

Appendix B.

Scoping Report



VALERO CRUDE BY RAIL PROJECT

Scoping Report

Prepared for
City of Benicia

November 2013



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SCOPING REPORT

Valero Crude by Rail Project

1. Introduction

This report provides an overview and a summary of the written and oral comments received by the City of Benicia during the public scoping period for the Environmental Impact Report (EIR) that the City is preparing for the Valero Refinery Crude by Rail Project (the proposed Project).¹ CEQA Guidelines Section 15083 provides that a “Lead Agency may...consult directly with any person...it believes will be concerned with the environmental effects of the project.” Scoping is the process of early consultation with the affected agencies and public prior to completion of a Draft EIR. Section 15083(a) states that scoping can be “helpful to agencies in identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in an EIR and in eliminating from detailed study issues found not to be important.” Scoping is an effective way to bring together and consider the concerns of affected State, regional, and local agencies, the project proponent, and other interested persons (CEQA Guidelines Section 15083(b)).

Scoping is not conducted to resolve differences concerning the merits of a project or to anticipate the ultimate decision on a proposal. Rather, the purpose of scoping is to help ensure that a comprehensive and focused EIR will be prepared that provides a firm basis for the decision-making process. In addition, a primary purpose of this Scoping Report is to document the process of soliciting and identifying comments from interested agencies and the public. The scoping process provides the means to determine those issues that interested participants consider to be the principal areas for study and analysis. Every issue that has been raised that falls within the scope of CEQA during scoping will be addressed and or considered in the EIR.

This report is intended for use by the public to have access to and understand the comments received during the scoping period. It includes verbal and written public comments received during the scoping period (August 9, 2013 to September 13, 2013). The City will use this report as a tool to ensure the preparation of a comprehensive and focused EIR. Pursuant to CEQA Guidelines Section 15082, all public comments *will be considered*² in the EIR process.

¹ The City of Benicia is the lead agency under the California Environmental Quality Act (CEQA) for the preparation of an EIR for the proposed Project.

² Comments not within the scope of CEQA will not be addressed through the CEQA Process.

2. Description of the Project

Project Summary

The EIR will examine the environmental impacts associated with construction, operation, and maintenance of the Valero Refinery Crude by Rail Project, and identify and evaluate a reasonable range of alternatives to the proposed Project. The objective of the proposed Project is to allow the Refinery access to additional North American-sourced crudes that have recently become available, and that can be received by railroad. This involves installation and modification of Refinery non-process equipment that would allow the Refinery to receive a portion of its crude oil deliveries by railcar replacing equal quantities of crude currently being delivered to the Refinery by marine vessel. The proposed Project would consist of the following primary components:

- Installation of one rail car unloading rack capable of offloading two parallel rows of 25 crude oil rail cars.
- Construction of two parallel, offloading rail spurs to access the rail car unloading rack and store rail cars in preparation for departure, and a parallel departure track.
- Installation of approximately 4,000 feet of 16-inch diameter crude oil pipeline and associated components and infrastructure between the offloading rack and the existing Refinery crude tankage.
- Replacement and relocation of approximately 1,800 feet of tank farm dikes.
- Relocation of an existing firewater pipeline, compressor station, and underground infrastructure.
- Relocation of groundwater wells along Avenue “A.”
- Construction of a service road adjacent to the proposed unloading rack.

3. Opportunities for Public Comment

Notification

On August 9, 2013, the City published and distributed a Notice of Preparation (NOP) to advise interested local, regional, and state agencies, and the interested public, that an EIR would be prepared for the proposed Project. The NOP solicited both written and verbal comments on the EIR’s scope during a 30-day comment period and provided information on a forthcoming public scoping meeting. Additionally, the NOP presented the background, purpose, description, and location of the proposed Project, potential issues to be addressed in the EIR, and the contact name for additional information regarding the proposed Project.

In addition to the NOP, the City notified the public about the public scoping meeting through multiple newspaper legal advertisements and the City website. The NOP, newspaper legal advertisements, and the City website notification are presented in Appendices A, B, and C respectively. Notifications provided basic Project information, the date, time, and location of the scoping meeting, and a brief explanation of the public scoping process.

The City published legal advertisements in English in the Benicia Herald on August 13, 2013. Additionally, an electronic copy of the NOP was posted on the City's website at: http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC={C45EA667-8D39-4B30-87EB-9110A2F9CE13}.

The public was encouraged to submit written comments on the scope, content, and format of the environmental document by mail, facsimile, or email to the City. Comments received after the formal comment period ended are also included in this scoping report.

Public Scoping Meeting

The City conducted one scoping meeting. The meeting was held Thursday, September 12, 2013, from 7:00-9:00 p.m. in the City Hall Council Chambers, located at 250 East L Street, Benicia, California. Attending the meeting on behalf of the City of Benicia included Brad Kilger, City Manager; Amy Million, Principal Planner; Kat Wellman, Contract City Attorney; Teri Davena, Recording Secretary; and Tim Morgan and Cory Barringhaus of Environmental Science Associates (ESA). Meeting attendees were provided with materials including presentation slides, a comment card, and a speaker card. Copies of the NOP were available upon request.

A presentation (Appendix D) was given which included an overview of the environmental review process, the regional context, project background and description, and role of the public comments. All attendees were encouraged to provide new comments not previously provided for the Mitigated Negative Declaration. Public comments associated with the Mitigated Negative Declaration were already considered part of the record and taken into consideration as part of the scoping for the EIR. Public comments were taken and summarized by Teri Davena, Recording Secretary (Appendix E). All attendees were encouraged to submit written comments (Appendix F).

4. Summary of Scoping Comments

During the public scoping meeting held on September 12, 2013, participants commented on the scope of issues to be included in the EIR. Written comments were also collected throughout the public comment period. Eighteen participants submitted written comments during the EIR scoping period and eight oral comments were received at the scoping meeting (Table 1). Fifty-two letters also were received during and after the Initial Study comment period (Table 2). Those comments are considered as part of the scoping for the EIR and are included as Appendix G. Appendix E presents the scoping meeting minutes, summarizing oral comments received, and Appendix F contains copies of the written EIR scoping comments.

Commenting Parties

The following individuals and parties submitted comments on the scope of the EIR. Comments received during and after the Initial Study comment period are listed in Table 2.

**TABLE 1
PARTIES SUBMITTING COMMENTS DURING
THE VALERO CRUDE BY RAIL PROJECT EIR SCOPING PERIOD**

Name	Organization	Date/Received Date
Written Comments		
Linda Scourtis	San Francisco Bay Conservation and Development Commission	August 30, 2013
Erik Alm, AICP	California Department of Transportation	September 4, 2013
Ken Chiang, P.E.	California Public Utilities Commission	August 28, 2013
Marilyn J. Bardet	Individual and Good Neighbor Steering Committee Member	September 12, 2013
Diane Bailey and Elizabeth Forsyth	Natural Resources Defense Council	September 13, 2013
Roger Straw	Individual	August 19, 20 and September 12, 2013
Grant Cooke	Sustainable Energy Associates, LLC	August 13, 2013
Dennis Lewis	Individual	August 26, 2013
Rick Slizeski	Individual	September 10, 2013
Lynne Nittler and Richard McAdam	Individual	September 12, 2013
Milton Kalish, LCSW	Individual and Yolando Climate Action	September 12, 2013
Mary Frances Kelly Poh	Individual	September 12, 2013
Clark Driggars	Individual	September 12, 2013
Kathy Kerridge	Individual	September 12, 2013
Judith S. Sullivan	Individual	September 13, 2013
Ed Ruszel	Individual	September 13, 2013
Donald Dean	Individual	September 13, 2013
Charles Davidson	Individual	September 13, 2013
Oral Comments		
Ed Ruszel	Individual	September 12, 2013
David Jenkins	Individual	September 12, 2013
Roger Straw	Individual	September 12, 2013
Kathy Kerridge	Individual	September 12, 2013
Marilyn J. Bardet	Individual	September 12, 2013
Mary Francis Kelly Poh	Individual	September 12, 2013
Brant Olson	Individual	September 12, 2013
Teagan Clive	Individual	September 12, 2013

Comments Received During the Scoping Process

The following discussion summarizes both the oral and written comments received during the public scoping period. For more detailed information, please see Appendix E, which contains the September 12, 2013 Scoping Meeting Minutes, and Appendix F, which contains written comments submitted during the scoping period.

Specific comments are categorized by topical areas to enable easier review of the comments.

**TABLE 2
PARTIES SUBMITTING COMMENTS DURING
THE VALERO CRUDE BY RAIL PROJECT INITIAL STUDY COMMENT PERIOD**

Name	Organization	Date/Received Date
Written Comments		
Erik Alm, AICP	California Department of Transportation	June 27, 2013
Randy Scott	AMPORTS	June 27, 2013
Diane Bailey and Elizabeth Forsyth	Natural Resources Defense Council	July 1, 2013
Various	Communities for a Better Environment	July 1, 2013
Dan Broadwater	Local Union 180, International Brotherhood of Electrical Workers	July 1, 2013
Sabina Yates	Individual	June 12, 2013
Harry Newhall	Individual	June 19, 2013
David Lockwood	Individual	June 21, 2013
Susan Hutchinson	Individual	June 27, 2013
Tom Cepernich	Individual	June 28, 2013
Ralph Aguin (s.p.)	Individual	July 1, 2013
Constance Beutel	Individual	July 1, 2013
Sylvia Francisco	Individual	July 1, 2013
Nancy Carey	Individual	July 1, 2013
Larry Fullington	Individual	July 1, 2013
Richard Lim	Individual	July 1, 2013
John Ord	Individual	July 1, 2013
Bea Reynolds	Individual	July 1, 2013
Tim Rose	Individual	July 1, 2013
Rick Slizeski	Individual	July 1, 2013
Pat Toth-Smith and Andy Smith	Individual	July 1, 2013
Don and Gail Stock	Individual	July 1, 2013
Janeen Thomas	Individual	July 1, 2013
Marilyn Bardet	Individual	July 1, 2013
Roger Green	Individual	July 1, 2013
Jerome Page	Individual	July 1, 2013
Jim Ponder	Individual	July 1, 2013
Roger Straw	Individual	July 1, 2013
Steven Goetz	Individual	July 1, 2013
Mary Frances Kelly Poh	Individual	July 1, 2013
Ed Ruszel	Individual	July 1, 2013
Jack Ruszel	Individual	July 1, 2013
Jon Van Landschoot	Individual	July 1, 2013
Kathy Kerridge	Individual	July 1, 2013
Late Received Letters		
Ken Chiang, P.E.	California Public Utilities Commission	July 2, 2013
Ben Espinoza	Cement Masons Local 400	July 2, 2013
Dan Smith	Individual	July 2, 2013
Jeff McEuen	Iron Workers Union Local No. 378	July 3, 2013
Melvin Breshears	Heat and Frost Insulators and Allied Workers Local Union No. 16	July 5, 2013
Sandra Kozak	Individual	July 5, 2013

TABLE 2 (Continued)
PARTIES SUBMITTING COMMENTS DURING
THE VALERO CRUDE BY RAIL PROJECT INITIAL STUDY COMMENT PERIOD

Name	Organization	Date/Received Date
Late Received Letters (cont.)		
Dave Shipley	Individual	July 8, 2013
Diane Bailey and Elizabeth Forsyth	Natural Resources Defense Council	July 9, 2013
Nancy Steele	Individual	July 10, 2013
Rick Slizeski	Individual	July 10, 2013
Richard Freeman	Individual	July 10, 2013
Sabina Yates	Individual	July 11, 2013
Larnie Fox	Individual	July 11, 2013
Nikki Basch-Davis	Individual	July 11, 2013
Mary Frances Kelly-Poh	Individual	July 11, 2013
Kim White	Individual	July 11, 2013
Kathy Kerridge	Individual	July 11, 2013
Steve and Marty Young	Individual	July 11, 12 and 22, 2013
Marilyn Bardet	Individual	July 11, 17 and 29, 2013
George Oakes	Individual	July 19, 2013
Priscilla Whitehead	Individual	July 20, 2013
Roger Straw	Individual	July 26, 2013
Eric Hoglund	Benicia Chamber of Commerce	July 29, 2013

Issues to Be Considered under CEQA

Project Description

- The full scope of the proposed Project is not being evaluated, specifically utilizing tar sands and diluted bitumen from Canada as new sources of crude.
- Include a detailed description of train operations, including train routes, scheduling, potential side lining of empty or loaded crude unit trains within the Benicia Industrial Park and elsewhere. Describe how the trains will be staffed, what kind of rail cars would be used (DOT Class), and the safety of the cars.
- Describe the properties and parameters of crude oil to be transported and refined.
- Clarify Valero's intent to import crude from tar sands.
- Refining the crude oil being brought in by train must be included in the project scope.
- Include an updated site plan.
- Rail operations controlled by Union Pacific must be considered part of the indirect operations that could contribute to offsite, indirect impacts.

- Include proposed lighting in the project description.
- Include a detailed discussion of proposed offloading procedures.
- Describe plans for disposal of petroleum coke.
- Describe the staging of rail cars, including how far off the Valero-Benicia property they will be allowed to extend and how many cars will be stockpiled at any given time.
- Describe the maintenance factors associated with condition and safety of the rails under usage by the proposed Project.

Aesthetics

- Consider the visual impacts of the proposed Project on the Benicia Industrial Park.

Air Quality

- Quantify sulfur emissions and associated odors. Specify how odor impacts to the City of Benicia can be mitigated and if odors would increase with use of unconventional crudes.
- The EIR should explain the BAAQMD permitting process and how it relates to the permits required by the City of Benicia. Explain the timing and provide any information or determinations generated by the BAAQMD for the proposed Project.
- The EIR should consider impacts related to refining the crude oil brought in by the proposed Project in addition to the impacts of the rail terminal and storage tanks. This includes benzene and other toxic emissions resulting from transport, handling and refining crude oils with lower APIs, higher sulfur or higher chemical contaminant levels than the existing crude. The EIR should evaluate and mitigate contaminant emissions such as chromium, nickel, and vanadium. Assess emissions from increased boiler use, heating, steam, hydro-treating, hydrogen use, and other processing. Evaluate additional emissions from more corrosive new crude oils brought in by the proposed Project contributing to an increased frequency of accident, upset, and flaring events at the Refinery; creation of additional toxic byproducts such as petroleum coke, including evaluation of coke dust and toxic constituents with coke dust particles.
- Include mitigation measures such as legally binding requirements to ensure engines meet the latest USEPA emission standards on all diesel equipment, generators, vehicles and locomotives; robust enforcement of engine idling limits; electronic positioning systems for rail cars in the terminal; a permit condition that limits the sulfur levels and levels of other hazardous constituents in crude oil and sets parameters for the quality of crude oil such as a minimum allowable API, in order to reduce the impacts of the proposed Project; and all measures appropriate to address increased refinery emissions resulting from the proposed Project.
- Present and discuss the latest research pertinent to air quality resulting from toxic air emissions and airborne particulate matter.
- Evaluate the impact of the proposed Project on sensitive receptors in the area.

- Estimate vapors escaping during offloading and refining procedures.
- Discuss potential for petroleum coke emissions.
- The assumptions used in the air quality report by ERM, consultant to the applicant are flawed and underestimate air emissions.
- The emissions estimates include the assumption that one locomotive per train would be used when elsewhere in the document states that two or three locomotives would be used per train. Further, the engines are assumed to run for 2 hours when the unloading process would last 8 to 10 hours.

Biological Resources

- The EIR must document the presence of two federally listed endangered species, the Soft Bird's Beak and the Suisun Song Sparrow. The trains pass through the Suisun Marsh, which is a shallow tidal estuary in the Pacific Flyway, in which migratory birds from Alaska travel as far as Patagonia and back. Migratory bird treaties must also be addressed.
- Address effects of hazardous materials spilling into marsh, delta, Carquinez Straight, or Sulphur Springs Creek, which is adjacent to the train tracks and empties into the Suisun Delta, and effects on biological species.
- Request for the EIR to discuss the terms "ecology" and "ecosystem" as equivalent words to "environment".
- Note that there is no tidal gate at the mouth of Sulphur Springs Creek.

Climate Change

- Commenter requested that greenhouse gas emissions produced from obtaining the crude, transporting it, and refining it be estimated.
- Address conformance of the proposed Project with AB32.

Hazards & Hazardous Materials

- Summarize existing and proposed emergency planning efforts and applicable documents.
- Provide specifics on train operations including time needed for train to stop when operating at top speed through Benicia, the length of the trains proposed, what is the explosive force of each tanker car in the event of a crash and the fuel igniting, and how large of an area would be flattened in the event all 50 card ignited.
- Explain what would happen in the event of a derailment in the vicinity of the Industrial Park or any areas the train would pass through. How would first responders be informed about the contents of the cars and be trained to respond to diluted bitumen spills.
- Include mitigation measures in the EIR to address drippings that will take place while transferring oil from the tank cars to the Refinery.

- The EIR must assess and present appropriate mitigation strategies and alternatives for the full range of increased hazards that could result from the proposed Project, including rail car derailment, accidents, fires and spill at any point along the rail line or in the terminal.
- In the event of a leaking tank or an accident related to handling and storage of the crude oil, are adequate emergency response personnel available to respond and does Valero have sufficient response and containment equipment.
- Describe how Valero staff is trained for an effective and safe response.
- Discuss the ability of the proposed Project to accommodate more corrosive crude oils and any upgrades that may be required.
- Describe and analyze emergency response personnel and equipment available.
- The EIR should evaluate the capacity of the Union Pacific Railroad in the event of a spill and compare it to ship transport safety.
- Address hazardous material clean up procedures.
- Consider implementation of an emergency program as a mitigation measure.
- Discuss public health impacts associated with refining diluted bitumen.
- List and describe all guidelines and all applicable laws pertaining to rail transport of hazardous materials, including at grade crossings. Identify any regulations applicable if the trains come in close proximity to sensitive receptors.
- Describe safety standards for rail cars and emergency plans to address runaway trains.
- Include discussion of the County's involvement in an emergency situation such as a spill.
- Describe how Valero and Union Pacific interact in case of an emergency.

Hydrology and Water Quality

- Address impacts from spills at the project site to Sulphur Springs Creek, which is located less than 60 feet from the facility.
- Address impacts resulting from a spill near the Suisun Marsh or other waterway.

Noise

- The EIR should analyze and mitigate increased rail activity, particularly at night and including horns and the additional trains.
- Consider all appropriate mitigation measures, including grade separation.

Public Services

- Describe the ability of the applicable agencies to respond to emergencies.

Transportation/Traffic

- Include mitigation measures to reduce Project impacts on Interstate 680, in particular the intersection of I-680 and Bayshore Road.
- Evaluate the increase in traffic along the entire Union Pacific train corridor.
- The EIR must include a traffic study addressing mitigation measures to prevent traffic from backing up on the freeway from the exit ramp, a grade separation to address traffic and safety hazards, and mitigation measures to address impacts to emergency response access and response times to ensure that the additional rail crossings would not hinder ambulances and other emergency vehicles from reaching Benicia residents.
- The EIR must include an extensive discussion of rail facilities outside Valero property, including existing rail movement through the property.
- Rail traffic from AMPORTS Benicia Terminal should be included in the environmental setting of the EIR.
- Discuss existing, proposed, and future improvements.
- Include a discussion on federal, state, and local authority governing railroads.
- Include applicable mitigation measures to reduce traffic impacts.
- Address safety at existing and proposed at-grade crossings at tracks that serve or are near the Valero Refinery.
- Describe the regulatory framework guiding interstate and intrastate transport of fossil fuels, including at grade crossings. Detail the conditions of authority and enforcement of the regulations relevant to the proposed Project.
- Consider impacts to passenger rail service and potential delays.
- Address traffic movement and potential queuing at Park Lane. Does the analysis assume drivers would utilize the two-way turn lane? Would this be supported by the City or the California Manual of Uniform Traffic Control Devices?
- IS/MND Mitigation Measure TRANS-2 is inaccurate as it does not discuss emergency services to businesses that could be completely blocked by rail traffic along Bayshore Road.
- Include a switching plan for the Union Pacific Railroad.
- Consider limiting trains to 50 cars per day until a switching plan has been approved.
- Consider a signal to warn of stopped traffic on I-680 offramp.
- Consider modifying the off ramp to be two lanes with a right-hand turn lane.
- Add signage at Park and Industrial to warn of traffic delays.

