

# Sac Metro AQMD

July 31<sup>st</sup>, 2017

# Agenda

- Recap from November 2016 Meeting
  - Community request for source test
  - Questions about Right To Farm Act
- Source Testing Results (Brian Krebs, Permitting Program Supervisor, Sac Metro AQMD)
- Right to Farm Act (Angela Thompson, Field Operations Program Supervisor, Sac Metro AQMD)
- Other Comments Received (Angela Thompson)
- Questions

# Recap

- Sac Metro AQMD
  - Regulate criteria pollutants and Hazardous Air Pollutants (HAPs) from stationary sources of air pollution
- Public Meeting November 9, 2016 - Action items
  - Source test results
  - Investigate Right to Farm Act “substantial increase”
    - Wastewater flow data
    - Production data

# Health Risk Assessment

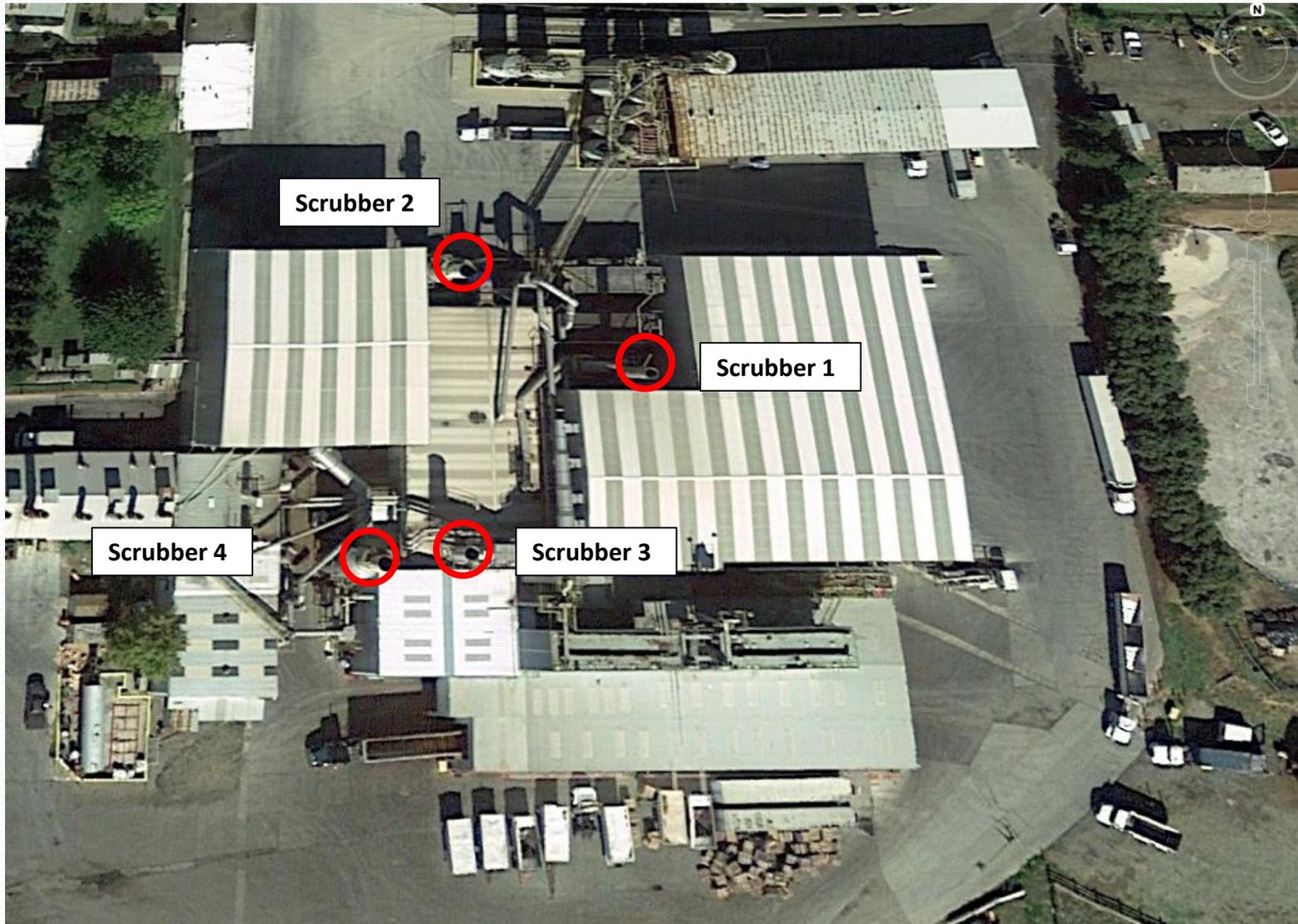
## Health Risk Action Levels and Assessment Summary

