4.5 Air Quality

This section evaluates the potential impacts of the Moosa 100K Alternative on air quality. This evaluation includes an assessment of the direct, indirect, construction-related, long-term and cumulative effects of the Moosa 100K Alternative on air quality within the San Diego Air Basin (SDAB). The evaluation is based on the air quality technical report prepared by Scientific Resources Associated (SRA, 2007), which is included as Appendix B to this EIR/EIS. Potential effects resulting from the release of "greenhouse gases" (primarily carbon dioxide) and the relationship of these gases to global climate change can be found in Section 8.7 (Potential Effects on Global Warming) of this EIR/EIS.

4.5.1 Affected Environment

4.5.1.1 Environmental Setting

The following section describes the existing air quality conditions within San Diego County and the Moosa 100K study area.

The nearest ambient air quality monitoring stations to the Moosa 100K study area are in Escondido (approximately 15 miles) and downtown San Diego (approximately 40 miles). Table 4.5-1 presents ambient air pollutant concentrations measured at the Escondido and San Diego stations during the period 2003-2005.

4.5.1.2 Regulatory Setting

Because the Moosa 100K Alternative is in the same air basin as the Proposed Action, refer to Section 3.5.1.2 (Air Quality for the Proposed Action) of this EIR/EIS for a discussion of federal, state, and local plans, policies, and regulations relevant to air quality that also apply to the Moosa 100K Alternative, including the federal and state Clean Air Acts that promulgate Ambient Air Quality Standards; the General Conformity Rule, as adopted by the San Diego Air Pollution Control District (APCD) in Rule 1501 (Conformity of General Federal Actions); the California Air Toxics "Hot Spots" Information and Assessment Act; the San Diego County Regional Air Quality Strategy (RAQS); Section 6318 of the San Diego County Zoning Ordinance; and Section 87.428 of the San Diego County Grading Ordinance.

4.5.2 Project Design Features

General Conditions and Standard Specifications that will be included in the project construction documents to reduce air quality impacts associated with construction and operation of the Proposed Action are summarized in Section 1.9.2 (Introduction, Air Quality) of this EIR/EIS. Refer to Section 3.5.2 (Air Quality for the Proposed Action) for a list of project design features that also apply to the Moosa 100K Alternative.

Table 4.5-1. Ambient Background Concentrations in parts per million (ppm) (unless otherwise indicated)

Pollutant	Averaging Time	2003	2004	2005	Most Stringent Ambient Air Quality Standard	Monitoring Station	Standard Exceeded?
Ozone (O_3)	8 hour	0.083	0.086	0.079	0.070	Escondido	Yes
	1 hour	0.105	0.099	0.095	0.09	Escondido	Yes
Carbon Monoxide (CO)	8 hour[(1)]	10.64	3.61	3.10	9.0	San Diego	No
	1 hour[(1)]	12.7	6.3	5.9	20	San Diego	No
Nitrogen Dioxide (O_2)	Annual	0.020	0.018	0.016	0.053	Escondido	No
	1 hour	0.135	0.080	0.076	0.25	Escondido	No
Sulfur Dioxide ($SO_{2)}$	Annual	0.004	0.004	0.002	0.030	San Diego	No
	24 hour	0.008	0.008	0.007	0.04	San Diego	No
	1 hour	0.036	0.042	0.040	0.25	San Diego	No
Particulate Matter (10 microns) (PM_{10})	Annual Average	32.7	27.3	23.9	20 $\mu g/m^3$	Escondido	Yes
	24 hour[(1)]	179	57	42	50 $\mu g/m^3$	Escondido	Yes
Particulate Matter (2.5 microns) ($PM_{2.5)}$	Annual Average	14.2	14.1	12.3	12 $\mu g/m^3$	Escondido	Yes
	24 hour[(1)]	69.2	67.3	43.1	35 $\mu g/m^3$	Escondido	Yes

[(1)] Highest values measured during the Cedar Fire event in 2003.
Note: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.
Sources: CARB, 2005; EPA, 2005