- Increased tolerance of at-grade crossing delays in the industrial area is questioned.
- Revisit traffic impacts on the I-680 off ramp caused by at-grade crossings.
- Consider impact of stopped trains blocking access to private properties outside the Refinery.
- Evaluate the use of the Y-connector for on-site storage of trains
- Evaluate the impacts of derailment

Socioeconomics

- Consider the economic impacts of the proposed Project on the Community Development Department and other city offices during the permitting process and construction, the financial impacts of emergency response and clean up after an emergency spill, fire, explosion or other disaster on Valero's property or rail lines; financial impacts on current and future businesses in the Benicia Industrial Park; financial impact to the City of Benicia and on healthcare for Refinery workers, industrial park owners and employees and Benicia residents. All should be calculated over a period of at least 50 years.
- How will the proposed Project negatively impact new businesses and the retention of current businesses in the Benicia Industrial Park.
- Address how increased traffic would affect new and existing businesses and employees.
- How will the reduction in shipment by marine vessel impact existing jobs at the port.

Energy

- Include in the EIR accurate calculations of the proposed Project's energy demand.
- Assess the increased energy demand associated with refining heavy bitumen.

Cumulative

- The EIR must consider other projects involving oil importation that are planned in the Bay Area.
- Evaluate cumulative GHG impacts and noxious pollutant effects resulting from alternative sources of crude.
- Discuss an increase in the total Bay Area refining capability enabled by the WesPac Petroleum Storage Depot.
- Include offsite emissions at WesPac Oil Storage Depot, Pittsburg Waterfront Project, and other regional projects.
- Consider cumulative impacts of air pollutants from nearby refineries, including processing diluted bitumen on a regional level.

Alternatives Analysis

- Evaluate a No Project Alternative.
- Rail unloading facility could be located on the lower waterfront to avoid impact to Bayshore Road and Park Road.
- Include an alternative transportation method for analysis in the EIR.

General Comments

- Request to extend the comment period to 60 days and ensure that the Draft EIR public comment period is not in December.
- Encourage the City to consider public safety.
- Support for preparing an EIR rather than a MND.
- Health and safety issues must be addressed.
- The proposed Project is not a “green” alternative.
- Train track construction has commenced at the site already.
- All communities that may be affected by the rail transport with potential oil spills, sulfur dioxide air pollution and GHG emissions should be notified.
- Valero VIP EIR did not acknowledge the need to increase rail traffic.
- Requests to incorporate all comments on the IS.
- Request to include the following sections in the EIR: Public Health, Public Safety, Land Use, Energy, Noise, Aesthetics, Visual Quality, Light and Glare, Public Safety and Utilities, Growth Inducing Impacts and Urban Blight, Marine Terminal Operations, Greenhouse Gas Emissions, and Cumulative Impacts.
- Provide background information on existing shale in the Midwest and gas wells in Texas and Oklahoma that demonstrate a boom in the availability of unconventional crudes.
- Implement Benicia Air Monitoring Program.
- Reject the Valero IS/MND and require a full EIR.
- General support for the proposed Project.
- AMPORTS would be unaffected by the proposed Project.
- EIR should consider the entire length of the rail.
- EIR should document Valero’s statement that this would decrease the dependency on foreign oil.

APPENDIX A

Notice of Preparation

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**To: Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044**

**From: City of Benicia
250 East L Street
Benicia, CA 94510**

**Subject: NOTICE OF PREPARATION (NOP) OF AN ENVIRONMENTAL IMPACT
REPORT (EIR) AND NOTICE OF SCOPING MEETING:
Valero Crude by Rail Project**

Date: August 9, 2013

On May 31, 2013 the City of Benicia issued a Notice of Intent (NOI) to adopt a Mitigated Negative Declaration (MND) for the Valero CBR project. The issuance of the NOI started a 30-day comment period, which concluded at 5 PM, Monday, July 1, 2013. During the comment period the City received 34 written comments. Subsequent to the closure of the MND comment period the City received an additional 27 written comments as of August 2, 2013.

On July 11, 2013 the Planning Commission held a public meeting on the Valero CBR project. During the meeting 31 speakers commented on the project, in addition to questions from the Planning Commission.

The City received voluminous comments on the draft MND. Many of the comments stated that the project may have a significant effect on the environment, such that the City should prepare an Environmental Impact Report pursuant to CEQA Guidelines Section 15064. In light of the comments, Section 15064, and the desire to ensure full consideration of all environmental issues, the City has decided to prepare an Environmental Impact Report for the project.

Additional information on the project can be found on the City's website at:

http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC={C45EA667-8D39-4B30-87EB-9110A2F9CE13}

Project Description:

The proposed Valero Crude by Rail Project would allow the Valero Benicia Refinery (Refinery) access to additional North American-sourced crude oil for delivery to the Refinery by railroad. The proposed Project would involve the installation and

Refinery by railroad. The proposed Project would involve the installation and modification of Refinery non-process equipment that would allow the Refinery to receive a portion of its crude oil deliveries by railcar replacing equal quantities of crude currently being delivered to the Refinery by marine vessel. Valero intends to replace up to 70,000 barrels per day of the crude oil currently supplied to the Refinery by marine vessel with an equivalent amount of crude oil transported by railcars. The crude oil to be transported by railcars is expected to be of similar quality compared to existing crude oil imported by marine vessels. Crude delivered by rail would not displace crude delivered to the Refinery by pipeline.

Location of the Project

The Valero Refinery is located at 3400 East Second Street, Benicia.

Issues To Be Addressed In The EIR

The EIR will identify the potentially significant environmental effects of the Project, including those resulting from its construction, operation and maintenance. The EIR also will discuss and analyze a reasonable range of alternatives to the Project, including a No Project alternative, and alternatives to the Project that could attain most of its basic objectives while avoiding or reducing any of its significant environmental effects.

Below is a list of the project's potentially significant effects:

Air Quality: Potential air quality impacts during project construction would be reduced by implementation of Bay Area Air Quality Management District's basic control measures during construction.

Biological Resources: Construction activities would avoid nesting season impacts to nesting birds, and buffers would be implemented if nesting birds are identified.

Cultural Resources: Inadvertent discovery of cultural or paleontological resources or human remains would be mitigated by cessation of construction activities, notification of relevant authorities, and proper treatment of resources.

Geology and Soils: Implementation of recommendations contained in a site-specific geotechnical report would reduce impacts regarding groundshaking, liquefaction, and landslide hazards.

Hazards and Hazardous Materials: Potential impacts from upset and accident conditions during transportation of crude oil to the refinery would be investigated in detail and evaluated against existing risks of crude oil transportation by marine vessels.

Hydrology and Water Quality: Implementation of a storm water management plan would reduce water quality impacts during project construction.

Transportation/Traffic: Potential impacts regarding train crossings would be reduced through train scheduling and coordination between the City's Fire and Police Departments and the refinery's emergency response team.

Public Scoping Period for this Notice of Preparation

State law mandates a 30-day time limit after the date of the NOP for the scoping period. The scoping period for this Project begins on Friday, August 9, 2013 and closes at 5:00 p.m. on Friday, September 12, 2013. Public comments received will become part of the public record. Please include a name, organization (if applicable), address, and e-mail address of a contact person on all written comments for future notification related to this process.

Please send your comments to:

**Amy Million, Principal Planner
Community Development Department
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637
amillion@ci.benicia.ca.us**

Scoping Meeting

In order for the public and regulatory agencies to have an opportunity to submit comments on the scope of the EIR for the Project, a meeting will be held during the scoping period at the next regularly scheduled Planning Commission meeting. The meeting will be held:

**Thursday, September 12, 2013
7:00 p.m. – 9:00 p.m.
City Hall Council Chambers
250 East L Street
Benicia, CA 94510**

Following a brief presentation, interested parties will be provided an opportunity to provide comments about the Project. Written comments also may be submitted anytime during the NOP scoping period to the address or facsimile number provided above.

REMINDER:

All comments will be accepted by postmark, facsimile or email through 5 p.m. Friday September 13, 2013. Please be sure to include your name, organization (if applicable), address, and e-mail address. If you submit by email, your email will not be considered accepted until you received an email to confirm it was received.

APPENDIX B

Newspaper Notices

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PUBLIC NOTICE

**Subject: NOTICE OF PREPARATION (NOP) OF
AN ENVIRONMENTAL IMPACT REPORT (EIR)
AND NOTICE OF SCOPING MEETING:
Valero Crude by Rail Project**

Date: August 9, 2013

On May 31, 2013 the City of Benicia issued a Notice of Intent (NOI) to adopt a Mitigated Negative Declaration (MND) for the Valero CBR project. The issuance of the NOI started a 30-day comment period, which concluded at 5 PM, Monday, July 1, 2013. During the comment period the City received 34 written comments. Subsequent to the closure of the MND comment period the City received an additional 27 written comments as of August 2, 2013.

On July 11, 2013 the Planning Commission held a public meeting on the Valero CBR project. During the meeting 31 speakers commented on the project, in addition to questions from the Planning Commission.

The City received voluminous comments on the draft MND. Many of the comments stated that the project may have a significant effect on the environment, such that the City should prepare an Environmental Impact Report pursuant to CEQA Guidelines Section 15064. In light of the comments, Section 15064, and the desire to ensure full consideration of all environmental issues, the City has decided to prepare an Environmental Impact Report for the project.

Additional information on the project can be found on the City's website at:
http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC={C45EA667-8D39-4B30-87EB-9110A2F9CE13}

Project Description:

The proposed Valero Crude by Rail Project would allow the Valero Benicia Refinery (Refinery) access to additional North American-sourced crude oil for delivery to the Refinery by railroad. The proposed Project would involve the installation and modification of Refinery non-process equipment that would allow the Refinery to receive a portion of its crude oil deliveries by railcar replacing equal quantities of crude currently being delivered to the Refinery by marine vessel. Valero intends to replace up to 70,000 barrels per day of the crude oil currently supplied to the Refinery by marine vessel with an equivalent amount of crude oil transported by railcars. The crude oil to be transported by railcars is expected to be of similar quality compared to existing crude oil imported by marine vessels. Crude delivered by rail would not displace crude delivered to the Refinery by pipeline.

Location of the Project

The Valero Refinery is location at 3400 East Second Street, Benicia.

Issues To Be Addressed In The EIR

The EIR will identify the potentially significant environmental effects of the Project, including those resulting from its construction, operation and maintenance. The EIR also will discuss and analyze a reasonable range of alternatives to the Project, including a No Project alternative, and alternatives to the Project that could attain most of its basic objectives while avoiding or reducing any of its significant environmental effects.

Below is a list of the project's potentially significant effects:

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Issues To Be Addressed In The EIR: The EIR will identify the

potentially significant environmental effects of the Project, including those resulting from its construction, operation and maintenance. The EIR also will discuss and analyze a reasonable range of alternatives to the Project, including a No Project alternative, and alternatives to the Project that could attain most of its basic objectives while avoiding or reducing any of its significant environmental effects.

Below is a list of the project's potentially significant effects:

Air Quality: Potential air quality impacts during project construction would be reduced by implementation of Bay Area Air Quality Management District's basic control measures during construction.

Biological Resources: Construction activities would avoid nesting season impacts to nesting birds, and buffers would be implemented if nesting birds are identified.

Cultural Resources: Inadvertent discovery of cultural or paleontological resources or human remains would be mitigated by cessation of construction activities, notification of relevant authorities, and proper treatment of resources.

Geology and Soils: Implementation of recommendations contained in a site-specific geotechnical report would reduce impacts regarding groundshaking, liquefaction, and landslide hazards.

Hazards and Hazardous Materials: Potential impacts from upset and accident conditions during transportation of crude oil to the refinery would be investigated in detail and evaluated against existing risks of crude oil transportation by marine vessels.

Hydrology and Water Quality: Implementation of a storm water management plan would reduce water quality impacts during project construction.

Transportation/Traffic: Potential impacts regarding train crossings would be reduced through train scheduling and coordination between the City's Fire and Police Departments and the refinery's emergency response team.

Public Scoping Period for this Notice of Preparation State law mandates a 30-day time limit after the date of the NOP for the scoping period. The scoping period for this Project begins on Friday, August 9, 2013 and closes at 5:00 p.m. on Friday, September 13, 2013. Public comments received will become part of the public record. Please include a name, organization (if applicable), address, and e-mail address of a contact person on all written comments for future notification related to this process.

Please send your comments to:

Amy Million, Principal Planner
Community Development Department
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637
amillion@ci.benicia.ca.us

Scoping Meeting
In order for the public and regulatory agencies to have an opportunity to submit comments on the scope of the EIR for the Project, a meeting will be held during the scoping period at the next regularly scheduled Planning Commission meeting. The meeting will be held:

Thursday, September 12, 2013

7:00 p.m. - 9:00 p.m.
City Hall Council Chambers
250 East L Street
Benicia, CA 94510

Following a brief presentation, interested parties will be provided an opportunity to provide comments about the Project. Written comments also may be submitted anytime during the NOP scoping period to the address or facsimile number provided above.

REMINDER:

All comments will be accepted by postmark or facsimile through 5 p.m. Friday September 13, 2013. Please be sure to include your name, organization (if applicable), address, and e-mail address. If you submit by email, your email will not be considered accepted until you received an email to confirm it was received.

No. 1021
Published Aug. 13, 2013

PUBLIC NOTICE

Subject: NOTICE OF PREPARATION (NOP) OF AN ENVIRONMENTAL IMPACT REPORT (EIR) AND NOTICE OF SCOPING MEETING:

Valero Crude by Rail Project

Date: August 9, 2013

On May 31, 2013 the City of Benicia issued a Notice of Intent (NOI) to adopt a Mitigated Negative Declaration (MND) for the Valero CBR project. The issuance of the NOI started a 30-day comment period, which concluded at 5 PM, Monday, July 1, 2013. During the comment period the City received 34 written comments. Subsequent to the closure of the MND comment period the

APPENDIX C

Project Website Notification

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Home	<h2>Valero Crude by Rail</h2> <p style="text-align: right;">Click Here to Sign Up to receive Updates on: Valero Crude by Rail</p> <p>ANNOUNCEMENT: The City of Benicia will be preparing an EIR for the Valero Crude by Rail Project. The scoping meeting will be scheduled for the September 12, 2013 Planning Commission meeting. A copy of the Notice of Preparation (NOP) and Notice of Completion are available.</p> <p>August 8th Planning Commission meeting is canceled. Next regularly scheduled Planning Commission meeting is September 12th. Click here for more information.</p> <p style="text-align: center;"> Use Permit Application Project Description Project Plans </p> <p>Initial Study/Mitigated Negative Declaration</p> <ul style="list-style-type: none"> ◦ Notice of Intent ◦ Initial Study/Mitigated Negative Declaration ◦ Supplemental Reports <ul style="list-style-type: none"> ▪ Draft Transportation Impact Analysis Report, Fehr & Peers May 2013 ▪ Noise Study, Wilson Ihrig & Associates, March 8, 2013 ▪ Public Comments <ul style="list-style-type: none"> ▪ Public Comments Received May 30 - July 1, 2013 ▪ Public Comments Received July 2 - July 5, 2013 ▪ Public Comments Received July 6 - July 11, 2013 ▪ Public Comments Received July 11 - August 8, 2013 ▪ Supplemental Documents for NRDC Comment <ul style="list-style-type: none"> • Goodman Group Report <ul style="list-style-type: none"> ▪ Appendix A
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- [NRDC Volume 2](#)

-  [Use Permit Application \(pdf\)](#)
-  [Project Description \(pdf\)](#)
-  [Project Plans \(pdf\)](#)
-  [Initial Study/Mitigated Negative Declaration \(pdf\)](#)
-  [Noise Study \(pdf\)](#)
-  [Valero CBR Notice of Completion.pdf](#)
-  [CBR Notice of Preparation.pdf](#)
-  [Goodman Group Report \(pdf\)](#)
-  [Appendix A - Goodman Resume \(pdf\)](#)
-  [Appendix B - Rowan Resume \(pdf\)](#)
-  [Appendix C - Valero Investor Relations \(pdf\)](#)
-  [Appendix D - Valero Presentation UBS Oil and Gas \(pdf\)](#)
-  [Appendix E - Valero Presentation : Refining 101 \(pdf\)](#)
-  [Appendix F - Refinery Tour 7/9/07](#)
-  [Appendix G - Refinery Tour 8/17/10 \(pdf\)](#)
-  [Appendix H - Marathon Petroleum - Refining 101 \(pdf\)](#)
-  [Appendix I - CCOTA Presentation \(pdf\)](#)
-  [Report by Dr. Phyllis Fox \(pdf\)](#)
-  [NOI - Final \(color\).pdf](#)
-  [Draft Transporation Impact Analysis May 2013.pdf](#)
-  [Resume Phyllis Fox Ph.D.pdf](#)
-  [NRDC Volume 1 \(pdf\)](#)
-  [NRDC Volume 2 \(pdf\)](#)
-  [Valero Crude by Rail Project Public Comments received May 30 - July 1 2013.pdf](#)
-  [Public Comments Received July 2 - July 5, 2013 \(pdf\)](#)
-  [Public Comments Received July 6 - July 11, 2013 \(pdf\)](#)
-  [Public Comments Received July 11 - August 8, 2013 \(pdf\)](#)

City of Benicia California ~ 250 East L Street ~ Benicia, CA 94510 ~ (707) 746-4200

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APPENDIX D

Scoping Meeting Presentations

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**City of Benicia
Scoping Meeting
for the
Valero Crude by Rail
Project**

The presentation will include:

- An overview of the Environmental Impact Report (EIR) Process by City staff.
- A description of the proposed Crude by Rail project by Valero representatives.
- A summary of the environmental impacts already identified to be addressed in the EIR by the City's consultant.

Overview of the Environmental Impact Report (EIR) Process

The following are the steps in the EIR process:

1. Initial Study MND
2. Scoping
3. Draft EIR
4. Final EIR with response to comments
5. Certify EIR and MMRP
6. Notice of Determination

1. Initial Study / MND

The City retained the consulting firm, ESA, to prepare the Initial Study.

An IS/MND was prepared and circulated May 30- July 1, 2013.

- 34 written comments
- 27 additional written comments

1. Initial Study/ MND cont.

The project application, public comments, Initial Study/Mitigated Negative Declaration can be reviewed at:

1. Community Development Department office in City Hall
2. Library
3. City's website at www.ci.benicia.ca.us

2. Scoping

The purpose of the scoping session is to help determine what new environmental issues are raised by the project, in addition to those raised during the IS/MND comment period, and how those issues should be addressed in the EIR.

Started on August 9, 2013 with the circulation of the “Notice of Preparation.”

2. Scoping cont.

All interested parties are invited to comment on what issues should be addressed in the EIR including:

- Community Members
- Local Agencies
- Regional Agencies
- State Agencies
- Other members of the Public

2. Scoping cont.

State and Regional agencies contacted:

- ✓ Dept. of Conservation
- ✓ Dept. of Fish and Wildlife
- ✓ Office of Historic Preservation
- ✓ Dept. of Parks and Recreation
- ✓ Resources, Recycling and Recovery
- ✓ California Highway Patrol
- ✓ Caltrans
- ✓ Air Resources Board
- ✓ Regional Water Quality Control Board
- ✓ Resources Agency
- ✓ Dept. of Toxic Substances Control
- ✓ Native American Heritage Commission
- ✓ Public Utilities Commission
- ✓ State Lands Commission
- ✓ Office of Emergency Services
- ✓ Bay Conservation and Development Commission
- ✓ Solano County Clerk
- ✓ Dept. of Water Resources

3. Draft EIR

Following the scoping period, the consultants complete the preparation of a draft EIR, in consultation with the City of Benicia and agencies which have a regulatory role.

The Draft EIR will outline how the project will affect the physical environment, what impacts are significant and what the potential mitigations may be.

