharge process, Mr. Goodwin stated that staff sees the potential, but there are enough safeguards in place to stop the process before there are any impacts to the County's system. Staff would be monitoring the process closely and looking at the pre-treatment process, PH chemical feed, the county's collection system and treatment plant operations, and water quality effluent for any problems. If staff detects any problems, the County has the unilateral authority to stop the discharge to protect the infrastructure.

 Jeff Barath, Site Manager for HRK Holdings LLC (owner and operator of the property), stated HRK submitted their permit application to the Utility Department and has been

installing infrastructure, preparing for a March 1 commencement of the discharge process. He thanked the Board for understanding the seriousness of this issue and the County, for gathering the resources to help in this undertaking.



Mr. Barath utilized a slide presentation on the Piney Point site timeline. HRK Holdings LLC (HRK) is the current owner and operator of the former Piney Point Phosphates fertilizer plant and phosphogypsum stack system, located in northern Manatee County, directly across U.S. Highway 41 from Port Manatee. While HRK never operated phosphate manufacturing processes at the site, they are currently responsible for the site's long-term care and water management both as the owner of the site and in accordance with a series of FDEP agreements and orders entered into following HRK's acquisition of the site from the Bankruptcy Trustee (8/2006).

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The site was originally permitted by Manatee County in 1964. The permit was part of a \$42 million agreement with Borden Chemical for the development of the Piney Point Fertilizer production facility, and incorporated a \$13.5 million bond that was utilized for construction of the Manatee reservoir for the onsite water system.

He outlined FDEP's Investments and clean-up efforts 2001-11 following the closure by Borden. Mulberry Corporation was the final operator on the site, in which they filed for bankruptcy protection in 2001. FDEP's remedial activities to the site included: removal/treatment of 2.35 billion gallons of process water; installation of a seepage collection system around the entire phosphogypsum stack system, which prevents any water from migrating offsite and into any of the lower Tampa Bay estuaries; installation of a slurry wall around the southeast and north portions of the phosphogypsum stack system to create a groundwater shadowing effect to further protect the environment; installation of 450+ acres of high density polyethylene liner to create an impervious barrier in between storm water surfaces and known contaminated groundwater; and the importation of over 2 million yards of clean fill from various borrow pits throughout Manatee County to cover the 450+ acres of liner and to create a compaction, with the idea of developing a heavy industrial site before taking on any clients. A slide of two aerial photographs reflecting the changes to the site as a result of FDEP's cleanup efforts was shown.

HRK solely undertook the demolition and environmental remediation of the three former chemical plants located on site. HRK recycled over 19 million pounds of ferrous and non-ferrous materials to help fund demolition and clean-up; entered into a Dredge Materials Containment Agreement (2007) to receive 1.5 million cubic yards of dredge material from Port Manatee during the construction dredging of Berth 12 (Panamax Berth); entered into a long-term agreement with FDEP requiring HRK to be onsite managing the site until calendar year 2065; and developed the property to support Port-related businesses.



Mr. Barath spoke about the dredge disposal water leak that occurred within the seepage collection system, resulting from the NGS-S compartment failure during the pumping of water from the Port Manatee Berth 12 dredging project into gypsum stacks at Piney Point (5/11/11). HRK discovered the leak and performed a controlled breach (6/7/11) in coordination with FDEP to relieve the pressure to avoid catastrophe and conducted an emergency discharge of 169.18 million gallons of high activity water through HRK. HRK performed a series of repairs with third party engineers, with dredging recommencing on July 19, 2011. HRK assumed a level of accountability for environmental monitoring the site, has taken on all of the onsite process and stormwater management, and is analyzing the discharge water daily.

HRK has developed a variety of Port customers that are looking for part-time storage. Over 270 full-time jobs have been created, 500,000 tons of Port-related cargo have moved through the facility, and 19 million pounds of recycled material have moved through the HRK site.

 Mr. Barath showed a slide of the 2013-2021 total stored volume of the three ponds. The Line Process Water Sump (LPWS) pond has 6.7 percent remaining capacity (6.06 inches of remaining rainfall capacity through 1/31/21). The North Gypsum Stack South (NGS-S) Cell is a 77-acre pond that currently has 4.9 percent remaining capacity (12.86 inches of remaining rainfall capacity; this is the pond that leaked in 2011). The North Gypsum Stack North (NGS-N) Cell contains ponded process water and has 3.2 percent remaining capacity (7.92 total inches of remaining rainfall capacity). The site continues to accumulate process water, and it has a very limited amount of remaining lined process water storage capacity. Rain is the biggest detriment to the site.