4.5.3 Direct and Indirect Effects

4.5.3.1 Thresholds of Significance

Thresholds used to evaluate potential air quality impacts for the Moosa 100K Alternative are the same as those used to evaluate impacts for the Proposed Action. The thresholds are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G; and the San Diego APCD regulations. A significant air quality impact would occur if the Moosa 100K Alternative would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Expose sensitive receptors (e.g., schools, day care centers, hospitals, resident care facilities, retirement homes) to substantial pollutant concentrations.
4. Create objectionable odors affecting a substantial number of people.
5. Exceed the pollutant emission thresholds as indicated in Table 4.5-2.
6. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Table 4.5-2. Screening Level Criteria for Air Quality Impacts

Pollutant	Pounds/hr	Pounds/day	Tons/year
Volatile Organic Compounds (VOC) [1]	-	137	15
CO	100	550	100
NO_x [2]	25	250	40
Oxides of Sulfur (SO_x) [3]	25	250	40
PM_{10}	-	100	15
$PM_{2.5}$ [2]	-	55	10

[1] The evaluation of O_3 is based on the standard practice of evaluating emissions of VOC and NO_x, which are O_3 precursors.
[2] This screening criterion is derived from the SCAQMD significance thresholds.
[3] SDAB has been in attainment of SO_x standard due to sulfur-free natural gas for electricity generation and lack of heavy industrial/manufacturing uses in the region.
Source: City of San Diego, 2004.

4.5.3.2 Impact Analysis

Methodology

Refer to Section 3.5.3.2 (Air Quality for the Proposed Action) of this EIR/EIS for a discussion of the methodology used to evaluate air quality impacts associated with the Proposed Action that also applies to the Moosa 100K Alternative, including the basis for significance determinations for each of the six thresholds listed above.

As described in Section 2.3.2, construction for the Moosa 100K Alternative is comprised of several components. These components are as follows:

- Moosa Dam
- Drain/Fill Pipeline from Moosa Dam to Second Aqueduct
- Pump Station at Moosa Creek
- Interconnection between Moosa Pipeline and Second Aqueduct
- Relocation of First Aqueduct west of Moosa Dam
- Pump Station and Water Line for VCMWD (North)
- Pump Station and Water Line for VCMWD (South)
- Relocation of Public Roads and Electrical Systems

As such, the construction phasing, techniques, equipment usage, workforce, and scheduling for the Moosa 100K Alternative would necessarily be different than that of the Proposed Action. The Moosa 100K Alternative has been evaluated at the same level of analytical detail as is required for the Proposed Action, with certain exceptions noted below (i.e., SIP conformity).

Analysis

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan

SIP and RAQs Conformity

Along with the Proposed Action, project alternatives, if selected, would be subject to San Diego APCD Rule 1501, Conformity of General Federal Actions. Therefore, an evaluation of the applicability of the rule to the Moosa 100K Alternative was conducted. The maximum annual construction scenario was identified based on an evaluation of the construction schedule to determine which construction phases would be constructed in a single year. The Year 2010 was identified as the maximum construction scenario for both the on-site quarry options and the off-site quarry option. The emissions from the on-site quarry options represented the maximum annual emissions scenario. A summary of the estimated annual construction emissions for the project construction, along with an evaluation of construction emissions versus the federal *de minimis* thresholds for nonattainment and maintenance pollutants in the SDAB (i.e., CO, NO_x, and VOCs) is presented in Table 3-62 of Appendix B to this EIR/EIS.

Emissions of nonattainment pollutants are below the *de minimis* thresholds for VOCs, but above the *de minimis* threshold for CO and NO_x. Furthermore, emissions associated with the Moosa 100K Alternative would be higher than for the Proposed Action. Accordingly, a conformity determination is required to demonstrate that emissions of CO and NO_x for the Moosa 100K Alternative would conform with the SIP.

