



ebruary 2014

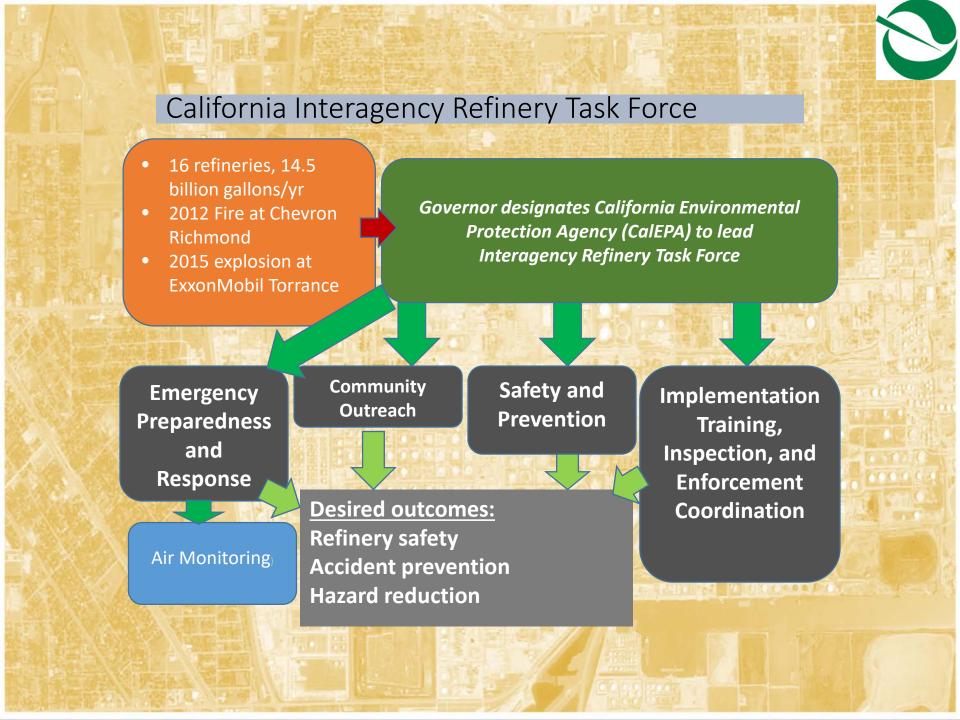


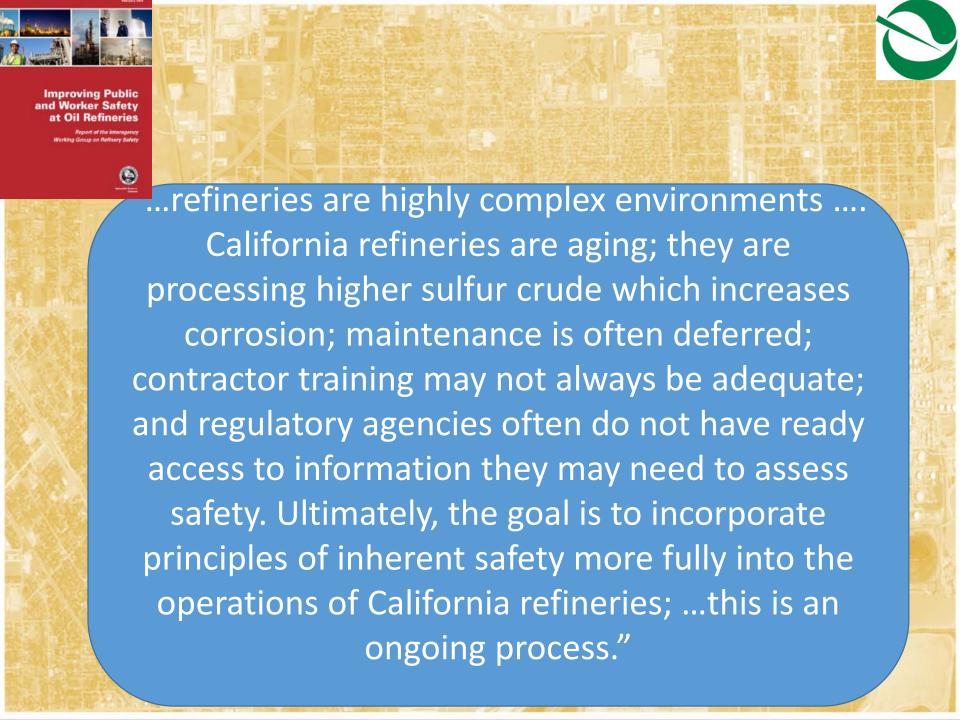
Improving Public and Worker Safety at Oil Refineries

Report of the Interagency Working Group on Refinery Safety

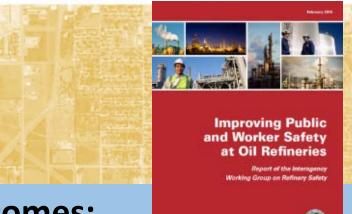


California Environmental Protection Agency California Air Resources Board **Department of Toxic Substances Control** State Water Resources Control Board Department of Industrial Relations (CalOSHA) Governor's Office of Emergency Services California Department of Public Health California Emergency Medical Services Authority Office of the State Fire Marshal U.S. Environmental Protection Agency Region 9 Certified Unified Program Agencies with refineries Contra Costa County Environmental Health El Segundo Fire Kern County Environmental Health Los Angeles County Fire (Torrance Fire) City of Los Angeles Fire San Luis Obispo County Environmental Health Solano County Environmental Health Local Air Pollution Control Districts with refineries Bay Area Air Quality Management District San Joaquin Valley Air Pollution Control District San Luis Obispo County Air Pollution Control District South Coast Air Quality Management District









Intended Outcomes:

- Improving refinery safety is a goal strongly shared by government, industry, workers, and communities.
- Refineries should have a culture that fosters inherent safety, including stronger accident prevention and hazard reduction measures.
- Government agencies can improve interagency coordination, emergency response procedures, and communication and outreach to the public.
- The Interagency Refinery Task Force will guide California efforts to help achieve the highest possible level of safety and prevention in the California refinery sector."

Refinery Emergency Air Monitoring Assessment Project



Monitoring and Laboratory Division
Office of Emergency Response

Torrance
April 23, 2018

Refinery Project Plan



Richmond 2012



Torrance 2015

Develop Project Plan - July 2013

- Objective 1: Inventory existing assets and resources - May 2015
- Objective 2: Evaluate capabilities and propose enhancements - Public Final Draft September 2017
- Objective 3: Develop statewide guidance to implement recommendations/best practices
- Objective 4: Improve ongoing training, coordination, and preparedness



Findings



Data Availability:

- Existing monitoring
- Deployed monitoring
- Modeling

Coordination and Communication





Overview of Recommendations

- Require multi-layered air monitoring around refineries
- Sponsor technical symposia to identify best practices and advancements in industrial modeling
- Coordinate better local emergency preparedness, response, and messaging
- Improve State and local coordination group via Refinery Monitoring Working Group (RMWG) – statewide guidance.

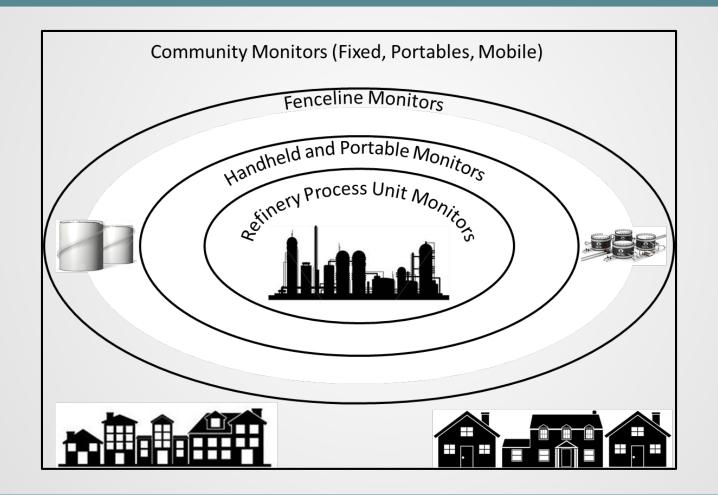


Routine and Emergency Air Monitoring

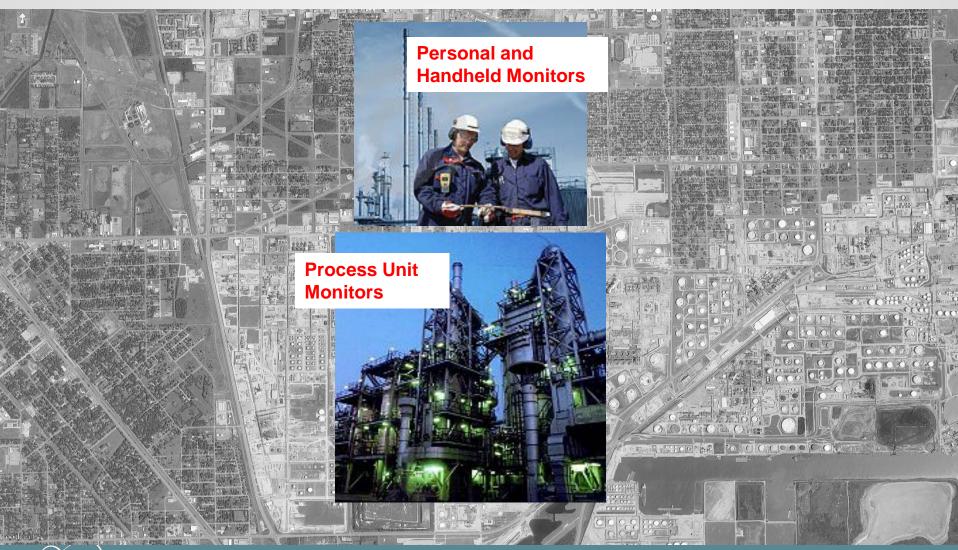
- Air monitoring systems designed for emergencies can provide information on routine operations
- Additional benefits include:
 - Information on air quality around industrial facilities
 - Status of routine industrial operations



