

UPDATE ON CARB POLLUTION MAPPING TOOL

and

AB 2588 “HOT SPOTS”

CAPCOA Symposium 2017
(Enforcement, Engineering, and Toxics)
Folsom, CA
November 8, 2017

A. CARB Pollution Mapping Tool

- AB 197 requires CARB to develop integrated pollution mapping tool
- Currently presents GHG and criteria pollutant emissions for large stationary sources
- Mandate to include toxic pollutant emissions for these facilities by January 1, 2018
- Today – preview of draft “toxics tab” of tool
- Toxics launch will include caveats, link to OEHHA health values, supplemental columns with toxicity-weighting equations

Mapping Tool User Interface

Facility Search Criteria

Hide Reset

▼ Facility Search

ARBID, name, address, sector, etc.

▼ Emission Year

Year: Choose Years x 2015

▼ Geographic Region

Basin: Choose Air Basins

District: Choose Air Districts

County: Choose Counties

City: Choose Cities

Zipcode: Choose Zip Codes

▼ Legislative District

Assembly: Assembly Districts

Senate: Senate Districts

▼ Primary Sector

Sector: Choose Sectors

▼ Cap-and-Trade

Covered in 2013? All

▼ Air Pollutant

Pollutant: Choose Pollutants

x CO2E_TOTAL

▼ Emission Level (MT)

CO2E_TOTAL:

Min Max

Maps Charts Data Help

Group by Facilities Map Layers Reset Maps

Hide Markers Get Image Get Data

Search a Place or Business on the Map

Facility Emissions GHG Trend Criteria Trend Toxics Compare

XYZ Company

GHG ID 999999

CEIDARS ID 9999999

Address 123 Industrial Park Rd

SIC 4922 - NATURAL GAS TRANSMISSION

NAICS 221210 - Natural Gas Distribution

Sector Oil and Gas Production

Basin Mojave Desert

District Mojave Desert AQMD

County San Bernardino

Emissions by Facility

FACILITY	CO2E_TOTAL (MT)
1 3M Corona	14,809
2 ABI Foundry	15,857
3 ACE Cogeneration	0
4 AES Alamos, LLC	684,896
5 AES Huntington Beach, LLC	432,210
6 AES Redondo Beach LLC	318,370
7 Aemetis Advanced Fuels Keyes, Inc.	69,826
8 Aera Energy Belridge Gas Plant 32	33,441
9 Aera Energy Coastal Basins	231,065
10 Aera Energy San Joaquin Basin	3,342,461
11 Aera Energy Ventura Basin (opt-in 2014)	12,976
12 Aera Energy Ventura Gas Plant	4,923
13 Aerojet Rocketdyne	9,511
14 Air Liquide El Segundo Hydrogen Plant	552,487
15 Air Liquide Large Industries US L.P. - Rodeo Hydrogen Plant	819,886
16 Air Products & Chemicals, Inc., Martinez	196,728
17 Air Products Carson Hydrogen Plant	673,014
18 Air Products Manufacturing Corporation, Sacramento	44,205
19 Air Products Wilmington Hydrogen Plant	633,296
20 Algonquin Power Sanger, LLC	58,207
21 All American Asphalt - Corona	12,783
22 All American Asphalt Irvine	10,406
23 All American Oil and Gas Company	173,969
24 Allergan	9,080
25 Alon Bakersfield Refinery - Area 3	0
26 Alon Bakersfield Refinery - Areas 1&2	31,340
27 AltaGas Pomona Energy Inc (San Gabriel Cogeneration Facility)	53,742
28 AltaGas Ripon Energy Inc.	24,547
29 Ameresco Chiquita Energy LLC	33,279
30 Ameresco Forward LLC	16,644
31 Ameresco Half Moon Bay	45,483
32 Ameresco Keller Canyon	14,313
33 Ameresco San Joaquin LLC	13,622
34 Ameresco Santa Cruz	11,362
35 Ameresco Vasco Road	16,954
36 Amgen Inc.	20,013
37 Ampersand Chowchilla Biomass, LLC, 93610	106,290
38 Ampine: A Division of Timber Products	16,480
39 Anheuser-Busch LLC - Fairfield (opt-in 2013)	16,782
40 Anheuser-Busch LLC - Los Angeles Brewery	43,924
41 Applied Energy LLC - NAS North Island	167,504

