



Aliso Canyon Turbine Replacement Project Construction Non-Compliance Report

Incident Date:	<u>November 12 – December 31, 2014</u>	Report No.:	<u>NCR-06</u>
Date Submitted:	<u>10/09/2015</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; APM GE-2; MM BR-5; MM BR-14</u>
Current Land Use:	<u>Disturbed (Fill Site)</u>	Sensitive Resources:	<u>Drainage; Hydrology, Biology, Geology</u>

Description of Incident:

Overview

During November 2014, the California Public Utilities Commission (CPUC)/Ecology and Environment, Inc. (E & E) Team raised compliance concerns with the Southern California Gas Company (SCG) about the absence of temporary Storm Water Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs) at the PS-42 Fill Site. While permanent erosion control measures were part of PS-42's final design, the project's SWPPP did not clearly identify temporary BMPs or a timeframe for installation of them for this area. On November 12, the compliance team requested an updated SWPPP from SCG that included these missing details. SCG expressed confidence in its ability to rapidly install BMPs given a forecasted storm. SCG addressed the compliance team's concerns in a series of follow up e-mails during the week of November 17 included an updated SWPPP and explanations of additional temporary BMPs, and a timeframe for installation (Attachment 1). SCG indicated BMP installation would be complete by November 25. During his site visit on that date, the CPUC Compliance Monitor noted installation was not completed. While some effort was being made to secure the PS-42 Fill Site, SCG underestimated the level of effort and quantity of BMPs needed to secure the site, which led to damaging erosion and sedimentation during December storms.

Three storms occurred between December 1 and 17, each with varying intensity and duration. During and after the storms, erosion and sedimentation both on site and off was documented by the CPUC Compliance Monitor and in photographs made during the Monitor's weekly compliance visits. While BMP deficiencies and maintenance items were observed throughout project sites at the Aliso Canyon Natural Gas Storage Field (Storage Field), the PS-42 Fill Site was the largest area exposed and subject to the highest levels of erosion. In the days leading up to and those occurring after the storms, Weekly SWPPP reports and Weekly Compliance Reports from the Compliance Monitor document multiple instances of BMPs that were inadequate, missing, or improperly secured. Reports document significant erosion and sedimentation that occurred in areas where BMPs failed or where not installed (Attachment 2).

The CPUC/E&E Team clearly expressed to SCG that proactive and comprehensive BMP installation would be necessary to avoid erosion and sedimentation problems during storms. SCG responded slowly to these concerns and did not effectively prevent erosion and sedimentation. Additionally, the Weekly SWPPP reports written by SCG's Qualified SWPPP Practitioner (QSP) identified BMP deficiencies that were not addressed for several weeks (Attachment 3). SCG did not comply with the Good Site Management measures required as part of the project's Clean Water Act National Pollutant Discharge Elimination System General Construction Permit or adhere to the required timeline to initiate and complete repairs or design changes.

In addition, the CPUC/E&E team consulted with the California Department of Fish and Wildlife (CDFW) on December 16 to discuss the possibility that SCG would need a Lake and Streambed Alteration (LSA) Agreement per Fish and Game Code Section 1602 for adversely affecting fish or wildlife resources due to deposition of soil, rock, or other materials that may have passed or may pass into the drainage below the PS-42 Fill Site. SCG's biologists believed that the CDFW jurisdictional area began "immediately below" the base of SCG's project area (below rip-rap) at the base of the PS-42 Fill Site (Attachment 4). Although SCG reported to the CPUC that no impacts would occur to CDFW's jurisdictional area and thus no consultation with CDFW was necessary, CDFW highly recommended that SCG submit a Notification of LSA so that CDFW could assess if SCG needed an LSA Agreement and if upstream runoff significantly negatively affected the drainage. SCG submitted their application for Notification of LSA on December 31. On March 2, an Operation of Law letter was sent to SCG indicating that the CDFW missed their legal timeframe to respond and thus SCG did not have to obtain an agreement for the project described in their Notification.

Regulatory Setting

SCG obtained a National Pollutant Discharge Elimination System (NPDES) General Construction Permit (General Permit) for the Aliso Canyon Turbine Replacement Project, as required by the Federal Clean Water Act. This General Permit allows storm water 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 storm water BMPs and ensure their effectiveness. Included in the General Permit are protocols for monitoring storm water discharge samples and Numeric Action Limit (NAL) thresholds, which if exceeded, require SCG to take corrective measures and improve BMPs. Falling outside the identified 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 comply with a variety of Good Site Management measures for erosion and sediment control. To facilitate compliance, the General Permit also requires the development of a SWPPP. Weekly SWPPP reports, Rain Event Action Plans (REAPs), and NAL Exceedance Reports are prepared by the Qualified SWPPP Practitioner (QSP). The QSP focuses exclusively on ensuring BMPs are satisfactory and that the project is in compliance with the General Permit. When failures are identified by the QSP, dischargers are required to begin implementing repairs or design changes to BMPs within 72 hours and complete the action as soon as possible.

