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ROBERT M. C. ROSE, (1924-2006)

October 31, 2011

Ann Cole, Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

Re:

FREDERICK L. ASCHAUER, JR.

CHRIS H. BENTLEY, P.A.

F. MARSHALL DETERDING

MARTIN S. FRIEDMAN, P.A.

ROBERT C. BRANNAN

JOHN J. FUMERO, P.A.

BRIDGET M. GRIMSLEY JOHN R. JENKINS, P.A.

KYLE L. KEMPER

Mad Hatter Utility, Inc; 2011 General Rate Increase Application

PSC Docket No. 100337-WS

Our File No. 28023.18

Dear Ms. Cole:

On October 26, 2011, Mad Hatter Utility, Inc. filed an Amended Application for Increase in Rates. In that filing, the supplemental Engineering Report was attached as Exhibit "A." However, the original Engineering Report was inadvertently omitted from that filing. Both reports should together be included as Exhibit "A." Therefore, attached are 16 copies of the complete Exhibit "A" which should replace the exhibit provided on October 26, 2011.

If you or members of the staff have any questions in this regard, please do not hesitate to contact me.

Sincerely,

ROSE, SUNDSTROM & BENTLEY

F. Marshall Deterding

For The Firm

07987 00131 =

# ENGINEERING REPORT

EXHIBIT "A"

1 DOCUMENT NUMBER-DATE

07987 OCT 31 =

FPSC-COMMISSION CLERK

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Engineer's Narrative

Master WTP Looping and Systems Distribution Project

As the professional Engineer of record on many of the subject systems, general familiarity with same and close association with their owner(s) for over thirty-five (35) years I offer this report.

The inception of the utility provider originated in 1975 with the construction of the first water treatment plant (WTP). It has grown over the years to ten (10) WTP's with well sizes varying from four (4) inch to twelve (12) inch diameter utilizing PVC well casings assuring water quality management. Sample photos of existing system(s) are attached; see exhibit(s) "A" – "D".

It has historically been the goal of the owners/managers to furnish and maintain high integrity, reliable water service. Integrity of service during periods of severe stress (tropical storms, hurricanes, equipment malfunctions, etc) has been a major concern to be addressed with the inter-connection of six (6) of the seven (7) subject systems water treatment plants presently being evaluated. These include Linda Lakes WTP, Foxwood WTP, Turtle Lakes WTP, P.L. WTP, Cypress Cove WTP, Carpenters Run WTP, and Linda Lake Groves WTP.

Based upon my experience as a professional Engineer and review of the system, I believe that interconnection of the seven (7) subject systems and ten (10) WTPs is an appropriate and necessary change to the system, primarily to meet the needs of all of the Utility's existing customers on a day-to-day basis, but also in cases of tropical storms, hurricanes and equipment malfunctions. In addition, these changes allow the Utility to increase the reliability of services and efficient use of its water allocation in light of several factors. These factors include:

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- The need to ensure safe and reliable service for all systems operated by Mad Hatter Utility, Inc. by providing several different sources of treated water at any given time, in order to meet peaking needs.
- In light of the recently approved Water Use Permit, which provides no additional capacity to the Utility, to meet peaking needs or temporary outages in any one system.
- 3) The interconnection will increase the efficient use of the Utility's water capacity by substantially reducing or eliminating the necessity to flush its water lines.
- 4) To improve the Utility's ability to comply with DEP chlorine residual requirements.
- 5) This interconnection is also necessary and appropriate from an engineering and Utility operational standpoint in order to meet future needs within the system, while remaining within compliance of all regulatory requirements during peaks.

Please review the attached "Systems Interconnect Plan" (Exhibit "E") showing the service area locations with proposed improvements to PWS #'s; <u>651-4894</u>, <u>651-2064</u>, <u>651-0620</u>, <u>651-1076</u> & 651-4545 delineated.

This project and capital improvement focuses on retained and improved water service for all systems. Our goal is redundancy for reliability assuring uninterrupted potable water service to the most distant corner of the systems water plant location grid. These proposed improvements will reduce or eliminate the potential need to issue a Precautionary Boil Water Notice (PBWN) as adopted in F.D.E.P. rule #62-555.335 F.A.C. (Exhibit "F" 1 - 4).

