CONTRA COSTA COUNTY
HAZARDOUS MATERIALS COMMISSION

Thursday, October 24, 2019
4:00 p.m. – 6:00 p.m.

The County Connection
2477 Arnold Industrial Way, Board Room
Concord CA 94520

COMMISSION ACTION MAY BE TAKEN ON ANY ISSUE IDENTIFIED IN THIS AGENDA

The Contra Costa County Hazardous Materials Commission will provide reasonable accommodations for persons with disabilities planning to attend the Hazardous Materials Commission meetings who contact Michael Kent, Hazardous Materials Commission Executive Assistant, at least 24 hours before the meetings, at (925) 313-6587

AGENDA

1. CALL TO ORDER, ANNOUNCEMENTS AND INTRODUCTIONS
2. APPROVAL OF MINUTES: September 26, 2019
3. PUBLIC COMMENT
4. HAZARDOUS MATERIALS PROGRAMS REPORT ............................................ Randy Sawyer
5. OPERATIONS COMMITTEE REPORT ............................................................ Committee Chair
6. PLANNING AND POLICY DEVELOPMENT COMMITTEE REPORT .......... Committee Chair
7. OLD BUSINESS:
   a) Update on the pipeline safety recommendations made to the Board of Supervisors
8. NEW BUSINESS:
   a) Consider recommendation from the Operations Committee for the vacant Environmental Seat Alternate position.
   b) Consider recommendation from the Operations Committee concerning options for selecting topical speakers for issues and management of discussions during Commission meetings
9. REPORTS FROM COMMISSIONERS ON MATTERS OF COMMISSION INTEREST ................................................. Members
10. PLAN NEXT AGENDA
11. ADJOURNMENT

Attachments

Questions: Call Michael Kent (925) 313-6587

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by Contra Costa Health Services to a majority of members of the Hazardous Materials Commission less than 72 hours prior to that meeting are available for public inspection at 597 Center Avenue in Martinez

597 Center Avenue, Suite 200, Martinez CA 94553 (925) 313-6712 Fax (925) 313-6721
Contra Costa County
HAZARDOUS MATERIALS COMMISSION

Draft Minutes
September 26, 2019

Members and Alternates Present: Jonathan Bash, Don Bristol, Fred Glueck, Steve Linsley, Jim Payne, Mark Ross, George Smith, Leslie Stewart, Tim Bancroft (alternate), Peter Dahling (alternate), Dave Hudson (alternate), Lisa Park (alternate), Absent: Rick Alcaraz, Frank Gordon (represented by alternate), Mark Hughes (represented by alternate), Gabe Quinto (represented by alternate), Ralph Sattler (represented by alternate), Staff: Michael Kent, Randy Sawyer

Members of the Public: Charlie Davidson, Shoshana Weshler, Ed Ballard, Dave Wyatt, Janet Piegeorge, Len Walsh, Neil Bellenie,

1. Call to Order: Commissioner Smith called the meeting to order at 4:00

Announcements and Introductions:

Michael Kent announced:

- Tesoro Refinery has submitted a post-closure permit renewal application to DTSC
- The cybersecurity workshop the Commission co-sponsored on September 17th went well and had 29 attendees.
- The Board of Supervisors Transportation, Water and Infrastructure committee will discuss the Commission’s recommendations concerning pipeline safety at their October 7th meeting.

2. Approval of the Minutes:

A motion was made by Commissioner Glueck and seconded by Commissioner Bash to approve the minutes for the July 25, 2019 meeting. The motion passed 9-0-1 with Commissioner Dahling abstaining. (Commissioners Hudson and Linsley arrived after the vote)

3. Public Comments: None

4. Hazardous Materials Programs Report:

Randy Sawyer reported:

- They have hired Wade Finlinson as the new Integrated Pest Management coordinator.
- Amendments to the CalARP and PSM regulations were adopted in October of 2017 in response to issues that were raised in the aftermath of the fire at Chevron in 2012. The Western States Petroleum Association recently filed two laws suits challenging aspects of these new amendments. The lawsuits focused on two issues: 1) employee participation and union representation by non-employees in safety teams; and 2) the definition of
major change and inherent safety. The regulations are still being enforced while the law
suit moves forward, and the law suits do not affect the implementation of the County or
the Richmond Industrial Safety Ordinances, which contains most of the contested
provisions. Chairperson Smith referred the issue to the Planning and Policy committee
for further discussion.