Based on the 2010 estimated annual emissions reported for the SDAB, off-road diesel-powered construction equipment NO_x emissions are estimated at 18.15 tons per day, and on-road vehicle emissions are estimated at 82.74 tons per day. The total heavy construction equipment emissions for the maximum simultaneous construction scenario for the Moosa 100K Alternative are 260.32 tons/year or 0.74 tons per day assuming 350 days per year, which amounts to 4.1 percent of the off-road emissions budget in the current SIP. The total vehicular emissions for the maximum simultaneous construction scenario are 4.36 tons/year or 0.0125 tons per day assuming 350 days per year, which amounts to 0.015 percent of the vehicular emissions budget in the current SIP. The emissions are thus a small portion of the total SIP emissions budget for off-road equipment and on-road vehicles, and are well within the budget for these sources. The NO_x emissions are, therefore, accounted for in the SIP budget estimates for construction, and the project would be consistent with the SIP.

Based on the 2010 estimated annual emissions reported for the SDAB, off-road diesel-powered construction equipment CO emissions are estimated at 9.15 tons per day, and on-road vehicle emissions are estimated at 438.05 tons per day. The total heavy construction equipment emissions for the maximum simultaneous construction scenario for the Moosa 100K Alternative are 125.29 tons/year or 0.36 tons per day assuming 350 days per year, which amounts to 3.9 percent of the off-road emissions budget in the current SIP. The total vehicular emissions for the maximum simultaneous construction scenario are 13.8 tons/year or 0.039 tons per day assuming 350 days per year, which amounts to 0.009 percent of the vehicular emissions budget in the

current SIP. The emissions are thus a small portion of the total SIP emissions budget for off-road equipment and on-road vehicles and are well within the budget for these sources. The CO emissions are, therefore, accounted for in the SIP budget estimates for construction and the project would be consistent with the SIP.

Based on a review of the current SIP inventory of emissions associated with construction, the emissions associated with the Moosa 100K Alternative would be within the SIP emissions budget and the project would conform with the SIP.

Stationary sources would comply with the San Diego APCD Rules and Regulations and would thus meet the requirements for stationary source control measures required by the RAQS. Therefore, the Moosa 100K Alternative would be consistent with the RAQS, and conflicts with this applicable air quality plan would be less than significant.

Construction emissions associated with the Moosa 100K Alternative would not conflict with or obstruct implementation of the SIP and the RAQS. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation

Construction Impacts

Construction impacts would include emissions associated with heavy equipment exhaust, construction truck traffic, worker travel to/from the site, and fugitive dust created by grading and truck travel on dirt roads. As described under the Methodology above, construction for the Moosa 100K Alternative is comprised of several components. Based on an assumed schedule for the purposes of analysis, the maximum construction activity would occur in 2010. Table 4.5-3 provides a summary of the estimated maximum daily construction emissions associated with these activities for the Year 2010 worst-case construction period (i.e., simultaneous occurrence of the above construction components), which would exceed the quantitative significance thresholds for CO, NO_x, PM_{10}, and $PM_{2.5}$. Therefore, air quality impacts associated with exceedance of the daily CO, NO_x, PM_{10}, and $PM_{2.5}$ emissions thresholds resulting from worst-case (simultaneous) construction activities for the Moosa 100K Alternative would be significant.

CO "Hot Spots"

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." As discussed in Section 4.16 of this EIR/EIS, the Moosa 100K Alternative would result in additional traffic to the site; therefore, a CO "hot spots" analysis was conducted, consistent with the evaluation identified in Section 3.5.3.2 of this EIR/EIS.

As evaluated in Section 4.16.3.2, construction traffic from the Moosa 100K would significantly contribute to LOS F conditions at the following intersections: Lilac Road/Betsworth Road (PM peak hours); and I-15 Southbound Ramps/Gopher Canyon Road (AM and PM peak hours).