Storm Details

Three forecasted storms occurred during December 2014 at the Aliso Canyon Natural Gas Storage Field. Storm 1 began on December 1, lasted 54 hours and dropped 3.13 inches of rain. Storm 2 began on December 11, lasted approximately 17.5 hours, and dropped at least 2.75 inches of rain. Storm 3 started on December 16, lasted approximately 25 hours, and dropped at least 0.75 inches of rain. Each storm was a forecasted significant rain event with the potential to cause runoff and erosion. The SWPPP requires sampling and the implementation of the REAP, which protects all exposed portions of the site within 48 hours of any precipitation event forecast of 50% or greater probability. A Numeric Action Level Exceedance Report was completed for Storm 1 and Storm 2.

Storm 1 (December 1-3)

Prior to Storm 1 multiple reports and correspondence by the CPUC with SCG identified exposed dirt slopes that needed stabilization and BMPs (Attachment 1). The REAP, completed on November 25, contained maps and engineering diagrams with demarcations for BMP installation throughout the site. In this report and the Weekly SWPPP written on the same day, it was recommended that the PS-42 Fill Site receive additional straw wattles. Photographs of the PS-42 Fill Site show approximately 30 feet of exposed soil at the toe of the slope. A Weekly SWPPP report prepared hours prior to the start of the storm again identified the same need for more straw wattles at the PS-42 Fill Site. This report also documented exposed slopes without BMPs at other work sites at the Storage Field.

Per the SWPPP guidelines, the QSP visited the site during the storm on December 2 to sample at the designated Observation Sample Points 1-C, 3-C, 5-C, 7-C, 10-C, 12-C, 16-C, and 20-C throughout the Storage Field (Attachment 5). Samples were taken at seven of the eight sampling locations. Sampling location 20-C, below the PS-42 Fill Site, was reported inaccessible due to dangerous conditions. Of the seven sites sampled, five of them exceeded the NAL for turbidity and one exceeded the NAL for pH. A NAL Exceedance report was written for December 2, and included a list of existing BMPs for each location where exceedances occurred and recommendations for additional BMPs. The QSP visited the site again on December 3 and visited the same seven sampling locations. Locations 16-C, 5-C, and 3-C had no effluent to sample. Locations 10-C and 1-C were not sampled. Location 20-C was inaccessible due to dangerous road conditions. Locations 12-C and 7-C were sampled and did not exceed the NALs. In the December 4 Post-Storm SWPPP report, numerous BMP deficiencies were documented and accompanied by photographs. Several BMP deficiencies were noted throughout the Storage Field including: washed out berm and erosion downslope at PS-42 Fill Site, and washed out straw wattles at the PS-42 Access Road. Several deep

erosion gullies were present at the PS-42 Fill Site due to drain outlets flowing directly onto destabilized slopes.

During his December 3 site visit, the CPUC Compliance Monitor also documented significant erosion and sedimentation at the PS-42 Fill Site. Photos taken from the bottom of the PS-42 Fill Site show numerous straw wattles dislodged and erosion gullies down the center of the Fill Site; debris and sediment accumulated on the lower access road for the site; and erosional gullies below the lower access road directed toward the drainage below (Attachment 2). An unknown amount of muddy water and eroded material traveled past the partially-completed rip-rap site and down into the channel that drains into Limekiln Creek. During the site visit the Compliance Monitor recommended redesigning the BMPs for this area. The CPUC Compliance Team contacted SCG on December 2 and again on December 4 with a data request regarding SCG's proposed rip-rap installation below PS-42 Fill Site Access Road (which would dissipate storm water energy prior to discharge), additional SWPPP measures for the Fill Site, use of diversion piping, and presence of a California Department of Fish and Wildlife jurisdictional water.

Storm 2 (December 11-12)

On December 8, the QSP conducted their weekly site visit and reported numerous BMP deficiencies throughout the Storage Field. Some of these were recurring problems identified previously, but not fixed. Straw wattles at the PS-42 Fill Site were damaged and needing replacement, and additional rows of sandbags on the south side of the PS-42 Fill Site Access Road above the rip-rap were still necessary. At the bottom of the PS-42 Fill Site, plastic sheeting was recommended to replace the blown out straw wattles. At the time of the visit, crews were connecting corrugated plastic drainpipe to the existing drains near the top of the PS-42 Fill Site in order to redirect runoff directly onto the rip-rap below the site.

On December 9, the QSP completed a REAP for a storm forecasted to occur on December 11 in the evening. This REAP contained updated engineering designs with numerous additional BMPs indicated for the PS-42 Fill Site. Improvements included: plastic sheeting near the bottom where flows concentrate, completion of corrugated plastic drain pipe installation, gravel bag check dams installed down the center of the site, and straw wattles on exposed east and west slopes.

The CPUC's Compliance Monitor's report from December 11 noted corrugated diversion piping, straw wattles, and plastic sheeting on bottom slope of the site had been installed at the PS-42 Fill Site. The QSP also completed a Pre-Storm SWPPP report on December 11. This report recommended additional straw wattles at the Central Compressor Station, Management and Crew-Shift offices, and the P-41, PS-42, P-32, and P-43 fill sites. Photos taken during the visit by the QSP indicated BMP installation/maintenance was actively occurring at the PS-42 Fill Site.

