

Kirkhill, Inc.
AB 2588 Public Meeting

South Coast Air Quality Management District
November 13, 2019



Purpose of Meeting



Who we are

- **The South Coast AQMD is the regional agency responsible for air quality for areas in LA, Orange, Riverside and SB Counties**
 - Largest of the 35 local air agencies in CA
 - Work with CARB and EPA to meet state and federal standards
- **Responsibilities**
 - Control emissions from stationary sources (e.g., power plants)
 - Comply with U.S. government air quality standards
 - Permit and inspect 28,400 affected businesses
 - Administer \$100 million of incentive funding annually



South Coast AQMD's Air Toxics Program



The Air Toxics “Hot Spots” Information & Assessment Act (AB 2588)

- State law enacted in 1987 (Connelly)
- Public **Right-to-Know** Program
- Purpose
 - Collect emissions data with updates every 4 years
 - Identify facilities having localized impacts
 - Evaluate potential health risks through Health Risk Assessments
 - Notify residents of those potential health risks
 - Reduce health risks below certain thresholds
- Rule 1402
 - Implements requirements of AB 2588
 - More stringent requirements for reducing health risk

Kirkhill, Inc.

- Located at 300 E Cypress Street in the City of Brea
- Rubber manufacturing facility
 - Rubber seals, gaskets, components
 - Primarily for the aerospace and defense industries, but also for medical and other applications
- HRA required based on 2015 emissions



- Boundary of Kirkhill, Inc.
- Cancer Risk = 10 in-one-million (residential)
- Cancer Risk = 10 in-one-million (worker)

Operations at Kirkhill, Inc.



Mixing

Mixing additives with raw rubber for achieving desired properties in final product

Source of 1,3-butadiene, acrylonitrile, and benzidine



Milling

Forming rubber compounds into sheets or strips, warming up the rubber, and reintroducing recycled rubber compounds

Source of acrylonitrile



Extrusion

Pressing the rubber into a desired shape and combine previously mixed rubber compounds

Source of 1,3-butadiene, benzidine, and hexavalent chromium



Curing

Applying heat to rubber mixed with sulfur to induce vulcanization. Includes rotocuring, curing ovens, and autoclave curing

Source of 1,3-butadiene

About Health Risk Assessments

Estimates the chance that a person may experience a health effect from toxic air contaminant emissions

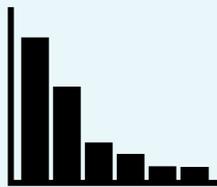


“Snapshot” based on toxic air contaminant emissions from one year of operation

Assumes 2015 emissions levels for 30 years



Snapshot can change if toxic air contaminant emissions are reduced



Conservative assumptions - people are outdoors 24 hours, 7 days a week in one location



3 Key Health Risk Elements of Rule 1402

Cancer Risk

- Estimates the increased probability for cancer
- Expressed in “Chances in a million”

Non-Cancer Risk

- Estimates non-cancer health effects
- Acute non-cancer effects are from short-term exposure
- Chronic non-cancer effects are from long-term exposure
- Expressed using a Hazard Index (HI)

Cancer Burden

- Estimates the increase in the occurrence of cancer cases in a population subject to a cancer risk of 1 in a million or greater
- Cancer burden > 0.5 requires risk reduction

Health Effects of Key Toxic Air Pollutants

Toxic Air Pollutant	Health Effect	
	Exposure	Potential Effects
Hexavalent Chromium	Long-term	Inhalation (years to decades) can increase the chance or probability of developing cancer, e.g. lung cancer
1,3-Butadiene		
Acrylonitrile		
Benzidine		

Rule 1402 Health Risk Thresholds

Cancer Risk Thresholds

Risk Reduction

Cancer Risk > 25 in one million

Public Notification

Cancer Risk > 10 in one million

Non-Cancer Risk Thresholds

Risk Reduction

Non-Cancer HI > 3

Public Notification

Non-Cancer HI > 1

Cancer Burden Threshold

Risk Reduction

Cancer Burden > 0.5

Kirkhill, Inc. HRA Results

- Residential cancer risk up to 18.8 chances in-one-million
- Worker cancer risk up to 15.9 chances in-one-million
- Residential long-term and short-term non-cancer risks below threshold Hazard Index < 1
- Worker long-term and short-term non-cancer risks below threshold Hazard Index < 1

Next Steps

- Risk Reduction Plan is not required.
- Kirkhill has voluntarily eliminated the usage of a yellow dye containing hexavalent chromium, the toxic air pollutant that accounts for over 50% of the risk.

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Questions?