Coalition For A Safe Environment

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February 3, 2015

Mayor & City Council
City of Long Beach
333 W. Ocean Blvd.
Long Beach, CA

Re: Petroleum Coke, Coal & Petroleum Products Transportation
Su: Letter of Support for the Mandatory Covering of Train Rail Cars Transportation Petroleum Coke, Coal & Related Petroleum Products and Opposition To The Expansion Of Petroleum Coke, Coal & related Petroleum Products For Export

Honorable Mayor & City Council:

The Coalition For A Safe Environment (CFASE) would like to submit our public comment regarding Agenda 10. 14-0976:

1. CFASE supports Federal, State, Regional and City legislation, rules, regulations, ordinances, policies, approvals and permits that require that train rail cars transporting Petroleum Coke, Coal and related Petroleum Products be required to be covered to prevent the fugitive release of toxic, hazardous chemicals and greenhouse gas emissions which negatively impact public health, the environment, global warming, public safety, water, land and wildlife.

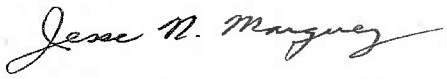
2. CFASE opposes any expansion of Petroleum Coke, Coal and related Petroleum Products for export because the use of these as a fuel releases toxic, hazardous chemicals and greenhouse gas emissions which negatively impact public health, the environment, global warming, public safety, water, land and wildlife.

3. CFASE supports Federal, State, Regional and City Environmental Justice, Civil Rights, Title VI and Socio-Economic Equality laws, legislation, rules, regulations, ordinances, policies, approvals and permits which protect these rights.

The Coalition For A Safe Environment requests that the Long Beach City Council vote to support the three outlines public comment positions of our organization which has members who live in Long Beach and members who live in communities and cities who border the City of Long Beach, Port of Long Beach, Alameda Corridor and other local and regional supporting rail transportation networks.

We submit additional information to support our position as attachments to this letter.

Respectfully Submitted,



Jesse N. Marquez
Executive Director
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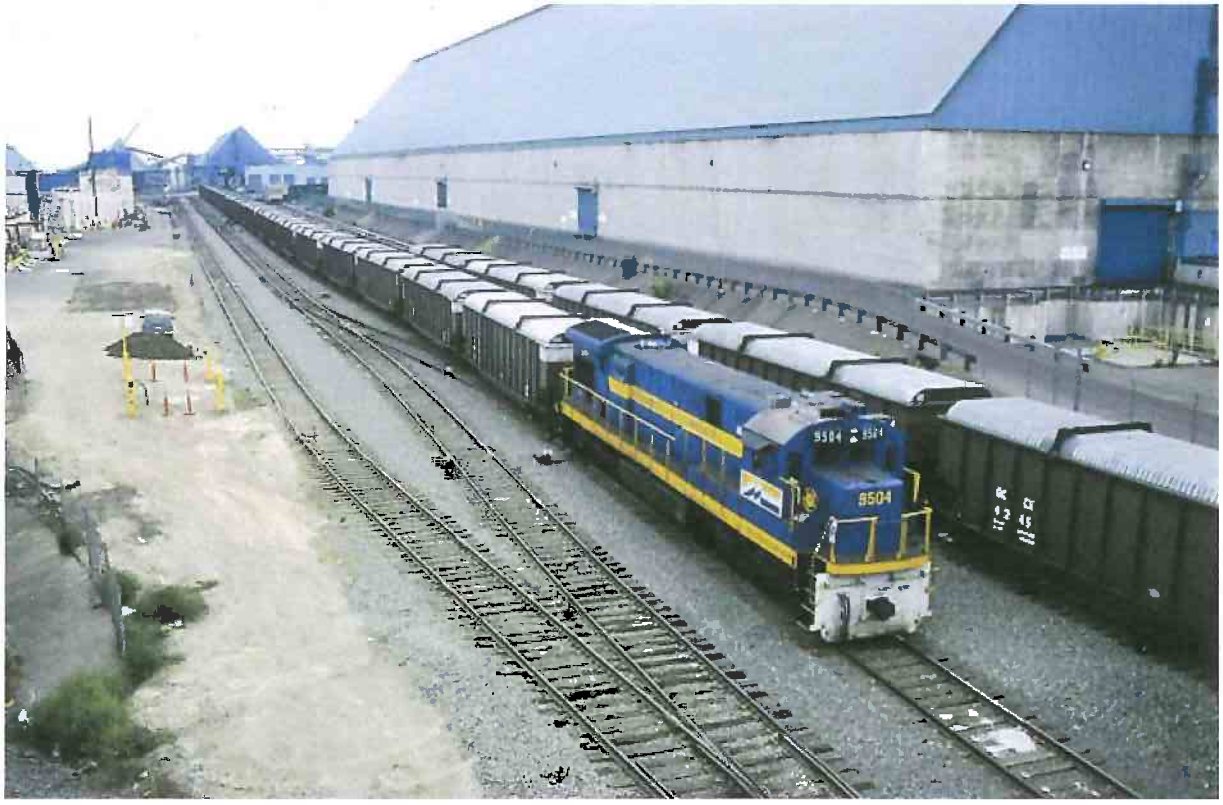
Newer Covered Hoppers At The Metropolitan Stevedore Facility In Long Beach



