

David Kashifi - Senior Corrosion Engineer and Cathodic Protection Specialist

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EDUCATION AND CERTIFICATION:

<i>Cal Poly State University San Luis Obispo Bachelors of Science – Civil Engineering</i>	June 1994
<i>NACE CP Level 4 Certified – Cathodic Protection Specialist (#7355)</i>	January 2002
<i>NACE CIP Level 1 Certified – Coating Inspector (#24378)</i>	September 2009
<i>NACE CP Interference Course – Passed Course Exam Successfully</i>	June 2011
<i>Licensed by State of California as an Engineer-in-Training (EIT)</i>	February 1994
<i>Inspection of Coatings on Steel and Concrete Course by SSPC</i>	June 2008

EXECUTIVE SUMMARY:

Senior corrosion engineer and cathodic protection expert with over 23 years industry experience. Proficient in the fields of cathodic protection, internal and external corrosion control/engineering, civil engineering, chemical inhibitors, and environmental engineering. Expertise in the field of cathodic protection (CP) systems design, corrosion and CP materials selection, proposals and sales, data analysis, field-related testing, installations, inspections, supervision, project management, troubleshooting, training, presentations and comprehensive engineering reports. Possess unique ability to successfully oversee hundreds of turnkey engineering projects on both a small and large scale. Possess the ability to effectively take on new roles and rapidly progress with minimal supervision. Exceptional at communicating with many diverse types of people from a wide range of disciplines. Excellent sales and public relation skills. Works well under pressure to meet deadlines on a timely manner. Future goals include obtaining NACE Corrosion Specialist and California PE Registration in Civil Engineering.

SUMMARY OF PROFESSIONAL EXPERIENCE:

President & Founder, Senior Corrosion Engineer – Corrosion Protection Solutions, Inc. (8/03-present)

- ◆ Senior Corrosion Engineer for various corrosion consulting and cathodic protection related, \$multi-billion projects. Clients include Apple, Google, Stanford University, McClellan Jet Services/McClellan Ari Base, Kitchell Facilities Management, Plains All American, JDH Corrosion Consultants, Farwest Corrosion Control Company, Alisto Engineering Group (Pacific Gas & Electric) on \$2.5+ Billion Pipeline Integrity Project, Corpro, MCH Incorporated, Broward Builders, HPS Mechanical, Bergelectric Corporation, Wood Group/Ethos Energy, Infineon Temecula Semiconductor Plant, Fairfield-Suisun Sewer District, City of Brentwood, City of San Bruno, City of Burlingame, Contra Costa Water District, Port of Oakland, City & County of San Francisco, City of San Jose, Exxon-Mobil, Santa Clara Valley Water District, City of Arcata, SE Pipeline Construction, Sanco Pipelines, San Francisco, Sacramento and Oakland International Airports, Mountain Cascade Construction, Diablo Water District, South Tahoe Public Utility District, Broward Builders, Exaro Technologies, Licensed General Contractors, Water/Wastewater Municipalities, Oil and Gas Companies, and others. Excellent client relations, obtaining long-term contracts.
- ◆ Successful corrosion control, cathodic protection testing and evaluation for water pipelines for various clients and owners throughout California and Nevada. Testing on impressed current and passive (galvanic) cathodic protection systems to include system design, energization, adjustments, repairs, and troubleshooting. Pipe inspection and integrity projects on water, wastewater, fuel, oil and gas systems at multiple location in California and Nevada. Expert in marine structures corrosion integrity projects, corrosion protection of marine pipelines sea walls, mooring dolphins, piers, ship hulls, wharf piles and other marine structures. Marine projects include Port of Oakland, Port of San Francisco and other marine projects. Tasks include project management, sales & marketing, proposals, job walks, internal and external corrosion control projects, CP Installations, site corrosivity studies, induced AC mitigation, CP interference, work at power plants, refinery and sewer plant projects, pipeline integrity projects, personnel training, Power-Point presentations, failure analysis and inspections, stray current interference investigations, tank (AST and Reservoirs) corrosion control, coating inspections (holiday tests) and failure analysis, materials selection and other related work. Managed large projects with supervision of large number of personnel. Materials selection, inhibitors, coatings, chemical treatment, etc.

Senior Project Engineer – CONCECO/MATCOR Engineering, Inc.

