



Aliso Canyon Turbine Replacement Project Construction Non-Compliance Report

Incident Date:	<u>December 15 to 29, 2016</u>	Report No.:	<u>NCR-12</u>
Date Submitted:	<u>2/28/2017</u>	Location:	<u>Aliso Canyon Natural Gas Storage Field</u>
Level:	<u>Level 3 Non-Compliance</u>	Relevant Plan/Measure:	<u>MMCRP; NPDES General Permit (SWPPP); APM GE-2</u>
Current Land Use:	<u>Disturbed</u>	Sensitive Resources:	<u>Hydrology, Biology: drainages, riparian</u>

Incident Summary:

Regulatory Setting

Southern California Gas Company (SCG) has obtained a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction and Land Disturbance Activities 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. As a Risk Level 2 Discharger, SCG must 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.”

The NPDES General Permit requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) by a Qualified SWPPP Developer (QSD). The goal of the SWPPP is to protect overall water quality during construction activities and identify BMPs which will minimize the transport of contaminants or sediment to receiving waters. SCG’s SWPPP requires weekly inspections of the construction site by the Qualified SWPPP Practitioner (QSP), and at least one inspection each 24-hour period during extended storm events. During these inspections the QSP identifies and records BMPs that need maintenance or improvements (BMP deficiencies) and provides recommendations. The SWPPP further requires that within 72-hours of identification of failures or shortcomings, SCG shall begin implementing repairs or design changes to BMPs and complete the changes as soon as possible.

In addition, 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 implemented 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.

The MMCRP details that APM GE-2 and other measures (MM BR-5, APM HZ-5) require the effective implementation of the SWPPP.

Effective implementation of the SWPPP and other measures in the MMCRP, including APM GE-2, are required to reduce environmental impacts as identified in the project's Final Environmental Impact Report (EIR). In particular, potentially significant impacts on biology (impact BR-3), soils (impact GE-5), and hydrology (impacts HY-1, HY-3, HY-5, HY-6, and HY-8) were reduced to less than significant in the EIR through the effective implementation of the SWPPP and/or APM GE-2.

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/Ecology and Environment, Inc. (E & E) Team has previously made clear, through the issuance of Non-Compliance Reports (NCRs), email correspondence, and meetings, that in order to properly 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 project area involved in this NCR, in particular the runoff below the Natural Substation, have been discussed previously 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, 8, and 10).

Site Hydrology

During rain events, stormwater flows down the paved Natural Substation access road and is diverted into a biofiltration system and then into an oak swale. The biofiltration system and rip rap in the upper oak swale were designed to dissipate the energy of the water to an extent and catch sediment if present. Once the water flows beyond the rip rap in the oak swale, there is a steep drop where the water gains speed in a concentrated area, and then it drops onto the TSP-A2 access road (also called the 12kV access road). The TSP-A2 access road is part of the 12kV component of the ACTR project. Since last winter the TSP-A2/12kV access road has been improved and graded, and as a result, stormwater from the oak swale began traveling down this steep dirt access road.

CPUC December 6-7, 2016 Site Visit

The CPUC/E & E Team visited the Aliso Canyon Storage Field on December 6 and 7, 2016 to view and discuss SCG's preparations for the rainy season. Since last winter's storms SCG has installed a paved water bar on the Natural Substation access road to divert water into the biofiltration system. SCG has also repaired the rills in the oak swale below the Natural Substation (e.g., installed netting and rip rap), as previously requested by the CPUC. Also since last winter SCG has installed TSP-A2, which required widening and grading the access road and creating a crane pad.

At the time of the December 6-7, 2016 site visit, SCG confirmed that no BMPs had been installed on the steep area where stormwater flows out of the oak swale, despite concerns previously raised by the CPUC/E & E Team during the 2015-16 rainy season. During the site visit, the CPUC/E & E Team again expressed concern that fast moving stormwater through the steep area below the oak swale could cause erosion and sedimentation. SCG then informed the CPUC/E & E team that SCG's Pipeline Integrity Group intended to repair and stabilize this area and had monies set aside; however, SCG staff onsite did not know when these repairs would take place. The CPUC/E & E Team was unable to inspect the area during the site visit because a crew was working on the TSP-A2 access road.

Mid-Late December 2016 Storm Details

During mid to late December 2016 several forecasted qualifying rain events (an event that produces at least 0.5 inches of rain within 48 hours or greater period, as defined by the SWPPP) occurred at the storage field.