Current engineering evaluation estimates \$375,000.00 for integrating a Supervisory Control and Data Acquisition (SCADA) system. Additional consideration is given towards the implementation of "stand by" generators and emergency power transfers for storm events to benefit the public health and safety. This will include the utilization of two (2) portable diesel generators capable of operating any of the current water systems. An additional three (3) small diesel generators will be utilized for the sewage treatment facilities in the event of disruption from the public utility power system(s).

It should be noted that electrical service to the subject systems is drawn from three (3) major transmission sources owned and maintained by two (2) independent sources (Tampa Electric

• Page 3

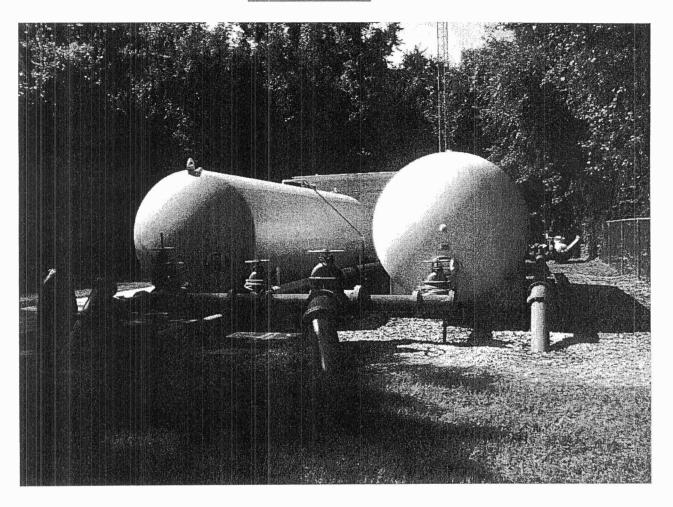
Company & Progress Energy) reducing the likelihood of a simultaneous power loss to all systems.

This capital improvement project will assure the uninterrupted service desired. The general proposed improvements, as is noted on the accompanying plan, include 139,000 feet of interconnecting water line piping (DR18 PVC pipe with C-900 resin) consisting of 87,000 feet  $\pm$  of 12", 52,000 feet  $\pm$  of 8" and all appurtances at an estimated construction cost of \$10,500,000.00. Sections of High Density Polyethylene (HDPE) and Ductile Iron pipe shall be utilized at strategic intersections and areas requiring "Jack and Bore" installations. Valves shall be installed at all key intersections for flow rerouting and isolation of sections as required for maintenance and testing. Fire hydrants (8" & 6" barrels) shall be installed offering fire protection along the route of the interconnecting water lines. All construction is proposed for public rights-of-way, the least costly and most suitable routing.

Based upon all of the above, I believe that the project being undertaken by Mad Hatter Utility, Inc. is necessary from a sound engineering and utility management standpoint, in order to provide reliable service to all of the current customers of the Utility, to ensure that the Utility is able to meet the needs of those customers in the event of outages, disasters, and occasional equipment malfunctions. Moreover, the project will result in substantial reductions in "wasted water." Therefore, these system changes and the capital improvement program being undertaken by the Utility while not required by any specific regulatory requirement, is highly recommended by me in order to modernize the system and ensure that safe, reliable service is provided at all times to the existing customer base.