3. Draft EIR cont.

The City will give public notice to the public, adjacent jurisdictions, affected state and regional agencies that the Draft EIR for CBR is available.

The preliminary schedule anticipates that the Draft EIR will be released in early October, 2013.

The Draft EIR review period will be 45 days

Planning Commission meeting on Draft EIR

4. Final EIR and preparation of the Response to Comments

The EIR consultant will prepare written responses to testimony received at the Planning Commission's public meeting and to all written comments received in the public comment period.

The preliminary schedule anticipates that the Response to Comments will be released in December 2013.

The Response to Comments on the Draft EIR are published at least 10 days before the public hearing to consider certifying the EIR.

5. Certify EIR and MMRP

The Planning Commission will hold a public hearing to consider whether the EIR adequately describes all significant potential environmental impacts and identifies potential mitigations for such impacts.

As part of certifying an EIR, the Commission would adopt a Mitigation Monitoring Program which indicates how the various mitigations would be carried out.

5. Certify EIR and MMRP cont.

The Planning Commission will also consider the Use Permit for CBR and decide whether to approve the project and with what conditions.

The preliminary schedule anticipates that this hearing will be held in early 2013.

5. Certify EIR and MMRP cont.

The certified EIR and the **Mitigation Monitoring & Reporting Program** would be used throughout the process of building the Crude by Rail Project:

To ensure that the project is carried out in compliance with the mitigations; and

To ensure that the project constructed is consistent with the project evaluated in the EIR.

6. Notice of Determination

Once final action has been taken on the project, the City files the “Notice of Decision” (NOD) with the County Clerk .

The certification of the EIR and filing of the NOD concludes the EIR process. However, if the action on the EIR are appealed to the City Council or challenged in Court, there could be additional hearings or actions.

Presentation:
Crude by Rail project
by Valero

Valero Benicia Refinery Crude-by-Rail Project

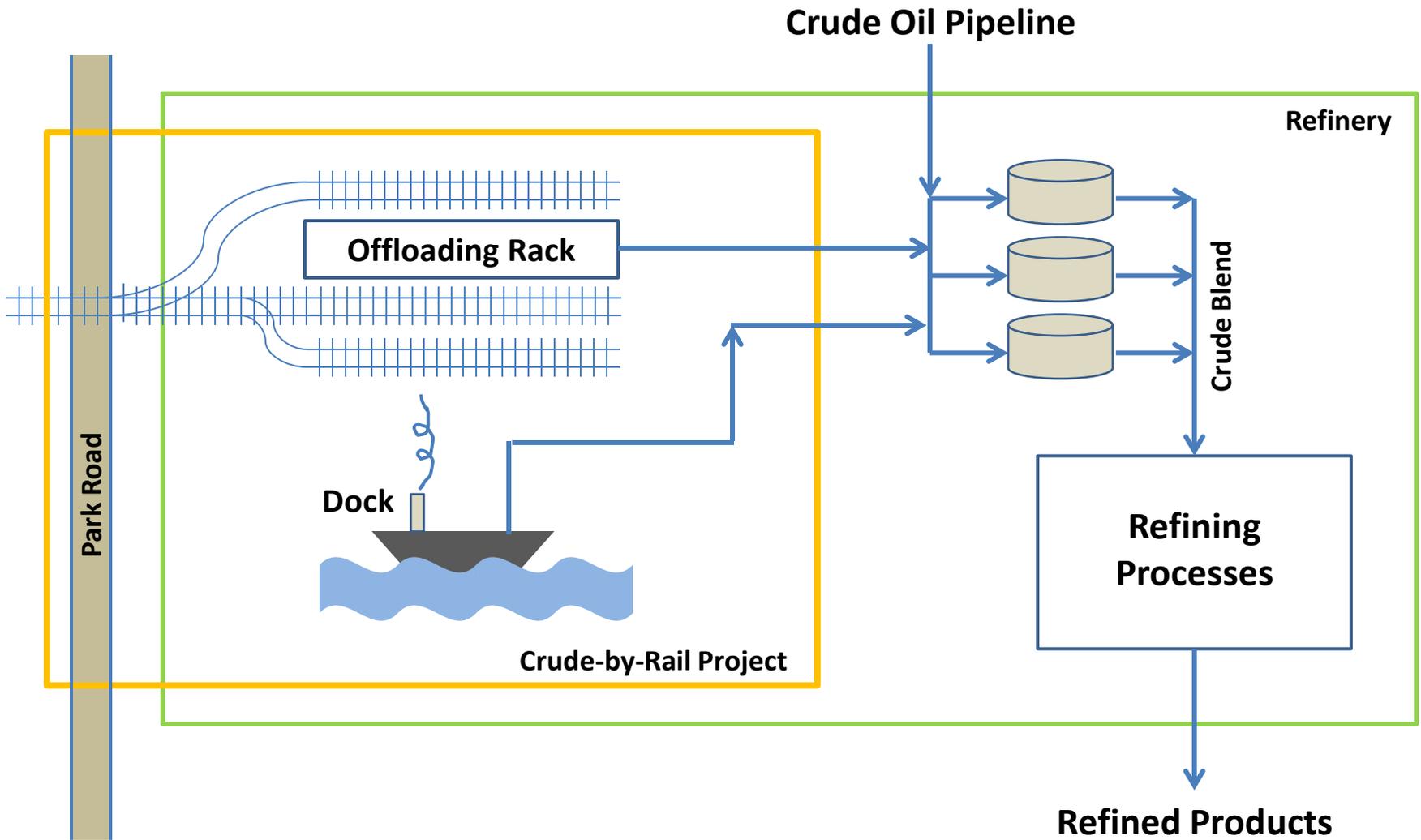
Project Description

Proposed Construction

- Rail Track Constructing two offloading rail spurs, and a parallel railcar storage and departure spur on refinery property to allow receipt of rail cars at an offloading rack.
- Offloading Rack Installing one offloading rack on refinery property capable of offloading two parallel rows of crude rail cars and transferring crude to a refinery storage tank.
- Crude Pipeline Installing approximately 4,000 feet of piping and associated components and infrastructure on refinery property between the offloading rack and existing crude storage tanks.
- Other Relocating approximately 1,500 feet of tank farm dike wall and an existing firewater pipeline on refinery property to accommodate the new rail tracks and offloading rack, and relocating a service road adjacent to offloading rail spurs.

Proposed Activity

- Crude Deliveries by Rail Increasing the volume of crude delivered by railcar by up to 70,000 barrels per day (maximum of 100 rail cars per day, in either one or two deliveries per day).
- Crude Deliveries by Ship Decreasing the volume of crude oil delivered by ship by up to 70,000 barrels per day (which equates to approximately 73 less ship deliveries per year).
- Work Force The project would require at least 20 additional full-time employees or contractors working at the refinery.



Valero Benicia Refinery Crude-by-Rail Project Description

Presentation:
A summary of the
environmental impacts
by ESA

Overview of EIR Scope

- Aesthetics
- Agriculture/Forestry
- ✓ **Air Quality**
- ✓ **Biological Resources**
- ✓ **Cultural Resources**
- ✓ **Geo, Soils & Seismic**
- ✓ **Greenhouse Gas Emissions**
- ✓ **Energy Conservation**
- ✓ **Hazards/Hazardous Materials**
- ✓ **Hydro/Water Quality**
- ✓ **Land Use & Planning**
- Mineral Resources
- ✓ **Noise**
- Population & Housing
- Recreation
- ✓ **Transportation & Traffic**
- Utilities & Service Sys.
- ✓ **Cumulative Impacts**
- ✓ **Alternatives**

Major Themes in Public Comments on the IS/MND to be Addressed in the EIR

- Change to Refinery Crude Feedstocks including the source
- Air Quality / Greenhouse Gases / Hazards
- Traffic Impacts / Park Road Crossing / Freeway off ramp
- Impacts to Emergency Response in Benicia
- Train Transport Issues
 - Noise
 - Tank Cars
 - Spill Prevention and Safety

Major Themes in Public Comments on the IS/MND to be Addressed in the EIR (continued)

- Potential Impacts from Spills in Sensitive Habitats
 - Sulfur Springs
 - Suisun Marsh
 - San Pablo and San Francisco Bays
 - Locations outside the Bay Area
- On-site Impacts
 - Corrosion of Equipment
 - Spills
 - Air Quality – Employees / Workers
- Cumulative Impacts
 - Identified CBR projects: Pittsburg Oil Terminal, Phillips 66 - Santa Maria, Tesoro – Martinez, Asphalt Refineries – Bakersfield
 - Relationship of CBR to the VIP

Public comments on EIR Scoping can be made:

At the public scoping meeting (September 12)

By mail to Amy Million, Principal Planner
Community Development Department, City of
Benicia, 250 East L Street, Benicia, CA 94510

By fax to: 707 747-1637

By e-mail to: amillion@ci.benicia.ca.us

The 30 day scoping period ends at 5:00 p.m. on
Friday, **September 13, 2013.**

APPENDIX E

Scoping Meeting Summary/Notes

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SUMMARY OF THE VALERO CRUDE BY RAIL ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

Staff Present: Brad Kilger, City Manager
Amy Million, Principal Planner
Kat Wellman, Contract City Attorney
Tim Morgan, ESA Environmental Consulting
Cory Barringhaus, ESA Environmental Consulting
Teri Davena, Recording Secretary

The meeting began at 7:10 p.m. following the regular Planning Commission Meeting.

Million introduced staff present and reviewed the process for this meeting and advised that Valero has eliminated the repurposing of tank 1776 from the project.

Wellman discussed the duties and makeup of the Planning Commission.

Million presented a PowerPoint overview of the process to date, the process for this meeting, and future step for review of this project.

Chris Howe, Valero, reviewed the proposed project and reviewed a PowerPoint map of the project.

Tim Morgan, ESA Environmental Consulting, reviewed the process to date, including the themes of comments received, and the continuing process via PowerPoint.

Million provided a reminder of ways and when to submit comments to the EIR Scoping.

Ed Ruszel spoke on traffic issues, particularly concerns about existing and future rail traffic, congestion, access, and public safety. Questioned what improvements UP will need to make to their tracks to handle the project, particularly a Y-connector. Encourages Valero to look at other means of transportation. Encourages the EIR look at UP's infrastructure. Encourages a grade-level separation on Park Road and encourage widening of the Park Road off ramp for I-680. Encourages a better emergency response plan so that driveways to Bayshore businesses are not blocked.

David Jenkins spoke on traffic issues. Commented on the work going on at Valero and UP, yet no permit at this time. Traffic is a serious problem with trains blocking roads, and discussed derailments. An accident response plan should be part of the EIR. The EIR should look at train derailments, spill and air quality impacts from the new trains.

Roger Straw discussed crude mining and rail transport in Canada. He read a letter he received from a citizen of Davis, CA. He wants the EIR to consider the entire length of the rail.

Kathy Kerridge requested a 60-day public comment period on the EIR, but not in December. Would like draft EIR to address the economic impacts to the industrial park. Concerned the draft EIR will be limited in scope, not addressing changes in crude mix and

health concerns. Would like the GHG emissions evaluated from the source of the crude to be evaluated. Reviewed a PowerPoint presentation.

Marilyn Bardet discussed several items she'd like to see added to the draft EIR and provided a bag of pet-coke as example of public health concerns. She concentrated her statements on the Public Health and Public Safety impacts of the project. Also requested that the EIR discuss the global issues and AB32.

Mary Frances Kelly-Poh requested at least a 60 day comment period on the DEIR. She discussed safety plans along the route, and endangered species of plants and birds.

Brant Olson representing National Resources Defense Council discussed rewards v. risks, and encouraged the City to investigate the benefits of the project as stated by Chris Howe. Stating that the EIR should document evidence behind Valero's claims in their presentation such as the following: 1) Decrease in emissions; 2) Decrease in foreign crudes ; and 3) 20 new jobs.

Teagan Clive from the City of Rodeo spoke of similar projects in her town, this project and ESA's involvement in both.

Million thanked everyone for coming, as did Kilger.

Completed at 8:31 pm.

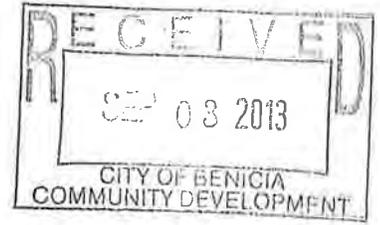
APPENDIX F

Scoping Period Written Comments

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Making San Francisco Bay Better



August 30, 2013

Ms. Amy Million
Community Development Department
250 East L Street
Benicia, CA 94510

SUBJECT: Notice of Preparation for Valero Crude by Rail Project
BCDC Inquiry File SL.BN.6927.1; SCH#: 2013052074

Dear Ms. Million:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of an Environmental Impact Report for the Valero Crude by Rail Project (EIR). Although the San Francisco Bay Conservation and Development Commission (Commission) has not reviewed the document, the following are staff comments based on our review of the NOP in the context of the Commission's authority under the McAtteer-Petris Act (California Government Code Sections 66600 et seq.) and the federal Coastal Zone Management Act (CZMA). The Commission exercises permitting authority over San Francisco Bay to the line of mean high tide, including all sloughs and marshlands lying between mean high tide and five feet above mean sea level. The Commission also has jurisdiction within a shoreline band between the edge of the Bay and a line 100 feet landward and parallel to the shoreline. Any person or government agency wishing to place fill, extract materials, or make any substantial change in use to any land, water or structure within the Commission's jurisdiction requires a permit from the Commission. The Commission can issue a permit if the proposed project is consistent with the McAtteer-Petris Act and the provisions of the *San Francisco Bay Plan* (Bay Plan).

The Commission also designates certain shoreline areas for uses that must be located on the waterfront, such as ports and water-related industry (which includes the shipment of crude oil and related products), so as to avoid potential filling of the Bay to accommodate water-related uses where the waterfront has been developed for uses that do not require a shoreline location.

According to your letter to Jaime Michaels of our staff dated August 9, 2013, the project is located outside our "shoreline band" permit jurisdiction; however, the refinery is located within a water-related industry priority use area as shown on Bay Plan Map 2. Under the CZMA, in the event a federal permit, license or federal funding is provided the proposed project, the Commission has the authority to determine whether the activity is consistent with its law and policies. If there will be any such federal involvement associated with the project, the project proponent should contact our Chief of Permits, Bob Batha.

We would be particularly interested to know the status of contingency planning in the event of an accident, whereby the crude, or any petroleum product, carried by rail could adversely affect the coastal zone, particularly in light of the proximity of the rail track to a marsh and wildlife refuge priority use area (see Bay Plan Map 2). We note that the EIR will include an evaluation and comparison of risks associated with rail and tanker vessel transport, and look forward to this discussion. Please contact me at 415.352-3644 or lindas@bcfdc.ca.gov should you have any questions.

Sincerely,

LINDA SCOURTIS
Coastal Planner

cc: Katie Shulte Joung, State Clearinghouse

DEPARTMENT OF TRANSPORTATION

111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
TTY 711



*Flex your power!
Be energy efficient!*



September 4, 2013

SOL680059
SOL-680-R2.58
SCH#2013052074

Ms. Amy Million
City of Benicia
250 East L Street
Benicia CA 94510

Dear Ms. Million:

Valero Crude by Rail / Notice of Preparation

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. Please also reference our letter to you dated on 6/27/13 regarding the May 2013 Mitigated Negative Declaration.

Lead Agency

As the lead agency, the City of Benicia (City) is responsible for all plan mitigation, including any needed improvements to State highways. The plan's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document.

Traffic Impact Study (TIS)

One of Caltrans' ongoing responsibilities is to collaborate with local agencies to avoid, eliminate, or reduce to insignificance potential adverse impacts by local development on State highways.

Please consider in your mitigation measures ways to reduce the impacts your project may have on Interstate (I-) 680. We are particularly concerned about how your project will impact I-680 / Bayshore Road intersection. For instance the Level of Service (LOS) on I-680 Northbound off ramp degrades from LOS D to LOS F. Please find ways to mitigate impacts your project has on these intersection ramps to maintain or improve the LOS.

We recommend using the Caltrans Guide for the Preparation of Traffic Impact Studies (TIS Guide) for determining which scenarios and methodologies to use in the analysis. The TIS Guide is a starting point for collaboration between the lead agency and Caltrans in determining when a TIS is needed. The appropriate level of study is determined by the particulars of a project, the prevailing highway conditions, and the forecasted traffic. The TIS Guide is available at the following website address:

http://dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

The TIS should include:

1. Vicinity map, regional location map, and a site plan clearly showing project access in relation to nearby State roadways. Ingress and egress for all plan components should be clearly identified. ROW should be clearly identified. The maps should also include project driveways, local roads and intersections, parking, and transit facilities.
2. Project-related trip generation, distribution, and assignment. The assumptions and methodologies used to develop this information should be detailed in the study, and should be supported with appropriate documentation.
3. Average Daily Traffic, AM and PM peak hour volumes and LOS on all roadways where potentially significant impacts may occur, including crossroads and controlled intersections for existing, existing plus project, cumulative and cumulative plus project scenarios. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect study area roadways and intersections. The analysis should clearly identify the plan's contribution to area traffic and any degradation to existing and cumulative LOS. Caltrans' LOS threshold, which is the transition between LOS C and D, and is explained in detail in the TIS Guide, should be applied to all State facilities.
4. Schematic illustration of traffic conditions including the project site and study area roadways, trip distribution percentages and volumes as well as intersection geometrics, i.e., lane configurations, for the scenarios described above.
5. Identification of mitigation for any roadway mainline section or intersection with insufficient capacity to maintain an acceptable LOS with the addition of project-related and/or cumulative traffic. As noted above, the project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should also be fully discussed for all proposed mitigation measures.

As a result, we encourage the City to coordinate preparation of the study with our office, and we would appreciate the opportunity to review the scope of work. Further, to ensure the State Highway System can facilitate and fund improvements necessary from the increased demand, we recommend the City develop a regional impact fee program to fund any necessary impacts, that result from the proposed update.

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State ROW requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the address below. David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See the website linked below for more information: <http://www.dot.ca.gov/hq/traffops/developserv/permits>.

Ms. Amy Million / City of Benicia

September 4, 2013

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Should you have any questions regarding this letter, please contact Keith Wayne of my staff by telephone at (510) 286-5737, or by email at keith_wayne@dot.ca.gov.

Sincerely,

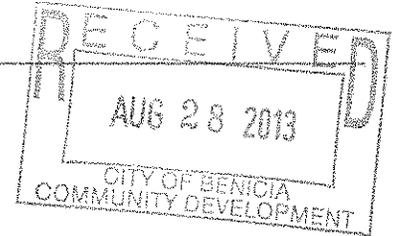
A handwritten signature in black ink, appearing to read "Erik Alm". The signature is fluid and cursive, with a prominent initial "E" and "A".

ERIK ALM, AICP
District Branch Chief
Local Development – Intergovernmental Review

c: Scott Morgan, State Clearinghouse

Amy Million - RE: SCH 2013052074 Valero Crude Oil by Rail project DMND 07022013 (REVISED: NOP due 09/09/2013)

From: "Chiang, Yen K." <yen.chiang@cpuc.ca.gov>
To: "amillion@ci.benicia.ca.us" <amillion@ci.benicia.ca.us>
Date: 8/28/2013 4:08 PM
Subject: RE: SCH 2013052074 Valero Crude Oil by Rail project DMND 07022013 (REVISED: NOP due 09/09/2013)
CC: "Munoz, Rosa" <rosa.munoz@cpuc.ca.gov>, "state.clearinghouse@opr.ca.gov"...



Hi, Amy @ (707) 740-4280:

We re-issue the comment letter on the project.

From: Chiang, Yen K.
Sent: Tuesday, July 02, 2013 2:28 PM
To: 'cknox@ci.benicia.ca.us'
Cc: Munoz, Rosa; state.clearinghouse@opr.ca.gov; Wong, Leo; Fristoe, Daniellia
Subject: SCH 2013052074 Valero Crude Oil by Rail project DMND 07022013

This message's contents have been archived by the Barrabuda Message Archiver.
SCH 2013052074 Valero Crude Oil by Rail Project DMND 07022013.pdf (162 KB)

Hi, Charlie @ 707-746-4280:

Attached is a comment letter issued by CPUC on the subject project.
Sorry for the delay in getting the comment letter out to you (due to our email system error).
If you have questions on the letter, pls contact me for clarifications/discussions.