5. Operations Committee Report:

The Operation committee reported that they review the MOU with Shannon Ladner-Beasley who
runs the Health Career Pathways program for Contra Costa Health Services about the proposed
student seat on the Commission.

The committee also interviewed 4 candidates for the open General Public seat. They will
interview two more candidates for the open General Public Seat in October and one candidate for
the open Environmental Seat alternate seat. The committee wasn’t sure if they should offer an
interview to another candidate for the open General Public seat because the candidate wasn’t
available to attend either the September or October committee meeting to be interviewed. The
Commission recommended offering this candidate an interview at the November committee
meeting, but if they could not attend that meeting to not offer another opportunity.

6. Planning and Policy Development Committee Report:

The Planning and Policy Committee did not meet in September.

7. Old Business:

a) Review and approve the MOU concerning a Student Seat on the Commission.

The Commission reviewed the revised memo submitted by the Operations Committee and voted
12 – 0 to approve the memo.

b) Discuss the Carbon Tax proposal by the Citizens’ Climate Lobby

The Commission began the discussion of the request made at the July 25, 2019 meeting by the
Citizens’ Climate Lobby to encourage the Board of Supervisors to support their carbon tax
proposal by noting that the power point presentation made at the July 25th meeting and the Board
of Supervisors current Legislative Platform language concerning a carbon tax were in their
agenda packet.

Commissioner Glueck began the discussion by saying that he thought the State has a very
aggressive position on GHG emissions and that this is more than adequate.

Commissioner Ross said that he has always favored a tax-based approach, but the deeper you get
into implementing it the more complex it gets. For example, when Valero shut a unit, the price of
gasoline in the state went up, meaning the market is very fickle. Another example of a problem with a market-based approach is that if people were actually conserve by 5% the whole market would crash. Also, if we were really able to get people to drive electric cars, the price of gas would go down, and then poor people would drive more, which is exactly the opposite of what we want them to do. But a tax would keep the price of gasoline high and keep demand low. And studies show that distributing the tax money would help people with the higher costs.

Commissioner Hudson said he was not in favor of a carbon tax. California has a Cap and Trade program, but locals have no say in how it is implemented. Taxes are going up anyhow, and we can’t absorb more. There are going to be lots of new taxes on the ballot this fall. He added that if the tax paid for fighting fires he would support it because particulate matter has a major health impact. Commissioner Smith added that the higher cost of fuel also hurts people that have to commute long distances. Commissioner Ross added that Cap and Trade is also a regressive tax.

Commissioner Stewart observed that the County’s legislative platform may have not gone as far as the Citizens’ Climate Lobby would have liked in terms of specifically designating that the tax be distributed equally, but they did support a concept of a national price for fuels. Should the Commission suggest they make their position more robust?

Commissioner Glueck thought that this is one of several major issues the County has to struggle with, but didn’t think it is worth it for the County to take a more aggressive position.

Ms. Weshler added that she was at the Board of Supervisors ad-hoc meeting on Sustainability when the Citizens’ Climate Lobby made their presentation. She thought they approach a carbon tax as a panacea. But she didn’t think the Board of Supervisors were convinced the use of the revenue was a settled issue. There are other possible uses for the tax, such as supporting a just transition of jobs away from the fossil fuel industry and retributions. This is why she thought the Board of Supervisors supported a carbon tax in concept, but not the specific proposal by the Citizens’ Climate Lobby. She didn’t think this was an issue the County should spend a lot of time on.

Commissioner Bash clarified that the Citizens’ Climate Lobby was proposing a federal tax, not a local tax.

At the conclusion of the discussion Chair Smith asked if any of the Commissioners wanted to make a motion regarding this issue; none did.

8. New Business:

a) Presentation on the deep water dredging proposal in San Francisco Bay

Charles Davidson from the Sunflower Alliance gave a presentation on why his group was concerned that the Army Corp of Engineer proposal to deepen the shipping channel in parts of San Francisco Bay and the Carquinez Straights would support the refining of tar sands oil by local refineries (presentation attached).
At the conclusion of his presentation, Mr. Davidson ask the Commission to request that Contra Costa County perform an EIR for Phillips 66’s marine terminal delivery expansion project in the context of the Army Core of Engineer’s dredging project, and request that Contra Costa County become the official non-federal sponsor for the dredging project.

