

Georgia Chapter of APPA Leadership in Educational Facilities

GAPPA News

July 2013

ceading Through; Education, Innovation, Dedication

Jekyll Island 2013! The convention center successfully hosted GAPPA 2013 Conference. The weather was so great and each member enjoyed being part of the conference on the beach.

We had 100 booths, 38 sponsors and plenty of attendees. There were 140 golf participants, 49 golf sponsors and 3 tennis participants. We had 19 guests visiting GAPPA from other regions. Twenty seven members were approved for the \$800 stipends to attend the conference. The musical group Grape Vine entertained the crowd at the Tuesday banquet.

See photos from the convention, by going

GAPPA web site. Select Annual meeting: www.gaapa.org



Check online for previous copies of "GAPPA News", newsletter or photos

10th Street Chilled Water Plant Expansion Georgia Institute of Technology & RMF Engineering

The 10th Street Plant provides district chilled water production and distribution for critical research, academic, and residential buildings at Georgia Tech. The plant has six chillers, including one redundant chiller, and has a firm capacity of 9,250 tons. Additional production capacity is needed to serve the new Engineered Bioscience Building (EBB-1). In addition to capacity, Georgia Tech wants to increase the sustainability of the plant by improving energy efficiency and reducing water and chemical usage.

This project involves the addition of 3,000 tons of cooling capacity to the 10th Street chiller plant. The new chiller will include a variable speed drive, and will become the most efficient and lead generation machine. The new cooling tower will be a 3,000 ton field erected unit, with CCS as the design basis. A free cooling heat exchanger will also be added to the plant as an energy conservation measure. Additionally, a condenser water treatment strategy that will reduce plant water, sewer, and chemical use will be implemented.

The chiller will generate 3,000 tons of cooling at 52F-40F evaporator conditions, and 85F-99.5F condenser conditions utilizing a single primary compressor with variable speed control and refrigerant R-134A. Condenser water flow rate and temperature ranges were analyzed, and it was determined that a condenser water flow rate of 2gpm/ton would provide the lowest first cost and best long term energy savings. Zero blowdown condenser water treatment and RO filtration systems were analyzed to help with water conservation.

The new chilled water pump, condensate pumps, and cooling tower fan will be powered from stand-alone VFDs. The controls for the secondary pump operation were reviewed and optimized for the best efficiency. The existing ABB control system will be expanded to allow for control of the new equipment.

Casey Charepoo

Associate Director-Utilities Maintenance





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New Lighting Technology Will Help Georgia Tech Save \$10,400/year

Georgia Institute of Technology's Facilities Management, Energy Conservation team is always on the lookout for new ways to save energy and money. This time, the Energy Conservation team has found savings in a new type of light bulb, extended life fluorescent lamps. Compared to the fluorescent lamps that the Facilities Management department previously stocked, the new extended life fluorescent lamps consume 12.5% less energy and will last more than twice as long.

Facilities Management has recently made the decision to switch from 32 watt, 4 ft, T8 linear fluorescent lamps to 28 watt, long life equivalent fluorescent lamps. The Georgia Tech storeroom will now stock the new technology and will slowly phase out the older lamps on campus as they need replacing. Over the past three years, GT has replaced roughly 28,500 T8 fluorescent lamps.

Even though the new T8 lamps cost \$4.32 more per lamp, the decreased energy consumption and longer rated life of the new lamps will save Georgia Tech an estimated \$10,400 and 146 megawatt hours per year. The new extended life lamps have the same light output as the older versions and will stay brighter over time. The new T8s are filled with a different gas than the conventional models and are only recommended in areas that stay at 60°F and above.

By: Jennifer Krajewski Energy Conservation & Management Coordinator Georgia Institute of Technology

Benning Construction completes new classrooms and offices at Southern Poly

Benning Construction Company (BCC) has completed extensive renovations at Southern Polytechnic State University.

The project was a complete overhaul of Building 1, which included demolishing the main level. BCC built new classrooms, restrooms, a wood shop, administration offices, jury rooms and paint booths.

Southern Polytechnic State University is located on 203 acres of wooded landscape in Marietta, and serves approximately 5,500 students representing 36 states and 64 countries.