Layered Air Monitoring Strategy











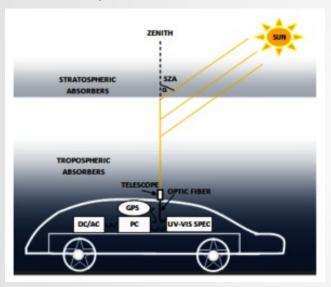






Technology Evaluations

Spectral Flux





South Coast Air Quality Management
District's Air Quality Sensor
Performance Evaluation Center







Modeling



- Emergency preparedness
- Model evaluation
 - New technology
 - Application

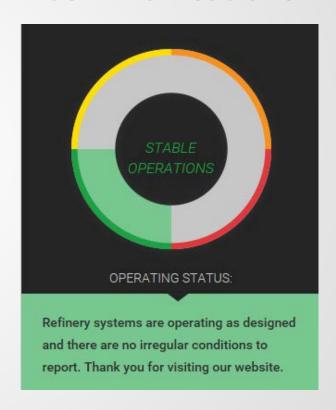


Coordination and Communication

Prevention and Preparedness

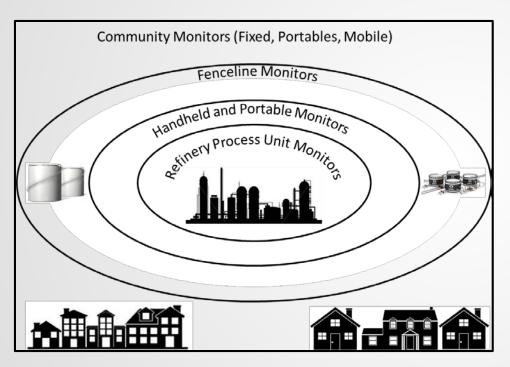


Communications





Next Steps



- Outreach activities
- Feedback on report
- Finalize report
- Form RMWG
- District rules and State regulations



Further Information

- CARB refinery related air monitoring website:
 www.arb.ca.gov/fuels/carefinery/crseam/crseam.htm
- Or web search: carb Refinery

Russ Bennett

California Air Resources Board: Office of Emergency Response



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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT: REFINERY RELATED AIR MONITORING EFFORTS

IRTF Safety Forum April 23, 2018

Dr. Jason C. Low Assistant Deputy Executive Officer Monitoring and Analysis Division

OVERVIEW

- South Coast Air Quality Management District (SCAQMD) Background
- Incident Response Program
- Current Air Monitoring Programs
 - Air Monitoring Network
 - AQ-SPEC Program
 - MATES V
- Upcoming Programs to Integrate Air Monitoring Strategies
 - AB 617
 - Rule 1180 Community Monitoring
 - Supplemental Environmental Project and Rule 1410 Update

WHO IS THE SCAQMD?

Regional Government Agency Responsible for Protecting Our Residents from the Health Effects of Air Pollution

What we do

- Develop Air Quality Management Plan
- Adopt air quality rules and regulations
- Issue **permits**
- Conduct periodic inspections and respond to air quality complaints
- Develop and deploy clean technology
- Conduct air monitoring
- **Engage** with all stakeholders
- Public outreach and education





SCAQMD Incident Response Program

➤ Responds to emergencies such as fires, explosions, toxic spills, and toxic gas releases at industrial/commercial facilities and other sources

> Activation:

- Notifications from Cal Emergency
 Management Agency, Cal EPA and Local Emergency Response Agencies, Local Fire Departments, CHP, wildfire events
- 1.800.CUT.SMOG / www.aqmd.gov







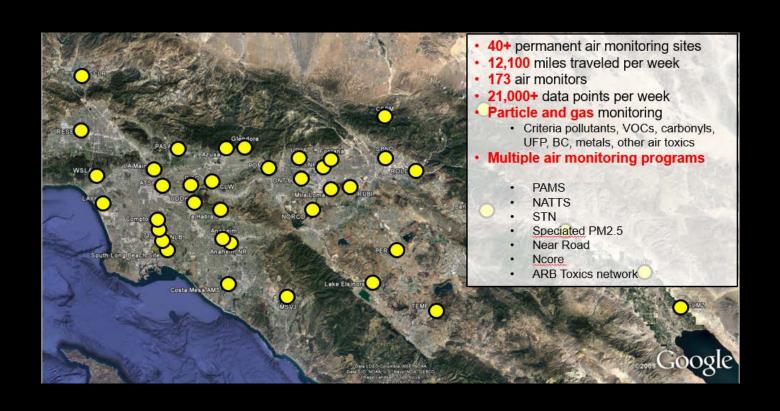


SCAQMD Incident Response Program

- Provides specialized technical support within the Incident Command System
 - Air quality sampling and analysis
 - ✓ On-site near real-time measurements
 - ✓ On-site sample collection for laboratory analysis
 - Capability for longer term monitoring
 - Facility inspection
 - Meteorological data, dispersion modeling, and forecasting



SCAQMD AIR MONITORING NETWORK





AQ-SPEC Air Quality Sensor Performance Evaluation Center

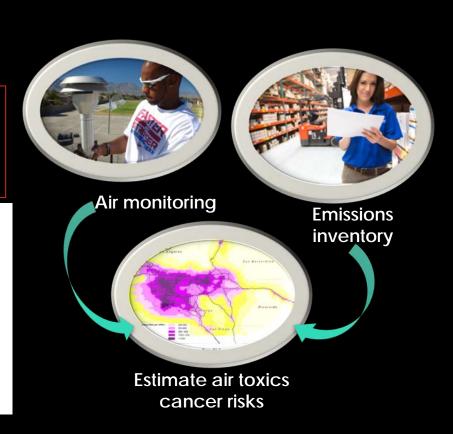
- Most comprehensive sensor evaluation program in the Nation
- Recognition for:
 - Community education
 - Air toxics monitoring
 - Validation of satellite air quality data
- Pilot sensor network projects
- Next steps:
 - Statewide sensor network development
 - Sensor certification program



MATES V PROGRAM OVERVIEW

PURPOSE: To evaluate regional air toxics health risks in the South Coast Air Basin

- Carcinogenic risk from exposure to air toxics
- Cumulative impacts approach
- Advanced monitoring component in areas near refineries



FLIGHT-BASED AIR TOXICS MEASUREMENT

AEROSPACE CORPORATION



- Survey large areas, including refinery areas
- Detect plumes & emissions
- Guide ground-based efforts

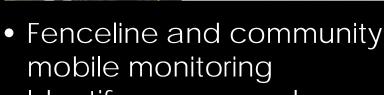


MOBILE AIR TOXICS LABORATORY FLUXSENSE, INC.





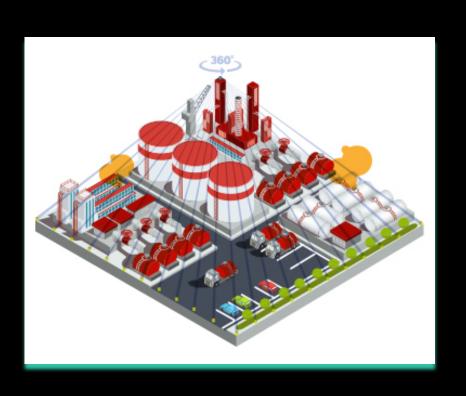
 Survey major refineries and other petroleum facilities



Identify sources and community levels



OPTICAL TENT (FACILITY-BASED AIR TOXICS MONITORING) UCLA



- Continuous facility monitoring
- Real-time leak detection
- Quantify long-term emissions

