



Aliso Canyon Turbine Replacement Project Construction Non-Compliance Report

Incident Date:	January 5 2016– January 7, 2016	Report No.:	NCR-10
Date Submitted:	4/26/2016	Location:	Aliso Canyon Natural Gas Storage Field
Level:	Level 3 Non-Compliance	Relevant Plan/Measure:	MMCRP; NPDES General Permit; APM GE-3; MM BR-5
Current Land Use:	Disturbed	Sensitive Resources:	Hydrology, Biology: drainages, riparian, oaks

Incident Summary:

Regulatory Setting

Southern California Gas Company (SoCalGas or SCG) obtained a National Pollutant Discharge Elimination System (NPDES) General Construction Permit (General Permit) for the Aliso Canyon Turbine Replacement (ACTR) Project, as required by the Federal Clean Water Act. This General Permit allows stormwater discharge to occur from the construction site, but includes measures and requirements to ensure water quality is not degraded, particularly from eroded soil particles. The General Permit requires SCG to implement a variety of stormwater best management practices (BMPs) and ensure their effectiveness. Included in the General Permit are protocols for sampling stormwater discharge and the Numeric Action Limit (NAL) thresholds for pH and turbidity; if NAL thresholds are exceeded, SCG is required to take corrective measures and improve BMPs. Falling outside a NAL itself is not a violation of the General Permit; however, failing to take corrective action is. Additionally, as a Risk Level 2 Discharger, SCG must also comply with a variety of Good Site Management measures for erosion, sediment control, run-on, and runoff. Attachment D: Section E of the General Permit identifies that SCG must “maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site” and Section F specifies that SCG must “effectively manage all run-on, all runoff within the site and all runoff that discharges off the site.” To facilitate compliance, the General Permit requires the development of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is a working document that is designed to be updated and improved based on BMP performance; assessment of performance occurs during weekly SWPPP inspections and inspections before, during, and after storm events by a Qualified SWPPP Practitioner (QSP).

The ACTR Project’s Mitigation, Monitoring, Compliance, and Reporting Program (MMCRP) was adopted with the approval of a Certificate of Public Convenience and Necessity by the California Public Utilities Commission (CPUC). Mitigation measures (MMs) and applicant proposed measures (APMs) within the MMCRP are required to be followed by SCG, including the following:

- APM GE-2: *Erosion and Sediment Control* requires SCG to ensure erosion and sediment control measures will be implemented that reduce the amount of soil displaced and transported to other areas by stormwater.
- MM BR-15: *Restoration of Native Oak Trees* requires SCG to “avoid and minimize impacts to oak trees resulting from project construction activities.”

The MMCRP is by definition a, “working guide to maintaining environmental compliance” and “may be revised to address the specific, day-to-day realities of project construction.” This provides flexibility for both SCG and the CPUC to evaluate APMs and

MMs for their effectiveness and work together to improve upon deficiencies that are found. The CPUC/E & E has previously made clear, through the issuance of Non-Compliance Reports (NCRs), email correspondence, and meetings, that in order to comply with the MMCRP, BMPs need to function to prevent to the greatest extent possible: (1.) erosion of the project site and areas immediately downstream of the discharge point, and (2.) the flow of sediment into drainages within the Aliso Canyon Storage Field (storage field). In particular, SWPPP compliance concerns at the two project areas involved in this NCR have been discussed on multiple occasions and the CPUC/E & E team has made clear that improvements were needed in these areas in order to fully comply (see NCRs 3, 4, 6, and 8).

Storm Details, CPUC Compliance Monitor Observations, and SWPPP Reports

A forecasted qualifying rain event (an event that produces at least 0.5 inches of rain within 48 hour or greater period, as defined by the SWPPP) occurred on January 5, 2016 and lasted until January 7, 2016. Approximately 5.7 inches of rain fell on the storage field, including on the ACTR project components. During his site visit immediately following the storm, the CPUC Compliance Monitor, Vince Semonsen, documented significant BMP failures at the PS-42 Fill Site (Fill Site)/PS-42 Well Pad (Well Pad) and below the Natural Substation.