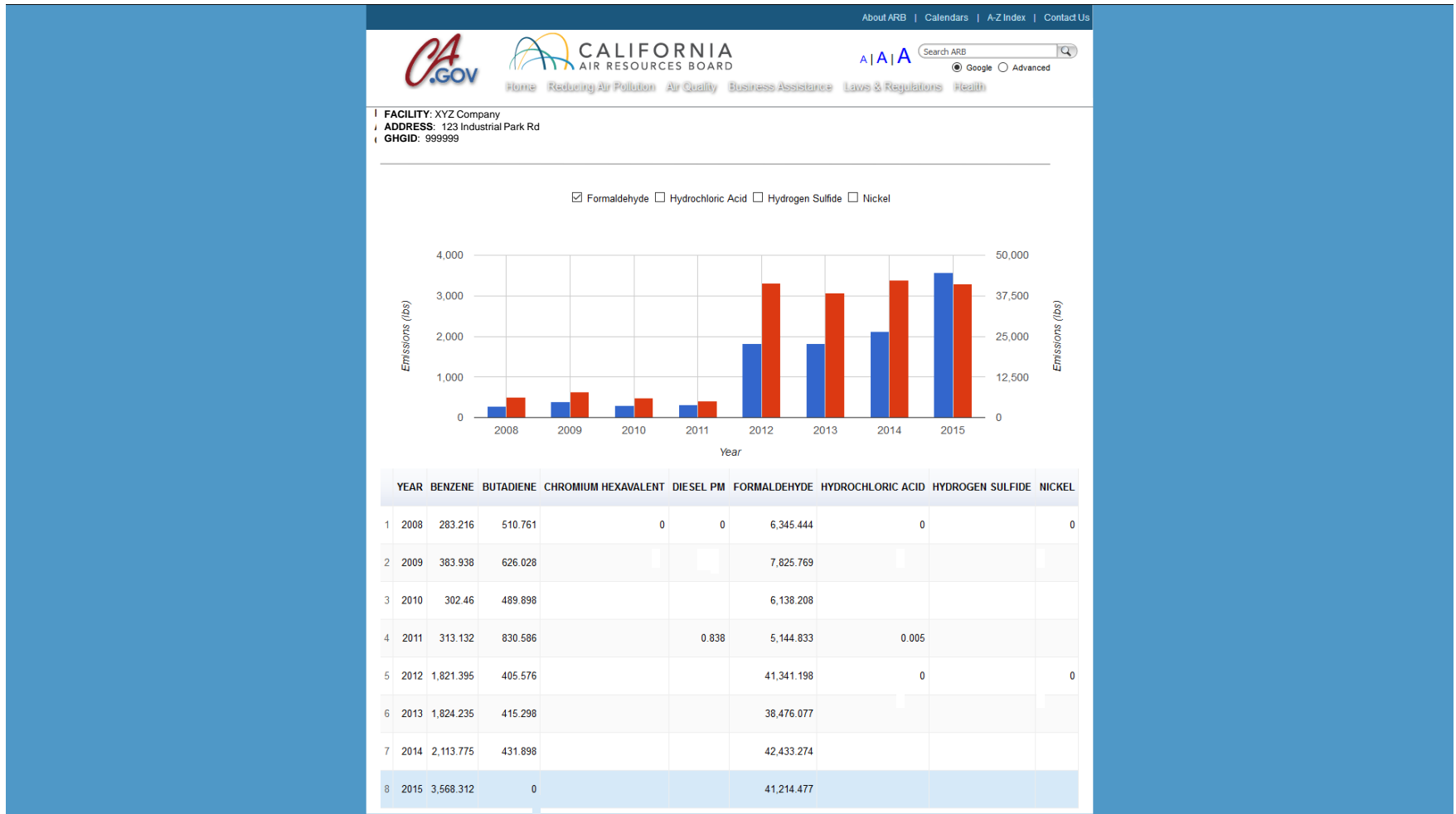
The Toxics Tab



Selected Toxic Pollutants Trend



Compare Pollutant Trends



View All Pollutants Reported



Home Reducing Air Pollution Air Quality Business Assistance Laws & Regulations Health