Type of Health Risk	Permitting Thresholds		Project HRA Results	
	T-BACT	Maximum	Residential <sup>(A)</sup>	Worker
<b>Cancer Risk (Chances per Million)</b>	$\geq 1.0$	10.0	0 (B)	0 (B)
<b>Acute Non-Cancer (Hazard Index)</b>	$\geq 1.0$	1.0	0.0001	0.0001
<b>Chronic Non-Cancer (Hazard Index)</b>	$\geq 1.0$	1.0	0.00003	0.00003

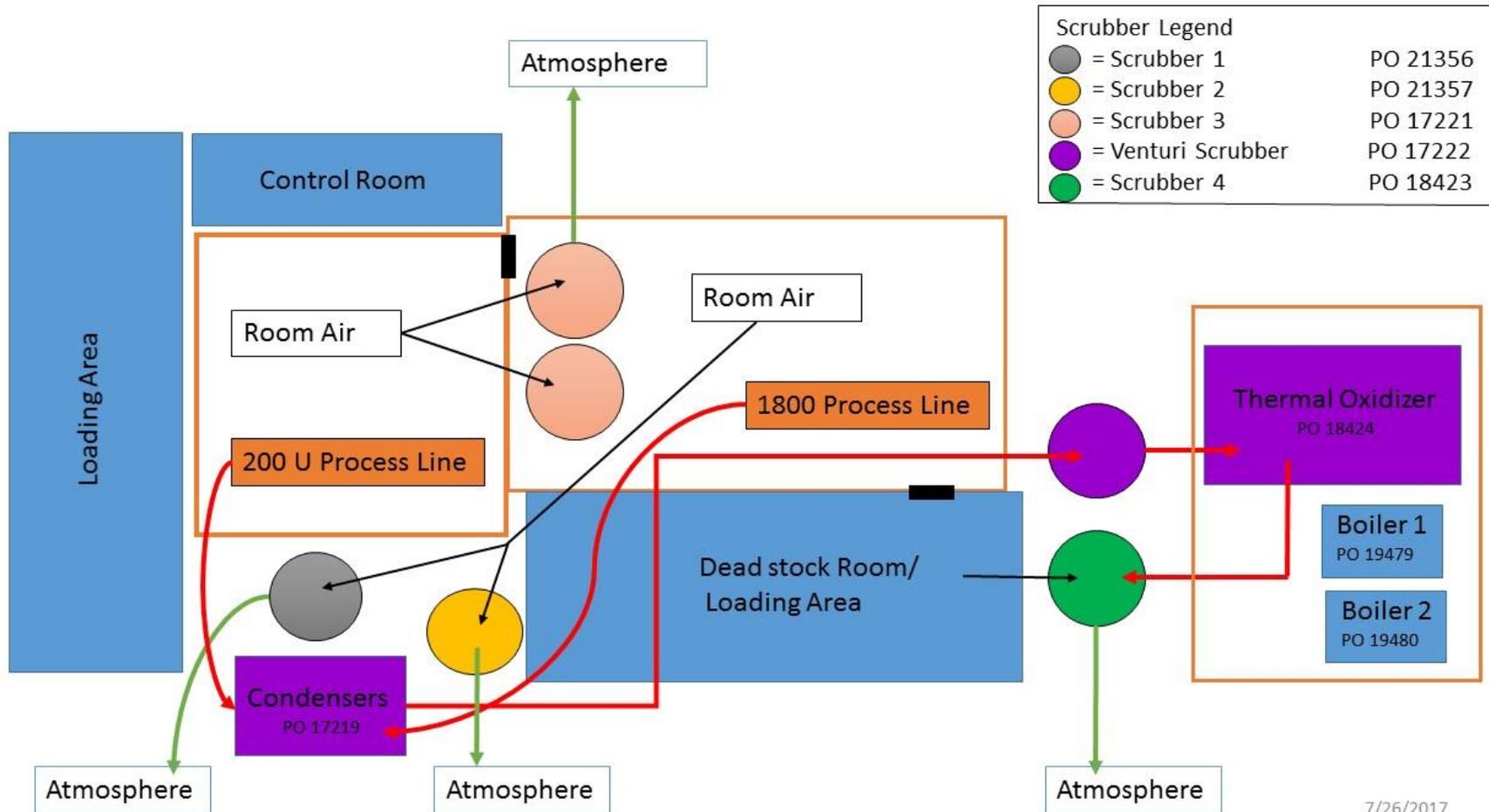
(A) The point of maximum impact was located at 652604.00 m E, 4265630.00 m N just north of the plant on open land. Though it is not a residential lot nor developed, the risks were calculated for both residential as well as nonresidential to represent a worst-case analysis.

