13. Summary of Mitigation Measures and Monitoring Requirements

The mitigation measures introduced in Sections 6 through 11 of this Specialist Report for Air Quality are presented below in Table 13-1 (Mitigation Monitoring Program – Air Quality), which provides a summary of how each mitigation measure should be implemented and evaluated for effectiveness.

Table 13-1. Mitigation Monitoring Program – Air Quality

Mitigation Measure	Location	Monitoring Requirement	Determination of Effectiveness	Timing of Action
Impact AQ-1: Construction emissions would exceed the SCAQMD, AVAQMD, and/or KCAPCD regional emission thresholds				
AQ-1a: Implement Construction Fugitive Dust Control Plan. SCE shall develop a Fugitive Dust Emission Control Plan (FDECP) for construction work. The plan shall be completed prior to construction and approved by the CPUC and FS. This Plan is in addition to any fugitive dust control plan required by SCAQMD. Measures to be incorporated into the plan shall include, but are not limited to the following: -Non-toxic soil binders, equivalent or better in efficiencies than the CARB approved soil binders shall be applied per manufacturer recommendations to active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction to reduce fugitive dust emissions. On NFS lands, SCE shall obtain FS approval of any soil binders to be used. -Unpaved road travel will be limited to the extent possible by; limiting the travel of heavy equipment in and out of the unpaved areas (move from construction site to construction site rather than back to marshalling or staging areas daily); through carpooling/busing construction workers to the maximum feasible extent; and by developing travel routes to each construction site that minimize unpaved road travel to the extent possible, according to FS or other regulatory agency road use restriction. The FDECP will include a road travel plan applicable for construction sites with unpaved access greater than one mile. -Water the disturbed areas of the active construction sites at least three times per day and more often if uncontrolled fugitive dust is noted. -Enclose, cover, water twice daily, and/or apply non-toxic soil binders according to manufacturer's specifications to exposed piles with a five percent or greater silt content. -Maintain unpaved road vehicle travel to the lowest practical speeds, and no greater than 15 miles per hour (mph), to reduce fugitive dust emissions. -All vehicle tires shall be inspected, are to be free of dirt, and washed as necessary prior to entering paved roadways. -Install wheel washers or wash the wheels of trucks and other heavy equipment where vehicles exit unpaved access to the construction sites. -Cover all trucks hauling soil and other loose material, or	Entire Project	• Prior to construction, SCE shall submit a construction FDECP to the CPUC and FS for review and approval. • SCE shall incorporate the requirements of the FDECP into the plans and specifications, and require compliance by the construction contractor. • CPUC and/or FS will monitor compliance at construction areas.	• PM10 and PM2.5 emissions are reduced. • Effectiveness can be determined by monitoring implementation of the control measures detailed in the FDECP.	Prior to and during construction.

Table 13-1. Mitigation Monitoring Program – Air Quality

Mitigation Measure	Location	Monitoring Requirement	Determination of Effectiveness	Timing of Action
require at least two feet of freeboard. -Establish a vegetative ground cover (in compliance with biological resources impact mitigation measures) or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites within 21 days after active construction operations have ceased. -Increase the frequency of watering, if water is used as a soil binder for disturbed surfaces, or implement other additional fugitive dust mitigation measures, to all active disturbed fugitive dust emission sources when wind speeds (as instantaneous wind gusts) exceed 25 mph. SCAQMD Rule 403 Best Available Control Measures (BACM) are required to be proposed in the FDECP and implemented when and if the BACM are as strict or stricter than the control measures listed above. Additionally, mitigation measures provided on the SCAQMD CEQA website Tables XI-A through XI-E (http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html or as updated by SCAQMD) must be implemented in the FDECP where applicable. This mitigation measure covers construction work performed within all three local air quality jurisdictions.				
AQ-1b: Off-road Diesel-fueled Equipment Standards. All off-road construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 50 hp, that engine shall have tailpipe retrofit controls that reduce exhaust emissions of NOx and PM to no more than Tier 2 emission levels. Tier 1 engines will be allowed on a case-by-case basis only when the Project owner has documented that no Tier 2 equipment or emissions equivalent retrofit equipment is available for a particular equipment type that must be used to complete the Project's construction. This shall be documented with signed written correspondence by the appropriate construction contractor along with documented correspondence with at least two construction equipment rental firms. Equipment properly	Entire Project	• Prior to construction, SCE shall submit a list of diesel-fueled off-road equipment to the CPUC and FS indicating compliance. • If Tier 2 equipment is not available for any off-road engine larger than 50 hp, SCE will submit records to indicate either: (1) that retrofit equipment has been added to the engine, or (2) that no Tier 2 equipment or emissions equivalent retrofit equipment is available for a particular equipment type.	• NOx, PM, VOC, and CO emissions are reduced.	Prior to and during construction.

