4. Impact Analysis Approach

This section explains how potential impacts associated with the proposed Project are assessed with regards to Air Quality. Section 4.1 presents the significance criteria on which impact determinations are based. Section 4.2 discusses Applicant Proposed Measures (APMs) presented in the Proponent's Environmental Assessment (PEA). Section 4.3 presents the impact assessment methodology used in this analysis. All impacts identified for the proposed Project and alternatives are presented in Sections 5 through 11.

4.1 Criteria for Determining Impact Significance

The air quality significance criteria were developed considering the CEQA significance criteria developed by the local air quality districts in the Project area, approved CEQA air quality checklists, and considering other federal criteria. NEPA regulations do not provide specific air quality significance criteria, and the local air quality district CEQA significance criteria is more stringent than the air quality significance criteria generally used in EIS documents (such as the PSD 250 ton/year emission thresholds).

Regional Air Quality Significance Criteria

CEQA allows for the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. The SCAQMD, AVAQMD, and KCAPCD have adopted regional thresholds of significance for construction activities and for project operations as shown below in Table 4-1. As a conservative approach, the most stringent of these standards in each jurisdiction would apply to the proposed Project.

Table 4-1. Air Quality Regional Thresholds

Criteria Pollutant	Antelope Valley AQMD		South Coast AQMD		Kern County APCD	
	Construction or Operation		Construction	Operation	Construction or Operation	
	tons/year [1]	lbs/day	lbs/day	lbs/day	Tons/year	lbs/day
Carbon Monoxide (CO)	100	548	550	550	---	---
Oxides of Nitrogen (NOx)	25	137	100	55	25	137 [2]
Particulate Matter (PM10)	15	82	150	150	15	--
Fine Particulate Matter (PM2.5)	---	---	55	55	---	---
Oxides of Sulfur (SOx)	25	137	150	150	27	--
Volatile Organic Compounds (VOC)	25	137	75	55	25	137 [2]

1 – The annual limit is no more restrictive than the daily limit (annual limit is 365 times the daily limit), so the daily limit will be used for impact determination within the AVAQMD jurisdiction.
2 – Indirect vehicle trip emissions only. The Project does not create indirect trip generation, such as a housing project, so the Project does not have the potential to create significant impacts for this KCAPCD significance criteria.
Source: SCAQMD 2009, AVAQMD 2005, and KCAPCD 1999.

Localized Air Quality Significance Criteria

In addition to the thresholds provided in Table 4-1, the SCAQMD recommends additional localized significance thresholds (LSTs) for toxic air contaminants (TACs), odors, and ambient air quality (see Table 4-2).

Table 4-2. Localized Significant Thresholds for the South Coast AQMD	
Criteria Pollutant	Toxic Air Contaminants (TACs) and Odor Thresholds
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment)
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402
	Ambient Air Quality for Criteria Pollutants [a]
NO2 1-Hour Average Annual Average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (State) 0.03 ppm (federal)
PM10 - 24-Hour Average	10.4 μg/m^3 (recommended for construction) [b] 2.5 μg/m^3 (operation)
PM2.5 - 24-Hour Average	10.4 μg/m^3 (recommended for construction) [b] 2.5 μg/m^3 (operation)
CO 1-Hour Average 8-Hour Average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (State) 9.0 ppm (State/federal)

Source: SCAQMD 2008.
Notes: lbs/day = pounds per day; ppm = parts per million; ug/m^3 = micrograms per cubic meter; ≥ greater than or equal to
a. Ambient air quality threshold for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
b. Ambient air quality threshold based on SCAQMD Rule 403.

Specific onsite emission thresholds have been developed for assessment of the LSTs for specific criteria pollutants (NOx, CO, PM10, and PM2.5) within the SCAQMD jurisdiction. These thresholds are determined by Sensitive Receptor Areas (SRAs), within the South Coast Air Basin portion of SCAQMD's jurisdiction. The proposed Project and Project alternative construction covers seven separate SRAs (8, 9, 10, 11, 15, 16 and 33). The specific construction emission thresholds, based on the distance to sensitive receptors for these seven SRAs are listed in Table 4-3.