Note the MetroPorts locomotive.

Sunday, November 30, 2014

Hauling Coke on the Southern Pacific Santa Barbara Subdivision

Yet another train for the SP Santa Barbara Subdivision...petroleum coke.

This train originates at Callender and carries petroleum coke produced at the refinery there. The refinery was originally owned by Union Oil of California. It has changed hands several times including Tosco, Conoco, and now, Phillips. The 'green' coke was further processed at an adjacent facility originally operated by Collier Carbon and Chemical Co., a wholly owned subsidiary of Union Oil of California. The calcining plant heated the green coke and drove off more impurities as well as slightly changing the physical nature of the coke, making it a more efficient fuel source. The calcining plant was closed in March 2007 to reduce air pollution in an agreement with the local air pollution control district. Information about the closure and the coke stockpile reduction is available in the Conoco Phillips Santa Maria Refinery Throughput Increase DEIR (draft environmental impact report) starting on page 2-13.
http://www.slocleanair.org/images/cms/upload/files/pdf/2011/COP/2_0_Project%20Description.pdf
The report also includes reference to multiple unit trains, typically 22 cars each carrying approximately 100 tons of green coke, transport a shipload of petroleum coke to the ports.
There was a bulk loader in San Pedro. I remember it in the late 60's and was intriqued by the rotary dumper. It was just off Miner Street, but that is all gone now, replaced by yacht marinas.

In previous times unit trains were sent north over Altamont Pass to the Port of Stockton and also to Trona via a connection to the Trona Railway by way of the Jawbone Branch of the SP east of Mojave.

http://spsbsub.blogspot.com/2014/11/hauling-coke-on-southern-pacific-santa.html

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
MONITORING AND ANALYSIS

Rule 1158 Follow-Up Study #11

EXECUTIVE SUMMARY

Purpose

In June 1999, Rule 1158 affecting storage, handling and shipment of petroleum coke, coal, and sulfur was amended to further reduce particulate emissions from these sources. The mandated date for full compliance with the Rule was June 2004. This study is one of an ongoing series examining elemental carbon (EC) contained in the inhalable particulate fraction (PM10) in the greater Long Beach/Wilmington area. This series of studies consists of PM10 sampling in the spring/summer and fall/winter, observing trends in ambient PM10 concentration and the EC content of collected samples.

Sampling

Sampling was conducted between October 30, 2004 and December 5, 2004, coincident with the AQMD PM10 monitoring network one-in-six day schedule. Sampling locations were identical to those utilized for the previous Rule 1158 follow-up studies. It is intended that these sites be used throughout the entire series of studies. Field operations were conducted by RES Environmental, Inc., while all laboratory operations and data analysis were performed by AQMD staff. Twenty samples were collected over seven non-consecutive sampling days.

Key Findings

1. Measured average ambient PM10 and elemental carbon concentrations at the Hudson and Edison School sites are higher than the AQMD Long Beach and Central Los Angeles network stations for the duration of the study. The average PM10 measured at Hudson School and Edison School were 48 μg/m3 and 42 μg/m3 respectively, during the study, while all other sites examined had averages ranging from 27-35 μg/m3.

2. While averages are used to analyze PM10 trends over the course of the nine Rule 1158 follow-up studies, individual sites often experienced days where PM10 exceeded the State 24-hour PM10 standard of 50 μg/m3. In 1998, approximately 70% of all measurements exceeded this standard. The incidence of 24-hour exceedances has since steadily declined and constituted 20% of the PM10 measurements in the current study.

