

# ALISTO News



Fall 2015 Edition



## A MESSAGE FROM AL



As this year winds down and we enter the second half of this decade we at Alisto can look back with a feeling of accomplishment and forward to new opportunities and potential growth.

In the past year we have had many successes including expanding our pool of resources with the addition of two highly experienced professional engineers, Keith Packard with over 20 years of experience in corrosion engineering and Mussarat Satti with extensive experience in engineering and construction of infrastructures; and a talented marketing team. Most notably, we successfully completed major gas engineering projects for two public utility companies, one of which is the installation of corrosion protection systems to mitigate the impact of alternating current from an electric transmission line on two major gas transmission systems on schedule and under budget.

2016 promises to be an even better year as we seek to expand our services and market for new clients and challenge ourselves with emerging technologies and engineering projects. We are well positioned to continue our quest for innovation and process improvement in all areas of our services and capabilities in California and elsewhere.

I would like to express my appreciation and gratitude to all for your commitment to safety, excellence, sustainability, and ultimately to the Alisto family. You make Alisto what it is today and my entire family look forward to continuing our important work together for a successful 2016 and beyond.

Here's to Team Alisto!

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## Featured Project Spotlight *Line 300 A&B Alternating Current Mitigation Project*



### CLIENT | Pacific Gas & Electric PROJECT MANAGER | Jess Borrego

In 2012, Southern California Edison (SCE) constructed a new 230-KV transmission line to connect a new wind farm into the grid, which crosses and runs parallel to Pacific Gas and Electric Company's (PG&E) L-300 A and L-300 B at various locations near Tehachapi, California. Because of health and safety concerns and impact of induced corrosion from alternating current (AC) from the new electric transmission line on PG&E's Line 300 A and B, the major transmission lines that transport natural gas from the Arizona border to the San Francisco Bay area, SCE retained a corrosion consultant to determine and design corrosion protection (CP) measures to mitigate the impact of alternating current from the electric transmission line.

With SCE's concurrence, PG&E contracted Alisto Engineering Group in 2013 to install the corrosion protection measures recommended by the SCE consultant to mitigate AC induced corrosion on L-300 A and B. As recommended and designed by the SCE consultant, Alisto installed deep ground rods at 17 locations to depths ranging from approximately 450 feet to greater than 850 feet and more than 500 feet of Zinc Ribbons. Alisto completed

the CP installation project on schedule and under the \$3.9 million budget.

After completing the CP installation, the SCE consultant conducted additional engineering analysis to verify the effectiveness of the completed AC mitigation plan. It was determined that additional measures were necessary to adequately protect the impacted segments of L-300A and 300B including a 50-foot exposed section of L-300A.

In 2015, PG&E again contracted Alisto to install the additional corrosion protection measures as recommended and designed by the SCE consultant to adequately mitigate the AC impact on segments of L-300 A and B. Alisto installed five additional deep ground rods to depths of up to 650 feet and covered the exposed section of the gas pipeline with clean engineered imported fill following PG&E standards. The additional CP measures were completed on schedule and under the \$2.1 million budget.



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## Alisto Receives PG&E's Gold Shovel Standard Certification



In 2014 PG&E launched the Gold Shovel Standard, a program designed to reduce dig-ins and to protect

their underground gas and electric infrastructure. The certification process helps to ensure PG&E hired contractors are adhering to the safest excavation standards to help prevent injuries, property damage, inconvenient outages, project delays and high costs.

Although it will not be a requirement until January 2016, Alisto Engineering Group was proactive in achieving the Gold Shovel Standard certification for our commitment to demonstrating safe digging and excavation practices.

The Alisto Health and Safety Manager developed and implemented a comprehensive dig-in prevention policy that included :

- A training program covering the requirements of the One Call Law and Cal-OSHA's Construction Safety Orders for new employees and for existing employees on an annual basis.

- An excavation statement, signed by all employees, requiring every employee who supports or is directly involved in excavation-related activities to follow California's excavation laws.
- A written Corrective Action Plan that details the processes for identifying root causes and the associated corrective measures.
- A written policy for Excavation Safety Accountability that provides all employees a mechanism to speak up when they observe situations that are in conflict with the company's policy requiring compliance with excavation laws.