December 15-16 Storms. The first of these storms was December 15-16 and SCG reported 2.5 inches of rain. SCG conducted a 24-hour storm inspection on Friday December 16 and identified several BMP deficiencies, including sediment on the paved road that leads to the TSP-A2/12kV access road (Attachment 1: Photo 1). Photo 2 shows a close-up of some of the sediment that came off the access road; the BMPs in this photo do not appear to have sufficiently captured sediment. SCG noted in the SWPPP inspection that maintenance was scheduled for Monday December 19. Photos from December 19 indicate that the sediment was cleared off the road and from straw wattles and check dams. In response to the large amount of sediment that ran off the access road, SCG placed gravel check dams along a rill that formed (Photo 3).

The CPUC/E & E Team emailed (Attachment 2) SCG on December 21 to inquire if the maintenance items scheduled for December 19 were completed and if there was a plan for inspections over the upcoming holiday weekend. SCG confirmed that the maintenance items were completed and no additional BMPs were identified as needed following the December 15-16 storm. However, the BMP improvements made after the December 15-16 storm did not appear sufficient to prevent erosion and sedimentation in following storms, even after the CPUC/E & E Team expressed concern during the December 6-7 site visit and in the December 21 email.

December 21-27 Storms. On December 21 another storm began, which produced 0.95 inches over 12 hours. SCG conducted a 24-hour inspection on December 22. The inspection report indicated no BMP deficiencies or additional BMPs implemented. No photos were provided for this inspection.

SCG reported to the CPUC/E&E Team in their December 21 email (Attachment 2) that since the rain event of December 21-22 and the upcoming predicted rain event for December 23-24 were within 48 hours, the conditions of their SWPPP consider these one storm. Because the QSP conducted a 24-hour inspection on December 22, and no construction would occur from December 23 to 26, the QSP would conduct the post-storm inspection on December 27. On December 27, SCG noted an additional 2.4 inches for a total of 3.35 inches over the December 21-27 time period. The post-storm SWPPP inspection report on December 27 and the BMP tracker do not indicate sediment on the paved road below the TSP-A2/12kV access road; however, SCG's photo (Photo 4) does show part of the paved road covered in sediment.

December 29 CPUC/E & E Compliance Monitor Inspection. On December 29 the CPUC/E & E Compliance Monitor visited the storage field and reported that erosion had occurred above and on the TSP-A2/12kV access road and sediment appeared to have traveled off the road and down toward Limekiln Creek. There was evidence that erosion occurred within the oak swale below the Natural Substation and continued all the way down the TSP-A2/12kV access road. The CPUC/E & E Compliance Monitor noted that the access road was badly eroded with deep rills up to 2 feet deep (Photo 5). It appeared from remaining mud and sediment that muddy water and sediment then traveled from the access road to the parking area below, across the Limekiln Creek bridge, and to the base of the Central Compressor Station, where the water ponded (Photos 6-8). The CPUC/E & E Compliance Monitor also noted that mud had accumulated on the edge of the creek, indicating that muddy water and sediment likely flowed into the creek (Photo 9).

During his December 29 visit, the CPUC/E & E Compliance Monitor also inspected the crane pad near TSP-A2 and did not report problems with BMPs or erosion, which indicates that the water going down the TSP-A2 access road likely originated from the oak swale and not from the crane pad area. In addition, he inspected the Natural Substation access road, biofiltration system, and upper oak swale and reported that the biofiltration system did not overflow, as it did at times during the 2015-16 rainy season. SCG had not implemented any measures to address the issue of potential erosion below the oak swale despite multiple discussions (see documentation in NCR-10 and the CPUC Site Visit discussion above).