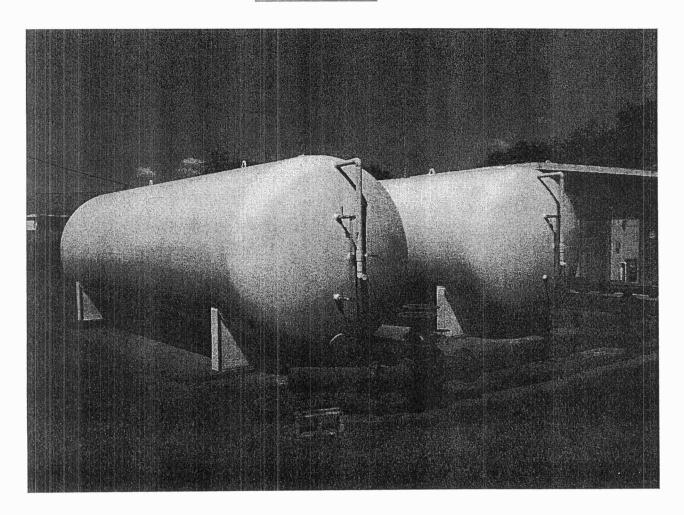
Larry D. Housel, P.E. Project Engineer

# EXHIBIT "A"



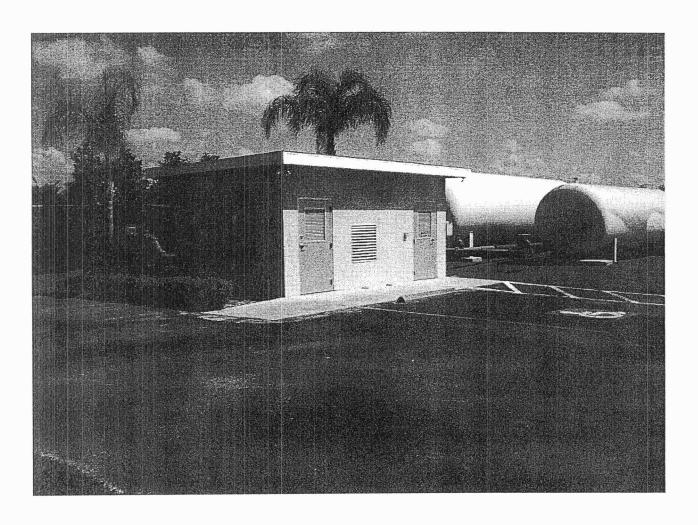
M.H.U. CYPRESS COVE II WTP – WESTERN SYSTEM

# EXHIBIT "B"



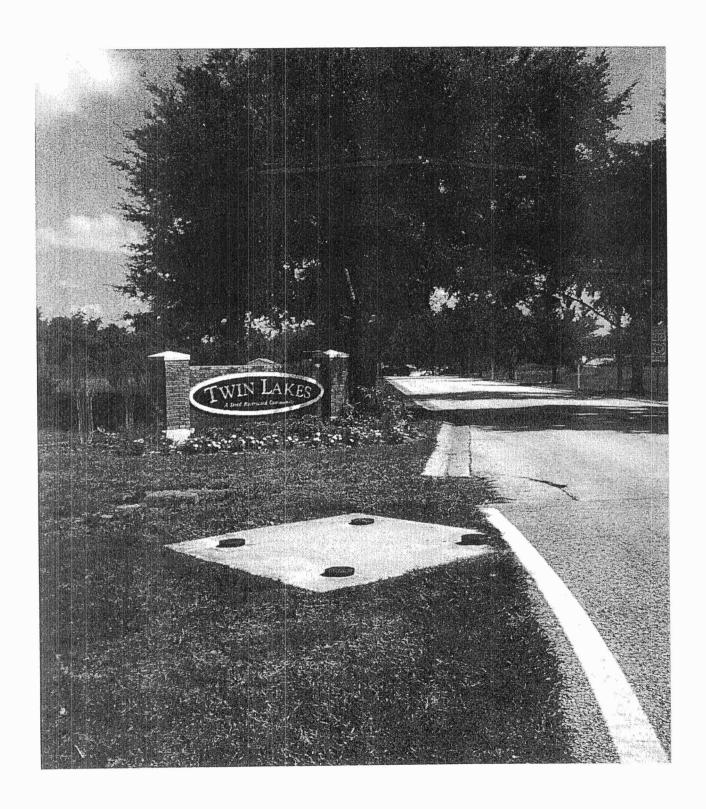
M.H.U. CARPENTERS RUN WTP – EASTERN SYSTEM