The LST thresholds for CO are too high (minimum value of 535 lbs/day) to be exceeded for any given single construction site, so there is no potential for localized CO impacts from the Project construction.

The normal operating emissions will be comprised of inspection and maintenance activities that will not have emissions in any one location high enough to create a localized impact. Therefore, only construction emissions are evaluated with respect to the SCAQMD LSTs, and only for NOx, PM10, and PM2.5 emissions.

Note that ozone is not included in Tables 4-1, 4-2, and 4-3. Ozone is not directly emitted from stationary or mobile sources; rather it is formed as the result of chemical reactions in the atmosphere between directly emitted air pollutants, specifically oxides of nitrogen (NOx) and hydrocarbons (VOCs). Therefore, it cannot be directly regulated, like its precursors, NOx and VOCs.

Table 4-3. Applicable SCAQMD LST Emission Thresholds (lbs/day)												
SRA #	Pollutant											
	NOx			CO			PM10			PM2.5		
	Site Acres			Site Acres			Site Acres			Site Acres		
	1	2	5	1	2	5	1	2	5	1	2	5
25 meters to receptor												
8	69	98	148	535	812	1540	4	6	12	3	4	7
9	89	128	203	727	1112	2022	5	7	14	3	5	8
10	118	170	270	576	833	1475	4	6	12	3	4	7
11	83	121	183	673	1031	1814	5	7	14	4	5	9
15	106	152	228	590	877	1644	4	6	12	3	4	6
16	103	147	221	496	724	1246	4	6	11	3	4	6
33	118	170	270	863	1232	2193	5	6	16	4	5	9
50 meters to receptor												
8	69	95	141	783	1125	1921	11	19	37	4	5	9
9	112	151	227	1102	1568	2683	14	22	43	5	7	11
10	148	200	302	858	1279	2033	11	18	36	4	6	9
11	84	118	176	760	1143	1984	13	22	43	5	8	12
15	107	148	219	879	1256	2095	12	19	38	4	5	8
16	104	143	212	637	938	1607	10	17	34	4	6	9
33	148	200	303	1328	1877	2978	14	19	50	6	8	12
100 meters to receptor												
8	81	104	151	1158	1594	2599	27	34	53	7	9	14
9	159	200	286	2233	2852	4294	34	42	63	9	12	17
10	211	263	378	1640	2165	3477	26	33	51	7	10	15
11	96	126	184	1113	1554	2549	29	37	59	9	12	19
15	124	160	233	1294	1787	2922	25	32	52	7	9	13
16	121	156	226	941	1295	2112	24	31	49	9	11	15
33	211	263	378	2423	3218	5188	44	34	80	12	14	21
200 meters to receptor												
8	104	124	166	2229	2785	4119	58	66	85	18	21	27
9	251	284	368	5604	6601	8867	75	84	105	22	26	35
10	334	377	487	4093	4802	6605	57	64	82	18	21	28
11	123	147	202	2110	2660	4024	60	68	91	20	24	34
15	161	190	256	2500	3108	4608	51	59	79	18	20	26
16	159	186	249	1834	2270	3347	53	60	78	20	24	34
33	334	378	486	5691	6778	9611	103	66	140	32	36	45
500 meters to receptor												
8	164	175	208	7270	7957	9857	152	160	180	77	82	93
9	489	513	584	23063	24758	29411	199	207	229	94	100	116
10	652	684	778	17890	19082	22091	148	156	175	75	80	93
11	193	206	245	6884	7530	9342	153	162	186	83	89	104
15	254	271	321	8174	8933	11049	131	139	161	74	80	95
16	252	269	317	6064	6612	8129	137	145	165	74	79	95
33	652	684	778	23065	24768	29410	280	160	322	141	150	170

Source: SCAQMD, 2008.
Values are for 1/2/5 acre active sites and are determined based on the minimum distance from the construction site to sensitive receptors.