Table 4.5-3. Worst-Case (Simultaneous) Maximum Construction Emissions: Moosa 100K Alternative (lbs/day)[(1)]

Construction Phase	CO	VOCs	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Moosa Dam						
Earthwork	408.32	14.75	263.65	0.22	172.22	13.45
Clearing	72.07	14.15	175.88	0.21	9.86	7.74
Foundation	155.69	30.85	341.19	0.53	16.91	14.94
Outlet	37.49	7.84	73.28	0.15	5.11	3.73
Drain/Fill Pipeline from Moosa Dam to Second Aqueduct						
Clearing	44.72	8.15	97.24	0.18	4.59	3.86
Excavation	47.89	4.11	98.94	0.16	54.28	14.31
Pipe Installation	77.12	9.03	159.61	0.29	10.79	7.29
Pump Station at Moosa Creek						
Excavation	52.80	4.70	111.74	0.19	5.23	4.43
Electric Power	9.12	0.71	14.75	0.02	0.60	0.54
Relocation of First Aqueduct West of Moosa Dam						
Excavation	50.38	4.60	110.40	0.19	55.20	14.89
Pipe Installation (Trenching)	71.77	6.74	146.72	0.26	10.18	6.70
Tunneling	78.33	6.20	151.76	0.23	6.55	5.83
Pump Station and Water Line for VCMWD (North)						
Pumps	12.78	1.17	14.01	0.04	1.00	0.27
Installation of Pipeline	37.44	3.59	75.99	0.14	3.48	0.42
TOTAL	**1155.92**	**116.59**	**1835.16**	**2.82**	**355.99**	**98.40**
Significance Threshold	550	137	250	250	100	55
Above Thresholds?	***Yes***	*No*	***Yes***	*No*	***Yes***	***Yes***

(1) Assuming implementation of standard dust control BMPs (refer to Section 3.5.2 of this EIR/EIS).
Source: SRA, 2007

However, as shown in Table 4.5-4, the CO concentrations predicted based on Caltrans protocol at the impacted intersections would be substantially below the 1-hour and 8-hour NAAQS and CAAQS for CO. The Moosa 100K Alternative would not cause CO "hot spots" or CO emission thresholds to be exceeded at the affected intersections. Therefore, air quality impacts associated with CO concentrations from construction-related traffic volumes at affected intersections would be less than significant.

Table 4.5-4. CO "Hot Spots" Evaluation Off-Site Trucked Scenario Predicted CO Concentrations (parts per million [ppm])

Intersection	CO Concentration	
Maximum 1-hour Concentration Plus Background, ppm CAAQS = 20 ppm; NAAQS = 35 ppm	**AM**	**PM**
Lilac Road and Betsworth Road	-	7.0
I-15 SB and Gopher Canyon Road	7.0	7.2
Maximum 8-hour Concentration Plus Background, ppm CAAQS = 9.0 ppm; NAAQS = 9 ppm		
Lilac Road and Betsworth Road	4.10	
I-15 SB and Gopher Canyon Road	4.24	

Source: SRA, 2007

Operational Impacts

Post-construction, potential air quality impacts would be associated with routine maintenance/ operation of the reservoir, and new or expanded recreational use. Motor vehicles and boats would be the primary source of emissions associated with reservoir operations.

Operational/maintenance activities for the Moosa 100K Alternative would consist of similar activities to those anticipated for the Proposed Action, including monitoring reservoir level and outlet and spillway discharges; monitoring dam instrumentation; maintaining appropriate records; and maintaining mechanical and electrical equipment according to the equipment manufacturers' requirements. All of these activities would result in emissions associated with worker trips to and from the reservoir. Operation and maintenance activities were anticipated to result in four trips per day; emissions associated with these trips would be negligible.

Recreational activities under the Moosa 100K Alternative would include boating and fishing opportunities. A maximum of 132 boats were assumed to operate on the reservoir for four hours on a single maximum use day. Emissions from boats were estimated using the EPA's emission standards as set forth in 40 CFR Part 94 for gasoline-powered marine engines. For the analysis, it was assumed that marine vessels would be on average 50 kW; that the emissions would be mainly NO_x; and that hydrocarbons in the exhaust emissions would be negligible. As shown in Table 4.5-5, the total estimated air emissions from vehicles and boats would not exceed the quantitative significance thresholds for any criteria pollutants. Therefore, air quality impacts associated with reservoir operations would be less than significant.

