

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

429 E. Cotati Ave
Cotati, California 94931

Tel: 707-794-0400
www.Illingworthrodkin.com

Fax: 707-794-0405
illro@illingworthrodkin.com

April 12, 2019

Tina Wallis
Law Offices of Tina Wallis, Inc.
100 E Street, Ste. 209
Santa Rosa, CA 95404
Via e-mail: Tina Wallis <twallis@twallislaw.com>

**SUBJECT: Purple Wine + Spirits Project, Sonoma County, CA
Air Quality and GHG Emissions**

Dear Tina:

Illingworth & Rodkin, Inc. (I&R) predicted greenhouse gas (GHG) emissions for changes to the Purple Wine + Spirits project at 9119 Graton Road in the unincorporated Graton area of Sonoma County. This letter reports those emissions and also describes changes to air quality conditions.

Project Description

We understand that the existing facility is currently a wine production facility which processes juice only (no grape crush) and a distillery with a maximum permitted capacity of 3 million cases. The project proposes to reduce on-site wine and spirits production by 1.5 million cases and bottling uses, while adding a crush pad with approval to crush up to 10,000 tons of grapes per harvest season, in a calendar year. The project traffic study predicts the changes in automobile and truck traffic associated with the project.

The project would move or relocate some on-site equipment and install equipment powered by electricity or hydraulics. This would include presses, pumps, a compressor, and conveyors. This equipment is expected to be powered by electricity and not have air pollutant emissions. There may be some minor increase in indirect GHG emissions from electricity generation when this equipment is used seasonally. The primary source of emissions from this facility is from automobile and truck traffic.

Traffic GHG Emissions

Both worker (passenger vehicle) and truck traffic are the primary source of emissions from the facility. The project traffic study provided trip generation information for the Purple Wine + Spirits facility under (1) existing conditions, (2) proposed project under non-harvest conditions, and (3) proposed project under harvest conditions¹. Traffic was provided in the form of daily trip generation for automobiles (i.e.,

¹ W-Trans. 2019. Letter from Cameron Nye (W-Trans) to Eric Gilliland (Purple Wine & Spirits, dated March 12, 2019).

considered passenger autos and trucks and SUVs) and trucks. Existing conditions were anticipated to occur 260 days per year and, while not specified, the proposed project was assumed to operate 365 days per year. Harvest season was assumed to occur in September and October and include 60 workdays.

GHG emissions in the form of carbon dioxide were computed for existing and proposed project conditions². The traffic data, described above, was combined with emission factors produced by the Ct-EMFAC emission factor model (Version 6.0.0.18677). Inputs to the modeling included county (Sonoma), year (2020), daily trip rates by vehicle type (e.g., passenger vehicles and trucks), trip length (assumed to be 15 miles³), average speed (assumed to be 35 mph), and idles time (assumed to be 5 minutes per trip). Results of this modeling are provided in Attachment 1.

Based on this assessment, the existing project generates 746 metric tons of CO₂ per year from traffic. Most of these emissions are produced by passenger vehicles. The project would decrease the number of non-harvest condition trips substantially, such that these emissions would decrease to 364 metric tons per year. Traffic associated with harvest conditions would generate 91 metric tons per year. The net change in GHG emissions would be to decrease facility CO₂ traffic emissions to 454 metric tons per year. *This would be a reduction of 292 metric tons per year.*

Air Quality

The proposed project does not include any stationary or mobile equipment that would increase air pollutant emissions. As described above, the project would decrease GHG emissions that are associated with traffic. A corresponding decrease in air pollutant emissions would occur.

Stationary equipment or diesel-powered off-road equipment (e.g., construction-type equipment) and trucks are a source of toxic air contaminants that could lead to potential health effects at a localized scale. The project would not cause these impacts because (1) it does not include any stationary sources or on-site off-road equipment that would increase these emissions and (2) the project would result in a decrease in localized truck traffic. Any community risk impacts that are currently caused by the facility would decrease substantially with the project, as annual truck traffic decreases.

This concludes our assessment of GHG emissions and air quality impacts for the Purple wine & Spirits project.

Sincerely,

James A. Reyff
Senior Consultant, Principal
Illingworth & Rodkin, Inc.

² Note that GHG emissions are typically expressed as carbon-dioxide-equivalent (CO₂e) emissions that include the emissions of other gases and their global warming potential with respect to CO₂. Other gases from traffic include methane and nitrous oxide, but these make up a very small fraction of the global warming potential – i.e., less than 2 percent)

³ 15 miles is the average rural trip length used by CalEEMod.

Attachment: GHG Traffic Emission Calculations

Attachment 1

Purple Wine & Spirits

Traffic Emissions Calculations

Condition	Traffic Generation			CO ₂ Emissions (metric tons/yr.)	
	Daily	Distance	Days/year		
Existing					
Autos	399	15	260	564	
Trucks	45	15	260	182	
				746	
Project Typical Operations					
Autos	126	15	365	250	
Trucks	20	15	365	114	
Project Harvest					
Autos	141	15	60	46	
Trucks	48	15	60	45	
				454	
Emissions rate from Ct-EMFAC (Version 6.0.0.18677) for year 2020. Using EMFAC2014					
	Run at 35mph (gm/mi)	Idle (gm/hr)	Idle at 5min/trip (gm/trip)	Net	-292
Autos	347.97	2641	220		
Trucks	1007.5	5598	466.5		