Commissioner Bristol stated that a very small amount of the current pipeline from Canada carrying tar sands oil is being send to refineries in the Bay Area by ship.

Commissioner Hudson said that he heard at the Air District that tar sands are not as dirty as Central Valley crude. Commissioner Bristol responded that it is often less carbon-intensive than Central Valley crude.

Janet Pygeorge commented that tar sands are gad for people and that there already a lot of sick people in her community.

Michael Kent asked Mr. Davidson to clarify the relationship between the dredging project and Phillip 66’s ability to refine tar sands oil. Mr. Davidson said that the dredging project would help facilitate the refining of tar sands oil.

Commissioner Bristol commented that refineries have emission limits that limit the amount of ships that can come to their facilities. They also have limits on their throughput. He said the marine limit is not going to change the throughput at the refinery. It won’t constitute an expansion of the refinery. It will be done so that the refinery will have options to bring more crude in by water if there is ever a disruption to their pipeline system.

Terrilyn (?) asked if the refinery could still bring in more less full ships if they wanted to. Commissioner Bristol said that, yes, that could happen, but that is not normally done. They only time they would intentionally bring in a half-full tanker would be if someone else needed to get rid of it cheaply.

Commissioner Glueck asked where the dredge spoils from the deepening project would go. Commissioner Smith said there are to locations in the Bay where they are slated to go, and the planned next speaker for the next meeting will discuss that issue in detail.

Commissioner Park asked if the limit for the proposed marine terminal permit would allow them to bring more oil in by ship. Commissioner Bristol responded that the current permit allows them to bring in 50,000 barrels per day, but that they actually only average 30,000 barrels per day. The new permit limit of 130,000 barrels per day would give them more flexibility to bring in more oil by ship if they needed to.

Mr. Davidson reiterated his concern that past changes have allowed the refinery to do more intensive refining. He is worried that the 3 proposed projects at the refinery will allow for greater intensity in their refining practice.
Commissioner Bristol noted that the emissions from the Phillips 66 refinery have been going down over time, not up.

Commissioner Glueck asked how frequently do the channels have to be dredged. Mr. Davidson said that it depends on the location, but sometimes yearly.

Commissioner Hudson commented that he was not concerned about fires coming from tar sands. The biggest problem with fires in Canada is forest fires which add a tremendous amount of particulate to the air, and this was a major threat to public health on which more attention should be focused. Commissioner Smith added that the problem of fires with crude has occurred more with the rail transportation of light Balken crude.

9. Reports From Commissioners On Matters of Commission Interest:

None

10. Plan Next Agenda:

Continue presentations on the dredging issue and discuss the response of the Board of Supervisors to the Commission’s recommendations on pipeline safety.

11. Adjournment: The meeting adjourned at 6:00 pm.
Contra Costa County

BOARDS, COMMITTEES, AND COMMISSIONS APPLICATION

First Name: ED
Last Name: Morales

Home Address - Street:

City: Martinez
Zip Code: 94553

Phone (best number to reach you):

Email:

Resident of Supervisorial District:

EDUCATION

Check appropriate box if you possess one of the following:

☒ High School Diploma
☐ CA High School Proficiency Certificate
☐ G.E.D. Certificate

Colleges or Universities Attended

U.C. Berkeley
City College of San Francisco

Course of Study/Major: Chemistry

Degree Awarded:

☒ Yes
☐ No

Other Training Completed:

HAZARDOUS MATERIALS MANAGEMENT

Board, Committee or Commission Name: HAZARDOUS MATERIALS
Seat Name: Environmental - Alternate

Have you ever attended a meeting of the advisory board for which you are applying?

☒ Yes
☐ No

If yes, how many?

Several

Please explain why you would like to serve on this particular board, committee, or commission.

I have been a commissioner in the past representing other groups including Environmental Engineering, now as a board member of Sustainable Contra Costa, I believe I can represent them well for this seat.

Describe your qualifications for this appointment. (NOTE: you may also include a copy of your resume with this application)

I have over 30+ years of experience in the area of Environmental Risk Management and have been a resident of Martinez for 20+ years.

I am including my resume with this application:

Please check one:

☒ Yes
☐ No

I would like to be considered for appointment to other advisory bodies for which I may be qualified.