Table 4.5-5. Estimated Maximum Daily Operational Emissions: Moosa 100K Alternative

Emission Source	CO	VOCs	NO_x	SO_x	PM_{10}	$PM_{2.5}$
		lbs/day				
Boating	1.03	N	19.25	N	12.83	12.70
Vehicles	70.21	6.53	10.31	0.10	0.94	0.93
Total	***71.24***	***6.53***	***29.56***	***0.10***	***13.77***	***13.63***
Significance Threshold	550	137	250	250	100	55
Above Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
		tons/year				
Boating	0.19	N	3.51	N	2.34	2.32
Vehicles	12.81	1.88	1.19	0.02	0.17	0.17
Total	***13.00***	***1.88***	***4.70***	***0.02***	***2.51***	***2.49***
Significance Threshold	100	15	40	40	15	10
Above Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

N = Negligible
Source: SRA, 2007

*Construction of the Moosa 100K Alternative would exceed pollutant emission thresholds and have the potential to violate air quality standards for CO, NO_x (O_3 precursor), PM_{10}, and $PM_{2.5}$, and contribute substantially to an existing or projected air quality violation for O_3 as represented by its precursor NO_x. Therefore, impacts of the Moosa 100K Alternative would be significant (**Impact M/AQ 1**).*

Construction-related traffic volumes associated with the Moosa 100K Alternative would not cause CO "hot spots" or CO emission thresholds to be exceeded at impacted intersections. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Operation of the Moosa 100K Alternative would not exceed pollutant emission thresholds, violate air quality standards, or contribute substantially to an existing or projected air quality violation. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Threshold 3: Expose sensitive receptors to substantial pollutant concentrations

Construction of the Moosa 100K Alternative could result in TAC emissions, which are considered to have long-term carcinogenic and non-carcinogenic health effects. The emissions would be mainly associated with diesel heavy equipment exhaust during construction activities. The construction equipment used for the Moosa 100K Alternative would be operating at various locations throughout the site, which is relatively isolated and not near sensitive receptors. Results of field reconnaissance and a directed web search of schools, day care centers, hospitals, resident care facilities, and retirement homes indicated that none of these sensitive receptors are located within one mile of the Moosa 100K study area. Therefore, construction of the Moosa 100K Alternative would not expose sensitive receptors to substantial pollutant concentrations and the impacts would be less than significant.

Construction of the Moosa 100K Alternative would not expose sensitive receptors to substantial pollutant concentrations. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Threshold 4: Create objectionable odors affecting a substantial number of people

Project construction could generate minor amounts of odor compounds associated with diesel heavy equipment exhaust. However, the construction equipment would be operating at various locations throughout the site, which is isolated and not near a substantial number of people. Results of field reconnaissance and a directed web search of schools, day care centers, hospitals, resident care facilities, and retirement homes confirm that none of these sensitive receptors are located within one mile of the Moosa 100K study area. No unusual odors would be generated by the Moosa 100K Alternative after completion of construction. Therefore, the Moosa 100K Alternative would not result in objectionable odors affecting a substantial number of people and impacts would be less than significant.

The Moosa 100K Alternative would not cause objectionable odors that would affect a substantial number of people. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Threshold 5: Exceed pollutant emission thresholds

The pollutant emission thresholds in Table 4.5-3 are the same as those in the evaluation of Threshold 2. Refer to the discussion under Threshold 2 above.

*Construction of the Moosa 100K Alternative would exceed pollutant emission thresholds and have the potential to violate air quality standards for CO, NO_x, PM_{10}, and $PM_{2.5}$, and contribute substantially to an existing or projected air quality violation for O_3 as represented by its precursor NO_x. Therefore, impacts of the Moosa 100K Alternative would be significant (**Impact M/AQ 1**).*

Construction-related traffic volumes associated with the Moosa 100K Alternative would not cause CO "hot spots" or CO emission thresholds to be exceeded at impacted intersections. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Operation of the Moosa 100K Alternative would not exceed pollutant emissions thresholds. Therefore, impacts of the Moosa 100K Alternative would be less than significant.