PS-42 Fill Site and Well Pad. According to SCG, BMPs at the Fill Site were overwhelmed because a welding crew (Attachment 1 Photo 2) working on the Well Pad directly upslope from the Fill Site punched a hole through a berm intended to retain stormwater on top of the Well Pad (Attachment 1 Photo 3). The welding crew was associated with the Well Incident Relief team, a team responding to an ongoing well leak at the storage field that was not related to the ACTR project. Stormwater then drained down the slope and flowed into the retention area on the Fill Site's top tier. This additional water caused the retention basin to exceed its maximum capacity. As a result, stormwater overtopped the retention basin and ran down the center of the Fill Site slopes, causing a large swath of erosional rills to form (Attachment 1 Photos 4 and 5). Sediment laden stormwater flowed to the bottom of the Fill Site and onto the access road below the Fill Site where it filled, then overtopped, a gravel bag catchment basin before dislodging and flowing past straw wattles on its way into the drainage downslope of the access road (Attachment 1 Photos 6 and 7).

Natural Substation Area. Below the Natural Substation Access Road the CPUC Compliance Monitor documented dislodged straw wattles, mud on the access road, and deep erosional gullies in the oak swale adjacent to the project area (Attachment 1 Photos 8-12). It appeared that fast moving water flowed into the oak swale from the access road, the biofiltration unit outlet, and the rip rap on the east side of the access road.

SCG's SWPPP contractor, Geosyntec, collected stormwater samples at several project locations in the storage field including: Guardhouse, Central Compressor Station, Wellhead P-37, Wellhead P-32, Kiewit Trailer, and the proposed Office Building location. However, samples were not collected at or near the PS-42 Fill Site, PS-42 Well Pad, or Natural Substation because, according to SCG, "heavy rain, dense fog, and flooding" limited safe access to these locations.

Non-Compliance

PS-42 Fill Site

BMP failures at the PS-42 Fill Site have occurred several times previously and are documented in NCRs 6 and 8. In December 2015, the CPUC Compliance Monitor, Vince Semonsen, raised concerns about the adequacy of installed BMPs at this location. On December 23, he told SCG's Consultant Compliance Manager, Amandeep Singh, that diversion pipes were not being directed into the culvert at the bottom of the Fill Site would likely result in stormwater runoff onto the road and into the drainage during a large storm. During his December 30, 2015 site visit Mr. Semonsen spoke with SCG's Environmental Coordinator, Seth Rosenberg, and SCG's SWPPP contractor, Trevor Marshall, about runoff and erosion concerns at the bottom of PS-42 Fill Site. These staff expressed to Mr. Semonsen that SCG was comfortable with the BMP measures that were in place and gave no indication they would add or improve BMPs in this location.

Inspection after the January 5-7, 2016 storm revealed:

- Erosion occurred on the slopes of the PS-42 Fill Site and the access road at the base of the Fill Site,
- Sediment was likely carried by stormwater from the PS-42 Fill Site into the drainage below,
- BMPs were not adequate to prevent erosion, and
- SCG did not address the specific concern raised by the CPUC Compliance Monitor during December 2015.

While stormwater discharge was not sampled at the PS-42 Fill Site location during this storm event, BMP failures and resulting

erosion (Attachment 1 Photos 4-7) strongly indicate performance standards were not met. By failing to prevent erosion, SCG was out of compliance with APM GE-2 and Attachment D Section F Run-on and Run-off Controls of the Construction General Permit. Repeatedly failing to prevent erosion or install adequate BMPs at the PS-42 Fill Site constitutes a level 3 non-compliance.

Natural Substation Area

Previous SWPPP and BMP failures at the Natural Substation Area are documented in NCRs 3, 4, and 8. BMPs that were intended to prevent erosion in this area were in place prior to the January 5-7, 2016 storm; however, they were insufficient to adequately reduce the energy and control the volume of water discharged into the oak swale below the Natural Substation. While discharge into the oak swale was not directly observed and water quality not tested during this storm event due to safety reasons, evidence of BMP failures, deep erosion gullies throughout the oak swale, and mud accumulation on the Natural Substation Access Road (Attachment 1 Photos 8-12) strongly indicate that the mechanisms in place to control stormwater did not meet the project's required performance standard for APM GE-2. Additionally, according to MM BR-15: Restoration of Native Oak Trees, the project is required to "avoid and minimize impacts to oak trees resulting from project construction activities." Severe erosion can expose roots and destabilize oak trees which may lead to impacts on oaks. Erosion gullies observed in the oak swale after the January 5-7, 2016 storm placed risk of impacts on the oak trees and did not meet the performance standard for MM BR-15.

