

Corrective Action Plan:	Person Responsible:	Due Date:
Notify contractor in writing of regulatory violations (tag line, operator certification, load chart capacity). Recommend to contractor that written lift plans be followed.	Bob Henry	Closed
Revise standard specifications, Section 00830 Project Safety Requirements, to require the contractor to have a written lift plan for any crane lift where the lift is 75% of crane lift capacity. Such plan shall be available for District inspection upon request.	Dan Owre	Closed
Train injured Central County Canal Maintenance employee to practice getting in & out of 5 yd dump truck cab.	Carl West	Closed
Update the line breaking SOP to include the use of an appropriate atmospheric monitor to determine atmospheric levels after line breaking.	Jan Polewaczyk	Closed
O&M to make temporary repairs & modifications to Bollman Caustic Day tank air line system: remove defective equipment, add valves, replace galvanized pipe with steel pipe.	Butch Martinez	Closed
ESR for an evaluation of current equipment and assess whether re-design is necessary to prevent Bollman caustic solution from entering into compressed air system. Also, evaluate similar air systems used for fluoride and alum. New design should consider running air lines through an overhead pipe rack rather than floor. Any new or modified facilities would be part of CIP.	Rachel Murphy	Closed. Engineering has begun a re-design project.

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Maintenance to follow Line Breaking SOP on the compressed air system.	Butch Martinez	Closed
Label Bollman air line indicating caustic solution residue. Label air lines for alum and fluoride systems as they pose similar risk.	Kevin Vanisko	Closed
Contractor work areas to have adequate warning signs and barriers for work areas. Require contractors to cordon-off work areas.	Tracie Simpson	On-going. Closed.
Establish work area delineation requirement in Contractor Safe Practices Handbook.	Spiro Zapantis	Closed
Perform contractor safety orientations as required.	Tracie Simpson	On-going. Closed.
Develop a contractor orientation checklist for District Center.	Spiro Zapantis	Closed
Include a procedure in the Safe Practices Handbook for field employees not climb over fences, walls, landscaping, or other uneven ground in customer yards. Train all field staff on requirement with photos and examples.	Spiro Zapantis	Closed
Implement a job safety walk program for meter reading staff.	Dom DeBellis	Closed
Procure more ramps.	Mike Bartzi	Closed
Procure full-sized warning signs advising traffic to go slow.	Mike Bartzi	Closed
Fabricate a rigid pipe that can be used as an alternative to a pump hose that must be run through traffic.	Mike Bartzi	O&M decided that rigid pipe may create a hazard to the public if the pipe broke. O&M procured very sturdy, heavy ramps weighing several tons that will eliminate the problem of ramp displacement.

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Procure and use hoses with quick release disconnects.	Mike Bartzi	Closed
Develop safety procedure covering use of ramps and hoses, use of a flagger, as well as closing off roadways, and include in the Excavation Guidelines.	Spiro Zapantis/Mike Bartzi	Closed
Outreach to public agencies to inform them to drive slow in construction zones, especially emergency vehicles.	Rachel Murphy/ Steve Welch	Closed. Discussed at semi-annual meeting with public agencies on 8/10/10
Request Site Safety Committee to update job hazard analysis of excavation activities.	Spiro Zapantis/Safety Committee	Closed
Include a procedure in the Safe Practices Handbook on when to call 9-1-1, and how to use hoses and ramps.	Spiro Zapantis	Closed
Train on new procedures	Spiro Zapantis	Closed
Consider employing an inspector with electrical expertise to provide oversight of electrical work.	Dan Owre	5/31/10
Develop a post electrical work communication checklist to be used whenever 100% inspection of electrical work is not performed.	Dan Owre	5/31/10
Replaced electrical panel and properly mark all circuits.	Butch Martinez to schedule	Closed
Affirm with Technicians: #1 Circuits are to be checked and verified for voltage prior to turning over for connection to a locating device. #2 Recheck isolated circuits for voltage in the event any conditions are changed; regardless of perceived effect change has on circuit.	Butch Martinez/Jan Polewaczyk	Closed

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#3 Discuss incident and roll out lessons learned information to crews during morning tailboard meeting.		
Revise SOP for locating electrical equipment.	Shawn Kelly	Closed
Update Training Matrix to include locating crew in Lock and Tag and Electrical Safety Awareness training.	Spiro Zapantis	Closed
Update Safe Practices Handbook to include procedure for confirming de-energization before handling non-insulated wiring.	Spiro Zapantis	Closed
Ensure that Proven works with its subcontractors during regular tailgate meetings to analyze hazards and pre-plan tasks that involve high hazards.	Bob Henry	Closed
Ensure regular safety communication occurs in the language of the workers at the site.	Bob Henry	Closed
Procure non-conducting probes (fiberglass probes and insulated handled probes) with blunt points for all O&M crews.	Glenn Nelson	Closed
Make new probes available at Stores.	Doug Anderson	Closed
Conduct detailed review & training on current Safe Excavation SOP	Supervisors	Closed
Revise the O&M SOP to clarify use of non-conducting probes, and hand digging around electrical lines using non-conducting tools.	Pete Schoemann	Closed
Keep Safe Excavation SOP on the crew trucks.	Supervisors, Crew Leaders	On-going
Raise the meter above grade and fill in the vault.	Mike Bartzi	9/30/10