# EXHIBIT "C"

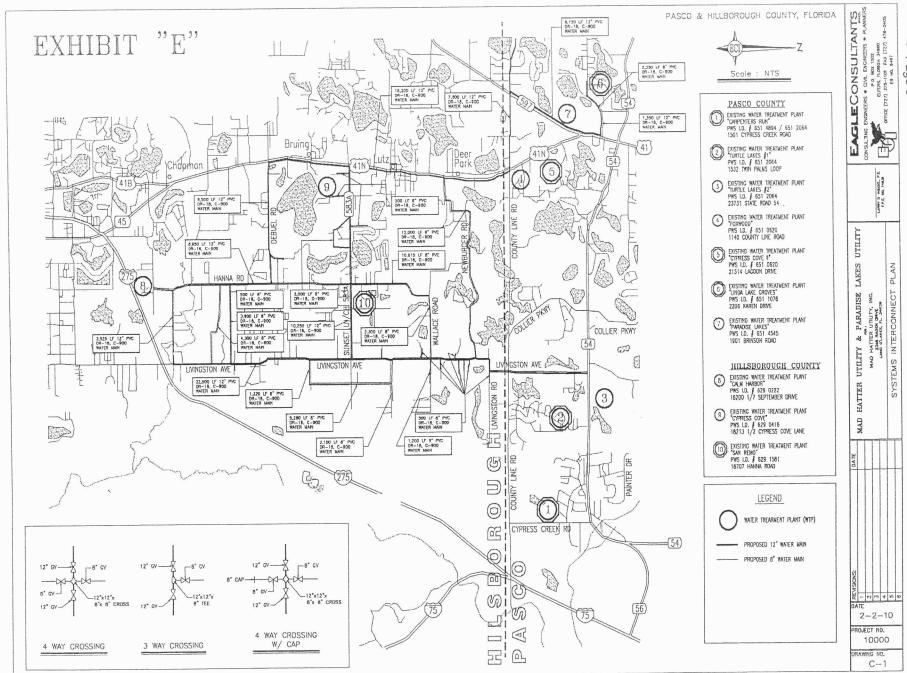


M.H.U. S.R.-54 WTP

# EXHIBIT "D"



TYPICAL EXISTING VALVE CLUSTER



### EXHIBIT "F" (1of 4)



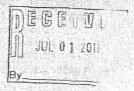
# Department of Environmental Protection



Herschel T. Vinyard Jr Secretary Bob Martinez Center 2600 Blair Stone Road Tallahassee, Florida 32399-2400 H. Frank Farmer, Jr., M.D., Ph.D Surgeon General

June 30, 2011

LARRY DELUCENAY PARADISE LAKES UTILITY LLC 2348 RADEN DR LAND O LAKES, FL 33639



Subject:

Issuance of Precautionary Boil Water Notices during Hurricanes, Tropical Storms, or Other Unforeseen Emergencies for Community Water Systems - Annual Alert Notice CYPRESS COVE SUBDIVISION PWS ID 6290416

Dear Water System Owner/Manager:

Following the hurricanes of 2004 and 2005, the Florida Departments of Environmental Protection (DEP) and Health (DOH) established guidelines for the issuance of precautionary boil water notices in the event of specific emergencies. The widespread hurricane power outages during that time period revealed that protocols for implementing these guidelines need to be clarified for public water systems (PWS) to enhance communication and coordination between the impacted water system, your customers, the county health department, and the DEP District Office. Effective communication between entities and consistency of application for these guidelines is critical for public health protection during emergencies.

When an emergency event occurs that warrants a precautionary boil water notice (PBWN), it is vital that the public water system first notifies its water regulatory agency (DEP District Office or Approved County Health Department) about the situation as is required under Rules 62-555.350(10)(b) and 62-560.410(1)(a)1 and (9), Florida Administrative Code (FAC). When the water system is regulated by DEP, then we request that you also notify the county health department (CHD) about an event requiring a PBWN. By rule, it is the water utility's responsibility to provide public notification to its affected consumers; however the Approved CHD and DEP must be consulted and they will initiate customer notification (a PBWN) if the PWS cannot or will not do so. The non-jurisdictional CHDs are also authorized by law to issue PBWNs on behalf of the PWS. Following the issuance of a PBWN, communication and coordination must continue.