(B) Since no carcinogenic compounds were found above the detection level, the cancer risk is zero.

# Sacramento Rendering Company (SRC)



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# Source Testing Parameters

Effluent air samples\* obtained from following locations:

- Scrubber 1/APC Scrubber (Permit No. 21356)
- Scrubber 2/APC Counterflow Tower Scrubber (Permit No. 21357)
- Scrubber 3/Cross-flow Scrubber (Permit No. 17221)
- Scrubber 4/Spray Tower (Permit No. 18423)  
(Triplicate effluent air samples obtained)

*\* All samples were taken using a 30-minute regulator and summa canisters*

# Source Test Sampling

## Scrubber 1



## Scrubber 2

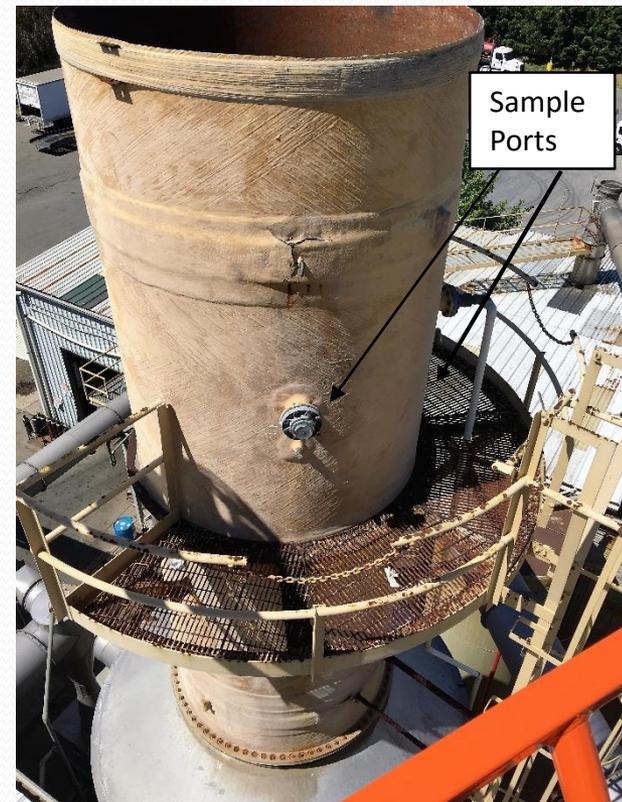


# Source Test Sampling

## Scrubber 3



## Scrubber 4



# Test Method – EPA TO-15 (Toxic Organics)

- EPA approved method
- Used to quantify Hazardous Air Pollutants
- 67 pollutants were quantified
- Reliable concentration calculations
  - Analysis using Gas Chromatography and Mass Spectrometry
  - Accurate for low concentrations