Alisto has added valuable training to its already robust Health and Safety Program and has further ensured a commitment to the public's safety, prevention of damage to PG&E's underground facilities and adherence to the One Call Law and Cal OSHA's Construction Safety Orders.



Call 811 Before You Dig

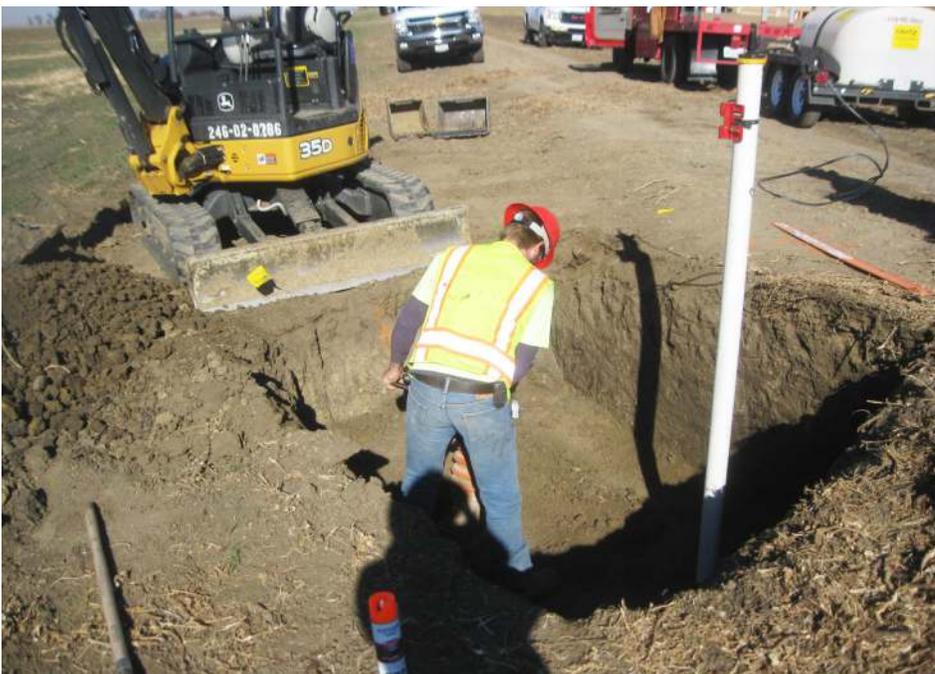
With safety being Alisto's top priority, we believe safe digging should be practiced by everyone, not just contractors. Whether planting a tree, installing a mailbox or pouring concrete, protect yourself and others from injury and prevent service outages by calling 811 before you dig. 811 is a free one-call service managed by USA North. USA North will contact PG&E and other utilities, who will send representatives out to locate and mark their underground lines for free. Here are some crucial steps to take before you dig:

- Identify and mark the digging area with a white substance such as chalk, spray paint, flour or marking whisksers, tags, stakes or any combination.
- Call 811 at least two business days before you dig.  
\*Contractors are required by California state law to call.
- Leave the marks made by the utility representatives in place until you are finished digging.
- Use hand held digging tools when digging within 24 inches of the outside edge of any underground lines. After finishing your project, carefully backfill and compact the soil.

#### References:

[http://www.pge.com/en/b2b/purchasing/suppliers/goldshovel/index.page?WT.mc\\_id=Vanity\\_goldshovel](http://www.pge.com/en/b2b/purchasing/suppliers/goldshovel/index.page?WT.mc_id=Vanity_goldshovel)

<http://www.pge.com/en/safety/diggingyard/callbeforeyoudig/index.page>



## Introducing Keith Packard, Alisto's Newest Corrosion Specialist



We're growing again! Meet Keith Packard, PE, who recently joined Alisto as a Senior Project Manager with our Corrosion Team. Keith, a Registered Corrosion Engineer, has over 26 years of experience in designing, monitoring and rehabilitating cathodic protection (CP) systems, both nationally and internationally. Here's a Q&A with Keith:

### What do you find interesting about corrosion engineering?

Cathodic protection is project work and each project is different and never boring. It includes a mixture of on-site testing and field evaluations and then doing the design work to mitigate the corrosion. Once you complete the field work or the design, you need to be able to explain to the client what you did, so written communication is very important. Once you learn the fundamentals of CP and current flow, you can evaluate corrosion for any metallic structure that is buried or immersed in water. A lot of corrosion is related to dissimilar metals and dissimilar environments. The fundamentals can help predict which metal or which part of a structure is most likely to corrode. Once the corrosion mechanism is understood it is possible to design the corrosion mitigation system.