Thanks for the opportunity to provide comments on the project.

(Yen) Ken Chiang, P.E.
Utilities Engineer
Rail Crossings Engineering Section
California Public Utilities Commission
320 West 4th Street, Suite 500
Los Angeles, CA 90013
(213) 576-7076//FAX: 576-7029

CPUC Rail Crossings Engineering Section
<http://www.cpuc.ca.gov/crossings/>

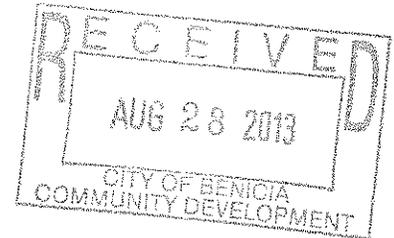
PUBLIC UTILITIES COMMISSION

320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013
(213) 576-7083



July 2, 2013

Charlie Knox
City of Benicia
250 E. L Street
Benicia, California 94510



Dear Mr. Knox:

Re: SCH# 2013052074; Valero Crude Oil by Rail Project, Valero Benicia Refinery DMND

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires the Commission approval for construction or alteration of crossings and grants the Commission exclusive power on design, alteration, and/or closure of crossings in California. The Commission's Rail Crossings Engineering Section (RCES) has received a copy of the *draft Mitigated Negative Declaration (Land Use Permit Application)* from the State Clearinghouse for the proposed Valero Crude by Rail Project. The City of Benicia (City) is the lead agency.

According to the Land Use Permit Application, Valero Benicia Refinery proposes to construct two (2) offloading rail spurs, a parallel engine runaround track and a "wye connector" track on the refinery property to allow receipt of rail cars at the offloading racks. The traffic associated with the project would be two freight trains per day. These proposed tracks will be connected to the existing Union Pacific Railroad (UPRR) tracks.

The proposed project would affect the existing at-grade highway-rail crossing at Park Road (CPUC # 001-37.32-C) and near Bayshore Road. The potential project impacts on the existing and proposed at-grade crossings along the tracks which serve or are near the Valero Benicia Refinery should be identified, discussed and evaluated for necessary safety improvements and mitigations. This includes considering traffic queuing, weaving, emergency service response, pedestrian circulation patterns or destinations with respect to railroad right-of-way, and compliance with the Americans with Disabilities Act. Mitigation measures to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and continuous vandal resistant fencing or other appropriate barriers to limit the access of trespassers onto the railroad right-of-way. All identified crossings shall also comply with the requirements of California Manual on Uniform Traffic Control Devices.

The new tracks shall be constructed in accordance with the Commission General Order (GO) Nos. 26-D (Clearance on railroads and street railroads as to side and overhead structures, parallel tracks and crossings), 72-B (Construction and maintenance – standard

Charlie Knox
Page 2 of 2
July 2, 2013

types of pavement construction at railroad grade crossings) and 75-D (Warning devices for at-grade railroad crossings).

Construction of a new public crossing or modification of an existing public crossing requires authorization from the Commission, through the formal application or the General Order (GO) 88-B request processes, respectively. Prior to submission of a formal application or GO 88-B request, the City should arrange a diagnostic meeting with RCES and UPRR to discuss relevant safety issues and requirements for the Commission's authorization. While construction of private crossings may not need the Commission's authorization, compliance with the Commission's GO 26-D (Clearances on Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks and Crossings) and GO 75-B (Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossing) standards are still required. RCES representatives are available for consultation on crossing safety matters. See the link for more information:
<http://www.cpuc.ca.gov/PUC/safety/Rail/Crossings/index.htm>.

If you have any questions in this matter, please contact Ken Chiang at (213) 576-7076, yen.chiang@cpuc.ca.gov, or Daniellia Fristoe at (916) 928-2108, dvm@cpuc.ca.gov.

Sincerely,



Ken Chiang, P.E.
Utilities Engineer
Rail Crossings Engineering Section
Safety and Enforcement Division

C: State Clearinghouse
Daniellia Fristoe

MARILYN J. BARDET
333 East K Street, Benicia CA 94510
707-745-9094 mjbardet@comcast.net

September 12, 2013

Amy Million, Principal Planner, Community Development Department
Brad Kilger, City Manager &&
Planning Commissioners
City of Benicia
250 East L Street
Benicia, CA 94510

SUBJECT:
Scoping comments for preparation of the Draft EIR for the Valero Crude-By-Rail Project

Dear Ms. Million, Mr. Kilger and Planning Commissioners,

I fully appreciate the City of Benicia's decision to require preparation of a Draft Environmental Impact Report ["DEIR"] for the Valero Crude-by-Rail Project ["Project" or "Valero Rail Project"]. The voluminous public testimony the City received critical of the conclusions of the Initial Study and recommended Mitigated Negative Declaration [IS/MND] pointed to that necessity. I also appreciate that the City has invited the public to contribute to the preparation of the DEIR through an official scoping process, including the official scoping session scheduled for tonight, September 12th, at the Planning Commission meeting.

I'd read that the DEIR would be intended to be ready for public circulation and review sometime in December-January. Now, tonight at the Scoping, we are told that the DEIR will be ready for circulating to the public by sometime in October for a 45 day review period, and that it would be anticipated that a Response to Comments Document, for public review for 10 days, would be available in December, at which point the Final EIR would be presented to the Planning Commission for its consideration. I want to register here that I am absolutely against scheduling a public review period for any CEQA document, given the apparent rush to get the DEIR prepared, especially the "Response to Comments" document which requires as much review as the DEIR, considering that it represents the "last word" by the consultant on the subject of public comment and critical review of the DEIR's conclusions. The holiday month of December is typically full of extra family responsibilities and obligations, besides regular jobs. My personal experience of reviewing and commenting on DEIRs over the years, including the Valero Improvement Project DEIR and its Response to Comments, allow me to make this request with justifiable concern. Citizens should not be purposefully disadvantaged in the month of December by having 10 days to study, then comment on a document that could be determinant for approval of a final EIR. The Crude-By-Rail Project has raised extraordinary, critical questions that have opened up the Project to much greater scrutiny and the discussion provided in the DEIR and answers that would be provided by consultants in the Response to Comments doc will deserve very serious attention and focus in preparation for the Planning Commission's hearing on the DEIR. There will be very little extra time for most of us during the holidays for that level of concentrated devotion required to tackle the document and prepare for a final hearing on the Final EIR. Community members should be commended and shown respect for their desire to comment on the sequence of documents, an arduous task at best. I also hereby request that the DEIR review period for the Crude-by-Rail Project be extended to 60 days,

and that the month of December be excluded from any review period of CEQA documents. Thank you in advance for your consideration of my requests, which I know others share.

I believe it would be an appropriate courtesy for the City of Benicia to notify all cities within the region, “up county” and beyond to Roseville, and even farther along the intended train route to Alberta or North Dakota through small towns along the way. After all, the train that exploded in flames and decimated the downtown of Lac-Megantic, Quebec, was meant to “pass through”—go on. Perhaps the notification task would be Valero’s or Union Pacific’s responsibility? By email blast? It would seem more than a gesture. If the Project is approved, unit trains with 50 tanker cars loaded with dangerous crude oil would be rolling through communities on Union Pacific tracks, from the shale plays in the Midwest and tar sands in Alberta through to Benicia’s industrial park and refinery.

I know that I’ve written here more than you could ever want to plow through. I am grateful, just by the thought that you might actually read it all. It’s a measure of my commitment that I’ve given such time and thought to this writing task, because of which many other obligations were put on hold. Part of my effort was spent trying to express the depth of my concern, having read about the tar sands mega-project and the aggressive campaign to promote it by the oil industry and its investors since around 2003, just when the Valero Improvement Project was being presented to the public for review. What and when did Valero’s CEO know about the tar sands opportunity? What did I know then? Not what I know now through my reading! Canadian officials flew to Texas to discuss with leaders in the oil business the prospects for expanding exports of “diluted bitumen” to the US. One name given to the product is “Western Canada Select.” It’s quite likely that Valero’s CEO and investors could have been involved in those early discussions with Albertans that might have prompted or reinforced Valero’s early decision to prepare the refinery, retool it, for processing greater varieties and amounts of sour crudes, as the VIP DEIR had described. After all the technical modifications and upgrades to achieve this goal, Valero is now poised to import unconventional low grade dilbits from the tar sands, albeit they’d rather name the crude from North Dakota’s Bakken shale formation rather than admit they’re aiming for the “money left on the table,” as Valero’s CEO Bill Kleese called it, speaking with investors. Valero Energy Corporation’s given rationale for the Project is to provide access to heretofore inaccessible, advantageously priced North American-sourced unconventional crude oil from Midwest shale formations, and though not admitted to the general public, presumably Western Canada Select from Alberta tar sands. Accessing North American-sourced crude by rail is therefore the *single reason* for the Project proposal, making those particular imported crude products an intrinsic part of the Project, representing the Project’s economic value to Valero. The primary motive for the Project is to increase the refinery’s profit margins, accounting the price-per-barrel discount of tar sands dilbits that could make the Project’s costs zero out after a few years. A very good deal for Valero! But what I see ahead for our community, I also see ahead for the earth and all of life as the climate crisis moves toward irreversibility. It is because of this nexus that I have worked so hard to make my case to get an honest, objective DEIR for review of this Project.

Thank you very much for reading and considering my comments. I can well appreciate the tasks you continue to face in administering this CEQA review process.

Very respectfully,

Marilyn Bardet
member, Good Neighbor Steering Committee

About my Scoping Comments: what they include by reference and citation

The DEIR must be a comprehensive tool for public understanding of the Project and its impacts. It is imperative that the DEIR not piecemeal the Crude-by-Rail Project, as if Project activities and operations were solely confined within Valero property at the proposed rail off-loading rack/terminal. The Project must be portrayed, characterized and analyzed within the full context of its operations on-site and off-site, including rail transport of crude oil by Union Pacific that would be imported by Valero. The Project's direct and indirect impacts must not be reviewed in isolation from those consequences resulting from other similar projects now being considered in the Bay Area. My comments will address these issues.

I request herein that all comments and questions that were *critical of the analyses and conclusions of the IS/MND* and that were officially submitted to the City as part of the official record be incorporated by reference into my Scoping Comments. This would include all comments submitted by me and others, including the National Resources Defense Council [NRDC], as well as reports submitted, the Phyllis Fox Report and the Goodman Group Report, and also, those verbal testimonies offered by members of the public at the Planning Commission hearing on July 11th.

Also, I endorse and wish to incorporate all Scoping Comments submitted to the City by members of the Benicia community, members of the GNSC, Roger Straw, Ed and Jack Ruszel, Bob Berman, NRDC and other citizens who seek to have a thorough, comprehensive DEIR prepared that would disclose the full scope of potential direct and indirect impacts of the Crude-by-Rail Project.

I also request to have incorporated as part of this scoping the comments from residents of Pittsburg that were submitted to the City of Pittsburg on the DEIR for the WesPac Energy Infrastructure Project ["WesPac Project"] proposed for Pittsburg's waterfront, since those comments are pertinent to the review of the Valero Rail Project's foreseeable, potentially significant and cumulative indirect impacts, both projects having enormous repercussions for the Bay Area at large, but also for our particular communities of Benicia and Pittsburg, and all other affected communities hosting refineries, and/or all cities and communities that share the prospect of having 50-car unit trains loaded with unconventional crude chugging through their communities.

I want to express my disappointment that Valero's presentation at the Scoping session held tonite did not reflect any of the concerns raised by citizens at the previous hearing on July 11th or those raised in writing and submitted to the City. There was no hint that Valero really had any concern to answer our questions directly. The company still refuses to talk about the specific sources for the unconventional crudes they intend to import now and over time., the scant description offered about the proposed project's benefits to the community would hardly qualify as reason to permit it.

According to the City's Notice of Preparation [NOP] issued August 9, the DEIR will discuss impacts under the following topics – Air Quality; Biological Resources; Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Transportation/Traffic. However, given the NOP's limited number of topics listed, the DEIR under preparation would qualify under CEQA guidelines as a "focused EIR," (not a "full EIR"). I believe that other CEQA topics must be included in this focused DEIR in

order to identify and address the full range of potentially significant and cumulative direct and indirect potentially significant and cumulative impacts resulting from the Project's various operations, on-site and off-site of Valero property. I herein request that additional topic areas be added that are typically found in DEIRs for large-scale industrial projects involving crude oil and other hazardous materials:¹ Public Health; Public Safety; Land Use Plans & Policies; Energy; Noise; Aesthetics, Visual Quality, Light & Glare; Public Services and Utilities; Growth Inducing Impacts & Urban Blight; Marine Terminal Operations; Greenhouse Gas Emissions; Cumulative Effects. My reasons for including these additional topics for the Valero Project DEIR will be made clear through my Scoping Comments.

About the terms “ecology” and “environment”

I request that the DEIR discuss the specific terms “ecology” and “ecosystem” as equivalents of the word “environment,” the term used by CEQA especially in reference to a project's potential local and regional negative impacts. The dictionary definition of “ecology” – “the relation of biologic organisms to their physical environment” – makes clear the totality of what CEQA means by “environment.” Thus, “environmental protection” means protecting an “ecosystem” encompassing all relations, e.g., those *exchanges* amongst living species with the physical world and conditions in which they find themselves. Humans, wildlife, plants and other forms of biologic life on the land and in waters are in perpetual exchanges of forms of energy in their respective habitats that are dependent for stability on conditions found within them and surrounding them. Those conditions, for whatever natural or man-made cause, are perpetually in flux over time – the critical time period of that flux is what allows for adaption or not. Harm to the environment, therefore, can affect biologic species of all kinds, with their survival and/or ability to adapt in a given area determined by the level of disruption over time to habitat, and causes of disruption and changes, such as industrial or residential development that disrupt the soil and the network of ecologic relations in those surroundings. The ultimate long-term disrupter of existing ecologic order is climate change, which already affects the survival chances of countless species, as scientists have documented for California.² The ecology of our local and regional environs is revealed distinctly, from the smallest to the largest evidence that can be discovered and experienced around us. Life depends on the energy of the sun and the quality of the air with its chemical contents, and these essentials determine the earth's climatic conditions for the diverse ecosystems that make up the world's “skin.” I would hope that the DEIR would use the term ecology with respect to the need to convey the wide-rippling, relational aspect of *indirect effects* of the Project – how one thing affects another, with an eye to how the continued extraction, processing and consuming and burning of precious fossil fuels contribute to an accelerating climate crisis. Scientific evidence continues to reveal the need to transition to renewable sources of energy for human civilization and to protect the earth's biologic diversity, the wellspring of all life.

The DEIR's purpose, objectives, and what the DEIR must provide and address³

¹ See Recirculated DEIR (public review ends Sept 13th) for WesPac Energy-Pittsburg LLC's proposed WesPac Energy Infrastructure Project for City of Pittsburg's waterfront, an oil terminal/import/storage/export operation proposed to include import of unconventional crude oil by rail from North American sources to be exported by pipeline to Bay Area refineries. <http://www.ci.pittsburg.ca.us/Modules/ShowDocument.aspx?documentid=5651>

² <http://oehha.ca.gov/multimedia/epic/pdf/ClimateChangeIndicatorsReport2013.pdf>

³ CEQA GUIDELINES http://ceres.ca.gov/ceqa/docs/CEQA_Handbook_2012_wo_covers.pdf

Under CEQA, the DEIR's primary **purpose** is to enable the public to review, reasonably understand, fairly evaluate and judge the full scope of the Project, inclusive of its various, foreseeable, potentially significant, as well as *cumulatively considerable*⁴ immediate and long-term *direct and indirect* risks and negative impacts posed to local and regional ecology by the "whole of the Project."

The DEIR's **purpose** is also to reveal the best possible solutions for mitigating those impacts that have been analyzed as being potentially significant such that they could result in harm to the environment, human health and safety. The DEIR must allow the public to fairly evaluate and judge the feasibility and effectiveness of specific mitigation measures, to be presented in the DEIR as *completed plans* with monitoring programs that are intended to eliminate or greatly reduce to "less than significant" those impacts identified as "significant" that would foreseeably result from Project activities and operations "on site" and "off site" over the Project's lifespan. The mitigation measures must specifically address the particular risks posed by potential direct and indirect impacts that would be potentially significant and *cumulatively considerable*: for example, negative consequences resulting from the Project's *indirect* emissions impacts to local and regional air quality, and also, foreseeable indirect consequences (accidents, derailments, spills, etc) of transporting crude-by-rail through cities along Union Pacific tracks, potentially threatening public health and safety, and through rural areas, thus posing incredible risks to ecologically fragile and sensitive landscapes. All significant negative direct and indirect impacts must be aggregated as cumulative impacts of the Project that under CEQA must be "*viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects,*"⁵ e.g., estimates of aggregated cumulative significant impacts from sources of pollution and transportation hazards, and any and all foreseeable impacts contributed by similar projects being proposed now or anticipated in the near future by other major, large-scale industrial polluters in the region – other refineries and chemical plants. [See further comments].

Thus, the DEIR's **objective** must be to accurately and comprehensively describe and assess the Project's potential direct and indirect impacts foreseeably resulting from operations, on-site and off-site of the Project's physical location within the refinery's perimeter. Obviously, without Union Pacific's trains and rail transport operations, there would be no need for the existence of the "on-site" Project: the proposed rail off-loading racks or two extra rail spurs on site, or 4,000 ft of new piping to carry off-loaded crude to the storage tanks. The Project's extensive rail operations, governed by federal interstate commerce law and therefore controlled by Union Pacific, must be considered as part of *indirect* operations that could foreseeably contribute to off-site indirect Project impacts. Those rail operations must be described, (train routes; proposed scheduling of unit trains; potential sidling of loaded or empty crude unit trains within the Benicia Industrial Park and elsewhere; location of rail hubs, etc) and these rail operations must be analyzed for potential and foreseeable impacts that would be *indirectly* associated to the Project – potentially significant impacts, such as leaks, spills and fires owing, for example, to the structure and condition of DOT-111 tanker cars that are reported to be prone to puncture and/or rupture, thus exposing the risk of leaks, fires, explosions and major cleanup problems that have to be addressed in the DEIR. In the case of derailment when tanker cars contain, for example, highly corrosive and heavy tar sands diluted bitumen ("dilbits") or Bakken crudes that may contain fracking residues of highly corrosive hydrochloric acid and that also emit volatile, flammable gases, we know that it would be imperative to ensure that the tanker cars that would carry these unconventional crudes would be double-walled and proven safe when derailed. But, ". . .the rail industry is fighting a proposal to retrofit

⁴ From CEQA GUIDELINES_Amendments, 2009: § 15064. (h)(1) "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

⁵ CEQA Guideline Amendments, 2009: § 15064. (h)(1)

existing cars, saying it could cost as much as US \$1 billion.” [Bloomberg News⁶]. The DEIR must address the type and current performance history of the tanker cars that Valero has purchased for the Project and discuss specific, potential indirect impacts of crude-loaded 50-car unit trains, loaded with different crudes with different characteristics, if there is an accidental derailment “on site,” and accidents “off site” – derailments, spills, fires, catastrophic explosions affecting sensitive ecologic areas (creeks, marshes, wetlands, floodplains, shorelines, and the river – when crude-loaded unit trains are in transit through the Benicia Industrial Park, in sensitive areas within Benicia city limits, the region and beyond.