# Test Method EPA TO-15

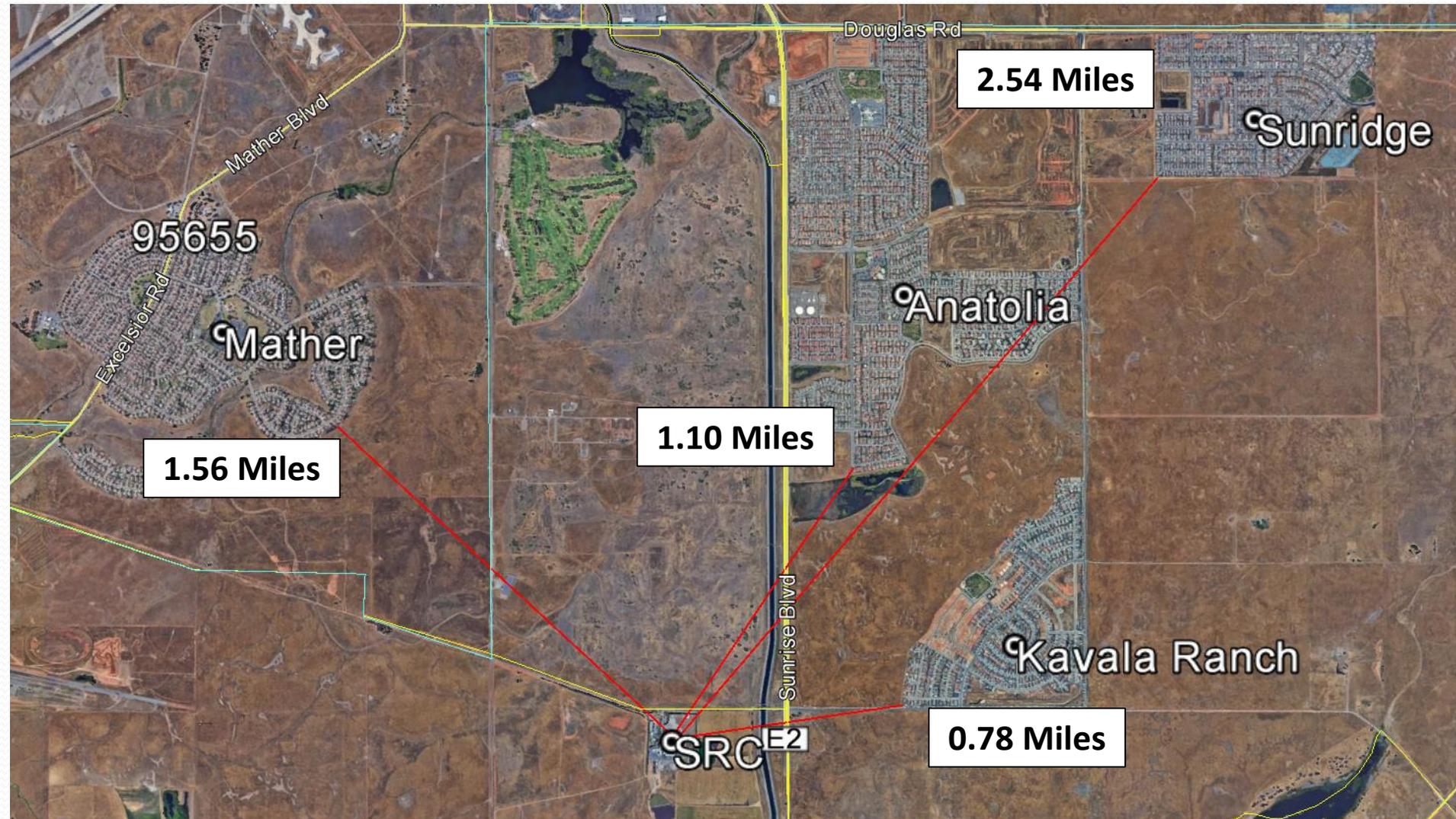
## LIST OF COMPOUNDS

Chlorodifluoromethane	1,1-Dichloroethene	Benzene	Chlorobenzene
Propene	Methylene Chloride (DCM)	Carbon Tetrachloride	Ethylbenzene
Dichlorodifluoromethane	Allyl Chloride	Cyclohexane	m & p-Xylenes
Chloromethane	Carbon Disulfide	1,2-Dichloropropane	Bromoform
Dichlorotetrafluoroethane	Trichlorotrifluoroethane	Bromodichloromethane	Styrene
Vinyl Chloride	trans-1,2-Dichloroethene	1,4-Dioxane	1,1,2,2-Tetrachloroethane
Methanol	1,1 - Dichloroethane	Trichloroethene (TCE)	o-Xylene
1,3 - Butadiene	Methyl Tert Butyl Ether (MTBE)	2,2,4-Trimethylpentane	4-Ethyltoluene
Bromomethane	Vinyl Acetate	Heptane	1,3,5-Trimethylbenzene
Chloroethane	2-Butanone (MEK)	cis-1,2-Dichloropropene	1,2,4-Trimethylbenzene
Dichlorofluoromethane	cis-1,2-Dichloroethene	4-Methyl-2-pentanone (MIBK)	Benzyl Chloride (a-Chlorotoluene)
Ethanol	Hexane	trans-1,3-Dichloropropene	1,3-Dichlorobenzene
Vinyl bromide	Chloroform	1,1,2-Trichloroethane	1,4-Dichlorobenzene
Acetone	Ethyl Acetate	Toluene	1,2-Dichlorobenzene
Trichlorofluoromethane	Tetrahydrofuran	2-Hexanone (MBK)	1,2,4-trichlorobenzene
2- Propanol (IPA)	1,2-Dichloroethane	Dibromochloromethane	Hexachlorobutadiene
Acrylonitrile	1,1,1-Trichloroethane	Tetrachloroethene (PCE)	