3. The current and previous monitoring studies indicate that higher PM10 and EC concentrations are measured at the Hudson School site than any other study sites, and measurements are often higher compared to most of the AQMD network sites for PM10. During this study the average EC at Hudson School (7.0 μg/m3) was 59% higher than any other study site. The two closest AQMD network sites that have measurements of EC, Central Los Angeles and Long Beach, reported concentrations of 2.7 μg/m3 and 3.6 μg/m3, respectively.

4. Monitoring at Long Beach shows a significant decline in ambient elemental carbon since Rule 1158 was amended in July 1999. In 1998, prior to Rule amendment, EC at the study sites averaged 7.8 μg/m3 and steadily declined to an average of 4.5 μg/m3 by fall 2000. More recent studies have shown average EC concentration to fluctuate within a narrow range between 5.0-5.5 μg/m3. This increase from the lowest observation (4.5 μg/m3 in 2000) may be attributed to increased commercial and private vehicular traffic in the area, and year to year variations in meteorology.

5.Monitoring during the spring/summer period shows lower and more consistent PM10 levels, whereas fall/winter measurements (which are historically higher throughout the Basin than springtime measurements) have been illustrative of trends in the area. Examination of all of the monitoring data for spring and fall suggests that measurable benefits of Rule 1158 have been observed, and increasing emissions from other sources of PM10 and EC in the area may be greater contributors to PM10, compared to PM10 from the coke/coal sources.

SCAQMD RULE 1158

STORAGE, HANDLING, AND TRANSPORT OF COKE, COAL AND SULFUR

(a)Purpose

The purpose of this rule is to reduce the emissions of airborne particulate matter from the storage, handling, and transport of coke, coal and sulfur; and to reduce the potential for the storage, handling and transport of these materials to violate AQMD Rules 402 – Public Nuisance and 403 – Fugitive Dust.

(d) Any facility that produces, handles, transports, or stores coke, coal, or sulfur material for transfer or shipment shall comply with all of the following requirements:

(12) The facility operator of an AQMD permitted facility shall not load material into any truck trailer or railcar unless it is subsequently and immediately covered, before leaving the facility, in one of the following manners sufficient to prevent material from escaping from the trailer or railcar onto the facility property:

(A) A solid sliding cover on the top of the truck or railcar that is kept completely closed, or;

(B) For trucks, a slot-top type cover that reduces the uncovered open surface area by at least 50% and extends above the trailer top edges without gaps; and either the material contained in the trailer is moist material, or a chemical stabilizer is applied to the surface of the material in sufficient amounts and concentration so as to prevent fugitive dust emissions during transport; or,

(C) A continuous tarp that completely covers the trailer or railcar top, and for trucks, does not contact the material within the trailer. In addition, the tarp shall be installed or the trailer/railcar constructed to prevent wind from entering over the leading edge of the trailer/railcar rim into the interior of the trailer/railcar; or

(D) For railcars, an alternative method of control proven effective in preventing visible fugitive PM emissions
escaping from the railcar and approved by the Executive Officer prior to its use.

(13) Facility operators shall not load material into truck trailers or railcars such that a trailer or railcar leaks liquid that contains material onto the facility property.

(14) If a truck trailer or railcar leaks liquid that contains material onto the facility property, the facility operator shall clean the affected property within one hour with a street sweeper or water

Petroleum Coke Health Impacts

Negative Public Impacts of Rail Transport of Petroleum Coke

1. Increased Air Pollution & Global Warming Greenhouse Gases
2. Increases Public Health Impacts
3. Increased Premature Death
4. Increased Public Health Care Costs
5. Increased Train Car Noise, Never a Quiet Day
6. Increased Air Conditioning & Heating Equipment Maintenance & Repair Costs
7. Increased Private & Public Land Contamination
8. Increased Private Home & Public Garden & Plant Contamination
9. Increased Public River, Lake & Ocean Contamination
10. Increased Public Home & Business Clean-Up Costs
11. Increased Traffic Congestion at Train Public Street Intersections
12. Increased Negative Visual Impacts of Non-Stop Trains
13. Increased Risk of Train Derailments
14. Decrease in Home Property Value
15. Decrease in Business Property Value

What Is In Petroleum Coke & Not 100% Disclosed To Public

1. Human exposure to fine particulate matter (PM) emissions from PetCoke storage piles, at sufficiently high concentrations and durations of exposure, could cause respiratory and cardiovascular effects characteristic of PM inhalation exposures.
2. Petroleum Coke (PetCoke) in the air is called Particulate Matter PM and can cause numerous respiratory illnesses like Asthma, Sinusitis, Emphysema, Lung Cancer and COPD.
3. PetCoke is finer than gravel or sand and will become airborne and float in the air.
4. PetCoke has more toxic chemical elements and has overall higher emissions than other bulk products.