SENSOR NETWORKS & COMMUNITY ENGAGEMENT OSENSE AND SCAOMD

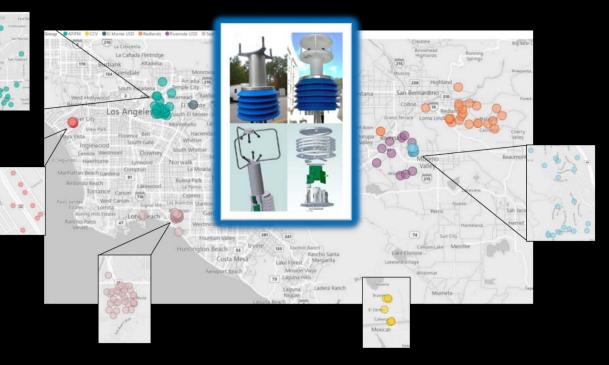
Detailed local data

• PM: 2 communities

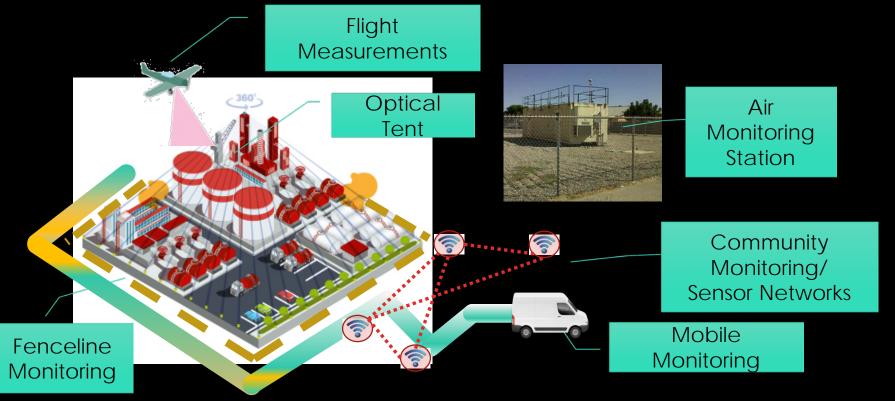
VOCs: 1 near-refinery community

Community engagement

- Air quality & sensor training
- Needs assessment
- Inform air quality improvement projects



COMPLEMENTARY APPROACHES TO REFINERY MONITORING



SCAQMD RULE 1180

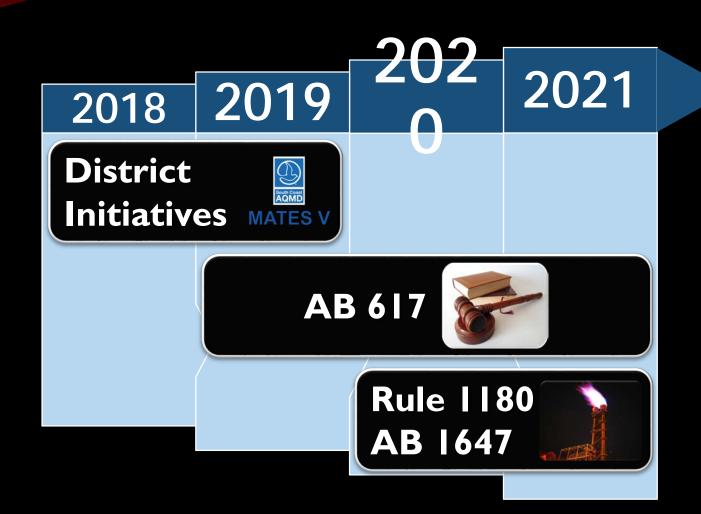
- Fenceline air monitoring system required to be installed
- SCAQMD will deploy community monitoring



AB 617 Goals







SUPPLEMENTAL ENVIRONMENTAL PROJECT

- Torrance refinery explosion
 February 2015 & restart in May 2016
- Settlement funds received totaling \$2,771,250 to be used in or to benefit the City of Torrance
- Community air monitoring and alerting system to be implemented



PROPOSED RULE 1410 – HYDROGEN FLUORIDE STORAGE AND USE AT PETROLEUM REFINERIES

- Initial rule concepts include different tiers of mitigation and phase-out of MHF technology
- Stakeholder input through working group and Refinery Committee meetings having presentations provided by manufacturers of emerging technologies, affected refineries, community groups, CalOSHA, and the California Energy Commission
- The third Refinery Committee Meeting scheduled for Saturday, April 28, 2018 at 9:00 a.m. at:

Torrance City Council Chambers 3031 Torrance Blvd Torrance, CA 90503

Questions?



Analysis of Refinery Chemical Emissions and Health Effects

Karen Riveles, PhD MPH

Office of Environmental Health Hazard Assessment (OEHHA)

California Environmental Protection Agency (CalEPA)

Karen.Riveles@oehha.ca.gov

OEHHA's Mission

▶ To protect and enhance public health and the environment by scientific evaluation of risks posted by hazardous substances

In an Emergency OEHHA assists

- Emergency responders and managers
- Local, State, and Federal air, environmental, and public health officials
- ► To assess health effects and characterizing risk to public health and the environment from toxic releases in the environment



Outline

- Timeline
- Background: Why did we create this report?
- What does this report do?
- What is the source of the information?
- Overview of information in report
- Regulatory health values
- Common process units and emission points at California refineries
- Routine and nonroutine emissions data
- Toxicity-weighted emissions
- Selecting candidate chemicals to recommend for air monitoring
- Key findings and conclusions

Timeline

Aug 2012

- Chevron refinery fire in Richmond
- Concerns about refinery safety and emergency response in California

July 2013 Governor Brown's report on "Improving Public and Worker Safety at Oil Refineries" recommends formation of Interagency Refinery Task Force (IRTF)

Aug 2013

- CalEPA forms IRTF in response to Governor's directive
- Develop findings, recommendations, proposed implementation measures

2014-June 2015 Public meetings: California Safety Forums

May 2015 ARB and CAPCOA report on "Refinery Emergency Air Monitoring Assessment: Delineation of Existing Capabilities"

June 2015

 OEHHA charged with assessing health effects, regulatory health values of CA refinery chemicals

Background

- Interagency Refinery Task Force (IRTF)
 - ► Tasked to improve public and worker safety around California refineries and strengthen emergency preparedness
- ▶ Air Resources Board (ARB) and California Air Pollution Control Officers Association (CAPCOA) Air Monitoring Committee
 - ► Tasked with writing a report to assess existing emergency air monitoring capabilities and potential improvements to California's current air monitoring system for refineries
- Office of Environmental Health Hazard Assessment (OEHHA)
 - California Environmental Protection Agency (CalEPA) tasks OEHHA with writing a report to summarize health effects of refinery chemicals

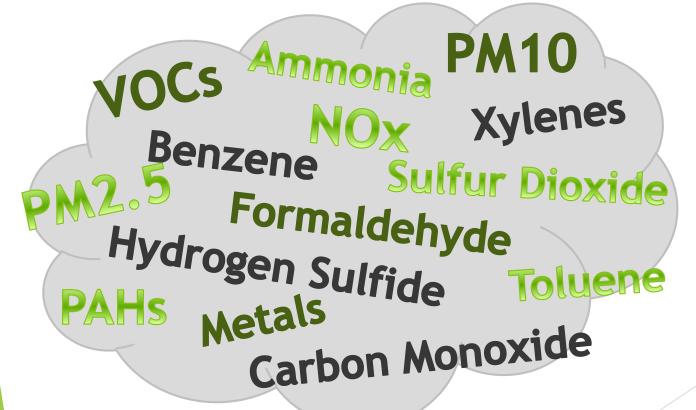
What does this report do?

- Provides a compendium of information on chemicals emitted from refineries in California
 - Regulatory health values and health effects
 - Common process units and emission points
 - Routine emissions in daily operations
 - Accidental emissions
 - Other non-routine emissions
 - Information on emissions levels and toxicity
 - Selects potential candidates for air monitoring

- ► This report does not:
 - Actually measure exposure or risk in communities
- ► OEHHA's report is a companion report to California Air Resources Board (CARB) report on air monitoring strategies
- The OEHHA report contains useful information for considering:
 - Which chemicals to monitor near facilities
 - ► Community air monitoring efforts
 - ► Fence-line air monitoring at refineries
 - Emergency response and preparedness



Knowing what is being emitted from refineries can help determine which chemicals should be monitored, as a way of reducing exposure.





What is the source of the information?

OEHHA used <u>publicly available information</u> to compile the list of chemicals and their emissions.

- California Air Resources Board's (CARB)
 - California Emissions Inventory Development and Reporting System (CEIDARS) Facility Search Tool
 - Routine emissions from all refineries in California
 - First Query: 2009-2012
 - ► Second Query: 2014
- US EPA
 - ▶ Routine and non-routine emissions from all California refineries
 - ▶ Data for 2010
- Additional sources
 - Literature searches, internet databases, government reports, peer-reviewed journal articles, and incident databases.

Overview of Information in the Report

- List of chemicals emitted from California refineries
- Health guidance values
 - OEHHA Reference Exposure Level (REL)
 - ▶ U.S. EPA Reference Concentration (RfC)
 - Cancer Slope Factors, Unit Risk Values, Prop 65
- Emergency exposure levels
 - ▶ U.S. EPA Acute Exposure Guideline Level (AEGL-1, 2)
 - ▶ NIOSH Immediately Dangerous to Life and Health (IDLH)
 - Lower Explosive Limits (LEL)

Overview continued

- Chemical health effects
 - Acute, chronic
- California refinery incident history
- California refinery process units and emission points
- Routine and nonroutine chemical emissions by California refineries
- Data analysis compares multiple variables to develop list of chemicals recommended for air monitoring

Regulatory Health Values and Refinery Chemicals in California

- ▶ 107 chemicals have at least one health guidance value from OEHHA or US EPA.
- 94 chemicals have at least one emergency exposure value to evaluate the harm of large unanticipated releases.
- ▶ 33 chemicals do not have any health guidance value. These chemicals are generally released in much lower quantities than those with guidance values.