In the event that you have a power outage or system malfunction that result in zero pressure in portions or your whole distribution network, you need to:

 Call, and e-mail or FAX the PBWN to your DEP District Office, or Approved County Health Department

Hillsborough County Health Department • Environmental Health Services
P. O. Box 5135, 1105 E. Kennedy Boulevard, Room 251• Tampa, FL 33675-5135
Tel. (813)307-8059 • Fax: 272-7242 www.hillscountyhealth.org/env\_health/water.htm

# EXHIBIT "F" (2of 4)

### Page 2

- Call, and e-mail or FAX the PBWN to Hillsborough County Health Department at (813)307-8059, Fax (813) 272-7242 and your county emergency operations center (EOC) at (813)272-6900, FAX (813)272-6878 <a href="http://www.floridadisaster.org/County\_EM/county\_list.htm">http://www.floridadisaster.org/County\_EM/county\_list.htm</a> (If phones are down, hand deliver the PBWN to the EOC)
- · E-mail or FAX the PBWN to the media serving the affected area
- If it is a localized event, such as a water main break, directly notify individual residences and establishments within affected area via door-hangers or other means as appropriate
- Update DEP's "Storm Tracker" at <a href="http://stormtracker.dep.state.fi.us/">http://stormtracker.dep.state.fi.us/</a> to include the date the PBWN was issued and specific area affected

Facilities Access (Facilities search and enter information for their facility only)

Username: florida Password: storm

- A public water system that exceeds maximum contaminant levels for E. Coli, fecal coliform or turbidity must also provide notification to the public as required in Chapter 62-560.410 (1).
   FAC
- The PBWN must state the name of the PWS, the area affected, the time and date of issuance, what happened, potential adverse health effects, corrective measures you are taking, what the public should do, your-contact number, and other information required in Rule 62-560.410(5), FAC
- Undertake needed corrective actions to the water system, restore pressure and maintain disinfectant residual, perform flushing as needed, and test for coliform bacteria as prescribed by the agency overseeing your system
- After lab results prove satisfactory, send a copy of the lab results to the applicable regulatory
  agency, obtain their approval, and rescind the PBWN if you issued it; and DEP or the CHD will
  rescind if they issued it

When corrective actions are completed, a predetermined number of representative water samples must be collected and tested to validate the microbiological safety of drinking water provided to consumers. The required number of water samples depends upon the population affected and the nature of the incident. For a system-wide outage resulting from power loss, multiple pipe ruptures, or major drop in water pressure in the distribution system, the utility is responsible to collect the same number of representative water samples according to its approved, written microbiological sampling plan. For a community system, this is your monthly compliance set of bacteriological samples. However, if only an isolated smaller portion of your system is under the PBWN, the number of required clearance coliform samples shall be set at one (1) per 1,000 people affected similar to the Rule 62-550.518, FAC, table, starting with a minimum of two samples. While the PBWN Guidelines require at least one day of satisfactory samples before rescinding (lifting) the notice. If you have water main breaks, two consecutive days of satisfactory samples are required to be satisfactory. It's therefore recommended that the PBWN not be rescinded until after two consecutive days of satisfactory samples.

Note that a simple water main break or other localized event would require representative water samples within that defined area in accordance with Rule 62-555.340, FAC. Analytical laboratory results for the samples must be provided to the regulatory agency or CHD prior to rescinding the boil water notice. We encourage you to request your lab to send those results directly to the regulatory office. Whichever entity (PWS, DEP, or CHD) issues the PBWN, must also properly rescind it.

We have attached a fact sheet template and encourage you to use this to alert your customers in ad-

# EXHIBIT "F" (3of 4)

### Page 3

vance of actions they should take when a PBWN is issued, and what to expect for the several days it will take to rescind (lift) it. Feel free to modify it with local information that you deem important. We believe that sending this type of information out as a bill stuffer, public service announcement (PSA), or flyer before the next hurricane would help your customers better prepare and stay healthy should they not be able to receive media announcements immediately after a storm.