Benning Construction Company is a regional general contractor founded in 1953, and is celebrating its 60th year in business in 2013. BCC specializes in educational and government facilities, grocery anchored retail centers, multi-screen theatres,



community centers and warehouse and self-storage facilities throuout the

Southeast.

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Investors break ground on Westin Hotel

The Jekyll Island Authority is pleased to announce that Jekyll Oceanfront Hotel, LLC (JOFH), (a joint venture comprised of Leon N. Weiner & Associates, Inc. ("LNWA"), a nationally recognized real estate development company, New Castle Hotels & Resorts ("NCHR"), an award winning, independent third-party hotel manager, owner and developer and other investors) today broke ground on the \$41 million Westin Jekyll Island, a 200room, convention-class, beachfront hotel that will open in September 2014 as part of the Jekyll Island Beach Village project. The ceremonies were held at the construction site, 110 Ocean Way, adjacent to the new Jekyll Island Convention Center.

"Around the world, the Westin brand is a standard and solid anchor in destinations with a vibrant convention business. We expect The Westin Jekyll Island to be the catalyst that enables Jekyll Island revitalization to achieve its full potential," said C. Jones Hooks, executive director of the Jekyll Island Authority. "Westin Hotels & Resorts also are marketed as havens of wellness and rejuvenation, which is a perfect fit for Jekyll Island's brand of relaxation and renewal."

Construction of The Westin Jekyll Island will generate a one-time economic benefit estimated at \$47 million for the State of Georgia, with \$37 million of that benefit going to the local Glynn County economy. Construction activity will create 365 jobs. Ongoing operations of the new hotel will generate \$40 million

annually to the state, with \$33 million annually accruing to Glynn County. And approximately 384 permanent direct, indirect and induced jobs will be created. The project is only the second fullservice hotel to break ground in Georgia since the great recession.

With breathtaking ocean views and direct beach access, the 200room Westin Jekyll Island will feature 5,700 square feet of meeting and banquet facilities and a full suite of Westin's signature amenities and services. It will include a full-service restaurant and the brand's signature WestinWORKOUT® gym experience.

The Westin Jekyll Island is expected to open in September 2014 and be the perfect complement to the Jekyll Island Convention Center, which celebrates its one year anniversary today. Construction of the retail village is expected to begin in the next few months. A 135-room Hyatt Place hotel is also planned but not yet underway.

Learn about current plans for progress and stay up-to-date about our continued steps of revitalization, visit our website at <u>jekyllis-</u><u>land.com/progress</u>. Or even better, come on by and see for yourself. Your beautiful island escape awaits!

Courtesy: Jekyll Island Marketing | 100 James Rd. | Jekyll Island, GA 31527



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"Spelman Named a UNCF/Toyota Campus Sustainability Leader" Art Frazier Receives President's Sustainability Award

UNCF recently selected Spelman College as the UNCF/Toyota Campus Sustainability Leader for the 2012-2013 academic year during an Earth Day briefing ceremony in Washington, D.C. The event included representatives from Second Nature, Environmental Defense Fund and the U.S. Green Building Council, among others. UNCF recognized Spelman's Climate Action Plan, as well as its recent LEED Gold renovation and the College's commitment to carbon neutrality and fostering a culture of wellness. UNCF provided Spelman with a \$5,000 contribution to help explore the potential for establishing a special Green Revolving fund.

Art Frazier, director of Facilities and Management Services, recently received 'The Presidents' Sustainability Award during a UNCF Earth Day briefing ceremony in Washington, D.C. One individual from the campuses of Spelman, Morehouse College, Clark Atlanta University and Hampton University was nominated by his or her respective campus president for making outstanding contributions to sustainability, with each being awarded \$500. Nominated by Presi-

dent Tatum, Frazier will use the award to strengthen the College's sustainability initiatives.

Going for the Gold: ?