Health Effects

- Information and acute and chronic health effects for a select group of refinery chemicals
- Summary table of health effects in report
- Longer health summaries in appendix

Common Process Units and Emission Points Self-Reported by CA Refineries (2010)¹

Release Type				
Fugitive	Point	Fugitive and Point		
Hydrogen plant Product loading Wastewater treatment	Boiler Flare Heater	Alkylation unit Cogeneration unit Coker		
	Hydrotreater Thermal oxidizer Vent	Cooling tower Crude unit Fluid catalytic cracking unit Hydrocracker Incinerator Stack		
		Storage tank		

¹ The process units listed above represent those most commonly found in OEHHA's research of California refineries based on U.S. EPA (2012a, 2012b) data for 2010. Note that the processes listed above do not reflect all refinery processes at California refineries.

Selecting Candidate Chemicals to Recommend for Air Monitoring

- Based on:
 - ► Highest routine and nonroutine emissions
 - ► Low Reference concentrations
 - ► RELs & RfCs
 - ► Carcinogencity
 - Low emergency exposure values
 - ► AEGLs (1,2)
 - ► In the most processes
 - Involved in reported refinery incidents
 - ► Toxicity-weighted emissions

Toxicity-Weighted Totals for Chemicals Released From California Refineries (2014)

			Toxicity- weighted lbs.
Chemical	Total lbs. released ¹	Toxicity weights ²	released ³
Formaldehyde	91681.92638	46000	4217368613
Nickel	1337.784985	930000	1244140036
Arsenic	64.78463609	17000000	1101338814
Cadmium	155.0871108	6400000	992557509.1
Benzene	20313.40527	28000	568775347.6
PAHs, total w/o individ components	711.0177817	710000	504822625
Chromium (hexavalent & compounds)	9.908684445	43000000	426073431.1
Benzo[a]pyrene	500.3090086	710000	355219396.1
Phenanthrene	279.8511702	710000	198694330.8
Beryllium	12.42167051	8600000	106826366.4
Ammonia	2517005.139	35	88095179.87
1,3-Butadiene	740.0423961	110000	81404663.57
Naphthalene	6313.022494	12000	75756269.93
Hydrogen Sulfide	12321.35516	1800	22178439.29
Acetaldehyde	1392.032749	7900	10997058.72
Manganese	474.3317752	12000	5691981.302
Diethanolamine	1777.82487	1200	2133389.844

- 1 Total amount of chemical released across California refineries
- 2 Proportional numerical weight given to each chemical based on chronic adverse health outcomes
- 3 Total chemical release multiplied by the toxicity weight

https://www.epa. gov/rsei/rseitoxicity-weights

Source: CARB's CEIDARS database for 2014

Candidates for air monitoring based on both emissions and toxicity considerations

Acetaldehyde Manganese

Ammonia Naphthalene

Benzene Nickel

1,3-butadiene Nitrogen oxides

Cadmium PAHs

Diethanolamine PM (10 and 2.5)

Formaldehyde Sulfur dioxide

Hydrogen fluoride Sulfuric acid

Hydrogen sulfide Toluene

Conclusions

- ► The report identifies 188 chemicals emitted from California refineries, although there are large variations in the frequency, amounts and toxicity of the emitted chemicals.
- There is generally good information for understanding the toxicity of the identified emitted chemicals
- All of the chemicals with <u>routine</u> emissions greater than 10,000 pounds per year statewide (14 chemicals) have an OEHHA Reference Exposure Level (REL)*
- ▶ OEHHA did not attempt to determine whether or how often these exposure levels may have been exceeded in areas near refineries.

*OEHHA does not have a REL for particulate matter (PM) or for categories of chemicals (VOCs, PAHs, etc)

Conclusions cont.

- With respect to accidental releases, OEHHA has identified several emitted chemicals of particular concern: benzene, formaldehyde, hydrogen sulfide, PM, sulfur dioxide, sulfuric acid, and toluene.
 - ► These chemicals have several health guidance values and emergency exposure levels, with low acute RELs indicative of relatively high acute toxicity.
 - ➤ Several of these chemicals are also involved in multiple refinery processes, increasing the chance that exposure could occur because of an accident or process upset.
 - ► These chemicals are also of interest for potential air monitoring because they all have high routine emissions (greater than 10,000 lbs/year).

Conclusions cont.

- California criteria air pollutants with high routine and non-routine emissions are: sulfur dioxide, nitrogen oxides, and particulate matter (PM).
- ► Hydrogen fluoride is a highly toxic chemical of serious concern; it is used at two refineries in California.
- ► The total amount released of hexavalent chromium, arsenic, and beryllium from all California refineries are all less than 100 pounds annually, making it likely very difficult to detect these in air.

Conclusions cont.

- ► The release of these chemicals from refineries does not necessarily mean that local communities face a significant health risk or substantial exposures, but it does increase the likelihood of exposure for nearby communities.
- Air monitoring of these chemicals may inform decisions that could reduce exposure.
- ► The top candidates for air monitoring are not ranked or prioritized further. An important consideration for air monitoring is that emissions of individual chemicals will vary among refineries.

THANK YOU!

Karen.Riveles@oehha.ca.gov

Report on OEHHA's webpage:

https://oehha.ca.gov/air/analysis-refinery-chemical-emissions-and-health-effects

CARB report:

https://www.arb.ca.gov/fuels/carefinery/crseam/crseam.htm

Interagency Refinery Task Force:

https://calepa.ca.gov/refinery/



Hydrogen Sulfide

Physical/Chemical Properties: Colorless gas with a pungent rotten egg odor. Corrosive and highly flammable.

Acute Health Effects: headache; nausea; irritation of the skin, eyes, mucus membranes, and respiratory tract; conjunctivitis with ocular pain, lacrimation, and photophobia; death from respiratory arrest

Chronic Health Effects: nasal inflammation (mice); low blood pressure, headache, nausea, loss of appetite, weight loss, ataxia, eye membrane inflammation, chronic cough

Hydrogen fluoride

- Acute 240 µg/m3 Respiratory system; eyes
- Chronic 14 μg/m3

Inhalation: Bone and teeth, respiratory system;

Oral: Bone and teeth

65

x. Hydrogen Fluoride

Hydrogen fluoride is a colorless fuming liquid or gas with a strong, pungent odor. Dissolution in water forms corrosive hydrofluoric acid, a systemic poison. Although it will not burn under typical fire conditions, this acid emits highly irritating and poisonous vapors that are corrosive to metals and body tissues when heated. Because it is corrosive to metals, hydrogen fluoride may yield hydrogen and may thus indirectly create a fire hazard. Hydrogen fluoride in air is normally found in the water vapor and particulate phases. The general population may be exposed to hydrogen fluoride in the ambient environment from industrial process emissions and coal combustion. In refineries, this chemical is used as a catalyst during alkylation or cracking and has been detected in refinery emissions and around crude units and cokers.

Short-term inhalation of hydrogen fluoride can lead to severe respiratory damage (irritation and fluid accumulation in the lung), lacrimation (tearing), sore throat, cough, chest tightness, and wheezing. Due to the ability of the fluoride ion to penetrate tissues, some health effects may be delayed for one to two days after exposure. Breathing high levels of the gas or in combination with dermal exposure may be fatal due to pulmonary edema (fluid accumulation in the lung) and bronchial pneumonia. People with cardiopulmonary disease may be particularly vulnerable to lower airway irritation at high concentrations. The most sensitive endpoint for short-term inhalation exposure to hydrogen fluoride is eye, nose, and throat irritation, which was observed in an inhalation study of healthy, male volunteers after one hour of exposure to concentrations of 0.20.6 mg/m3. After time and dose adjustments and consideration of uncertainties, OEHHA established an acute REL of 240 μ g/m3 to protect individuals from these effects.

Long-term exposure to low levels of hydrogen fluoride has been linked to congestion and irritation of the nose, throat, and bronchi. Liver and kidney damage has also been noted. Exposure to higher levels has been associated with increased bone density (skeletal fluorosis). This was observed in a study on fertilizer plant workers chronically exposed to an average of 0.14 mg/m3 hydrogen fluoride. In this study, OEHHA determined the point of departure for increased bone density to be 1.13 mg/m3, which served as the basis of the chronic REL of 14 µg/m3. Because fluorides may contaminate food and drinking water, OEHHA has also developed a chronic oral REL for hydrogen fluoride, based on the dental fluorosis observed in the inhabitants of several US cities exposed via drinking water. A point of departure of 0.82 mg/m3 at which the incidence of moderate to severe dental fluorosis was considered to be rare among the population was used to calculate the chronic oral REL of 40 µg/kg-day. Dental fluorosis has additionally been noted in children after maternal exposure to high levels during pregnancy.



CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY REGULATED SITE PORTAL

Thanks to: Jim Bohon, Project Sponsor Retired Assistant Secretary

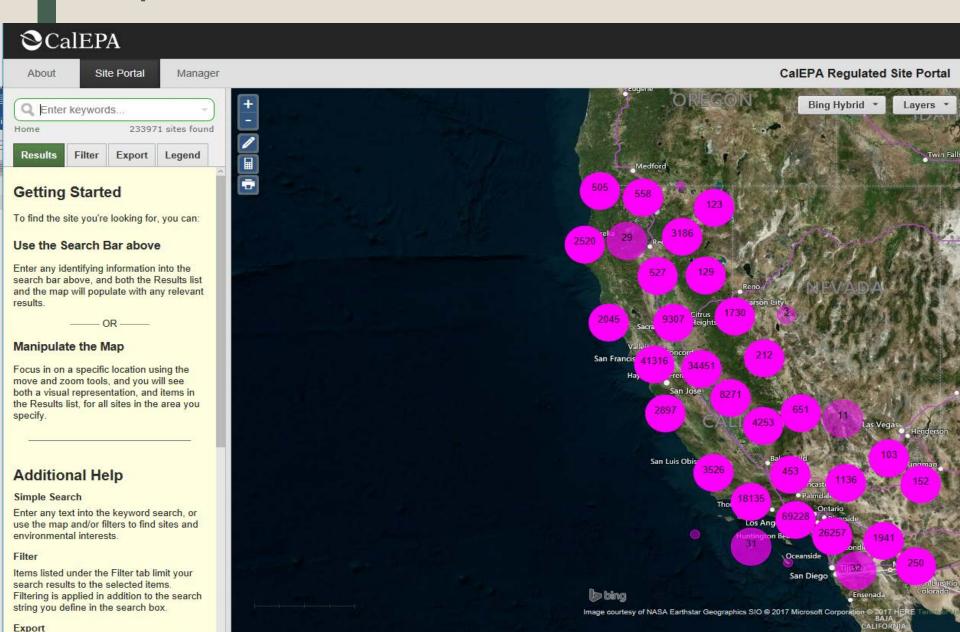
https://siteportal.calepa.ca.gov/nsite/

 Combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map

- Combines a variety of state and federal databases across the spectrum of environmental programs for any given location in California.
 - Including hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials.

Map Based Viewer

Use the export function to download data



About Tab

SCalEPA

About

Site Portal

Manager

CalEPA Regulated Site Portal

Background

The CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. The portal was created to provide a more holistic view of regulated activities statewide. By combining data from a variety of state and federal databases, the portal provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials. (More)

Data Sources

The portal combines information from the databases listed below. Additional data sources may be added in the future.

CERS - The California Environmental Reporting System was developed by CalEPA to support the reporting of information by regulated businesses and Certified Unified Program Agencies (CUPAs) pertaining to hazardous materials and hazardous waste throughout the state

EnviroStor - This system is used by the Department of Toxic Substances Control to track permitting, enforcement and cleanup activities at hazardous waste facilities and sites with known or suspected contamination.

GeoTracker - Developed for the State Water Resources Control Board, this database contains information about impacted groundwater sites within the state, such as leaking underground storage tanks, cleanup sites, and permitted facilities such as landfills and operating underground storage tanks facilities. CIWQS - The California Integrated Water Quality System (CIWQS) was developed by the State Water Board to manage permitting. compliance and enforcement activities related to sites which discharge to surface water (or otherwise affect surface water quality) throughout the state.

TRI - The Toxics Release Inventory (TRI) is a federal database that contains detailed information on nearly 650 chemicals and chemical categories that over 1,600 industrial and other facilities in the state manage through disposal or other releases, recycling. energy recovery, or treatment. The data are collected from these facilities by the U.S. Environmental Protection Agency

Report an Issue or Error

CalEPA and its agencies work together to ensure the information on this website is accurate and up to date. If you believe that you have identified an error or if data appears to be missing, please let us know by following the steps below. We are grateful for your feedback. If you would like a response, please be sure to include your name and phone number or email address.

- 1. Go to the facility where you first identified the problem.
- 2. Look at the detail under Regulatory Programs to identify the Source System.
- Find that Source System contact information below.
- 4. If you are communicating by email, please include the facility name, a screen shot, or any other information that you believe will help research the problem.

California Environmental Reporting System:

cers@calepa.ca.gov

California Integrated Water Quality System:

1-866-79-CIWQS or ciwqs@waterboards.ca.gov EnviroStor Cleanup:

1-877-7TOXICS (1-877-786-9427) or envirostor@dtsc.ca.gov EnviroStor Hazardous Waste:

1-877-7TOXICS (1-877-786-9427) or envirostor@dtsc.ca.gov GeoTracker:

1-866-480-1028 or geotracker@waterboards.ca.gov Toxic Release Inventory:

http://www.epa.gov/toxics-release-inventory-tri-program

Frequently Asked Questions

Warehouse Statistics

Show Statistics For:

Number of updated sites (30 days)



Data Sources



CERS: The California Environmental Reporting System was developed by CalEPA to support the reporting of information by regulated businesses and Certified Unified Program Agencies (CUPAs) pertaining to hazardous materials and hazardous waste throughout the state.



EnviroStor: Developed for DTSC by EcoInteractive, this database contains information pertaining to state and federally listed cleanup sites, along with hazardous waste permitted and corrective action facilities.



GeoTracker: Developed for the Water Board by EcoInteractive, this database contains information pertaining to impacted groundwater sites within the state, such as leaking underground storage tanks, cleanup sites, and permitted facilities such as landfills and operating underground storage tanks facilities.

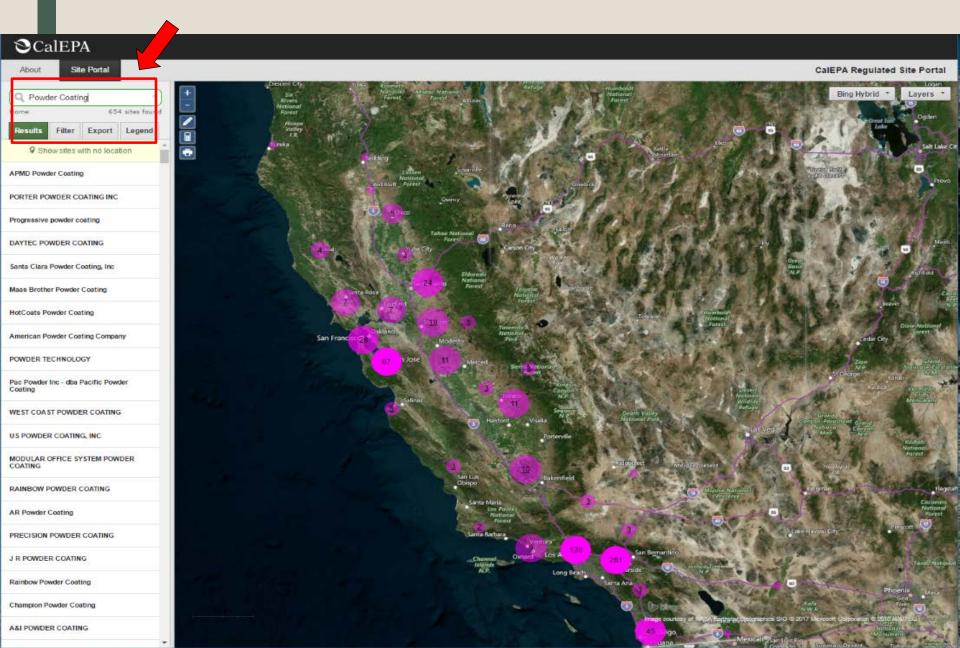
Data Sources

California Integrated Water Quality System Project (CIWQS) **CIWQS:** California Integrated Water Quality System was developed by the Water Board to manage permitting, compliance and enforcement activities related to sites which discharge to surface water (or otherwise affect surface water quality) throughout the state.

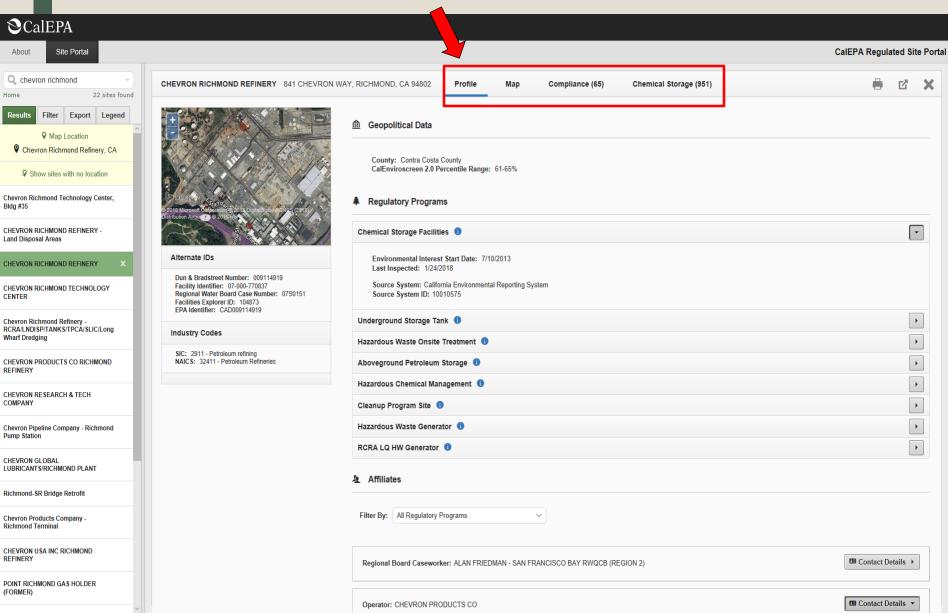


TRI: The Toxics Release Inventory is a federal database that contains detailed information on nearly 650 chemicals and chemical categories that over 1,600 industrial and other facilities in the state manage through disposal or other releases, recycling, energy recovery, or treatment. The data are collected from these facilities by US EPA. The collected data is exchanged to CalEPA and updated automatically through the CalEPA exchange node.