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O&M to survey vault lids to determine which lids need to be upgraded. Generate ESR, Upgrade similar meter vault lids with less hazardous options.	Mike Bartzi, Matthew Novak	9/30/10
Discuss the incident with District technicians that work with electricity and determine whether a procedure should be established to test cabinets for hazardous voltages and using the one-hand rule when working with potentially hazardous electrical parts. Include the procedure in the Safe Practices Handbook.	Matthew Novak Spiro Zapantis	Closed
Survey all rectifier cabinets and ensure that they are properly grounded.	Matthew Novak/Stu Engle	Survey and repairs completed (except for Shortcut rectifier). Closed.
Conduct a job hazard analysis of Corrosion Control Tech duties.	Stu Engle/Scott Nelson	9/30/10
Notify PG&E management of the importance of safe electrical facilities and the District's expectations that PG&E keeps its customers and the general public safe at all times.	Pete Schoemann	Closed
Finalize a written procedure to ensure backflow devices are properly placed into service. Follow manufacturer's instructions. Consider having the Cross Connection group bear sole responsibility for putting backflow devices in service after completion of installation work and flushing by the Service Crew. Recommended outline of backflow procedures: a. Inventory and issuance. (Stores) b. Assembly and disassembly, inspection, testing and approval for installation. (Cross Connection).	Shawn Kelly; Mike Bartzi	Closed

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c. Inspection, installation, and flushing. (Distribution Maintenance).		
Ensure daily tailgate meetings are conducted and documented involving all employees of the Distribution Maintenance groups. Hazards are to be identified and communicated during tailgate meetings. Use the tailgate form found in the O&M Excavation SOP.	Mike Bartzi, Joe Piro, Shawn Kelly, Glenn Nelson	Closed. On-going.
Ensure coordination between the O&M groups. Establish a standard work scheduling process that allows for time to conduct safety discussions, inspections and written pre-task plans to help promote that safety takes priority over production.	Matthew Novak, Mike Bartzi Joe Piro	Closed. On-going.
Develop and implement a written procedure for crack sealing work that includes requirements for: a. A means of communication be in place before the start of flagging work; b. Use of cones. c. Completion of a high hazard work plan before the task, and debrief after the task or immediately after any incident.	Dan Gonsalves Cary Richardson - Merkle	Closed
Provide formal flagging training to all LV Grounds personnel.	Dan Gonsalves Spiro Zapantis	Closed
Ensure availability of adequate walkie-talkie radios for flagging operations.	Dan Gonsalves	Closed
Adjust trench alignment when near other marked utilities, so utilities could be more easily exposed by further hand excavation of trench	Crew Leader	Closed. On-going.

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sidewalls.		
Consider the revising the Safe Excavation SOP revision” to ensure it prudent to allow shallow pass excavation with backhoe bucket. Ensure equipment (i.e., flat faced bucket) is available if OK’d to use.	Pete Schoemann/ Spiro Zapantis	O&M has purchased three rubber backhoe buckets to help prevent utility damage to PG&E lines.
Ensure Engineering design drawings issued to O&M for construction are signed and stamped by an Engineer per applicable Engineering Standard Practice (ESP) requirements.	Murphy/Piro	Closed
Update Engineering Standard Practices, specifically ESP 008.0-98 and ESP 09.0-08 to remedy current inconsistencies regarding design approval responsibilities.	Murphy	Closed
Develop procedure for potential field changes (e.g., utility conflicts based on USA marks or potholing) are reviewed with Engineering, prior to implementation.	Murphy/Piro	Closed
Additional written safe working procedures in the Safe Practices Handbook for tree trimming must include a requirement to conduct a Pre-Task Plan/Hazard Analysis during a tailgate meeting for tree trimming work as well as a requirement that prohibits trimming branches contacting power lines. A prohibition for District staff to climb trees should be considered.	Spiro Zapantis	Closed
Ensure a hazard analysis is conducted prior to tree trimming work.	Dan Gonsalves	On-going, closed.
Add labels on rough terrain vehicles to remind workers to wear seat belts.	Roger Nakagawa; Steve Arnold; Dan Gonsalves	Closed

