



What's happening

June 2010



DOYON UTILITIES' MONTHLY PROGRESS AT-A-GLANCE

Doyon Utilities Project Management Team

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The summer construction season is well underway at Doyon Utilities. We have many active projects at each of the three Army posts. Inside this month's newsletter, our project management team has prepared summaries of some of the most active and larger projects that have been undertaken this summer.

As you may recall, in previous newsletters we have provided a lengthy list of projects with short updates. From here forward in our newsletter we will be highlighting significant projects and providing more project detail than in previous newsletters. DU Operations maintains a database of active projects that is distributed weekly to various DU and government representatives. This listing will continue to be sent out on a weekly basis to update jobs status.

DU schedules its capital projects based upon the 5 year capital plan that is reviewed on an annual basis. The plan includes the many projects that were part of the original privatization solicitation repair and replacement schedule as well as new projects identified by both the government and DU. To manage our many projects, Doyon Utilities has assembled a knowledgeable and experienced team of project managers. Below is a brief introduction of each of our project managers and their respective areas of responsibility.

Mark Rockwell, P.E., is the project manager responsible for the Fort Greely projects. Mark began working for DU in February 2008. Prior to joining DU he owned and operated

Mark Rockwell



his own engineering and construction firm here in Fairbanks. Mark has extensive project management experience and a strong administrative background that helps organize the project management functions.

Norman Sather



Norman Sather and Wily Splain both have engineering degrees and are actively working for their P.E. licenses. Norman and Wily are responsible for the majority of the projects at Fort Wainwright. In addition, Shayne Coiley, the FWA site manager,

Wily Splain



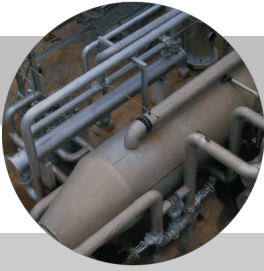
serves as a project manager for many of the smaller projects at FWA. Wily is a new addition to the DU operations staff. Wily began working for Doyon Utilities in May. He is a graduate of UAF's engineering program. Prior to joining DU, Wily was employed as an engineer at Alyeska.

Bill Farrell



Bill Farrell and Marvin Riddle jointly manage DU's extensive list of electrical projects. Bill Farrell is also a UAF electrical engineering program graduate.

Marvin Riddle is a consultant working with DU to assist in project management of the many electrical distri-



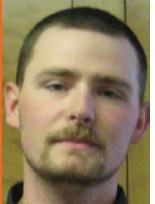
Site Specific Happenings

Marvin Riddle



Marvin Riddle is the project manager for the distribution system replacement projects scheduled for the early years of the 5 year capital plan. Marvin has a strong utility background with a Masters of Business Administration from UAF and an Associates Degree in Power Engineering from Southern Alberta Institute of Technology, Calgary, Alberta. The electrical distribution system capital projects dominate DU's 2010 capital program.

Robert Maxfield



Robert Maxfield is the project manager assigned to implementing DU's SCADA strategy. Robert began working for DU at the FWA CHPP in August 2008 as a plant operator where he quickly immersed himself in the operations of the plant controls and troubleshooting that are unique to the FWA CHPP. Robert has taken numerous classes related to advanced instrumentation, process technology and controls theory.

Mack Miessner is the newest member of DU's project manager team. Mack joined the Fort Richardson operation as a project manager to oversee Fort Richardson projects. Mack has more than 15 years of construction management experience. Mack's experience includes man-

Mack Miessner



agement of both private sector construction projects as well as managing multiple Corps of Engineer projects. In addition to construction management of capital projects, major repair and replacement projects and major O&M projects, Mack will actively participate in the FRA master planning process, serve as a liaison between the government representatives and DU at FRA, and perform QC activities related to his project management responsibilities.

George Ferree



George Ferree is an engineer that manages projects related to the district heat system at the FWA CHPP. George also coordinates the environmental program at the plant to prevent storm water migration off site of the CHPP. George has an extensive background in power plant operation and maintenance.

This project management team, in conjunction with the support they receive from headquarters staff, are keeping DU's projects on schedule and ensuring quality service to our customer.

Fort Richardson

The D Street Substation is currently under construction. The site has been cleared and grubbed, with new material brought in to complete the subgrade work. The foundations for the switchgear buildings and transformer will be formed and poured. The ground grid and conduit will then be installed within the next month. This project is scheduled to be completed by mid November. The 15kV equipment will be operational by October.

The substation will provide greater system reliability to Fort Richardson. This is accomplished by a new 35 kV and 15 kV tie between the existing Spartan Substation near the CHPP and D St. Substation. The substation is also being constructed to facilitate the addition of a 115 kV transmission line. Each of the different connections allows for greater flexibility for operations. The substa-

tion will also have three new 3 MW fast start standby generators which will replace the old and outdated standby generation at the FM plant.