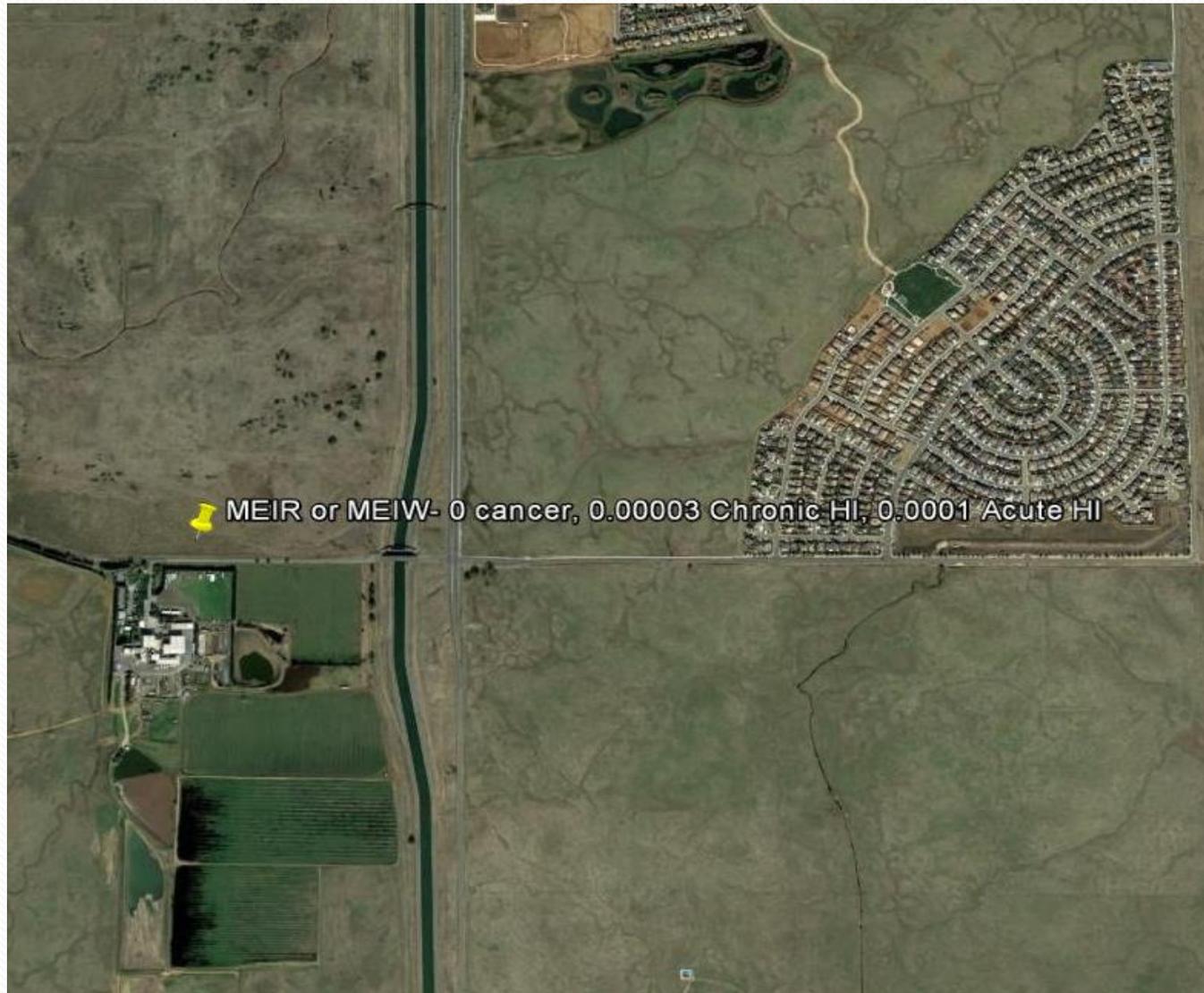
# Source Test Results

Emission Table (A)								
	Scrubber1		Scrubber2		Scrubber3		Scrubber4	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
<b>TAC</b>								
<b>Propylene</b>	1.2E-03	10.8	ND	ND	ND	ND	1.7E-03	14.6
<b>Chloromethane</b>	9.0E-04	7.9	1.2E-03	10.4	ND	ND	2.4E-03	20.7
<b>Methanol</b>	1.8E-02	161.6	9.0E-02	788.3	ND	ND	ND	ND
<b>Ethanol</b>	1.7E-01	1504	2.4E-01	2087	6.9E-02	601	3.3E-02	293
<b>Acetone</b>	4.4E-02	386.4	2.7E-02	234.5	2.5E-02	218.0	1.8E-02	153.4
<b>Carbon Disulfide</b>	1.9E-03	16.8	ND	ND	ND	ND	ND	ND
<b>2-Butanoine (MEK)</b>	8.1E-03	70.7	1.2E-02	105.9	6.9E-03	60.7	1.3E-02	110.7
<b>Hexane</b>	ND	ND	ND	ND	2.5E-03	21.6	1.7E-03	14.8
<b>Ethyl Acetate</b>	ND	ND	2.1E-03	18.0	ND	ND	2.1E-03	18.2
<b>Heptane</b>	ND	ND	ND	ND	3.6E-03	31.2	3.6E-03	31.8
<b>Toluene</b>	ND	ND	ND	ND	ND	ND	1.6E-03	14.1