General Searching

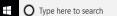


Facility Profile























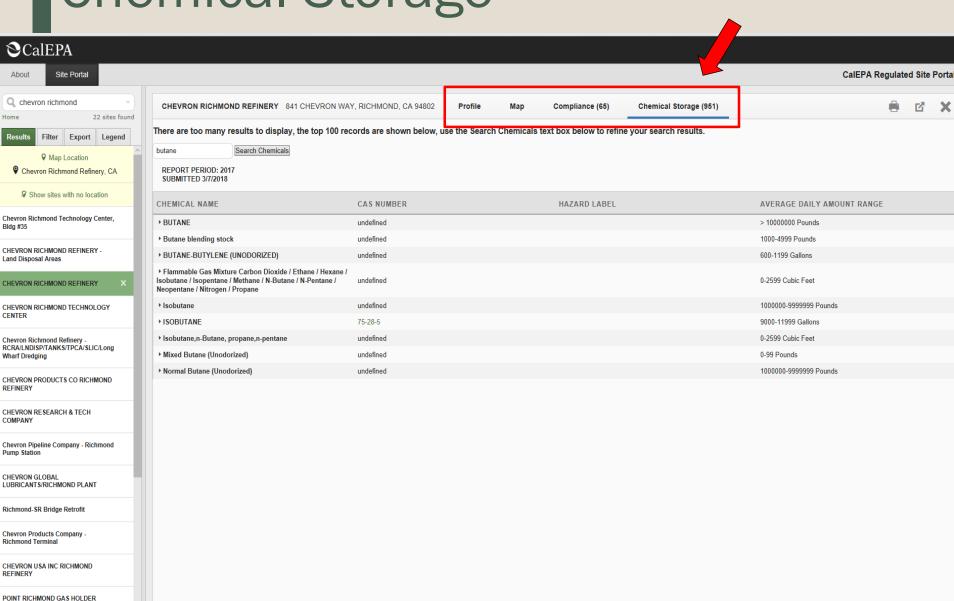








Chemical Storage



























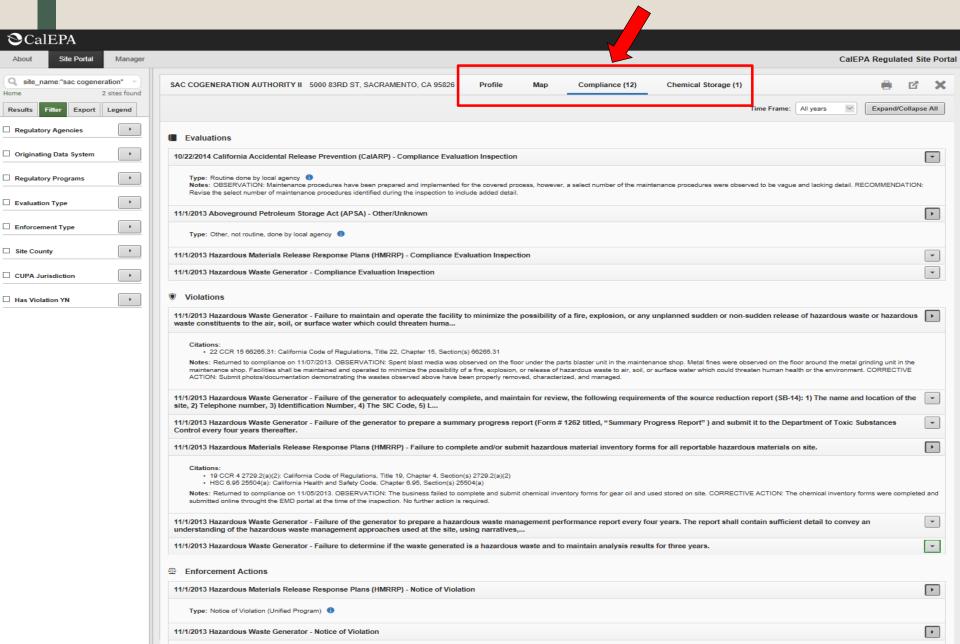






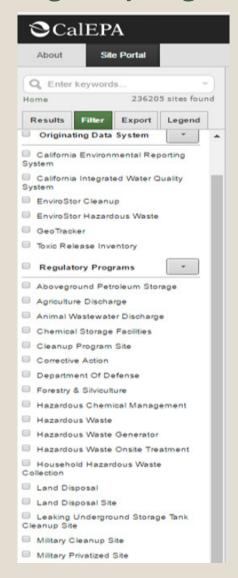


Compliance History

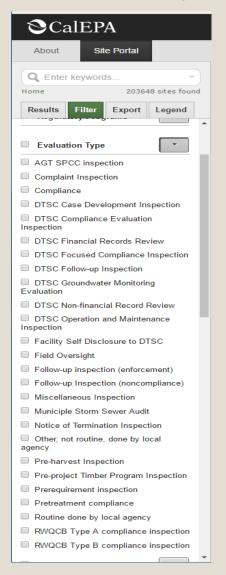


Filtering Display

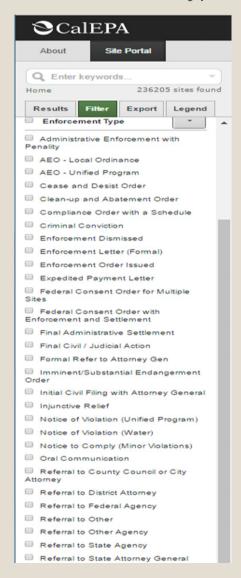
Regulatory Programs



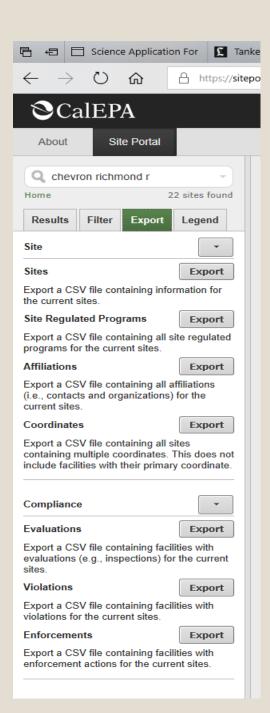
Evaluation Type



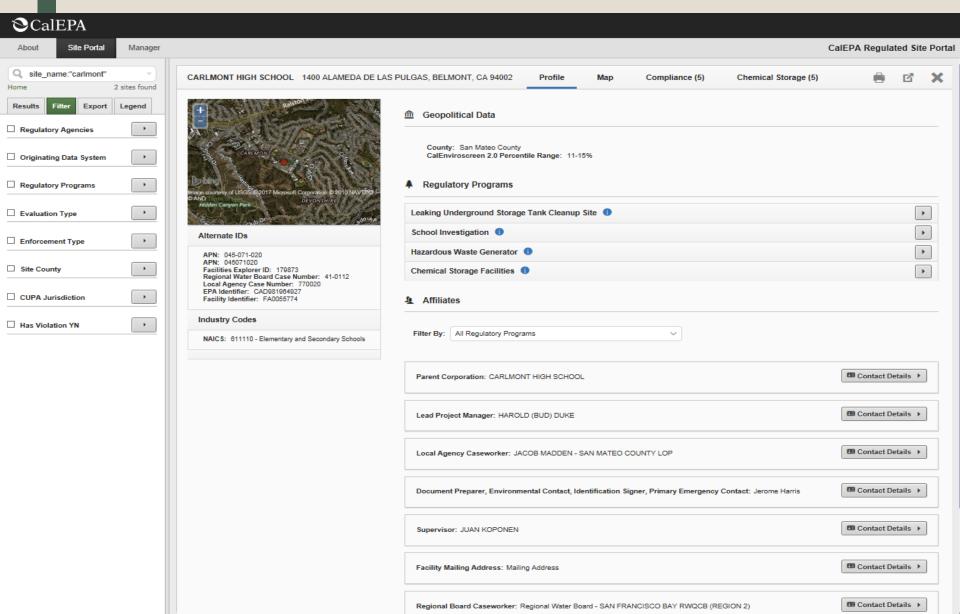
Enforcement Type



Export



Multiple Regulatory Programs



Live Link to Source System



STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER



Tools

Reports

UST Case Closures

Information



CARLMONT HIGH SCHOOL (T0608100106) - (MAP)

SIGN UP FOR EMAIL ALERTS

1400 ALAMEDA DE LAS PULGAS BELMONT, CA 94002 SAN MATEO COUNTY LUST CLEANUP SITE

PRINTABLE CASE SUMMARY / CSM REPORT

Summary Cleanup Action Report Regulatory Activities

USER DEFINED BENEFICIAL USE

GW - GROUNDWATER RECHARGE

Environmental Data (ESI) Site Maps / Documents Community Involvement

Related Cases

SAN FRANCISCO BAY RWQCB (REGION 2) - CASE #: 41-0112

PRINTABLE CASE SUMMARY

SAN MATEO COUNTY LOP (LEAD) - CASE #: 770020

CASEWORKER: Regional Water Board

CASEWORKER: JACOB MADDEN

CLEANUP OVERSIGHT AGENCIES

Regulatory Profile

CLEANUP STATUS - DEFINITIONS

COMPLETED - CASE CLOSED AS OF 1/28/2000 - CLEANUP STATUS HISTORY

POTENTIAL CONTAMINANTS OF CONCERN

GASOLINE

FILE LOCATION

LOCAL AGENCY WAREHOUSE

DWR GROUNDWATER SUB-BASIN NAME

Santa Clara Valley - San Mateo Plain (2-9.03)