Corrective Action Plan:	Person Responsible:	Due Date:
Update the PPE requirements in the Safe Practices Handbook to require wearing helmets and neck supports for ATV and UTV operation.	Spiro Zapantis	Closed
Mount eyewash bottle on UTV.	Roger Nakagawa	Closed
Survey canal right of way terrain to determine where slopes greater than 15 degrees are located. Identify terrain hazards on maps.	Matthew Novak; Rachel Murphy	10/1/11
Arrange for hands-on UTV training. Provide training to operators of rough terrain vehicles to identify hazardous slopes.	Spiro Zapantis	8/1/11
Develop job safety evaluation curriculum for herbicide spraying activities.	Matthew Novak	8/1/11
Ensure tailgate meetings cover terrain hazards.	Roger Nakagawa	On-going. Closed.
Install inclinometers on all slope tractors and UTVs.	Roger Nakagawa, Steve Arnold, Dan Gonsalves	Inclinometers installed on UTVs. Because the tractor manufacturer does not specify a slope limit, inclinometers will not be installed. Closed.
Include the monitoring of seat belt compliance during quarterly supervisor site inspections.	All O&M and Watershed managers, superintendents, and supervisors.	On-going. Closed.
Enforce the reporting of all vehicle incidents and near misses.	All O&M and Watershed managers, superintendents, and supervisors.	On-going. Closed.
Research the use of rubber backhoe buckets.	Shawn Kelly	O&M has purchased three rubber backhoe buckets. Closed.
Construct temporary berms for excavation control of loose material rolling downhill.	Barnard	Closed

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Increase notification and communication of job site activities. In addition, District staff will determine what the hazards may be for every visitor to the site before allowing them to proceed to their work area.	Barnard (Chris Hall) & CCWD (Bob Henry)	On-Going. Closed.
Update Job Hazard Analysis for work activity to include rolling rocks as potential hazard.	Barnard	Closed
Provide a second review of ESA's LV Safety PowerPoint and communication tree with the Biologist.	ESA Field Supervisor	Closed
Provide the entire environmental team refresher training of the communication tree and the need to assess wildlife situations with ESA's Field Supervisor and CCWD.	ESA Field Supervisor	Closed
Establish animal handling procedure to call District WS&L staff or County Animal Control Services.	ESA	Closed
Instruct the contractor (Cleary Bros) to: 1. Prohibit the van driver to drive on the canal right-of-way in the future. 2. Have a spotter to direct drivers as they backed vehicles.	Jan Polewaczyk; Mike Lehman	Closed
Install reflectorized markers at the area of the incident to guide drivers away from the hazardous slope.	Mike Lehman	Closed
Instruct all LVE contractors to follow fire watch requirements found in the Contractor Safe Practices Handbook.	Bob Henry	Closed

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<p>Ensure pre-task activities involving hot work includes:</p> <ol style="list-style-type: none"> 1. Removal and/or wetting down vegetation at distances up to 75' downwind and/or use of shielding (plywood). 2. Use of a hot work permit (pre-task) checklist. 	Barnard	Closed
Develop a job safety evaluation checklist, and train and evaluate the operator's tractor mower abilities.	Dan Gonsalves; Spiro Zapantis	Checklist is completed.
Develop a written procedure requiring only manufacturer's approved parts be used for all equipment and tool repairs.	Spiro Zapantis	Closed
Develop an SOP for tractor mowing.	Dan Gonsalves; Spiro Zapantis	Complete
<p>Instruct meter readers to:</p> <ol style="list-style-type: none"> 1. use caution when lifting meter lids; 2. use their feet (steel toe shoes) along with their meter sticks when possible; and 3. carry a small flashlight with them to help in the event of poor lighting. 	Dominic DeBellis; Kathy Ringot	Complete
Develop a short procedure for the Safe Practices Handbook to remind staff to not use their hands to move meter box lids, and to replace lids correctly on boxes.	Spiro Zapantis	Complete
No work is to be assigned off Marsh Creek Rd before 9:00 AM (rush hour time)	Dan Gonsalves	Complete, on-going.
Communicate the importance of checking rear view mirrors when slowing down to field staff.	Dan Gonsalves; Spiro Zapantis	Complete, on-going.
Contact PG&E in writing (including a copy to PG&E management) expressing concern	Joe Piro; Glenn Nelson	8/31/11