A | A | A

Search ARB

Google Advanced

FACILITY: XYZ Company
ADDRESS: 123 Industrial Park Rd
GHGID: 999999

Toxic Pollutants and Emissions (lbs/yr) Reported for this Facility

Year	Pol ID	Pollutant Name	Emissions (lbs/yr)	ToxicityWtd-Lbs (Cancer)	ToxicityWtd-Lbs (Chronic)	ToxicityWtd-Lbs (Acute)*	
1	2015	1080	Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]	0	0	0	
2	2015	1085	Dioxins, total, with individ. isomers also reported {PCDDs}	0			
3	2015	1150	PAHs, total, with individ. components also reported	137.249			
4	2015	50000	Formaldehyde	41,214.477	1,904.109	78.414	128.314
5	2015	50328	Benzo[a]pyrene	0.006	0.049		
6	2015	53703	Dibenz[a,h]anthracene	0	0		
7	2015	56235	Carbon tetrachloride	61.707	19.956	0.026	0.006
8	2015	56553	Benz[a]anthracene	0.341	0.288		
9	2015	67561	Methanol	2,544.618		0.011	0.016
10	2015	67663	Chloroform	47.882	1.954	0.003	0.055
11	2015	71432	Benzene	3,568.312	796.804	20.367	22.63
12	2015	74953	Methylene bromide	149.423			
13	2015	75003	Ethyl chloride {Chloroethane}	0		0	
14	2015	75014	Vinyl chloride	25.11	15.081		0
15	2015	75070	Acetaldehyde	9,877.385	205.351	1.208	3.599
16	2015	75343	1,1-Dichloroethane	39.748	0.49		
17	2015	78875	1,2-Dichloropropane	45.34			
18	2015	79005	1,1,2-Trichloroethane	53.574	6.6		
19	2015	79345	1,1,2,2-Tetrachloroethane	67.46	30.128		
20	2015	83329	Acenaphthene	1.348			

Next Steps for Pollution Mapping Tool

- Beta version of tool with toxic pollutant emissions data by early November 2017
- Public release (version 2.0) by December 29, 2017
- Incorporate 2016 GHG, criteria and toxic emissions data by Spring 2018
- Add additional stationary, areawide, and mobile sources in 2019
- Continue to develop expanded tool features to improve public engagement
- Create an integrated inventory database system to support data tracking

B. HARP Prioritization Functionality

- Priority Calculation screens – start inside HARP Emission Inventory Module (EIM), Facility Data Entry Screen
- Screens to enter receptor proximity, optional multipliers
 - Mirrors options in the CAPCOA Facility Prioritization Guidelines
 - Recent screen allows separate multiplier for cancer vs. chronic
- HARP can show prioritization scores broken down by device, process, pollutant -- as well as facility total scores
- Enter any completed HRA risk results (Fees & Reporting)
- Last step: Export to CEIDARS transactions

Prioritization Screen in HARP Software

HARP - Emission Inventory Module v2.1.1 - [test]

File View **Add/Edit Data** Query Data Create Reports Export Data Tools Help

Facility Data Entry Screen

Previous Record Next Record Go To Settings

Editing Facility - ID: 3002 | ABC CHEMICAL | Year: 2


- Facility ID
- Facility Address & Location
- Contact & Employee Info
- Building & Property Dimensional Data
- Release Data (2)
- Device Data (1)
 - Process Data (2)
 - Emission Data
 - Toxics (10)
 - Criteria (2)
 - Other (0)
- Area Designation
- Supplemental Data (0)
- Priority Calculation**
- Fees & Reporting
- Additional Info
- Last Updated

Priority Calculation

Calculation Procedures

Emissions and Potency Procedure Dispersion Adjustment Procedure

Receptor Proximity

Receptor Proximity (m) 

Proximity Method Receptor ID=1 Name=MY RECEPTOR Proximity=260.56 m UTM East=256078.00 UTM North=571440.52

Advanced Options

Apply Priority, Proximity, and Noncancer Adjustments

Apply Noninhalation Adjustments (Multipathway Pollutants)