### What are your primary responsibilities here at Alisto?

All of my engineering work experience has been in the field of CP. I started as a field engineer doing the testing and evaluation of pipelines, water tanks and marine structures in the water and waste water industries. These are generally very large structures - long lengths and large diameters - and I learned a lot about current attenuation and electrical continuity of pipelines. CP of pipelines and water tanks has been done for many years but it has been done using very loose and overly conservative estimates that results in excess and unused capacity. Alisto is in a great position to expand into the water and waste water industries providing efficient and effective turn-key designs followed by the CP installation and rehabilitation. Since we have managers, supervisors and engineers with many years of construction experience we can provide construction services that the consulting engineers do not have the in-house resources to complete. We are not a materials sales business, so we can source our CP material from various vendors to use and install the best products from many suppliers.

### Tell us a little about your family.

My wife Shirley and I have been married for 28 years and we have two sons - Kyle is 14 and Sean is 11. We all enjoy hiking, camping, bicycling and skiing and we love living in Livermore. We like to take the ferry from Alameda to San Francisco and walk from the Embarcadero, through China Town for dinner then back to the Embarcadero to watch the lights on the new bay bridge.

### What are your hobbies/passions?

Bicycling. I used to do a lot of club rides on the weekends, long distance rides and some racing. I do not have that much time on weekends to be away from the family so I get my riding done by commuting to work by bike two or three times a week.

I took snowboarding lessons back in the 90's and have been snowboarding ever since. A few years ago, Kyle took a snowboarding lesson and he gets better every year. Sean is a skier and took ski lessons the same time Kyle took his lesson. Sean goes straight down the hills and challenges me to try to keep up with him. Sean and Kyle love the snow and I have a great time with them. Shirley does not ski as much anymore but she likes the cold clear air in winter. We are looking forward to a wet El Niño.

For more information about our corrosion and CP services please contact Keith Packard at 925-279-5000 [kpackard@alisto.com](mailto:kpackard@alisto.com)



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# MEET ALISTO'S POWERHOUSE CORROSION TEAM

Alisto's team of accomplished corrosion specialists are ready and available to provide all-inclusive, world-class services for any corrosion or cathodic protection (CP) needs. With well over 50 years of collective experience, our certified NACE certified corrosion technicians, Keith Packard and Craig Stuart along with Construction Manager Ken Burke, have gained valuable experience working on many projects across the US and internationally. Together, they have a wealth of knowledge and hands on experience to tackle any corrosion project. Alisto's menu of corrosion and CP services can meet any corrosion/CP design challenge and provide years of worry free operation of your facility or infrastructure.



## OUR TEAM

**Keith Packard, PE** is a Registered Corrosion Engineer with over 26 years of experience in designing, monitoring and rehabilitating CP systems for the water/wastewater industry. He has designed corrosion control systems for structures in buried, marine, natural water and atmospheric environments and has significant hands-on technical skills with CP field equipment.

**Craig Stuart, P.Eng.** has over 14 years of experience in corrosion engineering nationally and internationally. He specializes in chemical corrosion control, internal/ external corrosion monitoring, coatings evaluation and selection, CP and failure analysis. Craig also possesses extensive experience in the management of internal corrosion for pipelines, vessels, storage tanks and primary oil and gas process units.

**Ken Burke** has over 25 years of experience installing and repairing galvanic anode and impressed current CP systems on pipelines, storage tanks and treatment plant structures. Ken has an excellent reputation as a CP contractor and installer because of his attention to details and thorough understanding of the project requirements and industry standards.