(7/99-8/03)

- ◆ Assigned to senior project engineer/manager. Projects included pipeline integrity, stray current and galvanic cell corrosion investigations, cathodic protection design for new and existing ductile iron, steel, and concrete cylinder pipes owned and operated by various clients to include the City of Vallejo, Hayward Gateway Center, Contra Costa Water District, San Francisco and Oakland International Airports.
- ◆ Project manager for Mirant Corporation (Southern Energy), power generation plants. Projects for Mirant included cathodic protection systems design and testing, corrosion investigations, pipe locating, coatings design, corrosion resistant materials selection, hydrostatic testing supervision, failure analysis, preparing corrosion control training manual and presentations, video probe inspections, managing structural analysis projects, and other corrosion engineering related work. Condition assessment of multiple Mirant power plants.
- ◆ Project manager for major gas piping cathodic protection turnkey projects for Calpine Natural Gas Corporation on \$2 Billion project. Design, installation supervision, interim and final testing of impressed current and galvanic cathodic protection systems. Design for mitigation of induced AC, project coordination, material procurement, and construction management.
- ◆ Design and testing of internal and external corrosion control and cathodic protection systems for various types of pipelines, buried and above-grade storage tanks, caisson casings, seawalls, pipe pilings, natural gas pipelines, condenser water boxes, and other metallic structures. Field tests included pipe and cable locating, video probe inspections, electrical continuity/isolation tests, CP checkouts, post installation surveys, and technical reports with graphs, spreadsheets, discussion and recommendations.
- ◆ Design of cathodic protection system, field inspection, and project manager of fire protection, water pipeline replacement project in Hayward, California.
- ◆ Sales experience includes meetings and Power Point presentations for various clients, proposals, and obtaining contracts for multi-million dollar projects.
- ◆ Water tank and reinforced concrete reservoir inspection services for Contra Costa Water District, Zone 7 Water District in Dublin, California, Valley of the Moon Water District in El Verano (Sonoma), California, and The City of Modesto. Surveys included internal CP inspections, corrosion assessments (API 653) and ultrasonic thickness (UT) testing. Prepared reports to include all pertinent information.
- ◆ Corrosion investigation of a 16-mile long, fuel-oil pipeline in Guam for Winzler and Kelly and the Guam Power Authority. The survey consisted of ultrasonic thickness testing, close interval and cathodic protection survey, “bell-hole” inspections, DCVG surveys, coating analysis, pit depth measurements and final report.
- ◆ Design of CP system for ductile iron, water line for URS Corporation Oahu.
- ◆ Bell-hole inspections for Pacific Gas and Electric (PG&E) gas pipeline to include pit depth measurements, UT measurements, soil resistivity, pH and pipe-to-earth potentials, observation of existing and new coating systems, photo log and written reports.
- ◆ Expertise in material selection of cathodic protection and other corrosion and electrical related equipment. Knowledge of CP equipment to include impressed current anodes, rectifiers, galvanic system equipment, insulating materials, coatings, induced AC mitigation devices, and other equipment for on-shore, offshore, buried, submerged, atmospheric exposed and many other structures.

Project Engineer - Corpro Companies, Inc.

(4/96-7/99)

- ◆ Sales experience to include contacting clients, proposals, and obtaining change orders. Assigned project engineer of \$ 500-K CP project at Shell Oil and \$400-K CP projects (installation of hydrocarbon leak detection system and tank bottom (soil-side) CP systems) for fuel oil tank farm owned and operated by Santa Fe Pacific Pipelines (Kinder Morgan) and Shell Oil. Comprehensive CP inspection and post-inspection report of Tosco Refinery in Rodeo, California. Project engineer of \$4.5 Billion SFO International Airport Project.
- ◆ Electrical continuity testing to include attenuation, circulating current, potential measurements, resistance and more. Testing and troubleshooting pipeline and fiber optic tracer wires for electrical continuity using batteries and pipe locators.
- ◆ Testing, troubleshooting and remedial work on exposed and buried flange isolation kits.
- ◆ Designed, supervised installation, final test and reports for galvanic and impressed current CP systems on various structures including buried tanks, pipes, offshore structures, etc.
- ◆ Research studies include the topics of coatings, electrochemistry, engineering economics, inhibitors and cathodic protection design.
- ◆ Project engineer for pipeline integrity projects including coating efficiency testing using C-Scan, inspection of holiday testing, and close interval surveys using pulse generators and polycorders for Marin Municipal Water District and other clients.
- ◆ Energizing, testing and annual surveys of impressed current and galvanic CP systems.
- ◆ Complete survey of impressed current systems with the use multiple current interrupters, pulse generators and waveform analyzers for Raytheon and Santa Clara Valley Water District.
- ◆ Field collection and laboratory testing of soil samples to test for corrosiveness. Lab tests included sulfides, sulfates, pH, redox potential, moisture content and resistivity. Analyzed data and wrote reports to address soil corrosivity and recommended measures to be taken for corrosion control.
- ◆ Track-to-earth resistance and running rail continuity testing of light rail systems for LTK Engineering, Portland, Oregon and Santa Clara Valley Transit Authority, San Jose, California.

Groundwater Resources Engineer - Alameda County Water District

(9/95-4/96)

- ◆ Project engineer of 27 different locations with soil and groundwater contamination. Oversaw responsible parties' engineering work-plans, soil bore and water monitoring well and site cleanup reports. Prepared case closure reports and provided technical assistance to responsible parties.
- ◆ Successfully completed progress report for the district's Aquifer Reclamation Program, which involved discharging of salt water from deep aquifers into the San Francisco Bay.
- ◆ Assisted responsible parties in qualifying for \$27 million from the State Fund for contaminated sites. Conducted survey of Alameda County Water Treatment Plant No. II while investigating different issues affecting efficiency of the plant and water treatment systems.