Priority Score

Highest Score

Score Breakdown

Cancer Priority Score, Emissions and Potency Procedure	4.71
Noncancer Priority Score, Emissions and Potency Procedure	4.74
Acute Priority Score, Emissions and Potency Procedure	2.34

Record Navigation War

Record 5 of 5

Prioritization Screen in HARP (cont'd p.2)

Adjustment Factors

Receptor Proximity, Chronic Adjustment Factors, and Cancer Priority Multiplier

Factor Name	Factor	Description
Receptor Proximity Adjustment (Within 50m)	<input type="text"/>	This adjustment factor is intended to provide additional weighting for a receptor proximity that is less than or equal to 50m. This factor will be multiplied to all priority scores. By default, receptor proximities in the range of 0 to less than 100m is 1. See Appendix C and F in the CAPCOA Facility Prioritization Guidelines for more information.
Chronic Factor (Annual Operating Hours)	8760	This factor is used for calculating the noncancer chronic score. The annual average emissions are divided by this factor to convert from average lbs/yr to average lbs/hr. By default, this factor is set to 8760 hr/yr.
Chronic Priority Multiplier	<input type="text"/>	This multiplier is only applied to chronic priority scores. A zero priority multiplier is treated as 1.
Cancer Priority Multiplier	1.3	This multiplier is only applied to cancer priority scores. A zero priority multiplier is treated as 1.

Priority Multiplier:

This priority multiplier is applied to all priority scores (i.e. cancer, acute, and chronic scores). A zero priority multiplier is treated as 1. This factor can be manually entered (above) or calculated using the fields below. See the CAPCOA Facility Prioritization Guidelines for the list of criteria that may be considered for user-defined factors.

If you are using the fields below to calculate the priority multiplier, it will be automatically calculated using the following equation:
 Priority Multiplier = Population Density Adjustment Factor + User-Defined Factor 1 + User-Defined Factor 2 + User-Defined Factor 3

Name	Factor	Description
Population Density Adjustment Factor	0	This adjustment factor is intended to provide weighting based on the population density of the area of interest.
User-Defined Factor 1	0	<input type="text"/>
User-Defined Factor 2	0	<input type="text"/>
User-Defined Factor 3	0	<input type="text"/>

OK Cancel [Help](#)

Prioritization Screen in HARP (cont'd p.3)

HARP - Emission Inventory Module v2.1.1 - [test]

File View Add/Edit Data Query Data **Create Reports** Export Data Tools Help

Prioritization

Step 1: Choose Facilities to Report

- All Facilities
- Select One Facility
- User Defined Facility List

Select a List

Browse Edit / Create

Step 2: Select Reporting Year

Select a Year 2

Check Facilities

Step 3: Choose Procedure

- Emissions and Potency Procedure
- Dispersion Adjustment Procedure

Step 4: Optional Adjustments for Calculation

- Apply Proximity, Priority, and Noncancer Adjustments
- Apply Noninhalation Adjustments (Multipathway Pollutants)

Edit

Step 5: Report Display Options

Breakdown

- By Facility
- By Device
- By Process
- By Pollutant

Include

- Emissions
- Receptor Proximity
- Optional Factors

Step 6: Report Format

- Rich Text
- CSV File

Step 7: Sort Report By

- Facility Highest Score
- Facility ID
- Source Type

Report notes typed here will be saved to the report.

Calculate and Create Report

Prioritization Screen in HARP (cont'd p.4)

Facility Data Entry Screen

File Edit Previous Record Next Record Go To Settings Help

Editing Facility - ID: 3002 | ABC CHEMICAL | Year: 2

- Facility ID
- Facility Address & Location
- Contact & Employee Info
- Building & Property Dimension
- Release Data (2)
- Device Data (1)
 - Process Data (2)
 - Emission Data
 - Toxics (2)
 - Criteria (7)
 - Other (0)
- Area Designation
- Supplemental Data (0)
- Priority Calculation
- Fees & Reporting**
- Additional Info
- Last Updated

Fees & Reporting

Risk (For AB2588 Hot Spots Fees Purposes)

HRA Cancer

Acute Hazard Index

Chronic Hazard Index

Phase facility was brought into the program

Toxic Program Status (FEE_CAT)

Is the facility used for forecasting?