Non-Compliance

Previous BMP failures at the Natural Substation area are documented in NCRs 3, 4, 8, and 10. NCR 10 documented concerns about the amount of water coming from the paved Natural Substation area into the oak swale. NCR 10 specifically documented concerns about the amount of water coming from the paved Natural Substation area into the oak swale. While SCG has implemented BMPs to stabilize the Natural Substation area in response to the CPUC/E & E Team's concerns during the 2015-16 rainy season, the large amount of stormwater entering the oak swale from the Natural Substation area is still a concern. Stormwater appears to drop steeply at the base of the oak swale, pick up speed, and run onto the TSP-A2/12kV access road area below. The CPUC Compliance Monitor provided evidence (described above) that the water flowing down and off the TSP-A2/12kV access road likely originated from the oak swale and likely caused erosion and sedimentation off the road. The deep erosion rills on the TSP-A2/12kV access road, the sediment remaining on the road and in the parking area, the sediment remaining below the CCS, and the mud accumulated on the stream bank strongly indicate that the mechanisms in place to control stormwater did not meet the project's required performance standard for APM GE-2. APM GE-2 and the SWPPP must be implemented effectively in order to reduce impacts from erosion and sedimentation on biological, geological, and hydrological resources to a less than significant level, as required by the MMCRP and as described in the Final EIR.

Despite previous NCRs and a recent CPUC/E & E Team site visit (December 6-7, 2016), the area below the oak swale remained a concern and did not contain BMPs. Erosion from the first storm on December 15-16 indicated that runoff was coming from the oak swale and the TSP-A2/12kV access road; however, SCG failed to install adequate BMPs in response to this storm. The second, multi-day storm of December 21-22 and 23-24, resulted in additional erosion and sediment runoff that could have been reduced or prevented had adequate BMPs been previously installed. Repeatedly failing to control erosion and sedimentation and install adequate BMPs constitutes a level 3 non-compliance.



Pertinent Plans/Permits/Mitigation Measures:

- By failing to adequately "maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site" and "effectively manage all run-on, all runoff within the site and all runoff that discharges off the site," SCG did not follow their NPDES General Permit.
- By failing to implement adequate BMPs to control erosion and sedimentation on and around the project site, SCG was out of compliance with APM GE-2.
- By failing to effectively implement their SWPPP and APM GE-2, SCG did not follow the Aliso Canyon Turbine Replacement Project's Mitigation Monitoring Compliance and Reporting Plan (MMCRP).

Proposed Resolution:

The CPUC/E & E Team is currently working with SCG to control the stormwater in this project area. Since December 27, SCG has installed additional BMPs to temporarily prevent erosion and sedimentation, including straw wattles and gravel bags along the dirt access road to TSP-A2 (Photo 10) and a silt fence below the oak swale (see Attachment 2). The CPUC/E & E Team will continue to monitor and assess if the temporary measures are sufficient.

In addition, the CPUC requires that SCG provide a plan and schedule for a permanent solution in the area at the base of the oak swale and below within two weeks of receipt of this NCR.

Approvals	Date	Name (print)	Signature	Comments
CPUC Compliance Manager	2/6/17	Lara Rachowicz		
CPUC Compliance Monitor (if applicable)				
CPUC Project Manager (if applicable)	2/8/17	Andrew Barnsdale		
SoCalGas/SCE Environmental Compliance Manager (if applicable)				

Prepared by: Jenny Vick, Lara Rachowicz

Date: 2/1/17

Attachment 1

Photographs taken by SCG and the CPUC Compliance Monitor



Photo 1: Stormwater runoff from the 12kV/TSP-A2 access road (in distance) onto the paved road. Sediment from the TSP-A2 dirt access road appears to have been moved by stormwater and deposited on paved road. December 16, 2016 (photo by SCG)



Photo 2: Sediment build-up on straw wattles at the base of the 12kV/TSP-A2 access road, where it meets the paved road. December 19, 2016 (photo by SCG)



Photo 3: Gravel bag check dams placed along a rill that was formed by stormwater erosion. December 20, 2016 (photo by SCG)



Photo 4: Sediment on the paved road below the TSP-A2 access road and sediment accumulated on check dams. December 27, 2016 (photo by SCG)



Photo 5: 12kv/TSP-A2 access road with deep rills. December 29, 2016 (photo by CPUC)



Photo 6: Erosion and rills where the oak swale meets the 12kv/TSP-A2 access road. December 29, 2016 (photo by CPUC)



Photo 7: Sediment traveled from the TSP-A2 access road, in the background, through the parking area. December 29, 2016 (photo by CPUC)



Photo 8: Sediment accumulated at the base of the CCS. December 29, 2016 (photo by CPUC)



Photo 9: Sediment accumulated near the upper retention pond and likely flowed into the pond. December 29, 2016 (photo by CPUC)



Photo 10: SCG installed straw wattles and gravel bags. December 29, 2016. (photo by SCG)