



An Employee-Owned Company

February 15, 2018

Mr. Jon Rilling
The Accretive Group of Companies
12275 El Camino Real, Suite 110
San Diego, CA 92130

Reference: Updated Air Quality Emissions Evaluation for the Lilac Hills Ranch Specific Plan (RECON Number 6153)

Dear Mr. Rilling:

This technical letter summarizes the evaluation of the Lilac Hills Ranch (project) Air Quality Technical Report prepared by RECON Environmental, Inc. (RECON) as amended in June 2015 (2015 Air Quality Report) and the updated greenhouse gas (GHG) modeling prepared by Ldn Consulting, Inc. (Ldn) (2018 Updated Modeling). The purpose of this evaluation is to determine if the existing air quality findings are still valid based on the updated air emissions modeling.

Air Quality Modeling

2015 Air Quality Report (RECON)

The 2015 Air Quality Report includes air emissions modeling of project construction based on the five proposed phases. Construction phasing includes Phase 1 (July 2014 to December 2015), Phase 4 (April 2015 to September 2016), Phase 2 (January 2016 to June 2017), Phase 5 (October 2017 to May 2018), and Phase 3 (July 2018 to December 2021). Project operation of each phase was assumed to follow construction.

The 2015 Air Quality Report found that with implementation of mitigation measures, air emissions would exceed applicable significance thresholds for reactive organic gases (ROG), carbon monoxide (CO), and particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀).

2018 Updated Modeling (Ldn)

Ldn prepared an updated analysis of GHG emissions for inclusion in the Environmental Impact Report prepared for the project. The Global Climate Change Analysis (2018 GCC Analysis; Ldn 2018) relies on modeling based on the most recent project phasing schedule, which has been delayed by approximately six years. The most recent construction phasing includes Phase 1 (January 2020 to December 2021), Phase 4 (January 2022 to December 2023), Phase 2 (January 2024 to December 2025), Phase 5 (January 2025 to December 2026), and Phase 3 (January 2027 to December 2028). Because the updated GHG emissions analysis is focused on the annual emissions, as opposed to the maximum daily emissions included in the air quality analysis, additional modeling was conducted to create the daily emissions required for a true comparison between the 2015 findings and the most recent emission analysis.

Full project operation was modeled for the year 2028. The updated air quality modeling incorporated the following project design features as emissions reduction measures: implementation of a Transportation Demand Management (TDM) program, residential designs to achieve zero net energy standards (installation of non-residential solar systems), use of high efficiency lighting, on-site installation of electric vehicle charging stations, prohibiting wood-burning fireplaces, and requiring low ROG paints and architectural coatings. Detailed modeling outputs are included in Attachment 1.

Results Comparison and Conclusions

Construction

Due to schedule delays, project construction has shifted six years and thus the construction emissions calculations presented in the 2015 Air Quality Report are considered more conservative than the more recent schedule. This is due to the continued implementation of regulations for off-road equipment, the primary construction emission source. Later construction would have reduced emissions from these sources. Therefore, emissions included in the 2018 Updated Modeling are slightly less than those assessed in the 2015 Air Quality Report; however, the difference would not reduce any impacts to less than significant. Thus, the project’s construction-related air quality impacts (under the newer schedule) would be the same as identified in the 2015 Air Quality Report.

Operation

Estimated maximum daily operational emissions are summarized in Table 1. For comparison of emissions, construction phases listed in Table 1 are simply summed to provide the maximum daily emissions for the buildout of the project; all emissions identified in the 2018 Updated Modeling represent an opening year of 2028, and the 2015 Air Quality Report emissions represent an opening year of 2021.

Table 1 Operational Emissions Results Comparison (pounds per day)							
Source	Condition	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2018 Updated Modeling (Ldn)	Phase 1	23	23	101	0	33	9
	Phase 4	13	9	56	0	11	3
	Phase 2	32	41	163	1	55	15
	Phase 5	11	9	51	0	12	3
	Phase 3	33	31	132	0	45	12
	Total Max. Daily		111	113	503	1	157
2015 Air Quality Report (RECON)	Total Max. Daily	209	238	1,266	2	230	17
<i>County Significance Thresholds</i>		<i>75</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>
<i>Difference</i>		<i>-47%</i>	<i>-52%</i>	<i>-60%</i>	<i>-25%</i>	<i>-32%</i>	<i>161%</i>
Notes: Totals may vary due to independent rounding. Bolded values exceed applicable significance thresholds. ROG = reactive organic gases; NO _x = oxides of nitrogen; CO = carbon monoxide; SO ₂ = sulfur dioxide; PM ₁₀ = suspended particulate matter; PM _{2.5} = fine particulate matter.							

As shown, operational air emissions estimates included in the 2018 Updated Modeling are less than air emissions estimates from the 2015 Air Quality Report for all pollutants, with the exception of particulate matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5}). This reduction in estimated air emissions is primarily due to the difference in modeling years between the analyses and is a reflection of new regulations taking effect and reducing emissions from mobile sources. The PM_{2.5} emissions’ increase calculated in the 2018 Updated Modeling is primarily due to a change in calculation methodology to the U.S. Environmental Protection Agency’s AP-42 emission factor for on-road dust generation.

Based on the 2018 Updated Modeling, the estimated operational emissions would remain below applicable thresholds for NO_x, SO_x, and PM_{2.5}. Estimated operational emissions for CO decreased to less than the applicable CO threshold, thus this impact would no longer occur. Estimated operational emissions for ROG and PM₁₀ remained greater than applicable thresholds; however, the emissions of these pollutants decreased by 47 and 32 percent, respectively. Therefore, the only revision to the operational emissions assessment

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would be to reduce the impacts relative to CO to less than significant. However, due to emissions of ROG and PM₁₀, air quality impacts would remain significant and unavoidable. Therefore, no new air quality impacts compared to the previous analysis and disclosed in the project EIR would occur.

If you have any questions about the results of this analysis, please contact me at wmaddux@reconenvironmental.com or (619) 308-9333, extension 124.

Sincerely,



William A. Maddux
Senior Noise and Air Quality Specialist

VAM:eab

Attachment 1: CalEEMod Output

References Cited

Ldn Consulting, Inc.

2018 Global Climate Change Analysis for the Lilac Hills Ranch Specific Plan. Data modeling.

RECON Environmental, Inc.

2015 Air Quality Technical Report for Lilac Hills Ranch, San Diego County, California, Revised June 17.

San Diego, County of

2007 Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality. San Diego County Air Quality Guidelines. March.

ATTACHMENT 1

CalEEMod Output