Why Previous Governmental Agency Studies & information Cannot Be Trusted

1. There have been no long-term exposure studies of over 1-year of human health impacts.
2. There have been no studies of the cumulative human health impacts from all toxic chemicals in Petroleum Coke.
3. There has been no comprehensive study of all potential human health impacts.
4. There has been No Human Acute Inhalation Toxicity Study and there is no Standard.
5. There has been No Human Reproductive/Developmental Toxicity Study and there is no Standard.
6. There has been No Human In Vitro Genetic Toxicity/Gene Mutation Study and there is no Standard.
7. There has been No Human In Vivo Genetic Toxicity/Gene Mutation Study and there is no Standard.
8. One study said they found that no rat deaths occurred after 5-day or 2-year repeated dose inhalation studies and another said,"Due to high mortality in control and treated groups, only five to eight rats per group were evaluated after 22 months on test."
9. All exposed Rats showed evidence of pulmonary inflammation and discoloration
10. Rat observed lung effects were non-reversible and increased in severity with increasing concentration and duration of exposure.
11. The Petroleum Institute was the sponsor of some of the studies.

Toxic Chemicals In Petroleum Coke

Sample	Delayed Process Green Coke - 2003 Sample [1]				API Sample # 4-1-140 [2]	Micronized Delayed Process Green Coke – 1981 sample [3]	
	pellet (initial)[4]	pellet (final)[5]	micro-nized (initial)	micro-nized (final)	Delayed Process Coke	1981 Analysis	1984 Analysis
Bi (bismuth)	<19.3		<29.8				
Ca (calcium)	178	81.7	121.6	158.7			
Cd (cadmium)	<9.6		<14.8				
Co (cobalt)	<9.6	1.9	<14.9	1.7			
Cr (chromium)	<9.6	5.9	<14.8	4.6			
Cu (copper)	<11.6	1.8	<17.9	2.3			
Fe (iron)	310	216.9	247	276.1			
Hg (mercury)					<1	<1	<0.01
K (potassium)	<25.0	10.9	<44.4	20.5			
Li (lithium)	<9.6	<1.2	<14.8	<1.16			
Mg (magnesium)	77.4	50.3	60.9	65.5			
Mn (manganese)	<19.3	3.3	<29.6	7.3			
Mo (molybdenum)	<19.3	16.7	<29.6	15.0			
Na (sodium)	133	87.8	114.8	99.0			
Ni (nickel)	367.1	319.6	351.7	304.6	95	78	85
P (phosphorus)	<19.3	19.6	20.3	25.0			
Pb (lead)	<19.3	4.82	<29.61	7.1			
Pd (palladium)		<6.9		<8.9			
Pt (platinum)		5.9		4.5			
S (sulfur)	73920		58050				
Sb (antimony)	<48.2		<74.0				
Se (selenium)	<19.3		<29.6		4.5	<0.2	<0.5
Si (silicon)	743.2	39.78		204			
Sn (tin)	<25.0	<2.3		<2.3			

Sample	Delayed Process Green Coke - 2003 Sample [1]				API Sample # 4-1-140 [2]	Micronized Delayed Process Green Coke – 1981 sample [3]	
	pellet (initial)[4]	pellet (final)[5]	micro-nized (initial)	micro-nized (final)	Delayed Process Coke	1981 Analysis	1984 Analysis
Average Mass Median Aerodynamic Particle Size, µm	2000*	2000*	2.3/3.3*		≤ 5**	3.1	3.1
Elemental Analysis, % wt							
Carbon					89.93	89.07	89.58
Hydrogen					3.71	5.04	3.88
Oxygen					1.3	1.92	2.14
Sulphur	7.4		5.6		3.36	3.27	3.42
Nitrogen					1.1	1.1	1.2
Other Analysis, % wt							
SiO2					0.04	<0.04	<0.02
Ash					0.21	0.19	0.28
Trace Metals, ppm							
Al (aluminum)	321	205.1	300.2	250.7			
As (arsenic)	<19.3	<2.3	<29.6	<2.3	<0.001	0.3	0.7
B (boron)	<19.3		<29.6				
Ba (barium)	<19.3	7.74	<29.6	6.9			
Be (beryllium)	<9.6		<14.8				