Spelman College Hosted LEED Certification Ceremony

On Thursday, April 25, Spelman College celebrated the LEED Gold certification of the newly renovated Laura Spelman Rockefeller Hall with a special ceremony in Laura Spelman Rockefeller Hall. The event featured remarks by President Beverly Daniel Tatum and Spelman trustee Gwendolyn Adams Norton. During the ceremony, Sustainable Spelman interns described the LEED features that helped fulfill Dr. Tatum's vision of "Going for the Gold." David Freedman with the U.S. Green Building Council, Georgia chapter, presented the LEED plaque to Dr. Tatum.

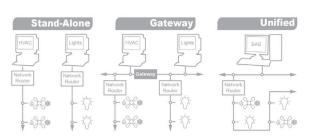


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Unified Lighting Control with BACnet

BACnet Before and After

Before BACnet and its global adoption, integrating lighting and HVAC controls within the Building Automation System (BAS) was expensive and uncertain. Because the risks and costs associated with pre-BACnet integration did not outweigh the benefits, most engineers and owners were forced to settle for standalone systems. The results of the past are clear; according to industry surveys less than 10 % of existing BAS include the control of lighting.



Today, with BACnet, consistently integrating lighting and HVAC together inside a BAS is easy. BACnet lighting control is native to the BAS, residing on the same BACnet MS/TP net-

work as the HVAC / DDC controllers. The result is Unified Lighting Control that delivers substantial infrastructure and maintenance savings, as well as better energy savings.

Better Energy Savings

U.S. Department of Energy data indicates that light and HVAC consume over 60% of the energy in commercial buildings. Both stand-alone and Unified Lighting Control can achieve basic energy savings and typically payback in less than 3 years. Unlike stand-alone, Unified Lighting Control can employ more advanced control sequences to achieve better savings, often accomplished through simple programming changes.

One example being employed is extending the use of occupancy sensors to automatically control lights and HVAC in unoccupied classrooms. For example; when an area goes unoccupied and the BAS is in occupied mode the lights automatically switch off and the temperature is changed to its reset value. Depending upon the application, additional energy saving measures can be taken by decreasing airflow or deciding to bring in less outside air.

Common classroom complaints with occupancy sensors can also be addressed by utilizing the BAS mode, occupied or unoccupied, to automatically adjust occupancy sensors time-out values. Increasing the value when the BAS is in occupied mode can reduce false-off complaints, while decreasing the value in the unoccupied mode can lower energy usage.

In addition, classrooms can employ a manual-on control strategy for lighting and HVAC to save energy between the occupied start time of the BAS, and the time when the room is actually occupied. Instead of the lights switching on at 6am when the BAS changes to occupied mode, activation of the override switch turns the lights on and initiates a temperature change from reset to set point.

The Bottom Line

Enabled by BACnet, Unified Lighting Control provides better energy savings and it eliminates the complexities and limitations that accompany stand-alone or gateway lighting control. Compared to the choices of the past Unified Lighting Control is a no-brainer. By : Ron Poskevich

By : Ron Poskevich Blue Ridge Technologies

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M2G and University of Georgia

Greffen Technology

The M2G is an advanced intelligent boiler control that optimizes the operation of a boiler. An M2G unit monitors the temperature of the water flowing in and out of the boiler at least every 10 seconds and the information is recorded. The M2G also monitors additional boiler operating data, including heat transfer rates during firing and interval periods when the burner is off.

When a demand on the boiler is made, the M2G microprocessor checks the latest data it has stored and decides whether to allow the control signal to fire the boiler or open a relay which blocks the boiler from firing. Energy

savings is only one of the criteria used in the M2G decision making process: (1) building comfort level and (2) protection of the boiler from stresses induced by thermal shock are the other key criteria that are used by the M2G. Also, the M2G preserves the existing system's control over the boiler system. The M2G's built-in intelligence adjusts to changing conditions and operational settings without any requirement for operator adjustment or



intervention. From an operator viewpoint all existing controls and procedures remain fully functional. The result is energy savings while ensuring maximum capacity during heavy load periods; this is accomplished with no impact on building comfort levels. Viewed from a perspective of waste heat, the M2G minimizes the waste heat going up the boiler flue while preserving the transfer of beneficial heat into the building.