Thus, however narrowly the Project is described, it is impossible to conceive of the Project without Union Pacific as a partner in its operations, and therefore, it is common sense to link Valero and Union Pacific together when considering off-site indirect impacts that could foreseeably flow from the Project’s implementation. The DEIR must address how cleanup of foreseeable rail accidents involving spills of diluted bitumen and/or Bakken crude would be carried out, and who would be responsible for the cleanup and its costs, Valero or Union Pacific and/or both. A Mitigation Measure and its Monitoring Program would have to be specific and cite existing evidence of how spills (from pipeline and trains) of these products have been dealt with in the past. Particularly important to review are the facts about the Enbridge Energy pipeline spill of tar sands diluted bitumen into the Kalamazoo River: the problems that arose in attempting restoration of 35 miles of river and shoreline, and what it has cost to date and how the cleanup bill has been paid for.⁷ And, of course, the catastrophic train accident involving derailment, fire and explosion of Bakken crude at Lac-Mégantic, Quebec. The most recent article posted on the subject shows that there was a “mislabeling” problem of contents of the train that exploded. The Bakken crude being transported was misclassified, so contents were not understood to be highly explosive. [See Huffington Post article, Sept 12, 2013]⁸

The DEIR’s Project Description and Impacts Analyses must discuss the regulatory framework governing the Project and its operations, and provide sufficient detail so that the Project and its impacts can be understood in context, that is, from local to global under the rubric of “Sustainability” – the City of Benicia General Plan’s overarching goal [General Plan, page 22]– the City of Benicia’s Climate Action Plan adopted in 2009, the California Global Warming Solutions Act - AB32 of 2006, and other current and/or pending legislation that supports AB32’s implementation, such as SB375, with description of the GHG reduction target levels described for Benicia, Bay Area and the state.

To benefit the public’s understanding, the DEIR must **provide as part of the draft document** the necessary tools to serve assessment of the Project and its effects as described. The Project should be able to be understood through study of the DEIR as a “stand alone” document, with Appendices to allow for easy access to important references, texts and citations, including a Glossary of Terms, and active weblinks to key documents, charts, graphs, etc., that are pertinent to close-order discussion of topics covered by the DEIR and that support the claims of the DEIR’s impact analyses. Thus, readers of the DEIR should not have to seek

⁶ [Fracking chemicals in spotlight as regulators investigate rail car corrosion and flammability of North Dakota crude | Financial Post](#)

⁷ [Kalamazoo River oil spill - Wikipedia, the free encyclopedia](#), also, [EPA Response to Enbridge Spill in Michigan | US EPA](#); also, [Enbridge Resisting Final Clean-Up of Its Michigan Oil Spill | InsideClimate News](#)

⁸ [Safety rules lag as oil transport by train rises - Canada - CBC News](#) Also: [Key things confirmed in the Lac-Mégantic train blast - CBC](#) ; also [Lac-Mégantic disaster stirs train vs. pipeline debate - CBC/ Your Community](#); also, [Transport: Bakken crude makeup faces scrutiny in rail car explosion -- Monday, September 9, 2013 -- www.eenews.net](#); also, [Fracking chemicals in spotlight as regulators investigate rail car corrosion and flammability of North Dakota crude | Financial Post](#); also, http://www.huffingtonpost.com/2013/09/12/lac-megantic-train-mislabeled-oil_n_3909175.html

relevant and expert information beyond the DEIR in order to fairly judge the Project. The Appendices must include current 2012 CEQA Guidelines, and full texts with summary explanations of all relevant, applicable local, county, state and federal laws, regulations and guidelines and “ARARS,” [“Applicable or Relevant and Appropriate Requirements”] that would serve as regulatory framework for assessing impacts and for governing the Project’s implementation and on-going operations. For example: the Appendix must **provide** web links to state laws AB32 and SB375; CAL-EPA and California Air Resources Board regulations that protect human health and safety; City of Benicia’s General Plan, and the City’s Climate Action Plan. It must also **provide** web links to the Valero Improvement Project [VIP] EIR (2003) and VIP EIR ADDENDUM (2006), in order that citizens and experts studying the DEIR can compare previous historical statistical analyses of refinery operations impacts with analyses provided by the Project DEIR’s analyses of similar impacts.

It is of utmost importance that the DEIR **provide** any and all current federal regulations and guidelines governing rail transport of crude oil and other hazardous materials. The DEIR must provide adequate discussion of Union Pacific’s historical performance record, train derailments and other accidents involving hazardous materials as well as the federal standards (if any) for DOT-111 tanker cars with regard to their construction and likely performance in the event of derailments and accidents, with examples given of the “credible worst case scenarios” for accidents involving hazardous, toxic materials. The Dunsmuir and Roseville historic and catastrophic train accidents⁹ involving large unit trains carrying hazmat must be discussed. In the case of Dunsmuir derailment, pesticides from a 97 car train spilled into the upper reaches of the Sacramento River killing fish and sickening many people and impacting 38 miles of the river. That accident was considered the most catastrophic in California history. The Roseville disaster, a rail yard explosion of 6,000 Mk-81 bombs, caused massive destruction and injured 350 people. What would happen if a crude-loaded train derailed, caught fire and exploded at the Roseville rail hub today? Or as it passed through any city along the UP tracks? The research that is being done to determine the causes of the Lac-Megantic catastrophe must be fully discussed. The DEIR should discuss the events leading up to these events, how they were dealt with in the immediate wake of the accidents, and what followed in the aftermath with regard to environmental damage, ecological restoration efforts and improvements made to protect public health and safety (emergency response, etc.)

As part of the Project Description and Introduction, the DEIR must account for the anticipated lifespan of the Project – the expected number of years of its construction and operations, (which the IS/MND failed to identify). This estimate is essential to understanding, for example, foreseeable impacts owing to an inevitable change *over time* to the refinery’s daily crude slate, which is processed at the permitted annual average throughput rate of 165,000 barrels per day, and at 180,000 bpd, the daily maximum throughput allowable. The DEIR must address and estimate how the crude slate could change over time, given that the Project would be importing 70,000 barrels per day of unconventional crudes from US and Canadian sources, a figure that represents almost *half the amount of the daily average allowable throughput*. In other words, using this example, the public must be able to fairly gage and judge the long-range indirect consequences of the

⁹ Dunsmuir historic train derailment, toxic spill in river; also recent UP derailment at the same location: [▶ Train derails north of Dunsmuir in area where disaster has struck before - YouTube](#) [A Toxic Nightmare: The Dunsmuir Metam Sodium Spill Revisited](#); [Millennium Ark: Hot News](#) [Railroad train fires and munition explosions | The History of Insensitive Munitions](#) <http://www.nts.gov/doclib/reports/2004/RAB0403.pdf>

likelihood of processing, *in incremental increases over time*, greater percentages on a daily basis of *unconventional*¹⁰ North American-sourced crudes. *The estimates of those impacts resulting from percentage increases in the crude slate must be based on current statistics for processing the existing crude slate at maximum daily capacity, 180,000 bpd.*

The DEIR must identify and discuss the “unconventional North-American sourced crudes” and their typical chemical constituents (including residues of acids and other chemicals used in the case of crudes extracted by hydraulic fracturing methods) that the Project is likely to import, since foreseeable indirect “off site” impacts associated to refining unconventional crudes with their distinct characteristic chemical signatures would flow from the Rail Project’s implementation.

Tar sands and Bakken crudes are highly likely to be the predominant candidates to be imported by rail,¹¹ despite the fact that Valero has verbally publicly denied that they would import tar sands bitumen – a natural asphalt – which, if imported in its original state would require. At a Valero Community Advisory Panel meeting earlier this year, it was stated that they would not be importing bitumen because it would “require a different kind of offloading terminal and heated tanker cars.” They have so far effectively skirted around answering whether they would seek to import tar sands *diluted* bitumen or “dilbits,” which would not apparently have those special requirements for transport and offloading. Valero has verbally stated that Bakken would be one of the crudes imported by the Project. There are other Midwestern “shale plays” that may also be sources of crude imported by the Project, but these have not been identified by Valero.

The DEIR must discuss the unconventional crudes being considered for import by rail. They may be highly acidic, “dirty” and “heavy” such as those derived from tar sands bitumen – a natural asphalt – and/or highly volatile and “light,” like the type extracted from the Bakken shale formation in North Dakota. In particular, given the probability that both Bakken crude and tar sands dilbits would be imported, the DEIR must describe their respective properties and the different challenges each poses for refining and transport by rail, with regard to concerns and risks to refinery and community safety, air quality, and hazards of spills during a train accident, derailment, etc. For example: processing tar sands diluted bitumen at a certain percentage of a crude slate could significantly increase risks of corrosion of refinery equipment and increase emissions of toxic air contaminants. Increases in production of petroleum coke (toxic carbon residue of the refining process, a particulate containing heavy metals) would result from increases in processing of tar sands dilbits; and processing Bakken oil as a percentage of the crude slate would potentially increase risks of leaks and

¹⁰ “unconventional crude” - term in common use to characterize oil derived from energy- and water-intensive extraction methods and techniques, such as hydraulic fracturing (“fracking”) used in Midwest and California shale formations that involve use of injected chemicals and water under pressure, and also, highly corrosive acids, (hydrofluoride or “HF” for fracking in CA; and hydrochloric acid, used in Midwest shale plays.) Various methods are used for extraction and upgrading of bitumen derived from Alberta, Canada’s tar sands, a vast network of industrial mining operations encompassing 250,000 sq miles, in the midst of what was once a pristine boreal forest. For information on the economic prospects and environmental impacts of extracting and processing unconventional crude types found in the US, see the book “*Snake Oil: How Fracking’s False Promise of Plenty Imperils Our Future*” by Richard Heinberg; 2013, Post Carbon Institute, a thoroughly researched, investigative analysis and rebuke to industry hype, giving solid statistical information, promulgated by the US Energy Information Administration (EIA), including the EIA’s recent prediction that unconventional oil supply will experience historic decline “within this decade.” This prediction alone, based on current production levels at existing shale and gas plays in the US, raises the question of the actual economic reality of the “boom” that current oil industry promotion campaigns describe for production owing to “inexhaustible oil reserves” found in extensive, often very deep, shale formations of the Midwest and California. The real test of this claim is how much “product” can be extracted at what cost, which determines the supply given its level of profitability and thus, the “energy return on energy invested” or “EROEI.” The overall cost of the extraction processes are huge and are offset right now by favorable pricing discounts such as offered by the Canadian government for tar sands diluted bitumen products (“dilbits”).

¹¹ See Goodman Group Report

explosive situations involving flammable gases under very high pressure, and also, risk increases of emissions of volatile organic compounds (VOCs) affecting local and regional air quality.¹² Then there are the indirect impacts associated to the transport by rail of unconventional crudes that have to be thoroughly described and analysed for cumulative significant environmental consequences. [See further comments.]

As the City's Notice Of Preparation declares, the DEIR must **provide** full account of the effects of a "No Project Alternative" as well as sufficient description of plausible, feasible "Alternative Projects" and also identify, based on established criteria, the "Preferred Project Alternative."

The City of Benicia as lead agent must **give notice and provide opportunity** for all relevant county and state agencies, offices and departments to comment on the DEIR. In addition to those notified by the City for the IS/MND, notice of the DEIR's preparation should go to Cal-EPA's Office of Environmental Health Hazard Assessment [OEHHA], the Bay Conservation and Development Commission [BCDC], the Solano Land Trust and other county conservation organizations.

The Project's potential indirect, negative environmental "ripple effects" related to global warming and climate change

Based on the preponderance of historical and recent evidence and continuing research, scientists concur that the primary cause of the increases in global warming over the last century and the accelerating rate of change in atmospheric levels of GHG is owing to advanced industrial civilizations' burning and consuming of non-renewable fossil fuels – for which purpose the current "boom" in extraction and processing and burning of "North American-sourced" unconventional oil serves.

There is no doubt that the remaining petroleum in the form of conventional oil should be left in the ground as a protected precious resource for the sake of future generations who would certainly, a hundred years hence, regard its energy-rich properties "like gold." Advanced economies have had access to cheap oil and natural gas for over 100 years and have used it productively, but also wastefully, as if there would be no end to the good fortune and exponential growth it created from the time of its first discovery in the US. We will remain dependent on fossil fuels for transportation and other industrial purposes for years to come. However, today's energy- and water-intensive extraction methods and production costs will inevitably affect supply of unconventional oil sourced in the US and Canada, since it will become more difficult and expensive to technically "melt" the dirty, oily substances out of deeper and deeper shale layers or, in Alberta, deeper layers of sand and clay. Those costs will finally determine the availability of the current unconventional crude supply which now appears to be so readily available – ready in greater quantities for import by rail into the Bay Area.¹³

There is growing public acknowledgement, with plenty of evidence, that we are in the midst of a difficult transition to a different energy future, 30 years hence, that will entail energy production from diverse sources that government sources predict will be dominated still by coal and oil, with wind, solar, geothermal, hydro the minor contributors. However, the federal government's projections recorded in its *International Energy Outlook* present a future scenario for 2040 that is unsustainable, if one thinks of the "staggering consequences" (see quote below) to climate by continued dependence on the extraction and consumption of carbon-based fuels. An alternative post-carbon future must be imagined and worked toward, to conserve non-renewable resources and create a distributed energy system based on renewables to support a more localized

¹² See Phyllis Fox Report

¹³ *Snake Oil: How Fracking's False Promise of Plenty Imperils Our Future*, Richard Heinberg, 2013, Post Carbon Institute

economy *not founded on old hopes and false expectations of exponential growth*. I quote extensively below from an article published Sept. 10th, 2013, on the website Common Dreams, called, “Our Fossil-Fueled Future: World Energy in 2040” by Michael Klare, the Five College Professor of Peace and World Security Studies at Hampshire College in Amherst, Massachusetts. Discussing the IEO’s projected scenarios about the future of oil, only 30 years away, Mr. Klare writes:

“ . . . These projections may not in themselves be surprising, but if accurate, the consequences for the global economy, world politics, and the health and well-being of the planetary environment will be staggering. To meet constantly expanding world requirements, energy producers will be compelled to ramp up production of every kind of fossil fuel at a time of growing concern about the paramount role those fuels play in fostering runaway climate change. Meanwhile, the shift in the center of gravity of energy consumption from the older industrial powers to the developing world will lead to intense competition for access to available supplies. . . . Anyone searching for evidence that we are transitioning to a system based on renewable sources of energy will be sorely disappointed by the projections in the 2013 *International Energy Outlook*. Although the share of world energy provided by fossil fuels is expected to decline from 84% in 2010 to 78% in 2040, it will still tower over all other forms of energy. In fact, in 2040 the projected share of global energy consumption provided by each of the fossil fuels (28% for oil, 27% for coal, and 23% for gas) will exceed that of renewables, nuclear, and hydropower combined (21%).

“ . . . Oil and coal continue to dominate the fossil-fuel category despite all the talk of a massive increase in natural gas supplies -- the so-called [shale gas revolution](#) -- made possible by hydro-fracking. Oil’s continued supremacy can be attributed, in part, to the endless growth in demand for cars, vans, and trucks in China, India, and other rising states in Asia. The prominence of coal, however, is on the face of it less expectable. Given the degree to which utilities in the United States and Western Europe are shunning coal in favor of natural gas, the prominence the IEO gives it in 2040 is startling. But for each reduction in coal use in older industrialized nations, we are seeing a huge increase in the developing world, where the demand for affordable electricity trumps concern about greenhouse gas emissions. . . . To fully appreciate the significance of the IEO’s findings, it is necessary to consider four critical trends: the surprising resilience of fossil fuels, the degree to which the world’s energy will be being provided by unconventional fossil fuels, the seemingly relentless global increase in emissions of carbon dioxide, and significant shifts in the geopolitics of energy. . . . If the trends identified in the Department of Energy report prove enduring, then the [world of 2040](#) will be one of ever-rising temperatures and sea levels, ever more catastrophic storms, ever fiercer wildfires, ever more devastating droughts. Can there, in fact, be a sadder conclusion when it comes to our future than the IEO’s insistence that, among all the resource shortages humanity may face in the decades to come, fossil fuels will be spared? Thanks to the exploitation of advanced technologies to extract “tough energy” globally, they will remain relatively abundant for decades to come. . . . So just how reliable is the IEO assessment? Personally, I suspect that its scenarios will prove a good deal less than accurate for an obvious enough reason. As the severity and destructiveness of climate change becomes increasingly evident in our lives, [ever more people](#) will be pressing governments around the world to undertake radical changes in global energy behavior and rein in the power of the giant energy companies. This, in turn, will lead to a substantially greater emphasis on investment in the development of alternative energy systems plus significantly less reliance on fossil fuels than the IEO anticipates. . . . Eventually, however, the destructive effects of climate change will prove so severe and inescapable that the pressure to embrace changes in energy behavior will undoubtedly overpower the energy industry’s resistance. . . . Unfortunately, none of us can

actually see into the future and so no one can know when such a shift will take place. But here's a simple reality: it had better happen before 2040 or, as the saying goes, our goose is cooked. ¹⁴

The DEIR must describe the viability and fate of the Project, thus through the Project's "lifespan," in the context of a near future (10 - 20 years out) when peak and decline of accessible, unconventional oil supplies is predicted.¹⁵ The reader must be enabled to envision the foreseeably widening negative environmental current and future "rippling effects" flowing from implementation of the Project and its potential indirect impacts overall, which may locally include "urban blight" (there is already a problem of attracting new businesses to the heart of the Benicia Industrial Park in the vicinity east of the refinery). But most grave in this context, are the effects over the Project's lifespan resulting from its contributions of greenhouse gases from direct and indirect Project operations (the actual transporting of crude by rail; the processing and refining of unconventional crudes). Impacts accumulate if we trace back to those crudes' sources and the incredible energy requirements to extract and produce the oil, the "cradle to grave" impacts of the Project, all inclusive – the "cradle" being the extraction process and any "upgrading" required such as what must be done to liquify bitumen, to produce diluted bitumen, and the "grave" being the burning of the resultant oil product,(see further comments), which should be considered as a final product, valuable as we understand it to be at the gas pump, of the ruination and destruction of pristine northern boreal forest, the draining of volumes of fresh water daily from three major Canadian rivers that flow to the Arctic, the consumption of natural gas to heat and pressurize water for the extraction processes, etc etc. All of these processes represent the *no-longer-hidden totality of environmental costs* of bringing greater quantities of unconventional oil into the Benicia refinery for processing, especially if all other projects created with similar intent are planned by other energy companies and Bay Area refineries.¹⁶ [see also footnote #5]

Research now demonstrates that there are evident increases of man-made global warming effects in California, as reported in the recently released "Climate Change Indicators Report of 2013"¹⁷ issued from Cal-EPA's Office of Environmental Health Hazard Assessment ["OEHHA"].

The rising level of CO₂ and other greenhouse gases – "metric tonnes of equivalent carbon dioxide" [MtCo₂e]¹⁸ – are now recorded at 400 parts per million,¹⁹ with 350 ppm considered by atmospheric scientists to be the "safe threshold level" that we must return to if we are to stabilize global climate through reducing GHG emissions from all sources to levels cited in state and local regulatory guidelines that call for

¹⁴ [Our Fossil-Fueled Future: World Energy in 2040 | Common Dreams](#), article by Michael Klare, posted Sept 10, 2013

¹⁵ *Snake Oil: How Fracking's False Promise of Plenty Imperils Our Future*, Richard Heinberg, 2013, Post Carbon Institute

¹⁶ " ' . . . Every barrel of bitumen produced from the tar sands creates, on average, three times more carbon dioxide emissions (187 lbs) than a barrel of normal [conventional] crude (62 lbs.). . . All unconventional forms of oil are worse for greenhouse gas emissions than petroleum," noted the late Alex Farrell while he was an energy expert at the University of California, Berkeley. 'When we face tradeoffs between economics, security and environment, the environment often ends up getting the short end of the stick.' "" p.129, *Snake Oil: How Fracking's False Promise of Plenty Imperils Our Future*, Richard Heinberg, 2013, Post Carbon Institute.

¹⁷ <http://oehha.ca.gov/multimedia/epic/pdf/ClimateChangeIndicatorsReport2013.pdf>

¹⁸ "GHG" represent the panoply of gases, referred to as "CO₂EMT, or CO₂ Equivalent Metric Tonnes, that continue to contribute to global warming potential (GWP) – gases that linger in the upper atmosphere like a blanket, some far into the future, that besides CO₂, include methane, (which immediately has the highest global warming potential), nitrous oxide, carbon tetrafluoride, hexafluoroethane, sulfur hexafluoride, fluoroform, Tetrafluoroethane, difluoroethane.