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Average Mass Median Aerodynamic Particle Size, µm	2000*	2000*	2.3/3.3*		≤ 5**	3.1	3.1
Elemental Analysis, % wt							
Carbon					89.93	89.97	89.59
Hydrogen					3.71	3.94	3.89
Oxygen					1.3	1.52	2.14
Sulphur	7.4		5.6		3.35	3.27	3.42
Nitrogen					1.1	1.1	1.2
Other Analysis, % wt							
SiO2					0.04	<0.04	< 0.02
Ash					0.2*	0.18	0.28
Trace Metals, ppm							
Al (aluminum)	321	205.1	300.2	250.7			
As (arsenic)	<19.3	<2.3	<29.6	<2.3	<0.001	0.3	0.7
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Sample	Delayed Process Green Coke - 2003 Sample [1]				API Sample # 4-1-140 [2]	Micronized Delayed Process Green Coke – 1981 sample [3]	
	pellet (initial)[4]	pellet (final)[5]	micro-nized (initial)	micro-nized (final)	Delayed Process Coke	1981 Analysis	1984 Analysis
Ti (titanium)	12.9	11.7	<14.8	14.4			
V (vanadium)	1938	1559	1805	1580	145	140	130
Zn (zinc)	12.0	8.9	<14.8	11.2			
Benzene Extract, % wt					1.79	2.02	2.64
PAHs, ppm							
Naphthalene	3.8	3.6	11	11			
1-methyl naphthalene	2.7	3.1	10	12			
2-methyl naphthalene	11	12	26	26			
Acenaphthene	ND	0.18	ND	0.51			
Acenaphthylene	ND	0.12	ND	0.5			
Fluorene	0.34	0.37	1.5	1.5	11	ND	ND
Phenanthrene	0.69	0.64	7.8	8.2	ND	ND	ND
Anthracene	ND	0.29	3.3	3.6			
Pyrene	1.3	1.2	8.6	10	ND	196	185
Fluoranthene	ND	0.1	1.4	1.6			
Benzofluorenes					ND	ND	ND
Benzo(a)anthracene	0.59	0.59	7.1	9	544		
Benzo(a,b)anthracene						280	287
Chrysene	0.88	1.1	9.4	10	126	210	255
Benzo(a)pyrene	1.5	1.7	11	12	440	175	190
Benzo(e)pyrene					110	85	134
Benzo(b)fluoranthene	0.52	0.62	3.8	3.9	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	1.5			

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	pellet (initial) [4]	pellet (final) [5]	micro-nized (initial)	micro-nized (final)	Delayed Process Coke	1981 Analysis	1984 Analysis
Perylene					ND		
Methyl benzo(a)pyrene					ND	ND	
Benzo(g,h,i)perylene	1.1	1.4	8.7	12	439	120	167
Dibenzo(a,h)anthracene	0.49	0.51	4.1	4.3	ND	NQ	ND
Benzo(g,h,i)fluoranthene					ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.34	0.45	3.5	3.8			
Dimethylbenz(a)anthracene							ND
Methylbenzo(g,h,i)perylene							377
Coronene					ND	ND	ND

Toxicology studies in which samples were used:

[1] OECD 203 Fish acute toxicity test; OECD 202 Invertebrate acute toxicity test; OECD 201 Algal growth inhibition test; OECD 208 Seedling emergence and growth of terrestrial plants; OECD 207 Earthworm acute toxicity test; OECD 421 Reproduction/developmental toxicity screening test

[2] Mouse dermal carcinogenicity study; *Salmonella* assay; mouse lymphoma cell assay

[3] Rat chronic inhalation study; Monkey chronic inhalation study; *Salmonella* assay; Rat *in vivo* cytogenicity assay

[4] initial refers to analyses conducted prior to initiation of the toxicology studies

[5] final refers to analyses conducted following completion of the toxicology studies

ND = not detected

NQ = detected, but not quantifiable

Blank cells = analysis not performed

* values are average mean particle size

** size not measured; value estimated from scanning electron micrographs

References: Aveka, Inc., 2003; CONCAWE, 1993; Chevron Products Company, 2003, 2005; Lancaster Laboratories, Inc., 2003, 2005