Pilot Installation and Methodology

An M2G was installed on each of the boilers that provide space heating for the Center for Applied Genetic Technologies. The boilers were two Weil McLain boilers with an input of 2,713,000 BTU/hr each. The M2G was installed immediately adjacent to the boiler's primary fire control device. The M2G installation was accomplished without impacting existing controls.

In addition to the M2G, a timer was installed on each of the boilers which allowed the M2G to operate in either of two modes. In the "save" mode of operation, the M2G unit operates normally. In "bypass" mode the M2G is still powered, however, its ability to modify the boiler's firing and timing is blocked electronically. In bypass mode the boiler operates as though the M2G technology were not installed. The timer toggles save and bypass modes alternately on a 24 hour basis.

Data was collected on boiler operations using a Dent data logger which measured the gas valve operation for the boiler. The data was collected with time and date information for each change in boiler status. Each time the boiler turned on or off the event was recorded with the date, time, and action. Temperature sensors were also placed in the building to determine the M2G's effect on the interior building temperature. The collected data was analyzed and a comparison of boiler operation was made with and without the M2G device in operation.

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KI ATLANTA HOSTS INAUGURAL EDUCATION SYMPOSIUM WITH EDUCATORS AND DESIGNERS

GREEN BAY, WIS. – KI Atlanta recently hosted its inaugural education symposium, which invited industry thought-leaders, educators and the design community to engage in dialogue surrounding trends shaping the future of education. More than 60 attendees participated in the forum, which included an education CEU presented by KI's Amy Kiefer, vice president of education markets, as well as a peer panel discussion moderated by Kiefer. Panelists included David Armstrong, vice president for administration at Truett McConnell College; Gardner Long,

vice president for technology at Central Georgia Technical College; and Ryan Haney, architectural technician with HOK Atlanta.

"This education symposium was a wonderful way to pull together an already academically focused region," said Kiefer. "We are tremendously grateful for the opportunity to discuss, share and exchange information on driving education forward."

The CEU and panel discus-



sion were co-sponsored by 3-Form and provided a great forum for discussion, debate and an exchange of ideas regarding trends in education and its future.

To view photos from the education symposium, visit KI's Facebook page: http://on.fb.me/Y0HBSr.

KI manufactures innovative furniture and wall system solutions for education, healthcare, government and corporate markets. The employee-owned company is headquartered in Green Bay, Wis, and operates sales offices and manufacturing facilities in the United States, Canada, Latin America, Europe and Asia. KI tailors products and service solutions to the specific needs of each customer through its unique design and manufacturing philosophy. For more information, visit www.ki.com.

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McCarthy Helps Build Independence and Dreams for Adults with Disabilities

Employees from McCarthy's Southeast Division recently donned their "Heart Hats" to benefit Creative Enterprises (CEI), a non-profit organization dedicated to serving adults with disabilities and other barriers to employment. Heart Hats is the volunteer employee and community involvement program of McCarthy Building Companies. Nationwide, each division partners with local groups in need of McCarthy's special skills and expertise.

Located in Lawrenceville, CEI is a 30-yr-old organization that provides social, vocation and programs designed to help adults become economically independent. In the workshop, individuals learn, work and earn a paycheck while producing products and services for local businesses. They also operate a greenhouse, an animal shelter and a thrift store that are open to the public. This hands-on experience gives CEI's participants opportunities to connect with, and contribute to, their own community. Over time, CEI's campus and services expanded and was in desperate need of help with several renovation projects. McCarthy's Heart Hats came to the rescue. Over two days, McCarthy's team provided the labor and materials to convert four small rooms into a large communal gathering space, installed shelving in the thrift store to provide added storage, installed new carpet and refinished and painted walls. The team returned later to repair areas damaged by frequent wheelchair traffic and added wainscoting to provide a durable surface to protect high-traffic walls.

"Creative Enterprises is a collection of inspiring and passionate individuals," said Kevin Kuntz, president of McCarthy's Southeast Division. "The opportunity to give back to an organization that has given so much to the community made for a memorable experience for the entire McCarthy team."

CEI has plans to add even more services in the future -- and they can count on McCarthy to help bring their vision to life.