If you have any questions regarding the information in this letter, please contact either your DEP District Office drinking water program staff or Approved County Health Department drinking water section. The rule referenced Precautionary Boil Water Notice Guidance with examples is online at: <a href="http://www.mvfloridaeh.com/water/manual/boilnew.htm">http://www.mvfloridaeh.com/water/manual/boilnew.htm</a>

Sincerely.

Therese J. LaDouceur

Therese J. LaDouceur
Environmental Supervisor II
Safe Drinking Water Program

Ce: PARADISE LAKES UTILITY LLC
Enclosures: Customer PBWN Fact Sheet Template-What Should You Do?

### EXHIBIT "F" (4of 4)

Page 4

DEP or ACHD emergency phone number and FAX number;
Non-jurisdictional CHD emergency phone number and FAX number;
Precautionary Boil Water Notice- What Should You Do?
Public Water System Name Telephone/ Contact Number;

If during a hurricane, tropical storm or unforeseen emergency, our water system loses power and water pressure, by law, we will issue a precautionary boil water notice to our customers. For source PWSs selling to consecutive systems, add the following: Our water is bought and used by the following water suppliers and so a boil water notice would also apply to Purchase/Consecutive PWS names

Water pressure keeps pollutants from entering the underground pipes that bring drinking water to your house or business. When the pressure is lost, contaminants can seep into the pipes. This might allow pathogens (disease-causing germs) into the water that can cause illness if one drinks it or prepares food or beverages with it. Therefore, as a precaution, it is important to disinfect tap water to kill any bacteria or viruses that may have entered the water, or use an alternative source of water (bottled water). If tests show actual contamination with bacteria, these same steps will make your water safe to drink.

Under a precautionary boil water notice (PBWN), water used for consumption can be disinfected by any one of the following methods:

- Bringing the water to a rolling boil and holding it there for one (1) minute
- Using a disinfecting chemical. If you cannot bott water, you should put eight (8) drops of common bousehold bleach (unscented) which is about 1/8<sup>th</sup> teaspoon, into one (1) gallon of tap water, then shake it, and allow it to stand for 30 minutes before drinking. If the water is cloudy, use sixteen (16) drops, about 1/4 teaspoon of bleach instead of 8 drops, shake it, and let it stand for 30 minutes. There should be a slight chlorine odor. Use common household bleach that has 5 to 6% active ingredients. Use food grade containers.
- · Using water purification tablets, or iodine that many sports and camping stores sell

You can also buy commercial bottled water for consumption and food preparation as an alternative, and use tap water you have safely stored before the emergency in clean sanitary food grade containers.

Consumption includes brushing teeth, washing fruits and vegetables, and homemade ice. Tap water may be used for showering, baths, shaving and washing, so long as care is taken not to swallow or allow water in eyes or nose or mouth. Children and disabled individuals should have their bath supervised to ensure water is not ingested. The time spent bathing should be minimized. Though the risk of illness is minimal, individuals who have recent surgical wounds, are immunosuppressed, or have a chronic illness may want to consider using bottled or boiled water for cleansing until the notice is lifted.

Businesses and non-residential sites should take steps such as posting notices at, or disabling water fountains and ice machines during the PBWN. If you provide water to visitors or employees, use commercially produced bottled water for drinking or beverage preparation (coffee). Food service operations have additional requirements from their regulatory agency.

After the water system is repaired, and the pressure is restored in the pipes to your home or business, the precautionary boil water notice will remain in effect for one to several days while bacteria tests are conducted to assure the safety of the water. The notice will be lifted (rescinded) only after tests prove the water is safe to drink. It may be lifted in sections of the city/county as those areas' pipes are cleared and the water deemed safe to drink. The media will be provided information updates and you should listen for this important information on the radio and/or from the television. Flush your taps and dispose of ice made during the PBWN.

The employees of <u>Public Water System Name</u>, your public water system, take great care in assuring that your water is safe to drink, and we appreciate your cooperation with the precautionary boil water notice to protect public health during this difficult time. Please call us at the phone number above if you have questions or concerns. The County Health Department can assist you with answers to questions.