 He reviewed 2020-2021 Rainfall and Process Water Seepage Collection Totals and stated the current status of the Piney Point site (as of 1/31/21), includes 748,180,000 gallons of processed water ponded onsite, 4.4 percent capacity remains within process water cells, 10.70 inches of remaining rainfall capacity, 52,560,000 gallons of process water seepage collection annually (average), and 55,600,000 gallons of process water treated onsite annually by enhanced spray evaporation. The Arcadis Report (2016) evaluated eight water treatment and management scenarios and identified pros/cons and assumptions with each water management option.

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 Mr. Barath addressed the four alternative solutions in the Arcadis Report (2016) and the details of each alternative. Based on water volumes, action is needed as soon as possible and all stakeholders must work together quickly to address challenges. Since 2011, HRK has managed the site in an environmentally responsible manner, but assistance from local and State agencies is needed to maintain this level of stewardship (the Arcadis Report views the Underground Injection Control Well [UIC] as the highest evaluated and lowest cost option available.)

 Mike Mies, Nclear Chief Executive Officer, reviewed slides outlining a solution for Piney Point and what can be done with the existing water on the site. He introduced Nclear's TPX patented synthetic mineral removal technology, in which Phosphorus can be recovered and recycled. He reviewed a comparison of the alternative solutions in the Arcadis Report (Enhanced Spray Evaporation, Underground Injection Control Well [UIC], and Lime Treatment) and Nclear's TPX and ElectrX technology solution, which allows for the recycling of approximately 1.4 million pounds of phosphorus rather than land disposal, and allows for the conversion of ammonia to nitrogen gas, saving approximately 1.5 million pounds of ammonia from being released into the atmosphere and redeposited. He spoke about a similar project for the Georgia Environmental Protection Division (GEPD) and outlined the treatment solutions with estimated costs. Nclear's mission is to restore nature's equilibrium to the world's water bodies, with a vision to establish Nclear as the world's leading nutrient removal company.

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(Depart/Enter Chairman Baugh)

 Mr. Mies addressed the Nitrogen Issue, the Tampa Bay Nitrogen Management Consortium (TBNMC), and total discharges into Tampa Bay. The TBNMC indicated that Chlorophyll-A levels are well below threshold levels in Lower Tampa Bay, Middle Tampa Bay and Hillsborough Bay.

 C. Shawn Luton, Nclear, showed a brief video tour of Nclear's newly constructed

wastewater treatment plant in Jackson County, Georgia, <https://youtu.be/U6gf7rV8J1A>. Nclear recently constructed a plant nearly identical to what would be constructed at Piney Point. After evaluating numerous potential solutions, the GEPD selected Nclear to provide a turnkey treatment system using Nclear's TPX and ElectrX technologies. He used a slide presentation explaining the Agri-Cycle Full Scale System Process Flow Diagram and Agri-Cycle Pond 5 Treatment Result. He encouraged Commissioners, staff, and HRK to come tour the site.

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 As to the estimated costs of the clean water solution to treat both the NGS-S and NGS-N ponds in their entirety and all costs of the water treatment (chemicals, power, supplies, labor), Mr. Mies referred to the slide of estimated costs and emphasized these were budgetary estimates only, based on the 2017 data. The proposal covers the treatment of both the north and south ponds in their entirety, but does not include: ongoing seepage, the LPWS pond, possible remediation of the site and closure of the gypsum stacks once the water is treated, the costs for potential nitrogen credits to the extent that they have to be negotiated with the Consortium, any external lab testing or compliance reporting, permitting or licensing which was not required in the Georgia project, and the costs to treat HRK stormwater if necessary. Again, he emphasized these costs were budgetary estimates based on 2017 data.

 Mr. Mies stated that significant water testing would be necessary in order for Nclear to update 2017 data. Nclear is prepared to re-deploy their pilot system and staff to conduct testing on all of the pond sources, and evaluate the existing water chemistry to see what has changed in terms of dosage and potential dilution/concentration. Primary model assumptions went into this cost estimate to treat the New Gypsum Stack North (NGS-N) and New Gypsum Stack South (NGS-S) ponds, exclusive of the LPWS, assuming that the Nclear system used in Georgia can be re-deployed, treatment volume would be 400,000 gallons/per day, in addition to the Publicly Owned Treatment Works (POTW) discharge of 50,000 gallons/day. This is a scenario of removing 450,000 gallons of water from the site, which is an estimated five-year project. This information is based on achieving the discharge limits that were achieved during the pilot system. The total volume of water to be treated is based on data from Mr. Barath, for an estimated 728 million gallons. This assumes a start-up arbitrarily for January 1, 2022; it would be a 24/7 plan operation, similar to Mr. Barath's operation, and it is assumed that the silos disposal would be done through Mosaic.