Site Specific Happenings

Fort Wainwright

Projects Underway at the FWA CHPP

We are in the process of undertaking some large system upgrades at the Fort Wainwright CHPP. Following are the major projects underway: Generator Switchgear Upgrade, Turbine Governor Upgrade and the AVR Exciter Upgrade. These projects started in March of this year and we expect to have them complete by October 1st.

AVR Exciter Upgrade

The AVR Exciter upgrade project will upgrade and replace the exciters and voltage controls on all four units. This upgrade eliminates the rotating exciter, increases reliability and decreases operations and maintenance costs. The voltage regulator being installed is a solid state Basler Automatic Voltage Controller that allows the generator to regulate voltage automatically rather than manually as it is now done. This upgrade will improve efficiency, reliability and voltage stabilization on the Post.

*The term **switchgear**, used in association with the electric power system, or grid, refers to the combination of electrical disconnects, fuses and/or circuit breakers used to isolate electrical equipment. Switchgear is used both to de-energize equipment to allow work to be done and to clear faults downstream. Switchgear is already a plural, much like the software term code/codes, and is never used as switchgears. Definition courtesy of Wikipedia.*

Generator Switchgear Upgrade

The FWA Generator Switchgear upgrade will replace the existing 12.47 kV switchgear on the turbine deck. Switchgear is used to isolate electrical equipment including the four generators. In order to undertake the switchgear upgrade, the 9 distribution feeder breakers have been moved to the new outdoor distribution substation as were the GVEA tie breakers. The five station service transformer breakers are

being replaced with four station service breakers and two new outdoor Elliott sectionalizer switches to provide station service redundancy. Generators 1, 3, 4 and 5 are receiving new generator breakers. Along with the breaker upgrades are new digital relays that include over current, bus differential and generator differential used to protect the plant electrical system. As part of the upgrade, existing neutral CTs and surge capacitors were upgraded to prevent the generator from being damaged during electrical fault conditions. This work is being accomplished by

Turbine Governor Upgrade

The turbine governor upgrade consists of upgrading the hydraulic and valve control components for the four steam turbines, two new hydraulic pumping units, all stainless steel tubing, V1 and V2 valve actuators and new Woodward 505E electronic steam turbine governors. These upgrades will allow for better load and speed control, automatic start up and synchronizing capabilities and will improve reliability by allowing for improved response to system disturbances. The upgrade of the controls will also provide us the ability to change the load and monitor turbine performance from the CHPP control room. The new V1 and V2 valves will improve reliability and decrease O&M expenses as the old valves had to be rebuilt every 6 months.



Site Specific Happenings

Fort Wainwright (continued)

removing one-half of the 12.47 kV bus from service and keeping the remaining one-half bus in service. This will enable the CHPP to continue operating, supplying steam and power, during the upgrade.

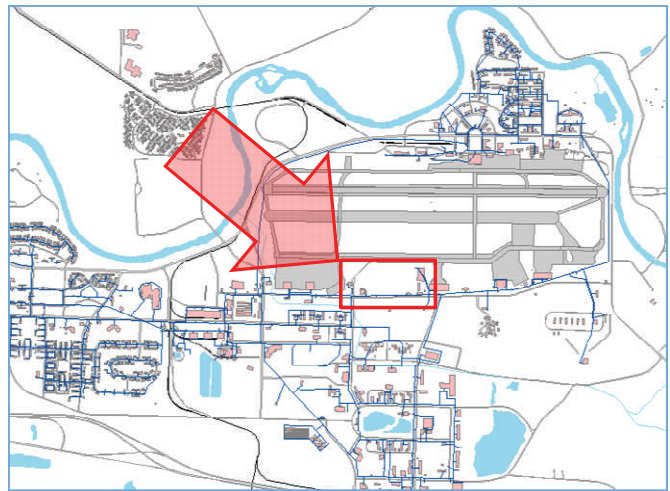
Utility Main Extension in Aviation Task Force Area

As new building projects on Fort Wainwright progress, utilities to serve them must be considered in chorus. In some cases, previous housing projects utilities design and construction was coordinated along w/ construction of each building complex. However, overlapping construction areas sometimes posed unanticipated logistical challenges stemming from congested work sites.

To minimize congested construction sites, Doyon Utilities is currently undertaking a project to extend the utility mains prior to construction of several Aviation Task Force Facilities planned for construction over the next several years. This part of the project, designed by Fosdick & Hilmer, will include extending utility mains for domestic water and wastewater piping along with steam (heat) and electricity through the area just north of Montgomery road near Santi-

ago. Work is planned to be completed by October 2010.

The Aviation Task Force Mains Extension project is just another example of Doyon Utilities meeting the challenge to provide new utility services to keep pace with utilities demands as well as upgrading aging infrastructure.