Threshold 6: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or state ambient air quality standard

As discussed above, the SDAB is classified as a nonattainment area for the Federal standard for O_3 (for which VOCs and NO_x are precursors), and the State standard for O_3 and PM_{10}. The SDAB has also been recommended by the CARB in November 2006 for designation as a non-attainment area for the state $PM_{2.5}$ standard. As evaluated under Threshold 2 above, since construction of the Moosa 100K Alternative would have a significant direct impact on air quality with regard to emissions of NO_x, PM_{10}, and $PM_{2.5}$, it would also have a significant cumulative effect.

*Construction of the Moosa 100K Alternative would result in a cumulatively considerable net increase of criteria pollutants NO_x, PM_{10} and $PM_{2.5}$ for which the SDAB is listed or proposed as non-attainment under applicable Federal and State air quality standards. Therefore, impacts of the Moosa 100K Alternative would be significant (**Impact M/AQ 1C**).*

4.5.3.3 Mitigation Measures

The project construction documents will incorporate the General Conditions and Standard Specifications listed in Section 1.9.2 (Introduction, Air Quality) of this EIR/EIS and the standard dust control BMPs listed in Section 3.5.2 (Air Quality for the Proposed Action) of this EIR/EIS to reduce CO, NO_x, PM_{10}, and $PM_{2.5}$ emissions during construction of the Moosa 100K

Alternative ***(Impacts M/AQ 1 and M/AQ 1C)***. These measures were included in the construction emissions calculations presented in Table 4.5-3. Based on estimates presented in Appendix B to this EIR/EIS, without implementation of standard dust control BMPs, PM_{10} emissions would be approximately 24 percent higher, and $PM_{2.5}$ emissions would be approximately 35 percent higher. Even with BMPs, these emissions would remain above the significance thresholds (Table 4.5-3). Furthermore, dust control BMPs would not reduce construction-related emissions of CO or NO_x, which would also remain above significance thresholds.

There are no additional feasible mitigation measures available to reduce these impacts to a level considered less than significant. Therefore, construction-related direct and cumulative air quality impacts of the Moosa 100K Alternative would be significant and unmitigable.

4.5.3.4 Residual Impacts after Mitigation

Even with implementation of General Conditions and Standard Specifications listed in Section 1.9.2 (Introduction, Air Quality) of this EIR/EIS and the standard dust control BMPs listed in Section 3.5.2 (Air Quality for the Proposed Action) of this EIR/EIS, the maximum daily construction emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ would remain above the quantitative significance thresholds, and the construction-related direct and cumulative air quality impacts associated with the Moosa 100K Alternative would be significant and unmitigable. These significant impacts on air quality would cease upon the completion of construction for the Moosa 100K Alternative.

*The construction-related direct air quality impacts (**Impact M/AQ 1**); and the cumulative air quality impacts (**Impact M/AQ 1C**) associated with the Moosa 100K Alternative would remain significant and unmitigable. A Statement of Overriding Considerations would be necessary for approval of the Moosa 100K Alternative.*

4.5.4 Cumulative Effects

4.5.4.1 Other CIP Projects

As described in Section 4.2, it was determined that Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline are the only CIP projects with the potential for cumulative impacts when combined with the Moosa 100K Alternative. The PEIR for the Regional Water Facilities Master Plan concluded that construction of CIP facilities could generate vehicle emissions and fugitive dust that could have an adverse, but short-term impact on sensitive receptors. Based on these emissions, CIP construction activities could contribute to non-attainment conditions for O_3 and PM_{10}, but these air quality impacts would also be temporary and short-term in nature. In addition, CIP construction activities could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors). These direct and cumulative air quality impacts were determined to be less

than significant with implementation of specific mitigation measures identified in the Master Plan PEIR. Therefore, assuming the Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline would be constructed concurrently with the Moosa 100K Alternative, the contribution of these CIP projects to cumulative air quality impacts in conjunction with the Moosa 100K Alternative would be significant. The above conclusions are incorporated into the cumulative analyses in Section 4.5.4.2.