During the storm on December 12, the QSP conducted sampling at the Storage Field. Storm water samples were taken at sampling sites 1C, 5C, 12C, 16C, and 20C. Multiple samples were taken for sampling sites where flow was present throughout the day. Averaging the discharge measurements showed NAL exceedances for turbidity occurred at sites 5C, 12C, 16C, and 20C. NAL exceedances for pH occurred at 12C. Sampling site 7C was not accessible due to flooding.

Storm 3 (December 16-17)

After the previous storm a Post-Storm SWPPP inspection occurred on December 15 (with the corresponding report written on December 18) and a REAP was completed on December 15 for a storm forecasted to arrive late that evening and continue through December 17. The SWPPP report identified numerous BMPs in need of repair at the Storage Field and documented several corrective actions that were noted complete on December 16. Rain began to fall in the early morning of December 16; however, the rain was light and the QSP was only able to sample outflow from 12-C, 20-C, and at the Bio-filter at the Admin/IM building. The area upslope of 7C flooded again and was not accessible. No NAL exceedances were recorded. After the storm, on December 17, another SWPPP report documented several BMP maintenance items at the PS-42 Fill Site including overtopped gravel bag berms, gravel bags washed down slope, damaged plastic at the bottom of the PS-42 Fill Site, and an overtopped earthen berm at the top.

After the last storm in December and during three weekly site visits on between the 16th and 31st, the CPUC Compliance Monitor noticed similar recurring BMPs requiring maintenance to the QSP. Recurring issues at the Storage Field identified in either the Weekly SWPPP or CPUC monitoring reports from the second half of December included two items at the PS-42 Fill Site: plastic sheeting in disrepair at the bottom of the fill site, and gravel bag and straw wattle maintenance on the access road below the fill site (Attachment 3).

Summary

Beginning in early November, the CPUC/E&E Team communicated regularly with SCG regarding the importance of BMPs and

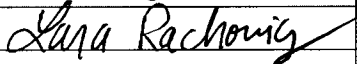
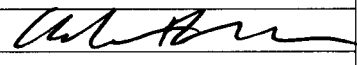
storm water management implementation; however, SCG did not establish a comprehensive and effective plan for implementation before the December storms. Multiple instances of missing BMPs or those in a state of consistent disrepair are documented. Forecasted storms in December overwhelmed installed BMPs and caused severe erosion where BMPs were missing. Coordination between SCG's contractors, environmental team, and construction management was insufficient to ensure that proper protocol was followed before the storms. Although SCG made efforts to improve BMPs and follow the SWPPP before and between December storms, they were neither timely enough nor sufficient. Monitoring by the QSP of storm water discharge document water with high levels of sediment leaving Storage Field project components at several locations after two different storms. Erosion and sedimentation appeared severe at several locations where sampling could not take place due to unsafe conditions. This was the case below the PS-42 Fill Site, where clear signs of erosion remained following storms. Sedimentation into the drainage below the PS-42 Fill Site may have been damaging. Had sampling taken place at these locations, additional exceedances would have been likely. This incident had the potential to cause (and may have caused) major environmental risk to environmental resources. Therefore, this constitutes a Level 3 Non-Compliance.

Pertinent Plans/Permits/Mitigation Measures:

- By failing to provide adequate BMPs to prevent erosion at the PS-42 Fill Site and sediment deposition onto the road below, SCG violated APM GE-2. In addition, SCG may have violated MM BR-5 and MM BR-14 by failing to prevent erosion on the slopes above a drainage.
- By failing to ensure compliance with project APMs and mitigation measures, SCG violated their responsibilities identified in the MMCRP and MPR-2.
- By failing to promptly address identified BMP deficiencies and maintenance items required in the Storm Water Pollution Prevention Plan, SCG did not follow their NPDES General Permit.

Proposed Resolution:

The CPUC/E&E team contacted SCG several times during November and December regarding BMP implementation and monitoring. An updated SWPPP with planned temporary BMPs at the PS-42 Fill Site and a timeline for installation was requested from SCG and submitted by them on November 20. SCG installed BMPs, primarily straw wattles, before the first December storm and added additional BMPs in-between December storms; however, the CPUC/E&E Team expressed that they were still concerned about unprotected areas in the Storage Field that needed additional BMPs. The CPUC/E&E requested that SCG include SWPPP reports written by the QSP in their weekly update. Additionally, it was requested that SCG notify the California Department of Fish and Wildlife (CDFW) of the drainage below the PS-42 Fill Site and begin the assessment process to determine if a Lake or Streambed Alteration Agreement would be required. SCG submitted their notification to the CDFW on December 31, 2014.

Approvals	Date	Name (print)	Signature
CPUC Compliance Manager	10/08/15	Lara Rachowicz	
CPUC Compliance Monitor (if applicable)			
CPUC Project Manager (if applicable)	10/8/15	Andrew Barnsdale	
SoCalGas/SCE Environmental Compliance Manager (if applicable)			

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Date: 7/22/15