To learn more about Creative Enterprises and their amazing clients and staff, visit <u>www.ceisite.com</u>. To learn more about McCarthy's "Heart Hats" program, visit





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GAPPANEWS

Joe White Award

Congratulations to North Georgia College and Clark Atlanta University for receiving the Joe White award in 2013. In 1989, the GAPPA Board decided to honor Mr. White's long and valued service to the organization by providing The Joseph M. White Award – a \$1,000 grant. The board presents this Award each year to a member institution's Facilities Management Department to use as the department head designates.

Mr. White started his career in higher education as the Resident Engineer Inspector for Macon Junior College in 1967. In 1968 he became the college's first Director of Plant Operations and he occupied that position until his retirement in 1997 from what had by then become Macon State College.

Mr. White became a charter member of GAPPA in 1982 and the first GAPPA Treasurer, and served in this office for over 20 years. As one of the founders of GAPPA, he was instrumental in building the organization into the vibrant developmental resource for the education facilities professionals of Georgia. Event after his retirement in 1997, both he and his wife Katherine continued to actively support the association to insure its continuous growth and provide the critical training opportunities for its members.

Unfortunately, Mr. White passed away in May 2010. He will be missed, and he will always be fondly remembered for his enormous contributions to GAPPA.

"GAPPA board of Directors decided to award up to two \$1000 Joe White Award grants at the Annual Meeting based on a random drawing of member institutions represented at that years' meeting. This award will normally be presented on the years that the Board of Directors Officers are not changing."





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Welcome new board members Fred Ricketson and Michelle Goff

Fred Ricketson, was born & raised in Augusta Georgia. He attended Southern Tech and received a Bachelor of Science Architectural Engineering. He received his MBA at Augusta State University and Graduated from the APPA Institute.



Worked in manufacturing for about 10 years, in his younger life, making things like: plastic bottles, diapers, paper towels, toilet paper, hydraulic hoses, and railroad cars

He also worked for GSFIC from '98-2000 – Learned a lot from John Butler, started working at Augusta State in 2000 as campus architect. Currently working at the newly formed GA Regents Univ. as senior planning and design manager.

Fred has been member of GAPPA for 10 years.

He and Jeane have been married for 21 years and have 3 Kids – 2 in college 1 at GRU, 1 at GA Southern.



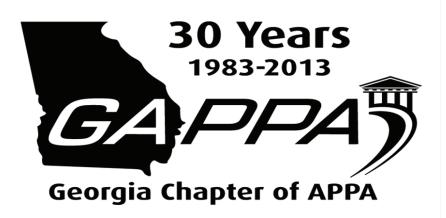
<u>Michelle Miller Goff</u>, began her career with the USG at Georgia Southern University in August, 1993. Michelle was Georgia Southern's first Code Compliance Inspector with the Division of Public Safety, and served in that role, as well as Environmental Safety Officer, until 1995. She then assumed the role of Project Manager with the Facilities Planning, Construction and Design Division of the Physical Plant Department, where she served until 2003.

In 2003, Michelle was hired as the Director of Plant Operations at East Georgia State College in Swainsboro. In 2010, Michelle was promoted to Director of Facilities.

While the Director of Facilities, the Swainsboro campus footprint has increased by over 125,000 square feet, including an on-campus housing facility. In addition to her duties as the Facilities Director, Michelle has oversight of most Auxiliary Services functions. Michelle earned an Associate of Science degree in Business Management from East Georgia State College. A native of Statesboro, she and her husband Butch reside in Twin City with their son Mitchell, who is a rising senior at David Emanuel Academy. In their spare time, the family enjoys camping and spending time with their extended families.