 He further stated the estimated costs were previously presented to the Board years ago, were based on Nclear being a supplier to HRK, providing the technology, and system design and technical support, with HRK being the site manager, and building and operating the site. He outlined two operating scenarios (Scenario A - HRK Operated, and Scenario B - Nclear Turnkey, where Nclear supplies all infrastructure, equipment, labor/personnel and power and charges a cost per 1,000 gallons of treatment - it is a pay-for-performance proposal). He displayed a slide in Nclear's presentation (Slide 29) of a breakdown of the estimated costs for Scenarios A and B, with initial cost, all costs on a turnkey basis, billed at \$17.00 per 1,000 gallons, and total project costs for both HRK operated and Nclear Turnkey scenarios.

 Commissioner Whitmore stated Nclear came before the Board in 2017, the County would be contributing \$6 million; she objected to discharging 1,000 gallons/day into the Bay, this plan only includes two ponds, bi-products still need to be treated, and where is the State in leading this remediation. She does not support any discharge of processed water that flows into Bishop Harbor.

 Commissioner Servia questioned Mr. Mies if this technology has been used on this scale of a project, has Nclear ever done a similar project in Florida; questioned Mr. Barath on the

March 1 discharge commencement and if algae bloom in Bishop Harbor should be expected, whether the flow of water from the wells has been monitored, what are the problems associated with deep well injection, how safe are the deep wells, and what option best serves the community.

 Commissioner Van Ostenbridge indicated no desire to proceed with the deep well injection process due to the risk of destroying the County's wastewater treatment system. It is unclear what is going to be done with the bi-products and how this would be handled.

 Chairman Baugh stated the next step is to close the stacks.

 Commissioner Bellamy stated that input from the State is necessary, the clear advantages and disadvantages must be presented as we move forward. He stated he was copied in a letter from Representative Will Robinson, who indicated that DEP is aware of this meeting today and is waiting to hear from the Board on moving forward. DEP would proceed with whatever the Board decides. Representative Robinson indicated in the letter that he was opposed to the deep well injection process.

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 Commissioner Kruse opposed the deep well injection process, there are other options, and there is no guarantee this water will not get into the aquifers. He hoped the Board would consider Nclear's water cleaning process, or a similar alternative.

 Chairman Baugh stated that Piney Point is the top priority this year and spoke in favor of Nclear's water cleaning process rather than taking the chance of placing contaminated water near the aquifer.

 Mr. Mies commented on the advantage of deep well injection and that the water can be disposed of in a few years. Nclear's proposal is that Manatee County does not pay unless the water is discharged according to the DEP permit.

 Tim Richey, Charlotte County resident and Founder/President of March Against Mosaic, questioned if any County Commissioners had ever flown over the Piney Point site. He stated that Governor DeSantis and Representative Steube should have attended this meeting.

 Douglas Bly spoke of his involvement with the installation of wells in Indiana. This is the cheapest way to rid the property of the waste water.

 David Woodhouse summarized and submitted his comments.

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 Sharon Friedman voiced concern with the Board proceeding with deep well injection and the effects to drinking water.

 Glen Gibellina strongly opposed deep well injection and stated the Board must not jeopardize the County's drinking water.

 Andra Griffin commented on the presentation by Nclear and spoke in support of their clean water, onsite process.

 Walter Wulczak stated Nclear did not respond to the question of whether they have worked on a project the magnitude of Piney Point.

 There being no further comments, Chairman Baugh closed public comment.

 Chairman Baugh stated this would come back on a regular agenda, as well as hearing from the State. The Board needs to decide if they are moving forward on deep well injection, or a clean water onsite process. Those are the two options. The next step would be to go to RFP; the Board must let the State know their preference to treat the water. The \$6.9 million does not include the closing of the gypsum stacks and the Board must move forward.

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**ADJOURN**

There being no further business, Chairman Baugh adjourned the work session at 3:08 p.m.

Minutes Approved: February 23, 2021