Table 13-1. Mitigation Monitoring Program – Air Quality

Mitigation Measure	Location	Monitoring Requirement	Determination of Effectiveness	Timing of Action
registered under and in compliance with CARB's Statewide Portable Equipment Registration Program are in compliance with this mitigation measure.				
AQ-1c: Limit Vehicle Traffic and Equipment Use. Construction worker carpooling will be encouraged and other vehicle trips and equipment use will be limited to the extent practical by efficiently scheduling staff and daily construction activities to minimize the use of unnecessary/duplicate equipment when possible.	Entire Project	• SCE will require compliance by the construction contractor. • Compliance will be verified by the onsite monitor.	• Exhaust emissions from Project construction are minimized to the extent feasible.	During construction.
AQ-1d: Heavy Duty Diesel Haul Vehicle On-road Equipment Standards. Require the use of 2006 engines or pre-2006 engines with CARB certified Level 3 diesel emission controls for all on-road heavy duty diesel haul vehicles that are contracted on a continuing basis for use to haul equipment and waste for the Project.	Entire Project	• Prior to construction, SCE shall submit evidence of CARB certified Level 3 diesel emission controls to the CPUC and FS for on-road heavy duty diesel haul vehicles to be used during construction.	• NOx, PM, VOC, and CO emissions are reduced.	Prior to and during construction.
AQ-1e: On-road Vehicles Standards. All on-road construction vehicles, other than those meeting the requirements of measure AQ-1d (Heavy Duty Diesel Haul Vehicle On-road Equipment Standards), shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to construction worker personal vehicles.	Entire Project	• Prior to construction, SCE shall submit California registration and SMOG certification to the CPUC and FS for all on-road vehicles to be used during construction, with the exception of those vehicles meeting the requirements of measure AQ-1d.	• NOx, PM, VOC, and CO emissions are reduced.	Prior to and during construction.
AQ-1f: Properly Maintain Mechanical Equipment. The construction contractor shall ensure that all mechanical equipment associated with Project construction is properly tuned and maintained in accordance with the manufacturer's specifications.	Entire Project	• SCE shall provide maintenance records to the CPUC and FS upon request.	• Mechanical equipment is properly maintained, which reduces NOx emissions. • NOx and PM emissions are reduced.	Prior to and during construction.
AQ-1g: Restrict Diesel Engine Idling to 5 Minutes. Diesel engine idle time shall be restricted to no more than 5 minutes. Exceptions are vehicles that need to idle as part of their operation, such as concrete mixer trucks.	Entire Project	• Onsite monitor will verify compliance at construction sites.	• NOx, PM, VOC and CO emissions are reduced.	During construction.
AQ-1h: Schedule Deliveries Outside of Peak Traffic Hours. All material deliveries to the marshalling yards and from the marshalling yards to the construction sites shall be scheduled outside of peak traffic hours (6:00 to 9:30 am and 3:30 to 6:30 pm) to the extent feasible, and other truck trips during peak traffic hours shall be minimized to the extent feasible.	Entire Project	• SCE shall submit delivery schedules to the CPUC and FS at appropriate intervals to verify that deliveries are scheduled outside of peak traffic hours. • Onsite monitor will verify compliance at construction areas.	• Traffic in areas where material deliveries occur remains generally free-flowing, as verified by the onsite monitor.	During construction.

