

**VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT**
Memorandum

TO: Ali Ghasemi, Manager
Ventura County APCD Planning Division

DATE: April 8, 2019

FROM: Kerby E. Zozula, Manager
Ventura County APCD Engineering Division

SUBJECT: Health Risk Assessment
Proposed Ri-Nu Environmental Services (Ri-Nu) Facility
Former Ventura County APCD Permit to Operate No. 00171
Former Santa Clara Waste Water Company (SCWW) Facility

CONCLUSION

Ventura County APCD (VCAPCD) staff conducted a health risk assessment for the air toxic emissions associated with former Permit to Operate No. 00171 (expired December 31, 2017) issued to the Santa Clara Waste Water Company for its facility at 815 Mission Rock Road in Santa Paula. This VCAPCD Permit to Operate included a number of tanks used to store, process and separate oilfield waste liquids such as produced water and drilling muds that contain hydrocarbons and reactive organic compounds (ROC). The oilfield waste liquids are separated into water, oil, and solids.

The permitted emissions from the proposed Ri-Nu facility are expected to be the same or similar to those of the former Santa Clara Waste Water Company (SCWW) facility. The proposed Ri-Nu facility will also use tanks to store, process and separate oilfield waste liquids that contain hydrocarbons and reactive organic compounds. The oilfield waste liquids will be separated into water, oil, and solids. All tanks will be equipped with vapor recovery and vapor control systems to minimize ROC emissions. All emissions from the proposed Ri-Nu facility will be fugitive in nature.

The health risk assessment assumes that the Ri-Nu facility will have emissions the same or similar to the former Santa Clara Waste Water Company facility. They both process the same oilfield waste liquids with the same process equipment and emission control systems (closed-top tanks, and vapor recovery and control systems). This health risk assessment was conducted using the California Air Toxic Hot Spots Program Facility Prioritization Guidelines developed by the California Air Pollution Control Officers Association (CAPCOA Prioritization Guidelines).

The health risk assessment includes the fugitive emissions from the oilfield waste liquids storage and processing tanks, and oil loading facility. There is no natural gas-fired combustion equipment proposed at the Ri-Nu facility that is subject to VCAPCD permitting requirements.

County of Ventura
Initial Study
PL15-0106
**Attachment 26 - April 8, 2019 APCD
Memorandum**

The flowing priority scores were calculated for cancer risk, non-carcinogenic short-term (acute) health risk, and non-carcinogenic long-term (chronic) health risk:

<u>Priority Score</u>	<u>Cancer Risk</u>	<u>Chronic Risk</u>	<u>Acute Risk</u>
Fugitive Emissions	1.09	0.0285	0.0312

Total:	1.09	0.0285	0.0312

The numbers above indicate that all priority scores are less than or equal to one (1) and therefore this facility is considered to be a low priority facility that does not result in a significant health risk. According to the CAPCOA Prioritization Guidelines, a prioritization score of 10 or greater is considered to be a high score that requires a more detailed health risk assessment. Prioritization scores of 1 or below indicate that the facility is not considered to have a significant health risk.

DISCUSSION AND ASSUMPTIONS

The former Santa Clara Waste Water Company (proposed Ri-Nu facility) is located at 815 Mission Rock Road in an unincorporated, industrial area of Ventura County, just south of the Highway 126 and north of the Santa Clara River.

The health risk assessment was conducted with the following assumptions:

The “Emissions and Potency Procedure” of the CAPCOA Prioritization Guidelines was used to calculate the facility priority score. This procedure primarily relies on four parameters to prioritize facilities: emissions, potency or toxicity, dispersion, and receptor proximity. A Receptor Proximity Adjustment Factor (RP) of 1 was used as a worst-case scenario. The RP factor decreases as receptors are located at a greater distance from the facility. For example, at a receptor distance of 100 to 500 meters (328 to 820 feet) the RP would be equal to 0.25 and the health risk would be significantly less.

Air toxics emissions were calculated using the permitted emissions of former VCAPCD Permit to Operate No. 00171 that was last issued to Santa Clara Waste Water Company for the period January 1, 2017 to December 31, 2017. The proposed Ri-Nu facility will operate in the same or similar manner to the former SCWW facility. The Ri-NU facility will accept oilfield liquid wastes such as produced waters and drilling muds and will use storage tanks equipped with vapor recovery and vapor control systems.

The air toxics emission factors for the fugitive emissions were based on the San Joaquin Valley APCD AB-2588 Hot Spots Air Toxics Profiles as detailed below.

For the fugitive emissions, Toxic Profile ID 204 below was used for benzene, toluene, and xylenes. Hydrogen sulfide emissions, if any, are expected to be negligible from the oilfield liquid wastes and were not included in the priority score.

San Joaquin Valley APCD AB-2588 Hot Spots Air Toxics Profiles

Oilfield Equipment Fugitive - District

District Toxic Profile ID	204
Description	Oilfield Equipment Fugitive - District
Source	District Approved Toxic EF for Fugitive emissions. District Policy based on Actual ST in the valley.

Pollutant Name	Emission Factor	Emission Factor Units	CAS#
Benzene	3.50E-03	lbs/lb VOC	71432
Hydrogen sulfide	1.43E-02	lbs/lb VOC	7783064
Toluene	3.40E-03	lbs/lb VOC	108883
Xylenes (mixed)	7.00E-03	lbs/lb VOC	1330207