¹⁹ [Climate Tipping Point? Concentration of Carbon Dioxide Tops 400 ppm for First Time in Human History | Democracy Now!](#)

reductions to be ratcheted down, at least back to levels recorded in 2000 by 2020. There are calls now for even greater, more drastic reductions in GHG to be accomplished by 2050. It is agreed by scientists worldwide that reaching a level of 450 ppm of equivalent metric tonnes of CO₂ would represent the likely uppermost threshold, at which, at the current rate of increase, could be reached within a few decades if we don't change course. The 450 ppm figure represents a tipping point, after which runaway global warming and climate change are predicted. That prediction is based on solid scientific evidence, through the study of deep ice-core samples from eons past that have trapped molecules of air and thus reveal the historical conditions over eons of the earth's changing atmospheric content of CO₂ – research which implicates the reasons for the related conditions known to exist at those times on land and water. In fact, with CO₂ recorded at 400 ppm today, the historical evidence, from deep ice core samples that trap air from the Eocene period some 50 million years ago, shows that at today's CO₂ level, there were once crocodiles roaming around Colorado and sea level was 300 ft higher than they are today, accounting for the existence of evidence in Colorado of an inland sea.²⁰ So, at the tipping point of 450ppm it is understood that climate instability would be irreversible, with drastic ecologic consequences for all species and prospects for relatively stable human civilization growing very dim for our children and their future generations.

The foreseeable expansion of the completely unsustainable²¹ tar sands extraction operations – which is being promoted by Alberta's provincial government, the Canadian government in Ottawa, as well as key investors in the energy sector, including oil industry giants, Shell, Chevron, ExxonMobil, Tesoro, ConocoPhillips that respectively own direct interests in the network of tar sands mines and greatly benefit from the Canadian and US governments' generous price supports and subsidies – therefore represents a calculated, demonstrable risk of passing the 450 ppm upper threshold for atmospheric CO₂, increasing the severity of global warming effects, thus causing greater climate instability overall. THIS, to support a now globalized economy based on the principle of “growth” seemingly at any price, e.g., *grossly unsustainable exponential growth*. Growth, even at the currently sluggish “business-as-usual” rate, is unsustainable in the 21st century, because the earth's ecology is a finite system with finite amounts of essential nonrenewable resources to supply human activities –activities that we have become accustomed to and therefore *assume* as equivalent to basic needs, such as our right to individual happiness through excessive consumerism supported by global manufacturing fueled by carbon-based fuels.

Fooled by oil industry hype, we could dream that North American-sourced crudes represent inexhaustible plenty into the far-flung future, making the US “oil independent.” But falling into that industry and investors' dream, we ignore the colossal expense to global ecology including the human community. Consider the fact, for example, that the US population, which represents 5% of the global population, consumes 25% of the world's resources, including oil supply, and considering that US car manufacturers are setting their sites on expansion of the Chinese market for vehicles of all sorts, and that China has recently surpassed the US in production of GHG emissions. Consider also, for the foreseeable future, the contributions to GHG of China's

²⁰ “*Field Notes From A Catastrophe: Man, Nature, and Climate Change*,” Elizabeth Kolbert, 2006. Bloomsbury Publishing. p.127 - 129

²¹ *Tar Sands: Dirty Oil and the Future of a Continent*; Andrew Nikiforuk, 2009; David Suzuki Foundation.

“Bitumen is one of the most water-intensive hydrocarbons on the planet. . . On average, the open-pit mines require twelve barrels of water to make one barrel of molasses-like bitumen.” – p.63.

“Planned expansions could bring the total to 3.3 barrels [of fresh water] per year, a volume that Natural Resources Canada website admits ‘would not be sustainable because the Athabasca River does not have sufficient flows.’ “ – p. 65.

“. . .every barrel of bitumen produced from the tar sands creates, on average, three times more carbon dioxide emissions (187 lbs) than a barrel of normal [conventional] crude (62 lbs.) – page 129

continuing use of coal as a fuel for manufacturing and home heating, etc. and add that to their use of refined oil for transportation.

The current drive to import tar sands by pipeline and rail into the US is evidence of what appears to be a Klondike-like “oil rush” by oil and energy companies to gain access – and competitive advantage – to the tar sands of Alberta and to shale formations in the Midwest and California. To get “on board” for those considerably favorable pricing discounts (\$3 per barrel)²² that, for example, Canada is offering for tar sands bitumen and dilbits, Valero has proposed the first, trend-setting Crude-By-Rail Project that would provide rail capacity for bringing into the refinery, *now or in the future, greater quantities of North-American sourced unconventional crudes, including tar sands diluted bitumen.* There can be no doubt, given the competition and pricing structures for tar sands dilbits in place right now,²³ that other Bay Area refineries would be making similar plans. The DEIR must investigate all such prospects by other oil industry players in the region in order to identify cumulatively considerable significant impacts to local affected communities and the region as a whole and considering the huge amounts of GHG emissions resulting from the tar sands mining operations, all told.²⁴

The DEIR must discuss these planned or anticipated projects with respect to Contra Costa County’s adoption, in 2012, of the “Northern Waterfront Economic Development Initiative,”²⁵ which envisions, encourages and sanctions, (surely with blessings from the California Energy Commission), more industrial development along the northern shore of the Sacramento River all the way to Stockton, the deepening (dredging) of existing ports and shipping channels for increased ship/tanker traffic on the river, as would be anticipated if such projects as the current one under CEQA review in the City of Pittsburg were to be approved, (the WesPac DEIR is under final public review, comments due on Sept 13, 2013): the WesPac Energy Infrastructure Project, a massive oil terminal proposed for Pittsburg’s waterfront, proposed by WesPac Energy-Pittsburg LLC, which I learned about on August 17th, reading a lead story in the Local News section of the Contra Costa Times. ²⁶

For our Bay Area region, Valero’s Rail Project proposal may be the “first” and precedent-setting for other refineries in Contra Costa County; but it is clearly not the only proposal for a crude-by-rail import terminal operations.

Right now, there is potential for a proliferation of proposals for more rail capacity to be permitted for other Bay Area refineries for importing unconventional crude such as is being currently proposed by Valero Energy Corp. and WesPac Energy LLC. And given that the WesPac oil terminal would have the capacity to import by rail and ship, and store and export by pipeline up to 242,000 barrels of crude oil per day (88 million barrels annually) to Bay Area refineries, including Valero, the DEIR must raise the issue of which refinery might bite WesPac Energy-Pittsburg’s bait, if the WesPac Project were to be approved this year, considering that The WesPac Project similarly aims to access unconventional crudes from shale “plays” in the Midwest, but also, presumably from the tar sands in Alberta.

Why do both Valero and WesPac fail to publicly admit that they would likely pursue importing tar sands dilbits? The DEIR must find the answers!

²² See Goodman Group Report, 2013

²³ See Goodman Group Report, 2013

²⁴ *Tar Sands: Dirty Oil and the Future of a Continent*; Andrew Nikiforuk, 2009; David Suzuki Foundation

²⁵ Northern Waterfront Economic Development Initiative, pdf. available through <http://www.cccounty.us/DocumentCenter/View/26503>

²⁶ [City of Pittsburg : WesPac Project Info](#) “WesPac Energy Infrastructure Project”

It's my understanding that Phillips 66 in Rodeo currently is permitted for rail export of propane and other products; the company could seek permit for additional rail capability for *importing* and off-loading crude oil. There needs to be a thorough investigation of other potential crude-by-rail projects anticipated or in the planning stages by other Bay Area refineries that would seek the same competitive advantages that apparently have driven Valero Energy Corporation's and WesPac Energy - Pittsburg LLC's project proposals *within the same time-frame*.

Therefore, the DEIR must identify and discuss, under the various CEQA topics to be included in the DEIR, and especially under the governing rubric of sustainability and AB32, the foreseeable and myriad potentially significant local and regional environmental and public health and safety risks potentially stemming from direct and indirect impacts resulting from on-site and off-site operations – all pointing to further considerably cumulative negative ecologic impacts, that both the Valero Rail Project and WesPac Project, *together with other similar anticipated projects*, that if implemented, would pose, not only to respective affected communities, but all cities and rural areas of the region that could be affected by rail transport of crude oil, but also, to the impacts to global ecology such an expansion of extraction of “unconventionals” would represent over time to climate and life on earth.

Hence, the potential ramifying consequences of Valero's proposed Project – a rail terminal offloading facility that, as narrowly defined would be confined to its physical location on Valero's property, offloading 70,000 barrels each day of those unconventional crudes. Yet the amount to be imported represents *nearly half the total average amount of oil processed daily* at Benicia's refinery, with resulting *significant and cumulatively considerable* negative, “cradle to grave” staggering ecologic costs – those that cannot be “discounted” in Alberta and the Midwest, owing to the local devastation wrought to the natural environs in which these massive operations are conducted. When all operations and activities are taken into account that the Project involves directly and *supports indirectly*, the considerably cumulative impacts, especially to global climate, are ominously portentous, heinous and extraordinary; and so, this report would appear in the aggregate to be beyond the scope of CEQA to address. Yet, “cradle to grave” accounting of those accumulating environmental costs are still mostly considered “externalities” by an industry and its investors' community when ringing up a project's price tag, and by the absence of any regulation to do so, these “hidden costs” remain unaccounted for. (It was an initiative in 1994 under the Clinton Administration to require environmental cost accounting to determine the overall cost of a product.) By this time, in 2013, given the climate crisis humanity faces, with the US Defense Department in accord about the national and global security risks posed by rising sea levels, all of the environmental costs particular to the indirect impacts of a project and its operations, *back to the cradle and forward to the end of a project's lifespan*, should be weighed against the very short-term economic benefit to energy companies and their investors, and also against the economic benefits promoted by them to the cities and communities that host their industrial operations, for which only a relative handful of jobs associated to, say, the Valero Crude-by-Rail project would be added. These judgments arise as being at the heart of the meaning of California's Global Warming Solutions Act of 2006, if there is any meaning left to words that we can so casually otherwise throw around, such as “sustainability.”

In the spirit of AB32, then, it is imperative that the DEIR reference sources of information outside the oil industry in order to address the whole picture of what the “oil rush” to Alberta and the Bakken fields, or California's Monterrey Shale, would mean with respect to local, regional and global impacts to public health and safety and global climate. What I would characterize as the “business-as-usual-or-economically die” mentality promulgated by representatives of the Western States Petroleum Association is a kind of propaganda that is sometimes used by industry representatives to scare local publics into believing a refining company will “pack up and go” if their project isn't approved.

The DEIR should offer independent analysis about the evidence and research now accumulating from existing shale plays in the Midwest and gas wells in Texas and Oklahoma that demonstrate that the current “boom” in the availability of unconventional North-American sourced crudes, may in fact be peaking already at several sites where such limits were not anticipated; this bears on research that indicates that there will likely be a steady decline of supplies of unconventional crude beginning *within this decade*.²⁷ In part, this will presumably be owing to the technical methods and difficulties of extraction with exceedingly high and costly energy requirements, such that, if it weren’t for current government subsidies and discounting arrangements supporting an expansion of extraction from shale formations and tar sands, the industry and its investors might suffer a “bust” sooner than later – something they would not prefer to envision at all, or at least state publicly and in writing.

The cumulative contributions of GHG are of enormous concern, if we account for the “unconventional crude creep” into the Bay Area – contributions from those anticipated projects in the Bay Area that are comparable to the Valero and WesPac proposed projects. These cumulative impacts have to be added to existing emissions and other impacts that currently are generated by refinery operations. GHG are produced during the energy-intensive extraction and processing requirements for unconventional crudes, which involve hydraulic fracturing [“fracking” and “acidizing”] in shale formations, and for extracting and “upgrading” tar sands. Alberta’s tar sands networks of individual companies’ mining operations are the largest industrial mega-development project in the world, involving 125,000 acres of what was pristine northern boreal forest, with its planned expansion projected to encompass roughly 250 sq miles of the northern hemisphere’s most beneficial “carbon sink.” The network of mines and methods of extracting require Niagara Falls-like volumes of water each day, affecting the vast watershed of three major rivers, the MacKenzie, Peace and Athabasca – mighty rivers that flow from sources in the Columbia Icefield glaciers to the Beaufort Sea of the Arctic Ocean. Huge amounts of natural gas are used to heat the water and pressurize it for blast injections into the sands, by various methods, to melt and release the asphalt-like bitumen. The bitumen is a highly corrosive natural asphalt-like substance as viscous as molasses, which, in order to make it fluid enough for transport by pipeline or rail tanker cars, then requires complex “upgrading” processes, which are themselves energy-intensive, to dilute the bitumen.²⁸ The DEIR must take into account and address the amount of GHG emitted by this extensive, complex pre-refining process that produces the finished “crude product” referred to as tar sands dilbits.²⁹

²⁷ *Snake Oil: How Fracking’s False Promise of Plenty Imperils Our Future*; Richard Heinberg. 2013, Post Carbon Institute

²⁸ *Tar Sands: Dirty Oil and the Future of a Continent*; Andrew Nikiforuk, 2009; David Suzuki Foundation

²⁹ *Tar Sands: Dirty Oil and the Future of a Continent*; Andrew Nikiforuk, 2009, David Suzuki Foundation.

The Focused DEIR's CEQA TOPICS, with additional topics, and examples of concerns, foreseeable impacts and mitigation measures

The City of Benicia's Notice of Preparation announced calls for discussion of impacts pertaining to:

Air Quality; Biological Resources; Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Transportation/Traffic. However, disclosure of the full range of potential significant, direct and indirect impacts, including "on-site" and "off-site" operations and activities that contribute to local, regional and global consequences that may be cumulatively considerable would call for additional topics as I've suggested. These additional topics are typically seen in DEIRs for assessing large-scale projects proposed by refineries and energy companies, as well as other industrial or commercial development projects. For example, the following topics are listed (among others) in the index to the DEIR for the WesPac Energy infrastructure Project.

Public Health; Public Safety; Land Use Plans & Policies; Energy; Noise; Aesthetics, Visual Quality, Light & Glare; Public Services and Utilities; Growth Inducing Impacts & Urban Blight; Marine Terminal Operations; Greenhouse Gas Emissions; Cumulative Effects.

Air Quality

Because of the prospect that there will potentially be a greater amount of emissions produced from processing heavy tar sands dilbits, as well as lighter crudes that are highly volatile, it's crucial that the Benicia Air Monitoring Program finally be implemented. The need to implement a comprehensive public and independent air monitoring program that provides for access to real-time data via a website, provides for professional maintenance of equipment and data analysis in perpetuity, and that allows for various educational and early warning uses of the equipment, must be addressed in the DEIR and incorporated as a mitigation and monitoring plan and program.

There is as yet no ambient air monitoring program established in Benicia for residents to access real-time data about what's in our air. This was a required condition of the 2008 GNSC/Valero Settlement Agreement, with modifications made to the Agreement in 2010. The purchasing of equipment was accomplished and a trailer provided and a relatively brief period in which the equipment, housed in the trailer, was utilized, but without public access to the data generated. During that time, the website was not completed; but just as it was being finished, its activation was not allowed because Valero raised the concern that an independent owner of the monitoring equipment had to be identified. The City of Benicia refused to take on the responsibility for the monitoring program, citing that they could not provide staff time, (including fire department's). For these reasons, the Benicia community remains without an independent air monitoring program as called for in the 2008 - 2010 Settlement Agreement, thus, the community still lacks a source of realtime statistics that could register and record, for instance, "spikes" of toxic emissions that could occur at any time, but would be of special concern if and when Valero would be processing their maximum allowable throughput of 180,000 bpd, and considering the proposal that unconventional crudes would be processed with their very distinct chemical qualities. The Air District [BAAQMD] has several ground level monitors at the refinery perimeter measuring only two gases, sulfur dioxide and hydrogen sulfide; however there are no other locally based monitors run by the District measuring ambient air off-site of the refinery in the industrial park or in neighborhoods within a mile of the processing block and tank farm. There was a fence line monitor purchased through the Settlement Agreement, but to my knowledge it has not yet been installed; Valero has stated that it hasn't been determined which fence line it should be installed along. Full fence line monitoring (all four sides) must be part of the mitigation measure. In fact, a second trailer with equipment should be provided so that there would be two monitoring stations, one for the east side of the refinery in the industrial park, and one to

be located near residential neighborhoods and Robert Semple Elementary School. The City of Benicia should contract an outside professional company with experience in air-monitoring systems and data analysis to take charge of the program and its maintenance.

To give one example of the kind of information and discussion that the DEIR needs to provide for the public's understanding of risks to public health posed by impacts to Air Quality:

The DEIR must present and discuss latest research and studies pertinent to understanding the public health and safety risks posed by the Project's operations, accounting for all foreseeable direct and indirect and cumulative increased toxic emissions which the Project would contribute. Risks that must be assessed are not only those that may induce cancer, but also, risks of inducing *decreased pulmonary function in sensitive receptors* that would be potentially resulting from occasional but repeated exposure to acute, spiking emissions of toxic gases, and also, chronic exposures to low-doses of toxic air pollution over time that could be attributed to proximity to the refinery and its operations and other sources of airborne pollution, and *given the known toxic chemical constituents of the types of unconventional crudes that would be imported from North American sources and processed as a result of the Project*. Exposure risks must be calculated based on *maximum* allowable throughput of a crude slate (180,000 barrels per day) and yearly averaged daily allowable throughput (165,000 bpd). It has been demonstrated that increased amounts of airborne emissions such as Volatile Organic Compounds [VOCs], and, *increased* amounts of the refining processes' residual waste product, petroleum coke, ["pet coke"] result from processing North American-sourced unconventional crudes. [See Phyllis Fox Report, also NRDC "Comments on IS/MND"]. Risks posed to local residents and workers in the vicinity of local railroad tracks and the Port of Benicia may be exposed to increases of *airborne particulate matter*, including increases in pet coke from its transport by rail from the refinery and offloading into ships' hulls from storage silos. Generally, increases in production of particulate matter is of huge significance locally and within the region. Example of an exposure pathway for airborne pet coke to reach human and wildlife receptors: as a residual waste of the refining process, pet coke is transported by rail from the refinery's "coker" to be stored in silos located in the Lower Arsenal. The coke trains pass through the Benicia Industrial Park on local tracks. The trains (as many or more than three per week, according to the VIP EIR) unload the hopper cars into exported as a "fuel product" by ship from the Port of Benicia to Asia. Pet coke is a highly toxic carbon residue when inhaled: its tiny, powdery particles – "particulate matter" measured in microns and ranging in sizes (denoted as PM10 - PM2.5 and smaller) – may contain an assortment of heavy metals such as cadmium, lead and nickel (depending on specific crudes processed), and those carbon molecules also carry with them VOCs and other toxic gases ubiquitously present in the vicinity of major pollution sources, including refineries, shipping terminals and freeways into lung tissue and bloodstream. Regular exposures to PM2.5 are highly destructive of young children's lung development as has been demonstrated and reported by epidemiologists from UC Berkeley's School of Public Health and also by the American Lung Association. Particulate emissions from all sources including from the Project if implemented, contribute to respiratory distress and increases of asthma attacks requiring hospital admissions, as reported.

[Benicia Air Quality](#)

[Wolfram's Air Quality Research](#)

Public Health

1) Consideration for sensitive receptors working or living in the vicinity of the Industrial Park, including near the Port of Benicia, who may routinely be exposed to airborne and/or spilled petroleum coke. Pet coke

must be characterized as a toxic particulate with health risks for inhalation and ingestion cited.