By failing to prevent erosion, install adequate BMPs, or effectively minimize risk of impacts on oak trees, SCG was out of compliance with APM GE-2, Attachment D: Section E Sediment Controls and Section F Run-on and Runoff Controls of the Construction General Permit, and MM BR-15. Repeatedly failing to prevent erosion, install adequate BMPs, and minimize impacts to oak trees constitutes a level 3 non-compliance.

Pertinent Plans/Permits/Mitigation Measures:

- By failing to provide adequate BMPs to prevent erosion at various locations around the project site, SCG violated APM GE-2
- By failing to minimize risk of impacts from erosion on oak trees in the oak swale, SCG violated MM BR-15
- By failing to effectively manage run-on and runoff that discharges from the ACTR project site, SCG violated Attachment D: Section E-*Sediment Control* and Section F-*Run-on and Runoff Controls* of the NPDES Construction General Permit for Risk Level 2 Dischargers
- By failing to ensure compliance with project APMS and MMs, SCG violated their responsibilities identified in the MMCRP

Proposed Resolution:

BMP failures and resulting erosion were reported to the CPUC Compliance Manager by the CPUC Compliance Monitor immediately following the January 7 site visit. Upon hearing of BMP failures the CPUC/E & E team scheduled and held a call with SCG and SCG's SWPPP contractor, Geosyntec, on January 13, 2016, to discuss the effects of the storm and coordination between the Well Incident Relief team and ACTR personnel. During the call SCG stated the Well Incident Relief team did not coordinate with ACTR personnel prior to breaching the Well Pad berm and that BMP failures at the Fill Site would not have occurred without the berm breach. SCG expressed regret about the lack of coordination and said ACTR personnel had contacted the Well Incident Relief team and would begin to coordinate closely. Questions regarding BMP failure remained unanswered and the CPUC/E & E continued to have compliance concerns related to the storm after the January 13 call.

A follow up call to continue the discussion with SCG was held on January 28, 2016. In addition, the CPUC/E & E team sent questions to SCG asking for additional information regarding outcomes of the storm and statements outlining the CPUC/E & E's understanding of BMP failures. During the call SCG requested additional time to respond to the CPUC/E & E's questions. SCG responded to the CPUC/E & E's questions on February 3, 2016 (Attachment 2). SCG's response included documentation of improvements made to the PS-42 Fill Site and an explanation of how it is meeting compliance standards.

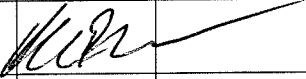
In a follow-up email sent to SCG on February 9, 2016, the CPUC/E & E requested that SCG prepare a plan for how SCG would repair erosion in the oak swale and revise the SWPPP to add measures that would prevent future erosion in the oak swale (Attachment 3). Two days later, on February 11, 2016 the CPUC Compliance Monitor discussed several concerns about drainage at the Natural Substation with SCG's Environmental Coordinator and they discussed possible solutions (Attachment 4).

SCG provided the CPUC with the requested plan on February 22, 2016 (Attachment 5) which included:

1. Installation of bio-degradable coconut straw blankets and site-derived aggregate across and within the erosion

- channels formed in the oak swale; and
2. Implementation of one of three options for installing a stormwater conveyance to the biofiltration unit during large storms (Attachment 6).

The CPUC/E & E team was satisfied with SCG's plan for repairing the erosion in the oak swale and SCG installed these improvements in this area. The CPUC/E & E team is still reviewing the options SCG presented for upgrading stormwater drainage.

Approvals	Date	Name (print)	Signature	Comments
CPUC Compliance Manager	4/26/2016	Lara Rachowicz		
CPUC Compliance Monitor (if applicable)				
CPUC Project Manager (if applicable)	4/24/16	Andrew Barnsdale		
SoCalGas/SCE Environmental Compliance Manager (if applicable)				

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