POTENTIAL MEDIA OF CONCERN

OTHER GROUNDWATER (USES OTHER THAN DRINKING WATER)

DESIGNATED BENEFICIAL USE(S) - DEFINITIONS

MUN

CALWATER WATERSHED NAME

South Bay - San Mateo Bayside (204.40)

Site History

No site history available

Live Link to Source System



Skip to: Content | Footer

Envirostor Home Tools Reports Community Involvement Information DTSC Home How to Use EnviroStor

CARLMONT HIGH SCHOOL MUSIC BUILDING (60001056)

1400 ALAMEDA DE LAS PULGAS

BELMONT, CA 94002 SAN MATEO COUNTY

SITE TYPE: SCHOOL

Summary

Activities

Map

Related Sites

CLEANUP STATUS

INACTIVE - ACTION REQUIRED AS OF 10/6/2010

SITE TYPE: SCHOOL

NATIONAL PRIORITIES LIST: NO

ACRES: 1.74 ACRES

APN: 045-071-020, 045071020

CLEANUP OVERSIGHT AGENCIES:

DTSC - SITE CLEANUP PROGRAM - LEAD

SCHOOL DISTRICT: ENVIROSTOR ID: SITE CODE: SPECIAL PROGRAM: FUNDING:

ASSEMBLY DISTRICT:

SENATE DISTRICT:

SEQUOIA UNION HIGH SCHOOL DISTRICT

HAROLD (BUD) DUKE

NORTHERN CALIFORNIA SCHOOLS & SANTA SUSANA

SEQUOIA UNION HIGH SCHOOL DISTRICT

JUAN KOPONEN

60001056 204230

SCHOOL DISTRICT

PROJECT MANAGER:

SCHOOL DISTRICT:

SUPERVISOR:

OFFICE:

22 13

PAST USE(S) THAT CAUSED CONTAMINATION

SCHOOL - HIGH SCHOOL

POTENTIAL CONTAMINANTS OF CONCERN

CHLORDANE

DDT

UNDER INVESTIGATION NATURALLY OCCURRING ASBESTOS (NOA)

POTENTIAL MEDIA AFFECTED

UNDER INVESTIGATION

The district is planning to construct a new music and art building at the location of the current music building, which is scheduled for demolition. The new building will be an approximate 7,600 square foot three story building. It will be located on the west side of the newly constructed performing arts building.

During the review of the Phase I, the District contacted DTSC with plans to demolish the building, prior to the completion of the Phase I review by DTSC. The DTSC Project Manager advised the consultant on sampling requirements before and after building demolishions. The District elected to conduct limited sampling under a Phase I Addendum, prior to DTSC's review of the Phase I.

Following receipt of the Phase I Addendum Data, DTSC contacted the District to notify them that, although the Phase I addendum addressed concerns for OCPs and lead around the building, a PEA would be required for potential Naturally Occurring Asbestos. On April 7, 2009, the District elected to withdraw from the DTSC process, forego the PEA for NOA, and drop the project.

In September of 2009, the District decided to re-open the project, and entered into an EOA with DTSC on September 16, 2009. DTSC agreed to use geotech boring samples along with one additional location for NOA analysis.

On March 3, 2010, the District requested DTSC to drop the site as it decided not to pursue State funds for the project. Consequently, DTSC issued a Inactive Status letter on March 4, 2010, and closed the project as Inactive - Action Required.

A CRU was mailed on 9/29/10

SIGN UP FOR EMAIL ALERTS

Live Link to Source System



Search | Map | List | Legend and Info

FACILITY REPORT



Toxics Release Inventory ID = 94802CHVRN841ST

841 CHEVRON WAY, RICHMOND, CALIFORNIA 94801

Industry: Petroleum

CONTEXT

County

26% of TRI releases in CONTRA COSTA, CA

33 TRI facilities in CONTRA COSTA, CA

National

Ranks 30 out of 602 TRI facilities in Industry: Petroleum

(Rank 1 = highest releases)

ON SITE RELEASES TOTALS

Information Security Issues

Worked With:

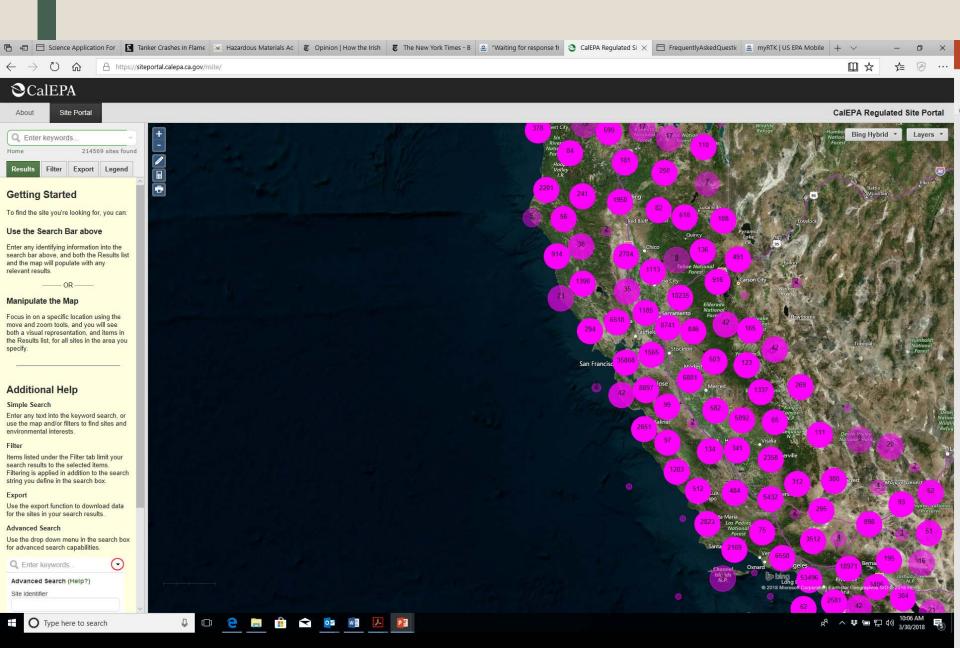
- Department of Homeland Security
 - Critical Infrastructure Directorate
 - Chemical Facility Anti-Terrorism Standards (CFATS)
- CalOES Infrastructure Protection
- Chemical Industry Council of California
- Dow Chemical
- AT&T
- CCEEB
- California Cable & Telecommunications
 Association
- Metropolitan Water District of Southern California

Live Demo

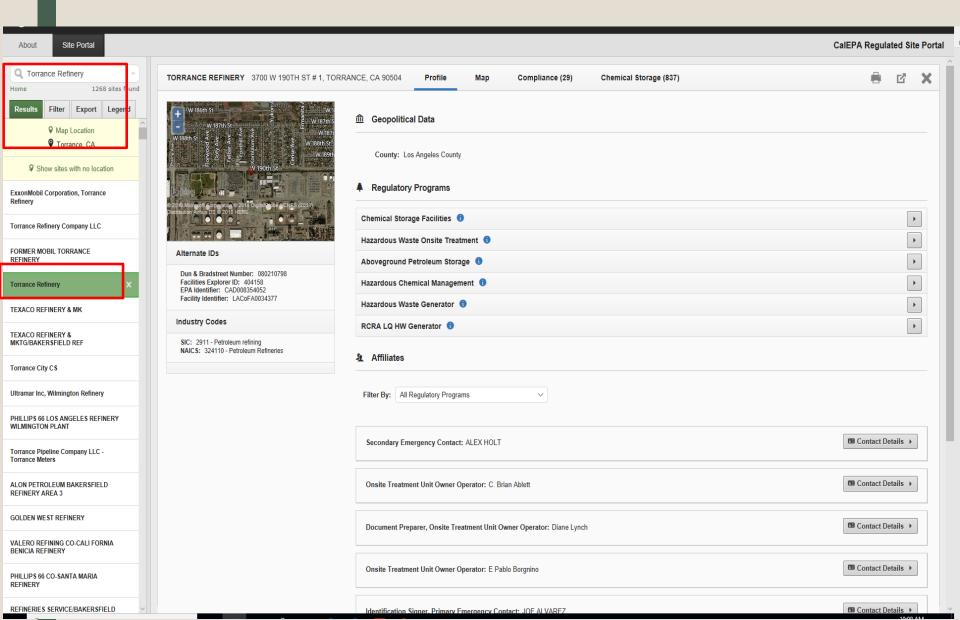
https://siteportal.calepa.ca.gov

For Example...