County Health Department-Telephone Contact Number:

P.O. Box 1502 Elfers, Florida 34680 Tel: (727) 375-1101 Fax: (727) 478-0405

info@eagleconsultants.org

Consulting Engineers • Civil Engineers • Land Planners

# Engineer's Narrative For The Mad Hatter Utility WWTP and Collection Systems

As the professional Engineer of record on many of the subject systems, general familiarity with same and close association with their owner(s) for over thirty-five (35) years I offer my recommendation in this Engineering report.

The inception of the utility provider originated in 1975 shortly after the construction of the first waste water treatment plant (WWTP). It has grown over the years to five (5) systems (Linda Lakes, Foxwood, Carpenters Run, Twin Lakes and Turtle Lakes Subdivisions). See Exhibit "A" for the System(s) Location Map.

It has historically been the goal of the owners/managers to furnish and maintain high integrity, reliable waste water service. Integrity of service during periods of severe stress (tropical storms, hurricanes, equipment malfunctions, etc) has been a major concern with the proposed provision of additional portable generators, portable generator receptacles and adequate alarms connected via radio/telephone to Mad Hatter's central office and staff cell phones.

I concur with the Pirnie Engineering "Systems Inspection Report" that all Mad Hatter systems have been and are being properly maintained, functioning well and conform to the requirements of all agencies with jurisdiction. With twenty-two (22) existing lift stations /wet wells and fourteen (14) have experienced years of deleterious effects of hydrogen sulfide gas and now require "epoxy lining" to prevent structural failure. The older lift stations when new did not have the option of maintenance efficient "rail systems". The rails provide ease (and safety) of access and ease of pump removal for maintenance and/or replacement. These items should be addressed to further assure system longevity.

Regarding the replacement of the Linda Lakes WWTP (the oldest of the Mad Hatter systems) as detailed and recommended in the Pirnie Engineering Report, as the original engineer of record, I suggest that the plants operation be replaced with an existing Lift Station upgrade and four (4) inch PVC force main and the waste water pumped directly into the Pasco County's nearby system forcemain. The Pirnie report in my opinion is not the best and most cost effective long range solution. Also, rather than replace the collection system piping, again listed as recommended in that Pirnie report, my review/recommendation and opinion is it would be most prudent and cost effective to retain the existing collection piping and rehabilitate it by utilizing an epoxy pipe lining (slip lining) process offering years of extended service life.

It should be noted historically Mad Hatter has operated with a minimal staff and equipment. A substantial, productive effort is expended by the owners who, as with the utility systems, are aging. Their years of "hands on" involvement in maintenance and activities reduces administrative time, thus my recommendations in staffing increase has been made.

In summary my following recommendations and requirements:

- Approximately 3,100 linear feet of the Linda Lakes sanitary sewer pipe should be epoxy relined (slip lined) to alleviate infiltration/exfiltration and assure the systems integrity and longevity. Slip lining with epoxy sock linen is recommended.
  (Estimated cost = \$398,000.00)
- Rehabilitate fourteen (14) of the twenty-two (22) lift stations including cleaning, blasting and epoxy coating, installation of guide rail systems, etc.
   (Estimated cost = \$1,011,400.00)
- Replace the Linda Lakes WWTP with a lift station and construct 1,250 linear feet of 4" diameter PVC force main, including three (3) directional bore road crossings, and pump direct to the existing Pasco County system.
   (Estimated cost = \$124,700.00)
- The recommendations for increased staffing and outlined added equipment/vehicles is required to assure a well run system meeting regulatory and customer service needs. Mad Hatter should be further staffed as recommended in its current rate application and efficiently equipped to current standards comparable to public sector waste water departments.

(Estimated cost = \$354,000.00)

I offer this as my professional opinion and recommendation for prudent project costs/system staffing expenditures, for addressing the best system upgrade, additional staffing, vehicle and equipment, as a minimum.

Larry D. Housel, P.E. Project Engineer

# EXHIBIT "A"