Federal General Conformity Significance Criteria

In addition to the regional and local significance criteria, the General Conformity Rule applicability 'deminimus" emission levels shown in Table 4-4, would apply to the project areas in federal jurisdiction and

control that are in nonattainment of the NAAQS. That the appropriate area for General Conformity consideration is limited to direct emissions and indirect emissions that: "(1) Are caused by the Federal action, but may occur later in time and/or may be further removed in distance from the action itself but are still reasonably foreseeable; and (2) The Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency." (40 CFR §51.852; 40 CFR §93.152) Therefore, the General Conformity Rule is not applicable to the Kern County portion of the MDAB for this project, nor portions of project within the SoCAB or Antelope Valley portion of the MDAB that are not constructed on the ANF or USACE lands.

Table 4-4. General Conformity Applicability Emission Levels

Area	NOx and VOC[1]	PM10	CO and PM2.5 and SO_2
South Coast Air Basin	25 tons/year	70 tons/year	100 tons/year
Antelope Valley Portion of MDAB	100 tons/year	N/A	N/A

1 – The SoCAB and the Antelope Valley Portion of the MDAB have been requested to be re-classified as extreme and severe nonattainment of the federal 8-hour ozone standard, respectively; however, EPA has rendered a decision on these requests.
N/A – not applicable.

In addition to the General Conformity de minimus levels provided above, rule applicability is triggered when a project has regionally significant emissions, defined in 40 CFR §93.152 as being 10 percent or more of a nonattainment or maintenance area's emission inventory for that pollutant. The annual emissions from this construction project would be well below 10 percent of the annual emission inventories for all criteria pollutants in the SoCAB or Antelope Valley Portion of the MDAB.

Greenhouse Gas Significance Criteria

The ARB and SCAQMD are working on establishing recommended GHG CEQA significance criteria; however, these efforts are not yet finalized. Additionally, the work being done by ARB and SCAQMD focus on residential and commercial or industrial projects and are not particularly relevant or applicable to large energy or energy infrastructure projects that promote electricity sector-wide GHG emission reductions. Therefore, considering the lack of other responsible state or local agency formalized GHG significance criteria that would be applicable to this type of project, have determined that the project would create a significant GHG impact if the project would result in greenhouse gas emissions that substantially exceed baseline greenhouse gas emissions and that following construction would not impel a regional reduction in GHGs.

Significance Criteria Summary

For this analysis both CEQA checklist criterion and the criterion discussed above were considered to create a list of significance criteria. The Project may result in significant impacts if:

- Criterion AIR1: The Project would generate emissions of air pollutants that would exceed any SCAQMD, AVAQMD, or KCAPCD regional air quality standard as defined in Table 4-1.
- Criterion AIR2: The Project would generate emissions of air pollutants that would exceed any SCAQMD localized significance threshold as defined in Tables 4-2 and 4-3.
- Criterion AIR3: The Project would generate toxic air contaminant emissions that would exceed SCAQMD risk thresholds as defined in Table 4-2.
- Criterion AIR4: The Project would result in non-compliance with the Federal General Conformity Rule (40 CFR Parts 6, 51, and 93) requirements.
- Criterion AIR5: The Project would expose a substantial number of people to objectionable odors.
- Criterion AIR6: The Project would conflict with air quality provisions of the Angeles National Forest Strategy.
- Criterion AIR7: The Project would be inconsistent with the current approved Air Quality Management Plans.

- Criterion AIR8: The Project would result in greenhouse gas emissions substantially exceeding baseline greenhouse gas emissions and following construction would not impel a regional reduction in GHGs.

The proposed Project's emissions, specifically the construction dust emissions, could also impact sensitive plant species and create temporary visual impacts; however, implementing mitigation as required to address these criterions will effectively mitigate air quality impacts on biological communities and visual resources.