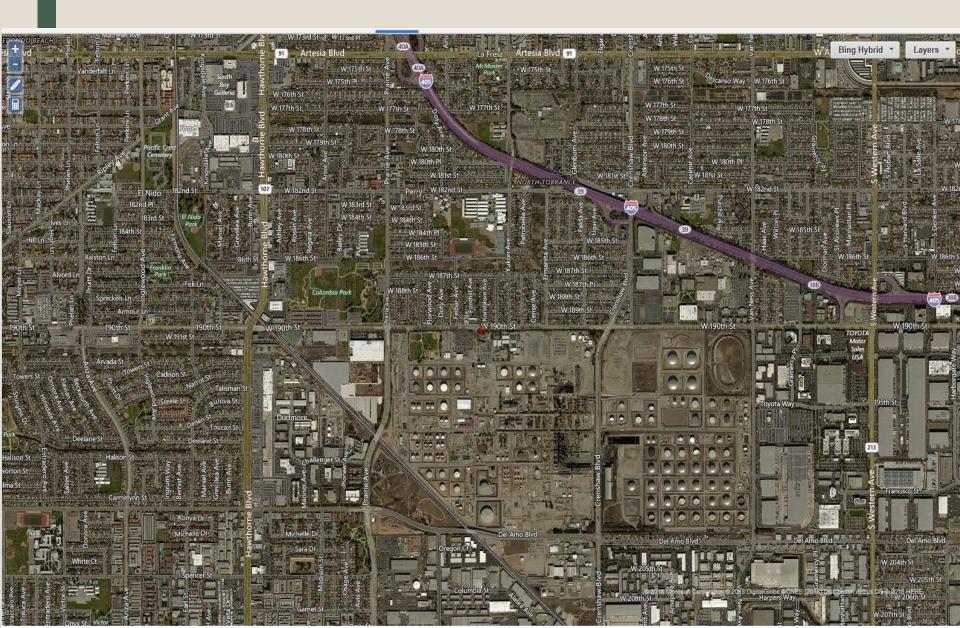
Start Here



Find the Right Location



Visualize



What Do You Want To Know?

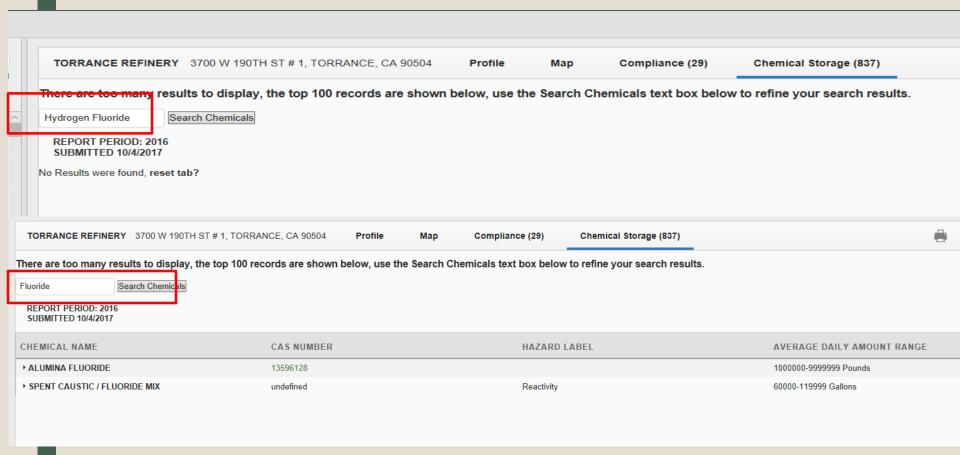
CalEPA Regulated Site Portal

12-59 Gallons

TORRANCE REFINERY 3700 W 190TH ST # 1, TORRANCE, CA 90504 Profile Map Compliance (29) Chemical Storage (837) There are too many results to display, the top 100 records are shown below, use the Search Chemicals text box below to refine your search results. Search Chemicals REPORT PERIOD: 2016 SUBMITTED 10/4/2017 CHEMICAL NAME **CAS NUMBER HAZARD LABEL AVERAGE DAILY AMOUNT RANGE** ▶ 80/20 OCTANE/HEPTANE 0-11 Gallons ACID SOLUBLE OIL AND RESIDUAL HF (UN-Fire 500-999 Pounds **NEUTRALIZED ASO)** AER-O-LITE 3% COLD FIRE FIGHTING FOAM (AFFF) 6000-8999 Gallons ALKYLATION ACID REGENERATOR OVERHEAD Fire 1000-4999 Pounds ALKYLATION UNIT HYDROCARBON RECYCLE MIXTURE 500000-999999 Pounds ALKYLATION UNIT MAIN ACID RECYCLE MIXTURE Fire, Sudden Release of Pressure, Reactivity 100000-499999 Pounds 12-59 Gallons ALL PURPOSE CLEANER AMMONIUM CITRATE DIBASIC 40% AQUEOUS SOLUTION 12000-59999 Gallons AMMONIUM CITRATE DIBASIC 40% AQUEOUS SOLUTION 12000-59999 Gallons BLEND ENVIREX SOLUTION ENVIREX NUTRIENT BLEND 600-1199 Gallons ▶ BUFFER SOLUTION PH 7.00 600-1199 Gallons CAT HYDRAULIC OIL SAE 10W 12-59 Gallons CATALYST, H2 REFORMER 1200-2999 Gallons 12-59 Gallons CD-200 DEGREASER CHEMSTAR CONCENTRATE R (FL11537) 12-59 Gallons COKE FROM COKER 120-599 Gallons COMPRESSED GAS - NITROGEN, HYDROGEN SULFIDE Fire Sudden Release of Pressure 0-2599 Cubic Feet COOLING TOWER WATER (NON-CHROMATE) 120000-1199999 Gallons COOLING TOWER WATER (NON-CHROMATE) >1200000 Gallons ► CP 6000-220 120-599 Gallons ► CP 6000-220 SILICONE OIL (1002093) 0-11 Gallons ▶ DELVAC 1230 120-599 Gallons DELVAC 1230 (1176467) 0-11 Gallons

DELVAC MOTOR OIL

Is This What You Are Seeking?

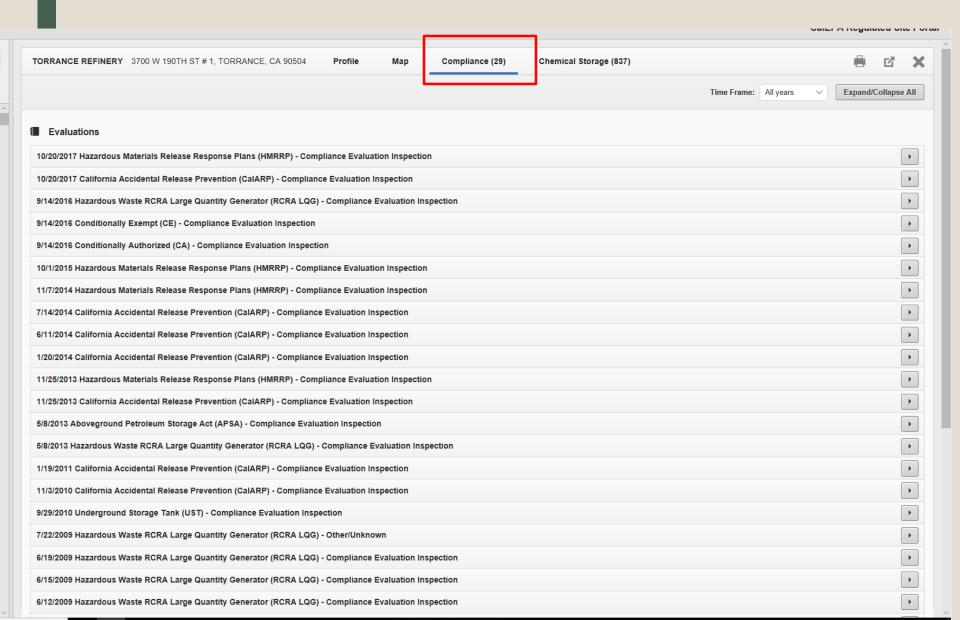


Or This?

CalEPA Reg TORRANCE REFINERY 3700 W 190TH ST # 1, TORRANCE, CA 90504 Profile Map Compliance (29) Chemical Storage (837) There are too many results to display, the top 100 records are shown below, use the Search Chemicals text box below to refine your search results. hydrofluoric Search Chemicals REPORT PERIOD: 2016 SUBMITTED 10/4/2017 CHEMICAL NAME CAS NUMBER HAZARD LABEL AVERAGE DAILY AMOUNT RANGE ▼ FRESH MODIFIED HYDROFLUORIC ACID (FRESH ACID undefined Fire, Reactivity 75000-99999 Pounds STORAGE DRUM) Common Name **Chemical Mixes** FRESH MODIFIED HYDROFLUORIC ACID (FRESH ACID STORAGE DRUM) Hazard Type(s) Fire, Reactivity Component HYDROFLUORIC ACID Avg Daily Amount / Unit 75000-99999Pounds CAS Number 7664393 Percentage by Weight 85.00 Days Onsite undefined Physical State(s) Liquid, Mix Is EHS Component Delayed Health, Acute Health SULFOLANE Health Effect(s) CAS Number 126330 Percentage by Weight 15.00

Is EHS

How About Inspections?



Look for Enhancements in 2018/2019

New Data Sources

- Storm Water Multiple Application and Report Tracking System (SMARTS) database
- Solid Waste Information System (SWIS)
- Facility Registry Services (via US EPA FRS Inbound)
- CalOSHA inspection, violation and enforcement information

Look for Enhancements in 2018/2019

■ Improved Search Capabilities

- Regulated Site Portal optimized for display on mobile devices
- RESTFul API services for sharing Regulated Site Portal data with interested State, Federal and public entities
- GIS Layers, Geospatial Services, Web Map Service (WMS) & Web Feature Service (WFS) for GIS professionals and enthusiasts

https://siteportal.calepa.ca.gov/nsite/

Thank You -

Paul Penn

Emergency Management and Refinery Safety Program Manager California Environmental Protection Agency

Paul.Penn@calepa.ca.gov

916-718-0751 (c)

916-327-9558 (o)