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over past incidents and inform them of the need to perform accurate locates. Contact USA North to request re-marking of PG&E gas utilities.		
Update the O&M SOP – Excavation SOP to include a procedure for rubber backhoe bucket use within eight feet of utility marks.	Pete Schoemann; Spiro Zapantis	8/31/11
Remind staff at tailgates and staff meetings of the safety culture goal of “engagement.”	Pete Schoemann; Spiro Zapantis	Complete
1. Advise employee to select footwear with lower heels. 2. Instruct employee to keep eyes on her path as she walks	Rachel Martin	Complete
Conducted Safety meetings on the hazards of uneven surfaces.	Mike Lehman, Spiro Zapantis	Complete
Evaluate the snake hazard of LV boats as they are serviced and/or replaced during Marina closure. Consider putting screens over bilge openings.	Cary Richardson-Merkle, Spiro Zapantis	April 2012
Place anti-skid coating on the painted portion of the sidewalk (red curb).	Tracie Keith	Complete
Place a set of instruction on how to safely adjust tension on the garage door springs inside the LV Marina water treatment building. The instruction shall include placing a C-clamp on the garage door track just above the bottom-most roller.	Ryan Freeborn, Bob Henry	1/31/12
Place finger guards on all shoring equipment	Glenn Nelson, Dan Fitzpatrick	12/30/11
Develop a written procedure to require guards for shoring hinges.	Pete Schoemann, Spiro Zapantis	2/15/12

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Review the CCWD Safety Suggestion list and ensure that good suggestions are implemented in a timely manner.	Pete Schoemann, Spiro Zapantis	On-going
Confirm with Engineering that lighter utility boxes are specified for new projects (for non-traffic rated areas).	Rachel Murphy	2/15/12
Refine method of removing utility boxes. Develop a training guide for proper removal technique of utility boxes.	Shawn Kelly	1/31/12
Revise and finalize the SOP for removing and installing meter boxes.	Shawn Kelly	2/29/12
Investigate the cause of the valve failure and report out.	Mike Bartzi	June 2012
Research the latest technology for any possible improved powered valve turning devices that are fully portable.	Scott Nelson	July 2012
Instruct employees to not to overexert when turning difficult valves and notify their supervisor of any failed valves they find.	Scott Nelson	Complete.
The Safe Practices Handbook will be updated to instruct employees not to overexert when turning difficult valves, identify any other nearby valves that can be utilized, notify their supervisor of any failed valves they find.	Spiro Zapantis	August 2012
Arrange for valve turning ergonomics re-training.	Spiro Zapantis	March 2012
Replace existing mat with either low profile ergonomic mat or a wet surface mat with at least a 6" transition.	Tom Ramirez	Complete

Corrective Action Plan:	Person Responsible:	Due Date:
Inspect other non-slip floor mats used throughout the District and ensure they do not have a hazardous transition.	Shawn Kelly; Doug Anderson; John Parsons; Butch Martinez Daryl Hensler; Steve Arnold; Mike Lehman; Dan Gonsalves; Tracie Keith	3/31/12
Install new stainless steel pipe nipples to replace all the galvanized pieces to prevent recurrence.	Daryl Hensler	Complete
Update the Engineering Design Safety Checklist to include a review of safety critical items subject to corrosion, and train Engineering and Construction staff on these standards.	Spiro Zapantis Rachel Murphy	4/30/12
Update the Safe Practices Handbook to include a procedure to avoid being in the immediate location of industrial equipment when the equipment is remotely started.	Spiro Zapantis	August 2012
Instruct crews on property where gas meter is not adjacent to the structure or if there are multiple structures without individual gas meters that they must use the rubber backhoe bucket.	Dan Fitzpatrick	Complete
Update the O&M Excavation Safety SOP to include safe working procedures when excavating on private property.	Pete Schoemann Spiro Zapantis	May 2012
Ensure applican designs include assessment of any on-site hazzards, including underground electrical or gas utilities, by due diligence of record drawings and questioning of Applicant.	Rachel Murphy	June 2012
Install new stainless steel pipe nipples to replace all the galvanized pieces to prevent recurrence.	Daryl Hensler	Complete

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Update the Safe Practices Handbook to include a procedure to avoid being in the immediate location of industrial equipment when the equipment is remotely started.	Spiro Zapantis	August 2012
Update the Los Vaqueros Visitor Information Orientation sheet to include a restriction on driving on unimproved roads for three days after periods of heavy rain without consulting with a Watershed supervisor. Ensure that new Sheriff deputies are oriented on their first day of duty.	Mark Swisher Cary Richardson Merkle	4/30/12
Identify poison oak trouble spots along the trail and arrange to have the poison oak safely removed ASAP.	Bob Henry	5/31/12
Update poison oak training materials to include more photos of poison oak to improve hazard identification. Also, emphasize the importance of wearing long sleeves, wiping down boots after hikes, properly washing clothing, and proper washing of skin when there is suspected exposure to poison oak oil.	Richard Broad; Spiro Zapantis	Complete