4.2 Applicant-Proposed Measures (APMs)

The Applicant-Proposed Measures (APMs) are shown in Table 4-5 (SCE, 2007).

Table 4-5. Applicant-Proposed Measures – Air Quality

APM AQ-1	Use Ultra-low sulfur diesel fuel (e.g., <15 ppm).
APM AQ-2	Use of clean burning on- and off-road diesel engines. Where feasible, heavy duty diesel powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) would be utilized. (see proposed Mitigation Measure AQ-1b)
APM AQ-3	Construction workers will carpool when possible. (see proposed Mitigation Measure AQ-1a and AQ-1c)
APM AQ-4	Restrict vehicle idling time to less than 10 minutes whenever possible. (see proposed Mitigation Measure AQ-1g)
APM AQ-5	Properly maintain mechanical equipment. (see proposed Mitigation Measure AQ-1f)
APM AQ-6	Use particle traps and other appropriate controls to reduce diesel particulate matter (DPM) where possible. Utilize equipment such as specialized catalytic converters (oxidation catalysts) to control approximately 20 percent of DPM, 40 percent of carbon monoxide, and 50 percent of hydrocarbon emissions. (see proposed Mitigation Measure AQ-1b)
APM AQ-7	Implement feasible fugitive dust control measures as provided in KCAPCD's Rule 402 and AVAQMD and SCAQMD Rule 403. (see proposed Mitigation Measure AQ-1a)
APM AQ-8	As feasible, restrict construction operations during the morning hours and during high wind events when NO_X emissions are more likely to contribute to O_3 formation. (see proposed Mitigation Measure AQ-1a)
APM AQ-9	Efficiently schedule staff and daily construction activities to minimize the use of unnecessary/duplicate equipment when possible. (see proposed Mitigation Measure AQ-1c)

Many of these proposed measures do not provide definitive requirements, do not ensure measurable emission reductions, and are not enforceable as written. Hence, some of these measures, as noted in Table 4-5, have been replaced and/or rewritten in Mitigation Measures provided in Section 6.1. APM AQ-1 is now a California regulatory requirement and so does not have to be provided as a mitigation measure.

4.3 Impact Assessment Methodology

The air quality impacts of the proposed Project are discussed below under subheadings corresponding to each of the significance criterion presented in the preceding section. The analysis describes the impacts of the proposed Project related to air quality and, for each criterion, determines whether implementation of the proposed Project would result in significant impacts.

The operating emissions from the proposed Project and all Project alternatives are comprised of occasional inspection and maintenance activities and no new stationary source operating emission sources will be constructed/operated as part of this Project. Overhead line inspection and maintenance activities currently occur on the existing transmission lines that this Project would affectively replace, and some minor new inspection and maintenance activities will occur for the new line segments. Therefore, the proposed Project would create minor incremental operating emissions along new line segments, but not create incremental operating emissions along existing line segments, nor create the potential for significant operating emission

impacts. The operating emissions are essentially identical for most of the Project alternatives, as they do not substantially increase in length, but there would be an increase for maintaining the underground transmission route associated with Alternative 5. Additionally, a minor increase in emissions is anticipated from unauthorized use of the additional service roads being constructed.

The Project would also indirectly reduce emissions in the SoCAB or elsewhere by reducing the amount of power that would have to be generated using polluting technologies. Not considering the indirect emission reduction of the Project, the normal operating emissions would only include an hour or two of incremental small helicopter use or the use of a crew truck for a few days to conduct line inspection or underground maintenance activities, and these incremental maintenance activities would be well below SCAQMD, AVAQMD, KCAPCD emission significance criteria. A more thorough documentation of the operating emissions is provided under the Impact AQ-2 discussions later in this section.

For the purposes of satisfying CEQA requirements, the significance of each impact is also identified according to the following classifications: Class I: Significant impact; cannot be mitigated to a level that is less than significant; Class II: Significant impact; can be mitigated to a level that is less than significant; Class III: Adverse impact; less than significant; and Class IV: Beneficial impact.