# Sacramento Rendering Company



# Health Risk Results



MEIR or MEIW- 0 cancer, 0.00003 Chronic HI, 0.0001 Acute HI

# Health Risk Assessment

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# The Right to Farm Act

- Health and Safety Code § 41700 and Sac Metro AQMD Nuisance Rule (Rule 402) regulate nuisance
- The Right to Farm Act **specifically exempts rendering plants from nuisance**

# The Right to Farm Act

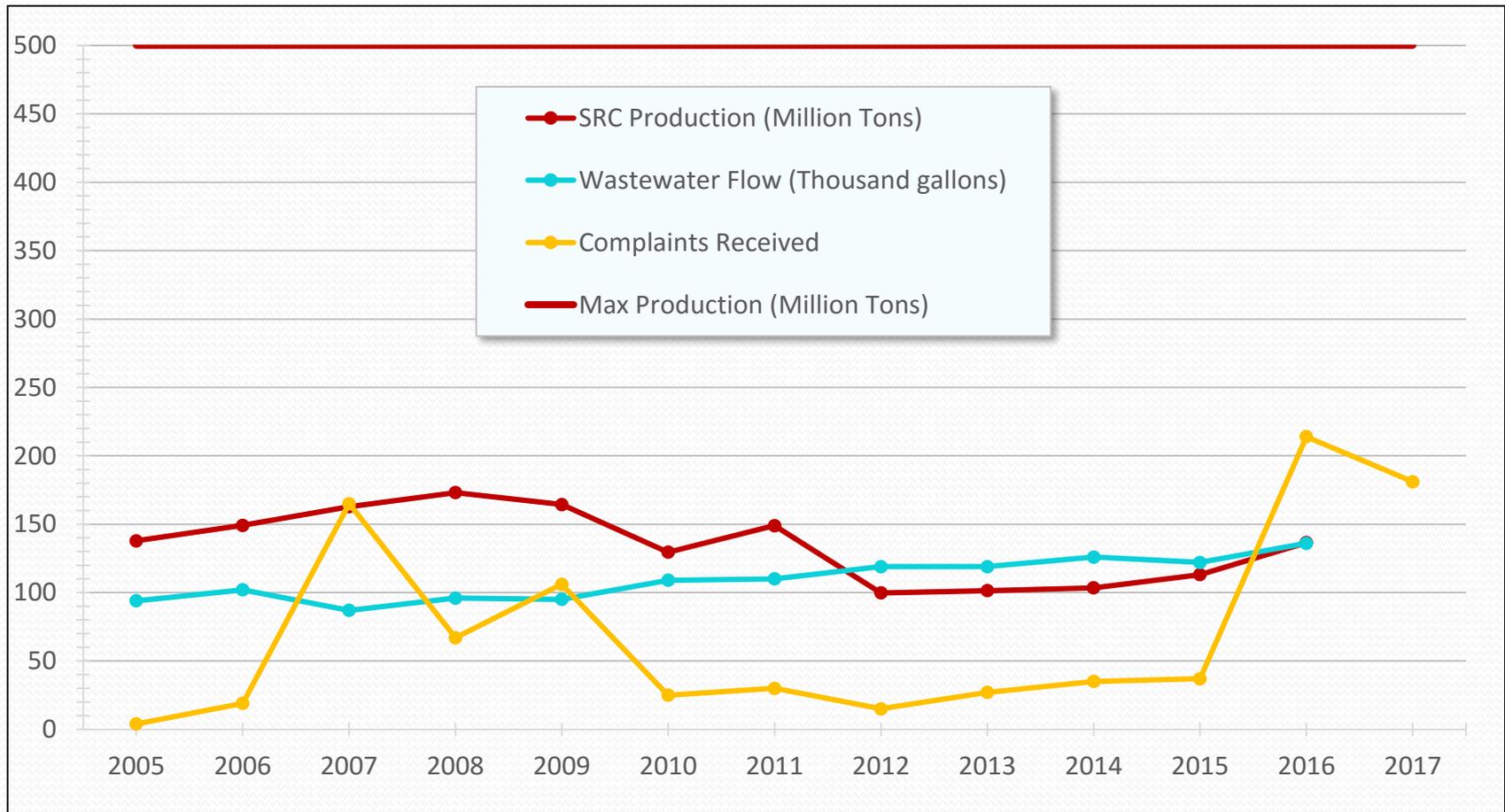
- Exempt from nuisance unless:
  - the activities or operations substantially increase
  - those increases have a significant effect on the environment
- A public or private nuisance may be brought with respect to those increases
- Burden of proof falls on those alleging increase, not the source

# The Right to Farm Act § 3482.6 (b)

- Activities or Operations
  - Activities: an increase in what is being done -- production
  - Operations: the processing lines
    - Capacity has not changed since permit issued in 2004
- Question is two-part:
  - Has there been a substantial increase in production?
  - If so, has that substantial increase in production had a significant effect on the environment?