Priority for Hot Spots Risk levels

Included in industrial wide?

Is this facility a small commercial facility (i.e., Aggregated Point Source)?

Is this facility record for a "Location Only facility (i.e., Used for certain small facilities for which location is known but site-specific emissions are not available like gasoline stations for CHAPIS mapping)?


Consolidated Emission Reporting Rule

Updating Code

Is this facility being regularly maintained by the district (e.g., More frequently than the 4-year Hot Spot Update cycle for toxics facilities)?

Is this a CHAPIS facility?

Year of Emission Data

SIC code for facility in Fee Regulation 

Exemption status and reason

Small business?

Year of Risk Data

Year of Prioritization Score [See CEIDARS Data Field Descriptions](#)

Number of SCC used by facility

Record Navigation 0 Warning(s)

Record 5 of 7

Transaction Generation - HARP Software

The screenshot displays the HARP - Emission Inventory Module v2.1.1 - [test] application window. The 'Export Data' menu item is highlighted with a green box. Below it, the 'Export Data To a HARP CEIDARS 2.5 Transaction File' dialog box is open, also highlighted with a green box. The dialog box contains three sections for selecting data to export: 'Choose Facilities to Export', 'Choose Areawide Regional Sources', and 'Choose Receptors to Export'. Each section has radio buttons for 'None', 'Select By Reporting Year', and 'Select By County, Air Basin, and District'. The 'Reporting Year' is set to 2. The 'Receptor Group' is set to TUTORIAL. There are also 'Browse' and 'Edit / Create' buttons for each section. An 'Options' section on the right has a checkbox for 'Do not include records where emissions were computed from ROG/TOG/VOC/PM 10/PM2.5'. A 'Start' button is at the bottom.

HARP - Emission Inventory Module v2.1.1 - [test]

File View Add/Edit Data Query Data Create Reports **Export Data** Tools Help

Export Data To a HARP CEIDARS 2.5 Transaction File

Choose Facilities to Export

None

Select By Reporting Year 2

Select a Facility

Select By County, Air Basin, and District

County Air Basin District

User Defined Facility List Browse Edit / Create

Choose Areawide Regional Sources

None

Select By Reporting Year 2

Select By County, Air Basin, and District

County Air Basin District

Select an Areawide Regional Source

Options

Do not include records where emissions were computed from ROG/TOG/VOC/PM 10/PM2.5 (This information should not be submitted to CEIDARS)

Choose Receptors to Export

None

Select By County, Air Basin, and District

County Air Basin District

Select By Receptor Group TUTORIAL

User Defined Receptor List Browse Edit / Create

Start

Please note that this feature will not export any user-defined pollutants. User-defined pollutants can only be exported via a HARP database. In addition, you must provide the user-defined database associated with your project.

C. Update on AB 2588 “Hot Spots”

- Emission Inventory Criteria & Guidelines (EICG) and Fee Regulation (TBD)
 - Update incorporated references (e.g., OEHHA risk guidelines, CAPCOA facility prioritization guidelines)
 - Possible candidate new substances for A-I list (e.g., N-propyl bromide, others?)
 - Consider other updates (e.g., Appendix E?)
- Today: would like air district discussion on some questions – especially on how AB 2588 and new AB 617 requirements could best interface

Discussion Questions

- 1) How should AB 617 “elevated prioritization scores” be defined (e.g., in relation to AB 2588)?
 - What are districts learning as they re-prioritize their facilities?
- 2) How might AB 2588 help track reductions in emissions (and/or risk) to support AB 617 Community Emission Reduction Plans?
- 3) How might AB 2588 be used to help define and address cumulative exposure burden?
 - What metric defines high cumulative exposure burden?
- 4) Are there changes districts would like to see to Appendix E of the AB 2588 EIC&G?
 - E.g., Any new categories of small facilities? Different thresholds? Role of onsite mobile? Treatment of industrywide categories?
- 5) Other topics of interest to districts?

Questions on Pollution Mapping Tool or AB 2588 Emission Inventory or Fees?

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