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GAPPA'S Long Term Partners Award



Presented To

Long Term Supporters

On the 30th Anniversary of the GAPPA Annual Meeting and Trade Show May 26, 2013

In recognition of your longstanding support as a GAPPA Business Partner

GAPPA'S Long Term Partners Award

1. **ALC**

- 2. Classic Ground Coyer
- **3.** Club Car
- **4.** Georgia Power
- 5. ISES CORP

6. Xeat Transfer Systems, Inc.
7. JOHNSON CONTROLS
8. NBP Engineers (Nottingham BROOK & Pennington)

9. Siemens Industry (Landis & Gyr)



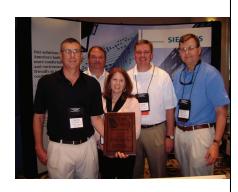
















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Wonderful Registration Team



















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Historic Georgia Tech Archibald D. Holland Central Heating and Cooling Plant Receives a Facelift



Was built in early 1900's, the Holland Plant is responsible for heating and cooling many of the buildings on Georgia Tech's campus. Chilled water and steam are produced at the Holland Plant and then sent out to the buildings on campus through a network of pipes and valves. The Holland



Plant is also responsible for the steam whistle that blows five minutes before every hour.

Georgia Tech's Facilities Management, Utilities Maintenance team has recently completed the beautification of the Holland Plant. Thanks to the help of diligent and enthusiastic Utilities Maintenance employees. The rejuvenation work began in January of 2012 with the cleaning of the exposed plant equipment.



Next, different piping systems were color coded with paint. For example, Georgia Tech's official gold color was used to symbolize the chillers. The team worked very hard to make sure that everything was spruced up including the floor, all while maintaining the equipment and making sure that the



plant ran as efficiently as possible.

On May 1, 2013, Facilities Management staff toured the Holland Plant and congratulated plant personnel for a job well done. The care and dedication of those who work at the Holland Plant is evident in the success of the plant's beautification project.



History of GT's Holland Plant Boiler Plant:

- 1914 Construction began
- **1915** Chimney construction began
- **1917** United States enters World War I

1917 The plant started coal steam production with four B&W boilers



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Historic Georgia Tech Archibald D. Holland Central Heating and Cooling Plant Receives a Facelift

unknown capacity.

1944 added the # 5 60,000lb Boiler & 60,000lb deaerator.

1955 Removed the # 1-4 coal boilers & installed the two B&W gas & oil 50,000lbs units, one B&W 16,000lb gas unit, one 175,000lbs deaerator. Renumbered boiler # 5 to # 4. Renovated the # 4 60,000lb coal boiler to gas with pneumatic controls.

1985 Replaced pneumatic controls boilers # 1-4 with Bailey DCS plant control system.

1995 Dome of 175,000lb deaerator replaced.

2003 # 3 boiler removed (16,000lb capacity too small for summer loads, no internal steam drum separation causing carry-over at capacity usage).

2004 Replacement of Boiler feed water pumps & piping headers. Replacement of Instrument & Shop compressed air systems & total piping.

2005 # 4 60,000lb 1944 boiler removed. Nebraska 110,000lb with Coen low-NOx burner installed.

2009 # 3 Electric 110,000 - 34MW boiler installed.

2011 Three new 100,000lb deaerators installed replacing the 1955:175,000 & 1944:60,000 units.

Holland Plant: All original chillers (#1, 2, 3, 4) unknown installation & cooling towers replaced.

1993 installed #5 & #6 @ 1000 tons each (McQuay)



1995 installed #1 @ 1000 tons (Carrier), in 1996 installed # 2 @ 1000 tons (Carrier), 1997 Removed original wood cooling tower, installed new 24,000gpm 8000ton Induced Draft Counter Flow.

1998 installed # 3 @ 2000 tons (York)

1994 installed # 4 @ 2000 tons (York)

2009 installed # 7 @ 2000 tons (York)

<u>Total Plant = 10,000 tons.</u>

10th St. Chiller Plant: was built in 1994 with 3000 tons cooling, # 1 & # 2. (York),

2001 added # 3 & # 4 @ 2000 tons each (York).

(24" Chill water piping mains extended east from plant to Atlantic Dr, south to Ferst Dr.)

2005 added # 5 with @ 2250 tons (McQuay) = 9250 tons plant

2008 added # 6 with @ 3000 tons (York) = 12,250 tons plant.

2013 adding # 7 with 3000 ton York with VFD compressor for EBB project

Total Plant = 15,250 tons.

2013 ABB controls are in the process of being upgraded to Symphony Plus "Total Plant automation" Casey Charepoo Assoc Dir-Utilities Maintenance

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