Please check one:

☒ Yes
☐ No
Are you currently or have you ever been appointed to a Contra Costa County advisory board?
Please check one: ☐ Yes ☐ No

List any volunteer and community experience, including any boards on which you have served.
- Past commissioner for the Hughson Commission.
- Board member, Sustainable Contra Costa.
- Member + Instructor, Martinez Community Emergency Response Team (CERT)

Do you have a familial relationship with a member of the Board of Supervisors? (Please refer to the relationships listed below or Resolution no. 2011/55)
Please check one: ☐ Yes ☒ No
If Yes, please identify the nature of the relationship:

Do you have any financial relationships with the county, such as grants, contracts, or other economic relationships?
Please check one: ☐ Yes ☒ No
If Yes, please identify the nature of the relationship:

I CERTIFY that the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge and understand that all information in this application is publicly accessible. I understand and agree that misstatements and/or omissions of material fact may cause forfeiture of my rights to serve on a board, committee, or commission in Contra Costa County.

Signed: [Signature]

Submit this application to: Clerk of the Board of Supervisors
651 Pine St., Room 106
Martinez, CA 94553

Questions about this application? Contact the Clerk of the Board at (925) 335-1900 or by email at ClerkofTheBoard@cob.cccounty.us

Important Information
1. This application and any attachments you provide to it is a public document and is subject to the California Public Records Act (CA Government Code §6250-6270).

2. All members of appointed boards are required to take the advisory body training provided by Contra Costa County.

3. Members of certain boards, commissions, and committees may be required to: 1) file a Statement of Economic Interest Form also known as a Form 700, and 2) complete the State Ethics Training Course as required by AB 1234.

4. Meetings may be held in various locations and some locations may not be accessible by public transportation.

5. Meeting dates and times are subject to change and may occur up to two (2) days per month.

6. Some boards, committees, or commissions may assign members to subcommittees or work groups which may require an additional commitment of time.

7. As indicated in Board Resolution 2011/55, a person will not be eligible for appointment if he/she is related to a Board of Supervisors member in any of the following relationships: mother, father, son, daughter, brother, sister, grandmother, grandfather, grandson, granddaughter, great-grandfather, great-grandmother, aunt, uncle, nephew, niece, great-grandson, great-granddaughter, first-cousin, husband, wife, father-in-law, mother-in-law, daughter-in-law, stepson, stepdaughter, sister-in-law, brother-in-law, spouse's grandmother, spouse's grandfather, spouse's granddaughter, and spouses' grandson, registered domestic partner, relatives of a registered domestic partner as listed above.

8. A person will not be eligible to serve if the person shares a financial interest as defined in Government Code §87103 with a Board of Supervisors Member.

THIS FORM IS A PUBLIC DOCUMENT
Attachment

Item 1
The USACE's * Bay Deepening Project

- Could this project facilitate the expansion of tar sands refining at Phillips 66 and at other refineries?
- Could this project add to existing environmental and public health burdens?
- *U.S. Army Corp of Engineers

USACE PLAN:

Deepen the existing maintained channel depth of the Pinole Shoal Channel and Bulls Head Reach (Suisun Bay) from ~35 feet to ~38 feet MLLW, with approximately 13.2 miles of new regulatory depths (to Avon)

"The channels in the study area primarily serve crude oil imports and refined product exports to and from several oil refineries and two non-petroleum industries."

* Phillips 66, Valero, PBF (was Shell), Marathon (was Tesoro), NuStar (Shore Terminal) and C and H Sugar.

The breakout of volumes for each feature is shown as follows:

**Pinole Shoal Channel deepening = 1,443,900 cubic yards**

~90% of total dredging material extracted alongside the San Pablo Bay Pinole Shoal

Project is adjacent to several square miles of tidal mudflats from Rodeo P66/Davis Point, along Pinole and Hercules waterfronts, to Point Pinole.

- Bullis Head Reach deepening = 38,700 cy ~ to 42-feet MLLW, plus 2 feet of overdepth
- Bullis Sediment Trap = 120,600 cy
- Rock Outcropping (Pinole Shoal Channel) - from a peak of ~39.7-foot MLLW to ~43-foot MLLW ~ 40 cy of rock (950 sq. ft.)

Depending on the current, a spill of tar sands diluted bitumen at Phillips 66 could inundate the intertidal mudflats of Pinole Shoals down to Point Pinole.
**P66: Marine Terminal Permit Revision Project is a volume delivery expansion: 76 tankers or ships**

- To increase the Marine Terminal offloading limit by 78,818 barrels per day (bbl/day), from 51,182 bbl/day to 130,000 bbl/day, depth to 38 feet. (previously 35 feet)

- Simultaneously, Phillips 66 also requests increasing the allowable number of tankers or ships making crude or gas oil deliveries by **76** ships per year (from 59 ships up to a total of 135 ships).