- 2) There has still never been a baseline health study conducted in the City of Benicia. Currently, there is no basis for comparisons or conclusions, such as were stated in the IS/MND, about either cancer or other non-cancer exposure risks for sensitive receptors living in the vicinity of the refinery and/or working in the industrial park, with no available statistics recording hospital admissions for respiratory distress or asthma, etc. The DEIR must address the need for a baseline health study must be a conditioned requirement of the Project as part of a mitigation measure, with historical and current stats collected from Solano County's Dept. of Public Health. Health statistics of a population, along with other criteria, is a key indicator of a community's health in all respects of livability.

http://www.euro.who.int/_data/assets/pdf_file/0017/101645/WA95096GA.pdf

In the East Bay, we live by enormous freeway systems and also, we have daily diesel exhaust from ship traffic on the strait. The transportation sources, tailpipe emissions and ship diesel, along with trains carrying petroleum coke from the refinery to the Port of Benicia produce carbon soot you see on decks and window sills locally. What's hidden: the soot can carry other metals and also VOC's ("volatile organic compounds"); particulate matter in the form of soot can affect lungs and lung development when the particulate is very small (range 2-5 microns or less penetrates lung tissue and enters bloodstream). The refineries are major pollution sources; but we in Benicia are also regularly impacted by pollution from Phillips 66 refinery in Rodeo, as well as by Shell, Tesoro, and Chevron and other industry polluters depending on variable and seasonal weather and temperature conditions, wind speed and direction.

Public Safety

A specific emergency response program that would be activated in the case of serious or catastrophic train accidents, must be designed for the community as a mitigation measure. The DEIR must review all current public safety protocols and procedures to be practiced at the time of such an accident, whether it occurs on-site or off-site Valero property. This must include designated evacuation routes for industrial park employees and for residential neighborhoods, including the lower Arsenal. Crude-loaded trains with 50 tanker cars take up a long stretch of track. It is foreseeable that a crude-loaded train would stretch along Bayshore Rd., from Park Rd intersection almost all the way to the Bridge. A graphic must be created that shows the actual length of a stationary train stopped along Bayshore Rd. to allow the public to envision the effect of dangerous, even life-threatening entrapment that employees would experience in the vicinity of UP's tracks in the case of a serious derailment/spill and/or fire.

Land Use Plans and Policies/Growth Inducing Impacts and Urban Blight

The appearance of the Industrial Park in the general area of Park Rd, Industrial Way and Bayshore Rd, e.g. the heart of the old park east of the refinery and north toward Lake Herman Rd is a sorry sight. The roads are in terrible condition and the signage is poor, especially at night, when driving on Industrial Way. The refinery dominates and represents the character of the park. If one thinks of adding two crude-loaded 50 car trains on a daily basis, with more coke trains heading for the port, and more empty railcars of all sorts parked on side tracks, with nothing yet done to upgrade the area with the exception of Union Pacific's latest rush to improve, replace and restore railbeds and tracks in the area, it would seem that the park was forever doomed to its look of neglect as long as the refinery was the dominant actor and influence affecting the park's character. The old 'heart of the park', through apparent lack of requirements and funds for any landscaping and road improvements, already looks like a blighted area, at the very least, neglected. This must be discussed in the DEIR, since the additional train traffic and all that has been presented by Ed Ruszel about traffic problems in

the park that would ensue owing to the Valero Project, give reason to address the matter in full through review of the Project and its impacts affecting the future economic outlook for the park and the City of Benicia. Does the Project's contribution to the City's tax base offset the effects of the refinery+Project's overall appearance, odors, transportation/traffic impacts over time? Does the expansion of rail activity cumulatively discourage investment in the park? Discourage potential companies from moving to Benicia and locating in the Bayshore Rd/Industrial Way/Park Rd area?

Energy

It was calculated for the VIP DEIR that the refinery actually would use more electrical energy than was first claimed. The DEIR for the current Rail Project must be explicit in its accounting of the specific and total energy requirements of the Project and its operations, on-site and off-site. Presumably, there are electricity requirements for pumps running crude to the storage tanks over the 8 hour off-loading period for each of the two 50-car trains.

Noise

Currently, we hear many trains throughout the day in Benicia, usually as they pass through the Strait on the Contra Costa side. The trains blast their horns, night or day, and they can be heard even when I am inside my house on East K Street. The DEIR must consider the impact of more horns tooting or blasting, depending on their distance and range. It would be of most concern to people living and working in the Lower Arsenal and Industrial Park, but it's quite possible that residential neighborhoods in Waters End development would hear the horns as well. The geography of the area bounces sounds around with echo effects. What are the reasons for locomotives to blow their horns? For warning on approach to crossings over public roads? What are other reasons that horns are used? Under the regime of the Project with regard to train movements at all hours within city limits how often would the public be subject to blasting horns?

Aesthetics

I've driven extensively around the old industrial park lately, trying to envision how the Project may impact the visual character of the park. I imagine, seeing so many empty rail cars sidelined along existing tracks and spurs along Industrial Way, that the park could begin to look like a train parking lot, especially if Union Pacific doesn't perfectly stick to the proposed schedule of crude-loaded train arrival and departure time. As has been said, Union Pacific controls all train movements and that includes when they decide to sideline a train or a number of empty cars. Amports already has vast amounts of asphalt dedicated to parking cars (on their own properties) in the industrial park. The DEIR must discuss the use of rail spurs for parking empty railcars and define, in a mitigation measure, aesthetic improvements –for example, plant clusters of hardy trees wherever possible!!!– that would screen or soften the general appearance of a train parking lot east of the refinery.

Visual Quality, Light and Glare

At night, there is only spotty lighting at best, if any, along Industrial Way, from Lake Herman Rd to Park Rd and Bayshore intersections. On winter nights, or rainy nights, it is nearly impossible to see while driving; there is hardly any striping down the center or along the sides of the road, making the big curve (nearing Valero's eastern office building) in the road nearly impossible to navigate safely, especially with oncoming cars and trucks barreling along at night and under low visibility conditions (fog, rain) which are typical in winter. For safety, considering new train movements are anticipated at night, the DEIR must identify the

existing lighting situation and address the lack of adequate (any!) street lighting on Industrial Way, as well as Park Road and Bayshore Rd. A mitigation plan is needed that would provide adequate proper lighting for the entire area along very busy roads.

Public Services and Utilities

Given the potential for accidents involving trains, vehicles and people in the industrial park especially, the DEIR must consider the need for a new fire sub-station that could respond within a few minutes to fires and other emergencies within the park extending to the Lower Arsenal area. Although Valero has its own essential fire department, the Initial Study had stated that the City’s fire department would also be involved in emergency response, and there was a calculation of the department’s response time, which should be analyzed with regard to “credible worst case scenarios” for accidents, spills, fires, explosions and any other emergencies that may occur off-site, while a crude-loaded train is traveling in the marsh or is approaching the industrial park and passing so near buildings/businesses on Bayshore Rd. The DEIR must discuss the need for an equivalent response team as now exists for ensuring rescue and emergency help on water, the Marine Spill Response Team.

Marine Terminal Operations

Because the Project will involve movement of trains in and out of upland areas of the Port of Benicia, the DEIR must consider the impacts around the Bridges and recreation areas provided for public access to the river (for fishing, etc), and ensure that crude-loaded trains (or coke trains) temporarily stopped along Bayshore Rd do not interfere with the public’s right of access or need to exit those recreation spots.

Greenhouse Gases

[See Comments!]

Cumulative Effects

[See Comments!]

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June 30, 2013

City Manager Brad Kilger,
Planning Commissioners: Chair Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell & Councilmembers Hughs, Schwartzman & Strawbridge
City of Benicia, 250 East L Street, Benicia CA 94510

SUBJECT: Valero Crude-By-Rail Project Initial Study/Mitigated Negative Declaration

Dear Mr. Kilger, Planning Commission Chairman Sherry, Planning Commissioners, Community Development staff, and Mayor Patterson and Councilmembers:

My comments overall reject the City's determination that a Mitigated Negative Declaration {MND} is a sufficient level of environmental review of Valero's Crude-by-Rail Project as described and discussed in ESA's Initial Study and Environmental Checklist. With regard to determining whether a more thorough environmental review is necessary, CEQA Guidelines §15064 describe the conditions under which an Initial Study is called for, and when an EIR is determined to be required:

"Must A Lead Agency Prepare an Initial Study?

- *If the need for an EIR is unclear, the lead agency must prepare an initial study.*
- *If the lead agency can determine an EIR will be required, an initial study is not required."*

It follows from the fact that an Initial Study was prepared that the City-as-lead-agent was *at the very least unclear, if not confused*, about whether a full EIR was necessary to review the proposed rail project.

We need clarity. There are too many missing discussions in the Initial Study and too many unanswered questions. My hope, and the hope of many, is that you will agree that sufficient, thus, more specific description, evidence and evaluation of potentially significant negative impacts are needed to enable the public to understand *"the whole of the project,"* as required under CEQA. Mitigation measures that would reduce or eliminate the severity of those environmental effects must be designed and submitted *at the time of the environmental review*. The mitigation measures must address the proposed Project's operations *over the course of the Project's lifetime*.

My comments give examples of the regrettable limitations of the Initial Study's Project Description and reject the conclusions of the Checklist. The Initial Study's limited findings suggest that there would be no further concerns than those already exposed by its review, and that the burden of a comprehensive investigation of any other foreseeable and potentially significant adverse impacts should not be necessary. I disagree.

The City's sign-off on an MND on May 31, 2013, by the former Community Development Director, is perhaps owing to the many constraints on staff's time in reviewing the Study. This is understandable, but not acceptable: the MND basically echoes the Initial Study's findings without evidence of independent questioning and further scrutiny. A reader should not have to read between the lines of the Initial Study to

discover the extent of the environmental ramifications of the Project, nor what further discussion is necessary.

Valero's Project would replace equivalent deliveries of crude by ship, and would be the second refinery rail project in the Bay Area. According to online news reports, Phillips 66 (formerly Conoco-Phillips) in Rodeo currently imports crude by rail. This fact was not discussed anywhere in the Initial Study or Environmental Checklist; yet learning this fact from other sources only underscores that we are not yet sufficiently informed by Valero, ESA or the City about the extent of the Project and its contributions to cumulative impacts: for example, the number of foreseeable crude-loaded trains that would be moving through Benicia and the Bay Area on Union Pacific's tracks. Other refineries in Contra Costa may be considering similar rail projects in the future (Tesoro's Golden Eagle, in Martinez). We therefore have no real idea, based on accurate estimates, of the potentially significant and even catastrophic impacts that could occur, given the foreseeably intensified use of Union Pacific's tracks for transporting crude and other hazardous materials. It is required under CEQA to identify and address potential cumulative negative impacts of other similar large-scale projects that would be concurrent or that are planned for the future in the region.

The importation of new "North-American-sourced crudes" – the vague, unqualified term used throughout the Initial Study – is not discussed with regard to the Phillips 66 crude-by-rail operation or other Bay Area refineries' future plans for crude-by-rail projects; nor, for that matter, the cumulative adverse impacts that are foreseeable wherein other CC County refineries, which are now already processing a variety of sour crude types, might also be planning to import by rail, in the near future, and/or by whatever *indirect* means, more heavy "North-American-sourced crudes," especially from Alberta Canada's tar sands. (Chevron Refinery, Richmond).

Valero has declared publicly (at CAP meeting and recent Economic Development Board meeting) that they will not be importing "tar sand crude" and their explanation has been that bitumen has to be transported in heated railcars and would have special off-loading conditions. If this is truly the case, why is there no discussion in the Study that would reflect Valero's commitment and explanation? And if they have made a "spoken" commitment to Benicia residents, why is this not committed in writing? Perhaps because they would not be importing "pure bitumen," which they assume, to their advantage, that members of the public mean when they refer to "tar sands" crude. Neither Valero nor the Initial Study have discussed a "diluted bitumen" blend or "dilbit" such as "Western Canada Select." (see my Comments).

Importing crude by rail using existing RR routes is a relatively recent phenomena now pushed by the oil industry to access various sources of heavy crude types that are being mined from shale formations in North Dakota and elsewhere in the Midwest, in California's Central Valley, and also from the vast network of open pit mining operations in Alberta's tar sands. If we're to grasp and assess "the whole" of the Valero rail project, we must not only ask Valero to be forthcoming about local and regional environmental ramifications of switching to rail as the method of importing crude, but also about the heavy crude types that would be imported under the proposed Project to be processed in Benicia. Getting access to "North American-sourced crudes" explains Valero's switch from ship to rail, and their desire to have had the Crude-by-Rail Project on time and on track for operation by late 2013 or early 2014, (from the Project construction timeline outlined in the Study. See comments).

Over the last 15 years, I've reviewed project applications, initial studies and draft EIR's, and have always tried my best to inquire into the details and facts of a proposed project and to imagine their

foreseeable effects for Benicia: the Koch Industries' "Coke Dome" project for the Port; the Tourtelot military cleanup for Southampton's residential build-out; the Valero Improvement Project [VIP]; Valero's EIR Addendum for VIP; several Seeno project draft EIRs; and also the draft EIR for the Arsenal Specific Plan. These projects envisioned land-use changes and/or long-range consequences for the community over project life-spans of 25 years and beyond. Of those mentioned, only the Tourtelot Restoration Project and Valero's VIP have gone forward successfully, much to everyone's credit.

As a member of the Good Neighbor Steering Committee [GNSC] for 13 years, and as a continuing member and former chair of Valero's Community Advisory Panel, I've worked hard with others to learn about the refinery, its VIP upgrades and local impacts. Representing the GNSC, I also currently serve as a non-voting member on the Community Sustainability Commission. I recognize the global effects of burning fossil fuels – the increasing, higher levels of atmospheric CO₂ pumped into our atmosphere by human activities that contribute to global warming and climate changes. There is a growing local, regional and national consensus that we must conserve non-renewable resources, conserve energy and water, and transform our economy into a more sustainable one by working toward creation of reliable, alternative energy systems that do not put global climate further at risk for even more rapid, unprecedented changes.

Challenges made to Valero with regard potential impacts of their VIP and its later additional upgrades were aimed to ensure that their technical improvements would reduce water and energy use, reduce significant "criteria" emissions, and comply with the intent and spirit of AB32, the California Global Warming Solutions Act. The Project also must conform to the Benicia General Plan whose overarching goal is "sustainable development" [General Plan, page 22]. This governing goal explicitly declares the widening and rippling effects of whatever we do here in Benicia – how we conduct business and live our lives. The Benicia Climate Action Plan sets local strategies for modifying and changing our habits to create a more sustainable community.

As part of the VIP's permitting requirements, Valero was required to install a scrubber that ultimately replaced its main stack and has proven to greatly reduce ozone precursor gases – a benefit to our local community and the regional air basin. But now we must look forward and exercise our critical faculties to assess Valero's new Crude-by-Rail Project with its deep and wide ramifications that are local, regional and global.

Thank you for your consideration of my comments. I am glad to join you in the Project's review.

Marilyn Bardet

COMMENTS:

1. General observations regarding the limited scope of review of the Initial Study and Environmental Checklist's Evaluation of Environmental Impacts:

The MND, signed off on May 31, 2013, by the former Community Development Director, summarizes the findings of the City-as-lead-agent:

“The City of Benicia finds that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because mitigation measures have been added to the project that avoid or reduce all impacts to a less than significant level.”

The introduction to the Checklist, “Evaluation of Projects” [p II-1] outlines a number of CEQA criteria for evaluating impacts of a project. Criteria #2 states: **“All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.”**

In reviewing ESA's Initial Study [“Study”], the City apparently found no foreseeable problems or impacts that were not addressed in the Study and the Environmental Checklist [“Checklist”]. The City's review apparently concurred *to the letter* with ESA's narrow Project Description and their assessments of impacts. The Checklist mainly focuses on impacts that would occur *during the Project's construction phases*. The Study does not describe the life-span of the Project, nor, thus, the foreseeable *and cumulative* potential significant negative impacts *over time* to Air Quality, Biological Resources; Geology/Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use Planning; Noise; and Transportation and Traffic. (See further comments for examples). It would be the job of an EIR to fully explore each of the CEQA areas of concern. There is minimal discussion, (seemingly meant to reassure the reader), about the actual operations of the Project.

According to the limited Project Description, Project operations would occur almost exclusively at the rail rack off-loading facility, located on Valero property east of the storage tanks. Scant, cursory description is provided about Union Pacific's role and involvement – running Valero-bound, Valero-owned, crude oil loaded railcars. Which corporation will be managing the crude-loaded trains with regard to scheduling, and considering *all trains* running on Union Pacific tracks? There is little or no evidence given to substantiate claims that there would be no significant off-site impacts that could not be mitigated. Mitigation Measure TRAN-1 is an example of an extremely limited view of possible impacts from trains traveling in and out of Valero property and beyond. There is no discussion of potentially *catastrophic* impacts – the potential “off site” impacts – that could foreseeably occur given where the Project's trains would be traveling, conveying “North American-sourced crudes” through miles of sensitive ecological areas.

The Project Description, therefore, seems to piece-meal the Project, as if the Project operations were limited to Valero property, and as if, somehow, they were not extended to the “off-site property” owned by Union Pacific – the RR tracks extending for miles to be used in the transport of crude to Valero's off-loading racks. Further, there is no adequate account of the potential effects over the lifetime of the Project of processing the various “North American-sourced crudes” projected to be imported by rail and processed in Benicia over years or decades.

The Project's construction phase was slated to begin in early 2013 and be completed in late 2013, thus operational by late 2013 or early 2014 [Appendix A1. " Air Permit Application. BAAQMD Overview 1.2, p. 1.]. From Valero's time-table for construction and operations' startup, the reader might assume that Valero had counted on the City to recommend its MND, and that therefore, the company, in planning its Project timetable, was not expecting that further environmental review would be required, or, that any other delay would hold up construction.

The Planning Commission hearing is scheduled for July 11; thus, the Project's construction startup date has long passed. Is the delay in reviewing the Project owing to the City's scheduling of the environmental review? Or, is there any *technical* reason for the delay on Valero's part? Although the BAAQMD Air Permit Application [Overview 1.2, p. 1.] reiterates Valero's assertion that no modifications to the refinery processing equipment would need to be made for the Project to proceed, is there any planned VIP technical upgrade that hasn't been completed that would be required to be completed and operational in order for the Project to be permitted? Has the Coker Unit expansion project that was scheduled to be completed in March 2013, indeed been completed? [VIP EIR Addendum, Table 2.5.1.1 "Project Schedule: Expand CKR, Light Ends, Silos..."]. I could find no mention in the Study of whether there would be increased production of residual coke from the processing of any of the "North American-sourced crudes" that might be imported – the bitumen-based crude (a diluted bitumen or "dilbit") produced from Alberta Canada's tar sands. (See related comments under #9, "Mandatory Findings of Significance.")



Regarding the Initial Study and Environmental Checklist

on global warming effects: The Bay Conservation and Development Commission [BCDC] must be involved in evaluating potential impacts to the Suisun Marsh of the Crude-by-Rail Project. BCDC has issued public reports that present evidence-based modeling of the projected sea level rise that would inevitably affect San Francisco Bay and the Carquinez Strait. BCDC's publicly available map of shoreline areas that would be affected by sea level rise show the effects on Benicia's marsh and floodplain environs over the next 25 - 50 years through the end of the century. The Study and Checklist should reference and discuss the implications of the BCDC map as related to the Union Pacific rail routes through the Suisun Marsh, which is projected to be more prone to greater seasonal flooding over the next decades – the probable lifespan of the Project? – increasing the intensity and number of winter rain storms, whose effects may be made more severe by high tides in the Strait and earlier snow melt. The Union Pacific tracks are visible along a long stretch of Goodyear Rd., within Benicia's city limit. The gravel railbed appears to be elevated approx. 18" - 24" above the marsh. The railbed itself was not flooded during the February, 2011 storm event that occurred along the length of Benicia's marsh surrounding the tracks. In the storm's immediate

aftermath, I took pictures capturing the train tracks leading from the Industrial Park through the marsh, and specifically where flooding and pooling of the marsh around the tracks had most severely occurred. One of the only small service roads that crosses the tracks (not far



from Organic Solutions, a company along Goodyear Rd.) was completely submerged except where it briefly crossed the tracks; therefore it was impassable to vehicular traffic, including emergency vehicles. A sign was posted at the dirt road's junction with Goodyear Rd that said "Flooded.") Trains carrying crude could conceivably be threatened if there was any erosion or disturbance of the gravel rail bed and tracks. Trains could be held up, (where? side-lined?), potentially stalled or derailed, with spills of crude oil. Description and analysis of potential significant impacts that might flow from such a credible worst case scenario are missing from the Study.