4.5.4.2 Other Planned Projects with CIP Projects

This section evaluates the cumulative air quality impacts of the Moosa 100K Alternative when considered in conjunction with the other planned projects listed in Table 4.2-1, and incorporates the cumulative air quality impacts associated with the CIP projects described in the above section. The following cumulative air quality analysis addresses each of the six significance thresholds listed in Section 4.5.3 above.

Cumulative Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan

Construction emissions associated with the Moosa 100K Alternative would not conflict with or obstruct implementation of the SIP and the RAQS. The construction emissions would be below the federal *de minimis* thresholds for VOC for determining SIP conformity, but above the *de minimis* threshold for CO and NO_x. The projected NO_x emissions would represent a small portion of the total SIP emissions budget for off-road equipment and on-road vehicles. With regard to cumulative impacts associated with ozone precursors, in general, provided a project is consistent with the community and general plans, it has been accounted for in the ozone attainment demonstration contained within the SIP and would not cause a cumulatively significant impact on the ambient air quality for ozone. When combined with the generation of these air pollutants from concurrent construction and/or operation of the other planned cumulative projects referenced above, the Moosa 100K Alternative's contribution to these air pollutants would not be cumulatively considerable. The Moosa 100K Alternative is consistent with the emission inventories and emission projections contained within the RAQS. Therefore, the cumulative construction-related air quality impacts of the Moosa 100K Alternative relative to conformance with applicable air quality plans would be less than significant.

Cumulative Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation

Construction of the Moosa 100K Alternative would exceed pollutant emission thresholds and violate air quality standards for CO, NO_x, PM_{10}, and $PM_{2.5}$, and contribute substantially to an existing or projected air quality violation for O_3 as represented by its precursor NO_x. When combined with the generation of these air pollutants from concurrent construction and/or operation of the CIP and other planned cumulative projects referenced above, the contribution of the Moosa 100K Alternative to these air pollutants would be cumulatively considerable.

Therefore, the cumulative construction-related air quality impacts of the Moosa 100K Alternative relative to violation of air quality standards would be significant ***(Impact M/AQ 1C)***.

Construction-related traffic volumes associated with the Moosa 100K Alternative would not cause CO "hot spots" at impacted intersections. As shown in Table 4.5-4, the projected CO emissions at the impacted intersections would represent between 20 and 36 percent of the 1-hour federal and state standards, and between 46 and 47 percent of the 8-hour federal and state standards. When combined with the CO emissions from traffic associated with concurrent construction and/or operation of the CIP and other planned cumulative projects listed in Table 4.2-1, the contribution of the Moosa 100K Alternative to these emissions would not be cumulatively considerable. Therefore, the cumulative construction-related air quality impacts of the Moosa 100K Alternative relative to CO "hot spots" would be less than significant.

Operation of the Moosa 100K Alternative would not exceed pollutant emission thresholds, violate air quality standards, or contribute substantially to an existing or projected air quality violation. When combined with the generation of air pollutants from concurrent operation of the CIP and other planned cumulative projects referenced above, the contribution of the Moosa 100K Alternative to these air pollutants would not be cumulatively considerable. Therefore, the long-term cumulative air quality impacts of the Moosa 100K Alternative relative to generation of air pollutants from operations would be less than significant.