# Production<sup>1</sup>, Wastewater Flow<sup>2</sup> & Complaints:

## **NO CORRELATION OBSERVED**



<sup>1</sup> Production data received from Sacramento Rendering Co.

<sup>2</sup> Wastewater flow data received from Central Valley Regional Water Quality Control Board

# Factors that Affect Wastewater Flow

- Changes in facility cleaning requirements (CDFA)
- Upgrades in odor control equipment (scrubbers)
- Changes in consumer meat consumption<sup>1</sup>
  - Increase in low yield meat consumption
  - Fluctuation in consumer purchasing
- Changes in supermarket batching operations
  - Shift to tray-ready food (low yield)
  - Butchering occurs at central processing (low yield)
- Focus on biodiesel in business adds additional water

Increase in demand for lean meat. [Trends in meat consumption in the United States, 2011](#)

[Carrie R. Daniel](#),<sup>1</sup> [Amanda J. Cross](#),<sup>1</sup> [Corinna Koebnick](#),<sup>2</sup> and [Rashmi Sinha](#)<sup>1</sup>

# Production Records

- SRC had 2005 to current records available
- SRC keeps historical tax records (financials), but that is not clearly correlated to production
- Sac Metro AQMD staff audited 2005-2016 records to determine production records.
- Staff reviewed spreadsheet of off-weight tags (material in) and subtracted material that is not rendered (blood, grease, Koefran)