Table 13-1. Mitigation Monitoring Program – Air Quality

Mitigation Measure	Location	Monitoring Requirement	Determination of Effectiveness	Timing of Action
AQ-1i: Off-Road Gasoline-Fueled Equipment Standards. As practicable, all off-road stationary and portable gasoline powered equipment shall have EPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in affect two years prior to the initiating Project construction. In the event that EPA Phase 1/Phase 2 compliant engines are determined not to be practicable, SCE shall provide documentation to the CPUC and FS with an explanation.	Entire Project	• Prior to construction, SCE shall submit a list of gasoline-fueled off-road equipment to the CPUC and FS indicating compliance.	• CO, NOx, and VOC emissions are reduced.	Prior to and during construction.
AQ-1j: Reduction of Helicopter Emissions. Helicopter use will be limited to the extent feasible and helicopters with low emitting engines shall be used to the extent practical.	Segments 6 and 11	• SCE shall submit a monthly helicopter use log including expected hours of operation, type of helicopter, and purpose of use to the CPUC and FS for review and approval.	• NOx emissions reduced.	Prior to and during construction.
AQ-1k: Waste Soil Trip Distance Minimization(Alt 4C Modified Only). The haul trip distances for the switchyard construction waste soil shall be minimized to the extent feasible by working with other agencies to identify the closest locations for reuse (sand and gravel plants) or disposal of the waste soil.	Alternative 4C Modified	• Prior to construction, SCE shall submit documentation to the CPUC of coordination with local agencies to identify the nearest locations for reuse or disposal of waste soil.	• Construction emissions are reduced.	Prior to and during construction.
AQ-1l: Waste Soil Truck Capacity (Alt 4C Modified Only). Double trailer trucks with a minimum total effective capacity of 20 cubic yards will be used to haul the switchyard construction waste soil.	Alternative 4C Modified	• Onsite monitor will verify compliance at construction sites.	• Construction emissions are reduced.	Prior to and during construction.
AQ-1m: Tunnel Waste Trip Distance Minimization. The haul trip distances for the waste soil and rock from tunneling shall be minimized to the extent feasible by working with other agencies to identify the closest locations for reuse (sand and gravel plants) or disposal of the tunneling soil and rock wastes.	Alternative 5	• Prior to construction, SCE shall submit documentation to the CPUC of coordination with local agencies to identify the nearest locations for reuse or disposal of soil and rock wastes.	• Construction emissions are reduced.	Prior to and during construction.
AQ-1n: Tunnel Waste Truck Capacity. Double trailer trucks with a minimum total effective capacity of 20 cubic yards will be used to haul the tunneling waste soil and rock.	Alternative 5	• Onsite monitor will verify compliance at construction sites.	• Construction emissions are reduced.	During construction.
Impact AQ-3: Construction of the Project would expose sensitive receptors to substantial pollutant concentrations				
Mitigation Measures AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.

Table 13-1. Mitigation Monitoring Program – Air Quality

Mitigation Measure	Location	Monitoring Requirement	Determination of Effectiveness	Timing of Action
Impact AQ-6: The Project would not conform to Federal General Conformity Rules				
AQ-6: General Conformity Emission Offset Mitigation (Alt 6 Only). In the event that the final emission estimate for the selected Project alternative as provided in the Project's Conformity Analysis exceeds the NOx and/or VOC emission applicability thresholds, and assuming the SCA QMD does not provide confirmation that the Project's emissions are accounted for in the State Implementation Plan (SIP) emission estimates per 40 CFR §93.158(a)(1), then the Project will obtain emission reduction credits to fully offset the NOx and/or VOC emissions per 40 CFR §93.158(a)(2) for the years that the Project has been estimated to exceed the NOx and/or VOC emission applicability thresholds. Credits shall be submitted to the CPUC and FS for review and approval.	Entire Project	FS will monitor compliance.	NOx and/or VOC emissions would be offset if standards are exceeded.	Post-construction.
Impact AQ-8: The Project would not conform to Angeles National Forest air quality strategies				
Mitigation Measures AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.	Please refer to AQ-1a through AQ-1j, above.
Impact AQ-9: The Project would not conform with applicable Air Quality Management Plans				
Mitigation Measures AQ-1a, AQ-1b, and AQ-1d, above.	Please refer to AQ-1a, AQ-1b, and AQ-1d, above.	Please refer to AQ-1a, AQ-1b, and AQ-1d, above.	Please refer to AQ-1a, AQ-1b, and AQ-1d, above.	Please refer to AQ-1a, AQ-1b, and AQ-1d, above.