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**P66 Potential SF Bay tanker volume delivery increase**

- Current Phillips 66 marine terminal throughput (5-yr avg.) is around **33,000 barrels/day** – a potential increase of **up to four-fold higher crude oil delivery volumes**, post-"permit revision" project *

  * To **131,000 barrels per day**, max.

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**There are FIVE currently planned Phillips 66 projects**

- The Marine Terminal Permit Revision Project
- The Propane Recovery Project
- The 4,000 barrel per day hydrocracker increase AND
- The Selby Slag Remediation Project (P66 and SLC)
- The Selby Slag Seaport Plan
The *Propylene Recovery Project* and the 4,000 barrel/day hydrocracker increase are needed to increase the refinery’s capacity to refine more high-sulfur heavy crude, such as increased amounts inexpensive price “advantaged...Canadian tar sands” oils.
The Canadian govt. nationalized the TM Pipeline and plans to triple its capacity three times, to 890,000 barrels per day of tar sands crude - about the size of the Keystone XL Pipeline.

Could the TYPE of oil refined at Rodeo change?

Yes, Oil tankers carry different oils than this refinery gets by pipeline.

1. Phillips 66 told investors it would switch over its California refinery to "Canadian Heavy" oil (2013, 2015).

2. When it tried to get that oil by train to its San Francisco Refinery's Santa Maria facility, San Luis Obispo County found that "Canadian Heavy" would be from the Canadian tar sands (2014).

3. Then San Luis Obispo County rejected the tar sands by rail proposal (2016 and 2017).


Please note:

- Phillips 66 has already tried to obtain permission to bring in tar sands crude by rail to its SLO County Mesa Refinery in order to pre-process it (70,000 barrels/day) and deliver it to Rodeo by its 200-mile pipeline (Line 200).

- In 2016, the P66 Rail Spur Project request was denied by the SLO County Board of Supervisors.
Tar Sands Diluted Bitumen is a Non-Floating Oil

Once exposed to the environment, dilbit breaks down into its components and the heavy bitumen portion sinks.

“For this reason, spills of diluted bitumen pose particular challenges when they reach water bodies.”

- National Academy of Science (2016):

National Academy of Science (2016):

“For any crude oil spill, lighter, volatile compounds begin to evaporate promptly; in the case of diluted bitumen, a dense, viscous material with a strong tendency to adhere to surfaces begins to form as a residue.”

* Which is exactly what happened in the 2010 Kalamazoo River spill, which has not yet been completely remediated and has cost over $1.2 billion, to date.

Standard Response Action

No Fire – Resource Protection

Sensitive area protection strategies (ACP), protection booming strategies, deflection booming to protect sensitive areas, water intakes, and fisheries.

Effectiveness

“Protection strategies for non-floating oils are much less effective.”

Bitumen: API (it sinks), Asphaltenes (it sticks) and Vanadium (it’s toxic)

<table>
<thead>
<tr>
<th>Properties</th>
<th>Crude</th>
<th>Dilbit</th>
<th>Syncrude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity, API</td>
<td>43.8</td>
<td>7.9</td>
<td>11.0</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.8222</td>
<td>1.0501</td>
<td>0.9828</td>
</tr>
<tr>
<td>Sulfur, wt%</td>
<td>0.2</td>
<td>4.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Nitrogen, ppm</td>
<td>800</td>
<td>6000</td>
<td>2740</td>
</tr>
<tr>
<td>CCR, wt%</td>
<td>1.06</td>
<td>13.4</td>
<td>12.0</td>
</tr>
<tr>
<td>Vanadium, ppmv</td>
<td>1.0</td>
<td>322</td>
<td>152</td>
</tr>
<tr>
<td>Nickel, ppmv</td>
<td>1.0</td>
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</tr>
<tr>
<td>Asphaltenes, wt%</td>
<td>0.1</td>
<td>17.3</td>
<td>13.4</td>
</tr>
<tr>
<td>TAN</td>
<td>—</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Salt, lb/1000 bbl</td>
<td>—</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>
Diluted Bitumen = Dilbit (Kear)