Major Engineering Courses at Cal Poly State University, San Luis Obispo

Electrical Circuits, Materials Engineering w/Laboratory, Corrosion Control, Engineering Economics, Water Resources Design, Geotechnical Engineering w/Laboratory, Thermodynamics, Hydraulics and Hydrology, Shallow Foundations Design, Traffic and Transportation, Reinforced Concrete Design, Water Treatment/Design, Structural Steel Design, Fluid Mechanics, and other courses. Senior project on Gravity Storm Drain & Sewer System Design. Received grades of "A" for senior project and other senior level, design courses.

HONORS AND SKILLS:

- ◆ Active member of National Association of Corrosion Engineers (NACE International).
- ◆ Active member of Cal Poly State University Alumni Association.
- ◆ Computer Skills: Excel w/Graphs, MS Word, MS XP Professional, Windows 7, WordPerfect, Power-Point, Internet, Basic Auto-CAD, Fortran, Pascal, Lotus and more. Familiar with optimum use of internet for search, using video communication programs, and much more.
- ◆ Corrosion and Cathodic Protection (CP) test equipment expertise to include following:

GPS Controlled Current interrupters, pulse generators, pipe locators, Radiofrequency Current Mappers/Locators (PCM, Vivax, Metro-Tech, Etc.), AC and DC data loggers/recorders (Tinker and Rasor DL-1 and others), robotic and manual video probes, pit depth gauges, ultrasonic thickness (UT) gauges, installation and operation of remote monitoring systems (Omnimatrix, NTG Watchdog, etc.), all CP and corrosion investigation survey equipment, GPS and mapping, soil corrosivity test equipment for field and laboratory testing, micro Ohm-meters, dry and wet film thickness gauges, rectifiers (permanent and portable), insulation checkers (above grade and buried), multimeters, clip-on ammeters, coating holiday detectors (low and high voltage types), direct current voltage gradient (DCVG or Pipe Camp) devices, half cells (Cu-CuSO₄, Ag-AgCl, Zinc, calomel), bell hole inspection devices, ground penetrating radar, and much more.
- ◆ Safety training to include confined space entry, First Aid and CPR certified, OSHA 40-hour HAZWOPER certified with 8-hour refresher course, BAT-C certified for refineries, and Power Plant Work Safety Training. Obtained Transportation Security Administration TWIC card in March of 2013.
- ◆ Hold a Transportation Worker Identification Credential (TWIC) Card for working at marine terminals throughout the United States. TWIC is required by the Maritime Transportation Security Act for workers who need access to secure areas of the nation's maritime facilities/vessels, and others who require a TWIC.
- ◆ Licensed as a Real Estate Broker in California and active member of the National Board of Realtors. Owned and operated real estate and mortgage loan firms.
- ◆ Volunteer work to participate in engineering projects in developing nations.
- ◆ Developed, funded and managing a non-profit health care hospital in 3rd world country.
- ◆ World traveler and have visited 23 countries. Work very well with people from all over the world and from many diverse ethnic backgrounds.

LIST OF CLIENTS (REFERENCES AVAILABLE UPON REQUEST):

GOOGLE – KITCHELL FACILITIES MANAGEMENT – CUSHMAN AND WAKEFIELD

APPLE – ELK GROVE SITE – COSCO FIRE PROTECTION

MCH INCORPORATED/MCH ELECTRIC

STANFORD UNIVERSITY

ALISTO ENGINEERING GROUP – PG&E PIPELINE CP INTERFERENCE, CP DESIGN, INVESTIGATIONS

CORRPRO

MIRANT – PITTSBURG, CONTRA COSTA AND POTRERO POWER PLANTS – SF BAY AREA

JDH CORROSION CONSULTANTS

FARWEST CORROSION CONTROL COMPANY

BERGELECTRIC CORPORATION

BROWARD BUILDERS

WOOD GROUP/ETHOS ENERGY GROUP – SMUD COSUMNES POWER PLANT

SE PIPELINE: PROJECTS AT SAN FRANCISCO, OAKLAND AND SACRAMENTO INTERNATIONAL AIRPORTS

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SANTA CLARA VALLEY WATER DISTRICT

SANCO PIPELINES

MOUNT DIABLO STATE PARK

GATEWAY PACIFIC CONTRACTORS

CITY OF BURLINGAME

CITY OF MOUNTAIN VIEW

MCCLELLAN JET SERVICES

MOUNTAIN CASCADE CONSTRUCTION

SHIMMICK CONSTRUCTION

STEVE P. RADOS CONSTRUCTION

VENOCO – GAS PIPELINE OPERATIONS

GRANITE CONSTRUCTION