Cumulative Threshold 3: Expose sensitive receptors to substantial pollutant concentrations

Construction and operation of the Moosa 100K Alternative and the CIP projects listed above would not expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors in the vicinity of the CIP projects listed above and the other planned cumulative projects listed in Table 4.2-1 (assumed to be under construction and/or operation concurrent with the Moosa 100K Alternative) could be exposed to substantial pollutant concentrations; however, the contribution of the Moosa 100K Alternative to these impacts would not be cumulatively considerable. Therefore, the construction-related and long-term cumulative air quality impacts of the Moosa 100K Alternative relative to exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Cumulative Threshold 4: Create objectionable odors affecting a substantial number of people

Construction and operation of the Moosa 100K Alternative and the CIP projects listed above would not expose a substantial number of people to objectionable odors. Sensitive receptors in the vicinity of other planned cumulative projects listed in Table 4.2-1 (assumed to be under construction and/or operation concurrent with the Moosa 100K Alternative) could expose a substantial number of people to objectionable odors; however, the contribution of the Moosa 100K Alternative to these impacts would not be cumulatively considerable. Therefore, the construction-related and long-term cumulative air quality impacts of the Moosa 100K Alternative relative to exposure of substantial population to objectionable odors would be less than significant.

Cumulative Threshold 5: Exceed pollutant emission thresholds

Please refer to the cumulative air quality analysis in Threshold 2. As concluded in that analysis, when combined with the generation of CO, NO_x, PM_{10}, and $PM_{2.5}$ emissions from concurrent construction and/or operation of the CIP and other planned cumulative projects referenced above, the contribution of the Moosa 100K Alternative to these air pollutants would be cumulatively considerable. Therefore, the construction-related cumulative air quality impacts of the Moosa 100K Alternative relative to exceedance of pollutant emission thresholds would be significant ***(Impact M/AQ 1C)***.

Cumulative Threshold 6: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or state ambient air quality standard

The cumulative air quality analyses in Threshold 6 of Section 4.5.3.2 and in Threshold 2 of Section 4.5.4.3 address the cumulative impacts of the Moosa 100K Alternative with respect to emissions of O_3 (specifically, its precursor NO_x), PM_{10}, and $PM_{2.5}$, pollutants for which the SDAB is listed or proposed as "non-attainment" by the applicable federal and state air quality plans. As concluded in these analyses, when combined with the generation of these air pollutants from concurrent construction and/or operation of the CIP and other planned cumulative projects referenced above, the contribution of the Moosa 100K Alternative to these air pollutants would be cumulatively considerable. Therefore, the construction-related cumulative air quality impacts of the Moosa 100K Alternative relative to exceedance of air quality standards for non-attainment criteria pollutants would be significant ***(Impact M/AQ 1C)***.

Even with implementation of General Conditions and Standard Specifications listed in Section 1.9.2 (Introduction, Air Quality) of this EIR/EIS and the standard dust control BMPs listed in Section 3.5.2, the maximum daily construction emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ would remain above the quantitative significance thresholds. Therefore, the construction-related cumulative air quality impacts associated with Moosa 100K Alternative would be significant and unmitigable during construction, but would cease upon completion of construction.

The cumulative construction-related air quality impacts of the Moosa 100K Alternative relative to conformance with the SIP and the RAQS would be less than significant. This alternative would result in significant direct air quality impacts during construction ***(Impact M/AQ 1)****. These impacts were determined to be unmitigable. Therefore, the construction-related cumulative air quality impacts of the Moosa 100K Alternative, when combined with air pollutant emissions from concurrent construction and/or operation of the CIP projects listed above and other planned cumulative projects listed in Table 4.2-1, would be significant for the duration of construction* ***(Impact M/AQ 1C)****. No feasible measures, in addition to the General Conditions and Standard Specifications listed in Section 1.9.2 (Introduction, Air Quality) of this EIR/EIS and the standard dust control BMPs listed in Section 3.5.2 (Air Quality for the Proposed Action) of this EIR/EIS, are available to mitigate the cumulative construction-related air quality impacts of the Moosa 100K Alternative. A Statement of Overriding Considerations would be necessary for project approval.*

The cumulative impacts would cease upon completion of construction. Long-term cumulative operational air quality impacts of the Moosa 100K Alternative would be less than significant.