- Bitumen blended with a diluent - one or more light petroleum products, such as condensate or a naphtha-based oil.
- Once released, initially behaves as a medium crude oil.
- Rapidly loses volatile fraction of diluent through evaporation, leaving behind the viscous bitumen, which behaves as a heavy crude oil that is persistent in the environment.
- Diluents - high percentages of toxic, water-soluble components; greater risks to water column organisms compared to heavier oils.
- Acutely toxic impacts from the diluent could be relatively severe, but limited to a localized area.
- Depending on the density of the bitumen, residue (after loss of light ends) may float or sink (smothering hazard) and be sticky and difficult to recover.
- Depending on the viscosity, pour point, and ambient temperature, oil may spread into slicks or congeal into tarballs and tarmacs.

<table>
<thead>
<tr>
<th>Table 5.2 Properties of dilbit oil</th>
</tr>
</thead>
</table>

- Depending on the blends, the residue may change properties over time; e.g., could become non-floating if sediments are present in the water, submerge, and rest on the benthos and/or be buried in sediments.
- Density: 0.94
- Viscosity: 83 cSt at 40 degrees C
- Pour Point: <183 degrees F (for whole crude oil, i.e., both bitumen and diluent)

Tar Sands is NOT a liquid oil. It is a non-floating oil. If spilled into water, it cannot be skimmed or contained.
The USACE's Bay Deepening Project - continued

• Why should the residents and communities near Phillips 66 want the U.S. Army Corp of Engineer's dredging and deepening of the San Pablo Bay, at the public's expense?

• Could this project add to existing environmental and public health burdens?

• Could this project facilitate the expansion of tar sands refining at Phillips 66 and at other refineries?

Stinky Bay Area spill blamed on oil refinery and tanker ship – East Bay Times (9/20/2019)

RODEO — The Phillips 66 oil refinery and an oil tanker were issued public nuisance violations Friday for a crude oil spill Sept. 20 that drew 1,450 odor complaints and sent more than 120 people to Vallejo hospitals and clinics with headaches, burning eyes and sore throats.
The top facilities located in each of the major geographic areas in California are as follows:

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>City</th>
<th>County</th>
<th>Total Releases (in lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHILLIPS 86</td>
<td>Rodeo</td>
<td>Contra Costa</td>
<td>1,097,117</td>
</tr>
<tr>
<td>VALERO REFINING CO</td>
<td>Benicia</td>
<td>Solano</td>
<td>655,285</td>
</tr>
<tr>
<td>CHEVRON PRODUCTS CO RICHMOND</td>
<td>Richmond</td>
<td>Contra Costa</td>
<td>611,235</td>
</tr>
<tr>
<td>SHIPLER PRODUCTS US MARTINEZ</td>
<td>Martinez</td>
<td>Contra Costa</td>
<td>525,046</td>
</tr>
<tr>
<td>TECKO REFINING &amp; MARKETING CO</td>
<td>Martinez</td>
<td>Contra Costa</td>
<td>507,714</td>
</tr>
</tbody>
</table>

2012 EPA Toxic Release Inventory - CA - TRI

Phillips 66 Carbon Plant on HWY 4 is the largest N. CA sulfur dioxide source. Note large pile of Petroleum Coke and blackened chimney stack.
According to the California Air Resources Board, in 2016 (after Levin's moderate 2014-15 pollution controls were installed), its annual airborne total particulate matter release was still 366 times more than that of the fully enclosed Koch Carbon facility in Pittsburg.

Petroleum Coke: The Coal Hidden in Tar Sands - OCI
Cumulative effects of the simultaneous and adjacent USACE and Selby Slag Dredging and pile driving projects

- The toxic cumulative effects of simultaneous USACE dredging and Port of Selby seaport plan and pile driving over 4,450 ft. for the planned sheet metal containment seawall (in the Selby Slag Remediation Project).

- The combined dredging and construction projects (USACE and Selby) will likely deposit significant amounts of fugitive toxins onto the Pinole Shoal mudflats.
Significant legacy toxic and heavy metals groundwater contamination at Selby Slag Site (Ok Bi – Cadmium; Yellow – Arsenic) – but no adjacent Bay mud analysis

Take Aways

- Dredging will likely facilitate the increase in more extreme processing methods for more bitumen refining (within the USACE project area refineries), which will emit more toxins.

- Accidents happen. We have a Bay and Carquinez Strait that we love and want to keep it healthy and alive.