Project Area for Aviation Task Force Mains Extension

Fort Greely

Fort Greely residents have noticed the utilidor along 3rd Street is exposed and workers are replacing utility piping. This is because Doyon Utilities is replacing the piping that was installed in 1954 and has exceeded its useful life. Heritage General Contracting of Delta, Alaska won a \$3.8M bid to rehabilitate the water and steam piping. The project was designed by Fosdick & Hilmer. Water and steam piping will be replaced which is expected to increase the water flow to fire hydrants and supply more steam for housing projects planned over the next few years. Work is planned to be completed by October 2010 with top soil and seeding to occur in early 2011.

Prior to the project, water flow rates to fire hydrants did not meet industry standards. Doyon Utilities recognized that the water main piping was only 6 inches in diameter

and was partially blocked by years of corrosion. Computer modeling of the water system revealed that by upgrading the water main to new 8 inch diameter piping along 3rd Street, water flow rates to fire hydrants could be increased to about 1000 gallons per minute. This will allow near term housing projects to enjoy a safe and reliable means of fire protection and adequate heating capacity for our cold winter nights.





Miscellaneous Happenings

Water Saving Landscaping Tips

Summer is here! That means we spend more time outside maintaining our yards and using more water. Below are some helpful landscape water saving tips presented by the American Water Works Association.



✦ Maintain a lawn height of 2 1/2 to 3 inches to help protect the roots from heat stress and reduce the loss of moisture to evaporation.

✦ Avoid planting turf in areas that are difficult to irrigate properly such as steep inclines and isolated strips along sidewalks and driveways.

✦ Aerate clay soils at least once a year to help the soil retain moisture.

✦ Promote deep root growth through a combination of proper watering, aerating, appropriate fertilization, thatch (grass clippings) control, and attention to lawn height. A lawn with deep roots requires less water and is more resistant to drought and disease.

✦ Mulch around plants, bushes and trees to help the soil retain moisture, discourage the growth of weeds, and provide essential nutrients.

✦ Plant in the spring or fall, when watering requirements are lower.

✦ When choosing plants, keep in mind that smaller ones require less water to become established.

✦ Collect rain water in a barrel and use it to water your garden

✦ Use porous materials for walkways and patios to keep water in your yard and prevent wasteful runoff.

Fort Wainwright Employees at Work

Roy Davis



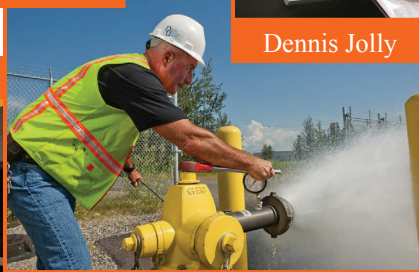
Erik Berrie



Dave Kerner



Dennis Jolly



Twila Stenvik



Todd Vincent





Safety Matters

Safety Message

It is that time of the year, lets que it up! Before you plan your next outdoor cookout, always check to make sure all your equipment is in good, safe working order and keep these safety tips in mind:

- Keep a fire extinguisher nearby. Water will only spread oil fires and may not extinguish grease fires. The best extinguisher is rated ABC.
- Never cook with grills or smokers indoors or in garages. They produce carbon monoxide and smoke that can be fatal.
- Don't keep your grill close to your house or deck railings. Beware of overhanging rooflines or trees.
- Never use gas, paint thinner, solvents, or kerosene to start your charcoal. Chimney or electric coil starters are the best way to start coals, but if you use charcoal starter fluid, once the coals are smoldering never squirt them with more fluid. The flame can climb up the stream and set you on fire.
- Don't cook near gasoline or other flammables. Keep propane tanks at least two feet from the burners.
- On gas grills, always lift the lid when you ignite the burners. A gas buildup under the hood could blow it open and flash in your face.
- Store propane cylinders outdoors in an upright position.
- If you smell gas, turn off the grill immediately.

- Handle hot grills, coals, and hot liquids with respect. Be alert. No horseplay near cookers.
- Keep children and pets away from grills and smokers, uncooked meat, hot liquids, and sharp objects.
- Use potholders and/or insulated gloves.
- Do not discard ash until the coals are thoroughly cooled. Let them sit overnight or dump water on them before you put them in your trash can.
- Bare feet, sandals, flip-flops, and loose clothes are dangerous around grills and are not recommended.
- Don't put small grills on flammable or glass tables.
- Save the grill manual and remember where you put it.
- If you have long hair, tie it in a pony tail.
- Stay sober when around the grill.



Each year about 600 fires/explosions occur with barbeque grills, causing injuries and some resulting in worse. Many of the accidents happen the first time a grill is ignited for the season or after a grill's gas container is re-filled and reattached. Remember summer is in full swing; please enjoy the food, friends, and weather this time of year and always grill safely.

Certifications



Joshua Garcia , Electrician at FWA CHPP, received his Class III Boiler Lisence

Visit our website at doyonutilities.com