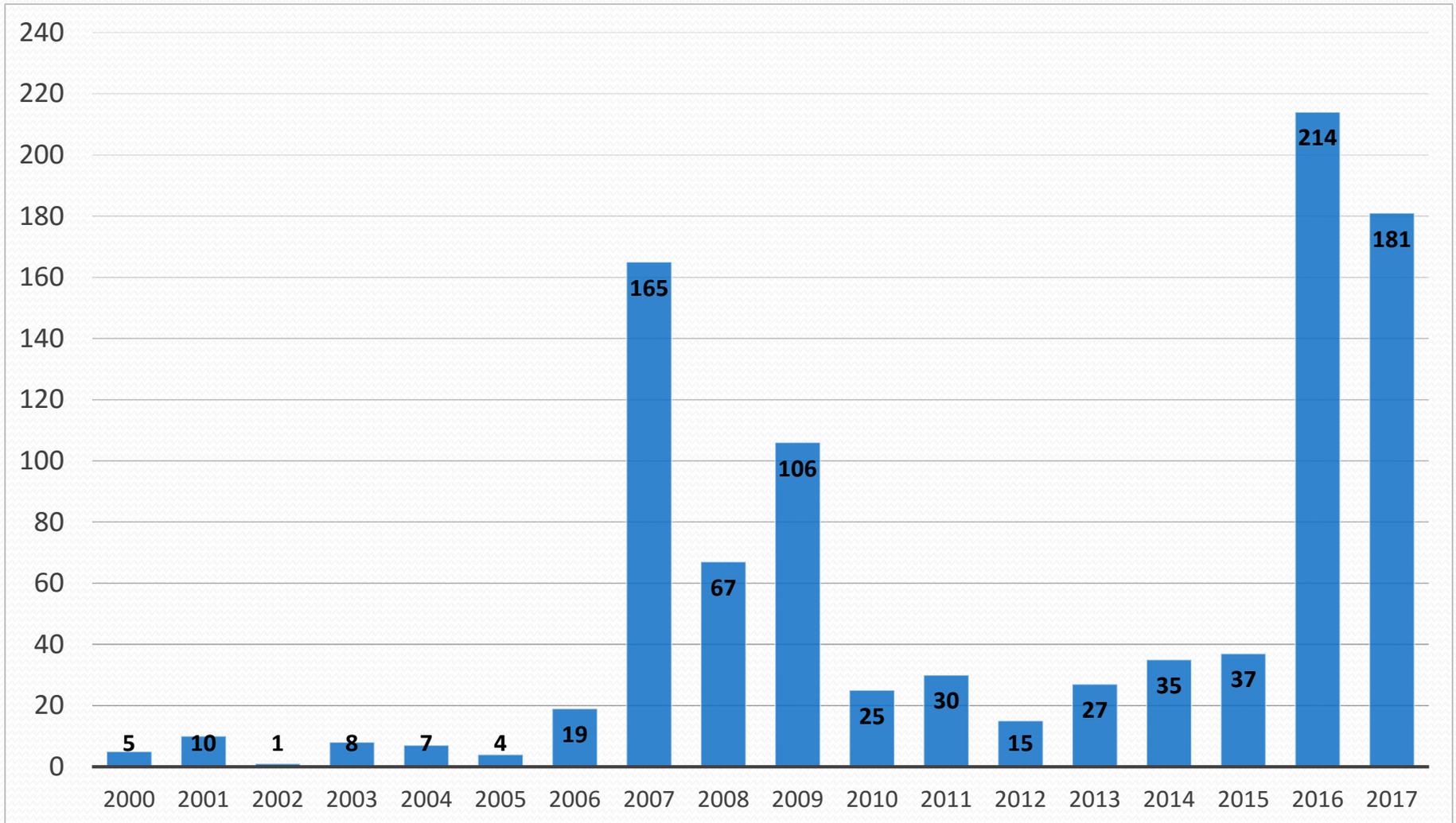
# Factors that Affect Production

- Operational status of other rendering plants
- Weather and seasonality
  - Heat spells
  - Mass animal die-offs
- Business
  - Contracts (Foster Farm 1985-2011)
  - SJVAPCD permitted FF in 1997
- Consumer trends
  - Meat consumption
  - Livestock and poultry

# Complaints

- Rendering odor is detected in the surrounding areas
- Complaints about abnormally high odors help Sac Metro AQMD enforce permit conditions
- Complaints should be real-time and include the following:
  - Contact information
  - Date/Time
  - Accurate location (where was odor detected)
  - Odor duration
  - Wind direction details
- Public questions and comments are always welcome
  - [athompson@airquality.org](mailto:athompson@airquality.org)

# Rendering Odor Complaints



# Public Comments & Questions

**Topic:** Sac Metro AQMD's ability to regulate odor under the Right to Farm Act.

**Response:** We can and do regulate SRC. SRC is already equipped with odor control equipment. The Right to Farm Act precludes us from issuing a nuisance violation.

**Topic:** Other rendering plants in California are not protected under the Right to Farm Act.

**Response:** The applicability of the Right To Farm Act depends on when the plant was built and when surrounding communities were developed.

**Response :** The Right to Farm Act was meant to prevent odor nuisance complaints stemming from urban encroachment.

**Topic:** Sac Metro AQMD allows the rendering plant to have malfunctions.

**Response:** Sac Metro AQMD rules allow certain unforeseeable failures or malfunctions of air pollution control equipment to occur. Immediate corrective measures are required.

**Topic:** Other Air Districts (YSAQMD, BCAPCD) regulate agricultural processing facilities for odors. See next slides.

# Right to Farm Act § 3482.6 (a)

(a) No agricultural processing activity, operation, facility, or appurtenances thereof, **conducted or maintained** for commercial purposes, and **in a manner consistent with proper and accepted customs and standards**, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in continuous operation for more than three years if it was not a nuisance at the time it began.

# Other Air Districts

## Yolo-Solano AQMD

- Four agricultural facilities with water processing equipment under permit
- Requires odor control equipment on waste water
- Has issued a nuisance violation, but facility has not asserted the Right to Farm Act

## Butte County AQMD

- One agricultural facility with water processing equipment under permit
- Believes they are precluded from issuing a nuisance violation

# Public Comments & Questions

**Topic:** Risk analysis and VOC considerations

**Response:** Originally permitting used standardized factors for considering VOC emissions; HRA performed from source test results

**Topic:** Concerns regarding CEQA analysis during housing & school construction

**Response:** Analysis of health effects of rendering odor on residents and students was included in the Sac County Final Environmental Impact Report of 2001 for the Sunrise Douglas Community Plan/Sunridge Specific Plan.

**Response:** Sac County can address questions related to this impact report

# Additional Information

- This presentation will be available at:  
<http://www.airquality.org/Residents/Complaints>
- Contact the Central Valley Regional Water Quality Control Board by phone or email with any groundwater, surface water, odor concerns, odor complaints, or permitting questions related to water:  
<http://www.waterboards.ca.gov/centralvalley>

# Conclusion

- Sac Metro AQMD has and will continue to regulate SRC to the extent of its authority
- Sac Metro AQMD has determined that there is no health risks from known carcinogens from SRC rendering process
- Will follow up on Sac Metro AQMD recordkeeping authority
- Will continue to monitor complaints
- Will continue to participate with the community

# Sac Metro AQMD Contact Info

- **Angela Thompson**

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- **Brian Krebs**

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