How would crude-loaded railcars be accessed in the case of a flood in Suisun Marsh if there were a train accident and spill of crude? What would be the emergency response plan? What would be the cleanup method? For diluted bitumen? The Initial Study doesn't provide answers.



3. AIR QUALITY IMPACTS:

[Initial Study; Environmental Checklist: 3. Air Quality p. II-10]

Mitigation Measure Air-1, "added to the project:" Air-1 references existing Bay Area Air Quality Management District's [BAAQMD] protocols and policies that are meant to protect against dust and diesel emissions during construction phases of development projects. It also refers to "2010 CAP" which is a recent Air District plan. It bears quoting from the Study's *minimal description* of the 2010 CAP. The thresholds for judging significance of air impacts are said by the Study not to be exceeded by the Project. It is not stated whether the air impacts evaluated are ones owing *only* to construction phases.

[From the Environmental Checklist – p. II-10]

“The 2010 CAP serves as a multi-pollutant air quality plan to protect public health and the climate.” . . . “The 2010 CAP’s control strategy includes revised and updated, and new measures in the three traditional control measure categories, including stationary source measures, mobile source measures, and transportation control measures. In addition, the 2010 CAP identifies two new categories of control measures, including land use and local impact measures, and energy and climate measures.” . . . “BAAQMD recommends that the agency approving a project where an air quality plan consistency determination is required analyze the project with respect to the following questions: 1) does the project support the primary goals of the air quality plan?; 2) does the project include applicable control measures from the air quality plan?; and 3) does the project disrupt or hinder implementation of any 2010 CAP control measures? If all the questions are included in the affirmative, BAAQMD considers the project consistent with air quality plans prepared for the Bay Area (BAAQMD,2012).”

Apparently, ESA expected the public to know what BAAQMD’s “control strategies” and “new measures” are, but this is an *unfair* expectation. The Appendix does not include a pdf of the actual CAP 2010 document, or any other explanatory material to help our understanding of the Air District’s regulatory guidelines for judging “thresholds” for emissions impacts, etc. The reader should not have to hunt for documentation on the BAAQMD’s (nearly inscrutable) website. The reader reviewing the above quoted text can therefore have no idea whether the ESA in drafting the Initial Study, or the City in recommending the MND, accurately analyzed the Project *with respect to the questions the Air District recommended be raised*, as stated in the above quote. Accordingly, the adequacy of Mitigation Measure AIR-1 is highly suspect in this case. For example: there is no description or analysis of local air quality impacts to sensitive receptors who are employees in the industrial park, thus of persons who might be affected by cumulative emissions from *increased daily emissions* from all sources within the refinery, including the Rail Project.

Regarding emissions expected during operation of the Project:

[Environmental Checklist p.II-13]

Under item 3c, the proposed Project’s emissions are evaluated relative to BAAQMD’s thresholds for “attainment” for the Bay Area air basin that are protective of human health. Project emissions (including diesel, VOC’s and Particulate Matter - PM10 and PM2.5) are contributors to smog production. “Net emissions reductions” that are accounted for in the Study, *if they are reliable*, are calculated using statistical averaging to arrive at a figure that would represent a finding of “attainment” or “non-attainment” of federal and state standards for general smog conditions *within the region as a whole*. Accordingly, it is not explained by the Study that local emissions impacts cannot be assumed to be reduced by evaluations made using BAAQMD calculations that assess emissions impacts to the whole air basin.

“. . . New stationary sources at the Refinery would include unloading rack and pipeline, which would result in fugitive emissions of ROG. The project would also include a change in service to existing Tank 1776 to allow it to store crude oil; however, because there would be no change in the amount of crude oil stored at the Refinery, there would be no net increase in tank-related storage mass emissions relative to baseline conditions. Overall, the proposed Project would result in reduced

air emissions compared to the existing operations because delivering crude oil by rail car results in less emissions with the BAAQMD compared to delivering crude oil by marine vessel. See Table 3-2 for a summary of net emissions reductions that would be associated with the Project.”

“. . . Regardless, long-term operations of the proposed Project would result in a beneficial impact to air quality in the BAAQMD.”

The final sentence in the evaluation reads like a statement of religious belief in the “*beneficial impact to air quality to the BAAQMD [the Bay Area Air Basin]*” that would be brought about by the advantages of the Project, mainly, replacing ship transport by train transport. There is no account of *local* air quality impacts from long-term Project operations, including cumulative impacts of exposure risks to the Benicia community from existing and future-anticipated refinery toxic emissions (including from accidental releases with “spiking” of emissions, leaks, fires, etc.) in addition to Project-related emissions.

Under item 3d, the Study recommends that the lead agent (City of Benicia) evaluate the “*incremental toxic air contaminant (TAC) exposure risk to all sensitive receptors within a 1,000-foot radius of a project’s fenceline.*” The summary sentences in the discussion are as follows:

[Checklist: Air Quality, 3d, p. II-14].

“Long-term operations associated with the Project would generate TAC emissions from locomotive idling, locomotive transit, locomotive switching and from fugitive equipment and routine Tank 1776 leaks. The Applicant provided a screening level health risk assessment, as summarized in Table 3-3 which modeled the following sources using the ISCST3 air dispersion model: . . . [Table 3-3: Maximum Cancer and Noncancer Risk].” . . .

“The closest sensitive receptors to the proposed Project would be residences off Lansing Circle, approximately 2,700 feet northwest of the proposed Project site. There are no sensitive receptors within 1,000 feet of the proposed Project components.”

Lansing Circle is a residential cul-du-sac located in the northeastern corner of the Water’s End development that overlooks the refinery processing block, which is just south and east of the cited street, alleged to be the nearest location of “sensitive receptors” to the proposed Project railcar off-loading racks. There is no analysis in the Study or Checklist of emissions from the Project that would affect, for example, sensitive receptors – employees – working in businesses near the Union Pacific tracks and/or near the refinery’s off-loading racks.

The air emissions dispersal modeling referred to in the quote cited above is inadequate to address how toxic, volatile emissions can travel given different wind conditions, winds’ seasonal patterns and the topography of the area. The “wind rose” pictured in Figure 4.2-2 and Figure 4.2-3, on pages 44 and 45, in the Valero VIP EIR’s “Response to Comments” document should be included in the Appendix. Cumulative exposures to refinery emissions over time may present “non-cancer risks” to sensitive receptors – for example, *Benicia residents who are also employees of the industrial park*. It is well known that chronic bronchitis and asthma are aggravated and/or triggered by diesel exhaust emissions and other refinery/industrial processing operations (particulate matter - PM10 and PM2.5; VOCs, black carbon, and other Toxic Air Contaminants). Cumulative and chronic health impacts should be discussed and analyzed for receptors within residential areas nearest the refinery fencelines and also for those employees in the industrial park. Other contributing sources of air pollution must be considered in

evaluating health effects that are related to potential significant *cumulative emissions* – air pollution conditions that can be chronic over time or “spiked” (acute) during releases, fires, etc – that would impact sensitive receptors in the community. (Contributors to cumulative air impacts from sources of PM 10 and PM 2.5 include freeway emissions, diesel emissions from ships and Valero’s coke trains, soot from fireplaces, pollen, and TAC emissions from other existing industrial polluters in the area.) To evaluate cumulative air emissions, other similar large-scale development projects that are proposed and planned for the area must be included in the calculations of air emission impacts in addition to Project-associated air emissions over time.

Further, cumulative air emissions from additional trains coming from CC County refineries (Phillips 66 and very possibly other refineries in the future) should be calculated as contributing to total cumulative Air Quality impacts, since Benicia, for most of the year, is downwind of Phillips 66, and Union Pacific’s rails run through CC County and into Benicia and continue north and eastward.

Regarding odors, Item 3e [Checklist, Air Quality, p. II-15]. This item discusses whether there would be “objectionable odors” that might affect “a substantial number of people.” The limited discussion of both potential impacts from construction phase and operations is as follows:

“Diesel equipment used to construct the project may emit objectionable odors associated with combustion of diesel fuel. However, these emissions would be temporary and intermittent in nature, thus odor impacts associated with diesel combustion during construction activities would be less than significant. There would be no change expected in the existing operational odors resulting from implementation of the proposed Project. This impact would be less than significant.”

Diesel fumes are considered by most people as highly noxious and offensive to smell, let alone that diesel exhaust fumes are toxic and can cause respiratory distress in sensitive receptors, *especially if the air is still and emissions are not dispersed*, as during weeks in winter when a cold damp fog sits on the ground and there is no wind. The Study’s discussion shows little concern about four train trips daily entering and leaving the industrial park, 365 days a year, that would create “unpleasant odors.” Locomotive exhaust would add cumulatively to the daily odors emanating from the refinery’s processing block, tank lids, and other sources (asphalt plant) that can be noticed and smelled “off site” in the industrial park southeast and east of the refinery. The Checklist’s assumptions do not take into account the numbers of people working in the vicinity of the Project.

Further missing from the Study’s discussion of odors and emissions impacts: westerly winds carry toxic gases and their odors eastward from the refinery processing block and would similarly waft emissions from the Project. According to calculations derived from the wind rose published in the VIP EIR “Response to Comments,” [cited above; Figures 4.2-2 and 4.2-3] approximately twenty percent (20%) of the of the year, mostly during late fall and winter months, the winds change direction and often die down, causing negative “off site” odors and air quality impacts to Benicia’s residential neighborhoods west and south of the refinery but also in the surrounding industrial park northeast, east and south of the refinery fencelines.

Cumulative adverse impacts from odors emanating from the Project should be calculated as potential *additional effects from toxic emissions from all sources, under favorable and unfavorable wind conditions, and, should be discussed as related to health risks to sensitive receptors in both the industrial park and residential neighborhoods.*

The following comments are intended to lend contextual breadth and depth from a local perspective to the Study's evaluation of Air Quality impacts and are pertinent to my rejection of the Initial Study's Environmental Checklist of Air Quality impacts and the alleged sufficiency of Mitigation Measure Air-1, the Study's lack of analysis of cumulative emissions impacts and concern for health of local sensitive receptors. The comments also discuss the problem of analysis of local ambient air quality. These observations regard BAAQMD's role and public mandate under the federal Clean Air Act.

BAAQMD's mandate under the federal Clean Air Act is, as the Air District repeatedly advises, to ensure the general safety of the Bay Area's air basin *as a whole* for human health. Accordingly, as a department of CAL-EPA, the Air District monitors the Bay Area air basin to ensure that the region meets "attainment" standards – safe thresholds set by federal and state regulation for smog-producing gases – e.g. ozone precursor gases including nitrogen oxides, sulfur dioxides, volatile organic compounds [VOC's http://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do], greenhouse gases and particulate matter (PM10 and PM2.5). The Air District monitors polluting industries' emissions and quantifies them, using statistical averaging, to calculate the cumulative negative impacts to the air basin *as a whole*, thus to report to state (and federal) EPA regarding non-compliance with "attainment" goals for the region. However, it is little understood that The Air District has generally **not** seen it as their particular responsibility to be concerned or involved with monitoring ambient air quality with respect to human health in local neighborhoods and communities living in close proximity to a major polluting industry, such as a refinery or chemical plant. Local communities' desires to have monitoring stations installed within neighborhoods affected by refinery or other polluting industrial operations (with the purpose to better understand exposure risks, to accurately monitor for emission "spikes" in real time during accidental releases, etc.), have been mostly dismissed over the years as *not part of the general mission of BAAQMD*, and this is an ongoing frustration and active dispute with the Air District by the concerned communities of Richmond and Rodeo/Crockett, and also by concerned Benicians. A spectacular failure of the Air District to track "off site" emissions in real time during the Chevron Refinery fire in August 2012 is a prime example of the District's lack of preparedness or interest (or mandate as public servants?) to address *local emissions impacts* that may affect ambient air quality and thus human health in the vicinity of a major polluting industry, especially during time of accidental releases, fires or explosions.

Right now, in Benicia, various air-monitors that were purchased *for the benefit of the community* under specific terms of a Settlement Agreement negotiated in 2008 between Valero and the Good Neighbor Steering Committee have been unplugged and the trailer housing them closed up and stored on Valero's property, thus remaining inactive until further notice. Since the equipment's initial installation above Tennys Drive, a public access website has yet to be fully completed. (Participants in its development are Argos Scientific, the Good Neighbor Steering Committee and Valero.) The question hanging over the intended independent program is one of ownership. The City has refused to take ownership of the equipment on the community's behalf for what was intended to be a permanent, independent, educational Benicia Community Air Monitoring Program ["BCAMP"] to sample and analyze ambient air quality in real time and make data available to the public via a public access website. This equipment was meant to be flexibly used, including for mobile monitoring during accidents, monitoring air at school sites, and for such purposeful uses by Benicia High School's Green Academy science students.

It is a fact that the Air District has also shown little interest in the Benicia community's attempt to establish the local air-monitoring program as discussed here. It is unfortunate that the City of Benicia has not wanted to take responsibility for the monitors – equipment purchased for \$200,000 by the 2008 Settlement Agreement, which also provided support (\$50,000) for two years of maintenance and data analysis by an independent contractor (Argos Scientific). *Funding for an on-going program is not the point here.* It is disturbing that the City would reject ownership of the very tools to be useful for local ambient air monitoring on any given day, yet sign off on an MND for the Project, expecting the public to believe that the City has given the Initial Study its foremost attention with care to Air Quality impacts, with due consideration to protecting the public's health from potential negative "off-site" cumulative emissions effects of the Project, thus the refinery's *total cumulative emissions impacts* on the local community.

4. Biological Resources, [Checklist, p. II-19]. Mitigation Measure BIO-1: concerns Project construction activities during *"nesting season, Feb. 15 through Aug 31."* If construction occurs during the nesting season, the Study states: *"a biologist experienced in conducting nesting bird surveys shall survey the Project area and all accessible areas within 500 feet."* The account goes on to briefly describe how nests would be protected during construction. Has the Department of Fish and Wildlife been contacted to review the Project?

The problem is, the Project is so narrowly defined that it appears to be limited to the immediate area surrounding the off-loading racks on Valero property.

For example, in item 4c, the following CEQA question is posed: *"Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?"*

The answer given presumes that "the Project" would only materially exist on Valero property, when logically, by extension, and common sense, it also exists along Union Pacific's tracks, upon which trains would be carrying crude through significant stretches of protected marsh areas with seasonal pools and wetlands and through river flood plains. The Delta Plan envisions Suisun Marsh as an area for restoration, where certain endangered fish species and plants could be at risk from spills. And although the Project would only add a small amount of new track on Valero property, it is not clear in the Study or Checklist whether potentially significant impacts owing to Valero's crude-loaded railcars traveling through sensitive ecologic areas on existing Union Pacific tracks would actually "count" as being potentially generated *as a result of the Project*, albeit such impacts are foreseeable, and *should* be discussed as a "credible worst case scenario" associated to Project operations. This begs a question about the limited Project Description and what it leaves out: there is no discussion of Union Pacific's rail routes by which crude-loaded railcars would travel, and whether those RR routes are to be considered part of the Project as a whole.

5. Mitigation measure GEO-1 [Checklist. Geology & Soils, p. II-29]:

Mitigation GEO-1 is *promised* to be provided, presumably at a later date, which violates CEQA's requirement that mitigation measures be planned and submitted at the time of a project's review.

GEO-1 raises the question of seismic risks to the area of the Project including possible liquefaction. GEO-1 does not discuss what would possibly happen if a severe earthquake occurs when a train is traveling within Benicia along the marsh where subsidence of rails could occur or rail misalignment, or in the case when railcars are off-loading crude at the racks. Given the active seismic area of the Project, this is a "credible worst case scenario" that is not envisioned in the Checklist's discussion of potentially

significant seismic impacts that could indirectly affect the safety of Project operations and increase hazard risks, and also, potentially affect sensitive marsh and wetlands near Union Pacific's tracks.

6. Greenhouse Gas Emissions [Checklist: Greenhouse Gas Emissions. p. II -34,35]

The Study's discussion and Checklist is short on the subject of GHG emissions: according to the Checklist, construction GHG would not have a significant impact, "*directly or indirectly.*" The Checklist states that BAAQMD does not identify a "*construction threshold of significance*" for GHG; however, the Air District does "*identify a quantitative threshold for annual operations of 1,100 metric tons of carbon dioxide equivalent (CO₂e).*" The Checklist states that this is a conservative estimate, since "*for stationary source projects, the quantitative threshold is 10,000 metric tons of CO₂e per year.*" BAAQMD's threshold of 1,100 metric tons of CO₂e per year for non-stationary sources is applied in analysis of the construction-related Project emissions.

Thus, for operational contributions to GHG, the Project is given a "pass:"

"Project operations would result in a net reduction of GHG emissions over existing conditions (see Table 8-2) as the overall capacity of the Refinery would be unchanged, but there would be less crude oil deliveries by marine vessels that have higher emissions compared to deliveries of crude oil by rail transit. The proposed Project would reduce GHG emissions by up to approximately 3,543 metric tons of CO₂e per year compared to existing conditions. Therefore, implementation of the Project would represent a beneficial impact."

The problem in evaluating GHG contributions is that, again, the Project appears to be so narrowly defined as if it were to exist materially only within Valero's property, and not extended through its train movements over miles. Are GHG emissions to be accounted for as Valero railcars, both loaded with crude or "emptied", are moving within Benicia limits? What about leakage of gases from railcars? What about trains moving through other cities and unincorporated areas – e.g., out and beyond Benicia's city limits? Where does the Project begin and end? Under CEQA, the Crude-by-Rail Project must be understood and evaluated in its entirety, "as a whole." (Please see my further comments on the need to identify, describe and evaluate "the whole of the Project.") There can be no doubt that total GHG emissions from crude oil processing and including the proposed rail Project operations would be even greater if assessments took in GHG emissions from hydraulic fracking and tars sands mining operations as well as long-distance rail transport of crudes – operations that, *by logical extension*, are the essential *raison d'être* of the Project.

Ultimately, we must know about the extent to which Valero seeks to meet AB32 GHG reduction targets, and how they will achieve those state and federal goals for 2020.

7. Regarding Hazards and Hazardous Materials: [Checklist 8; p. II-37];

Valero's rail project is slated to be completed in 2014. The Study is without benefit of any reporting of crude-by-rail local/regional/national experiences; thus there is no documentation of the kinds of impacts we might expect over the life-time of the project. Yet, there are growing numbers of articles, (see Google news, click on email alerts, and type in "railroad, crude oil") about crude-by-rail transport happening across the country. Available information about other experiences with crude-by-rail transport into refineries, or the transport by rail of other hazardous materials, in the Bay Area and beyond, should be cited and discussed in order that the public be aided to recognize and meaningfully anticipate problems and potentially significant negative impacts. The highly relevant topic of foreseeable, unpredictable

necessary adjustments or changes in train schedules by Union Pacific, considering the number of trains of all kinds including passenger trains that would be passing through CC County and Benicia, is not discussed.

Risks of Union Pacific RR transport of crude oil: What kinds of accidents could happen while trains are traveling? Would there be switching of tracks and change of locomotive engines at any place enroute from the loaded trains point of origin that may be occasion for accidents? What is the safety record of Union Pacific generally as a hauler of hazardous materials in California and elsewhere? Has Union Pacific been a carrier of crude for Phillips 66 or Tesoro (in Washington)? If so, what has been their experience and safety record transporting crude oil? What, if any, are federal policies and regulations that specifically govern transport of crude oil by rail? What would be Union Pacific's plans be in the case of stalled trains, derailment and/or failed railcar or uncoupling, etc.? What are "credible worst case scenarios" that are foreseeable hauling crude by rail? What about the *unexpected*, therefore *unanticipated* "black swans" – accidents that could be catastrophic in impact? What are the City's emergency measures in the case of catastrophic releases (or fires, explosions) that could require evacuation of parts of the industrial park near Union Pacific tracks? What would the effect of adding Valero's crude-loaded trains to the over-all number of passenger and commercial train trips traveled daily on Union Pacific routes passing through Benicia and cities "up county" and beyond? What kinds of equipment failures could occur at the off-loading racks on Valero property? What about any potential for side-lining of crude-loaded rail cars? Or problems that could occur with scheduling of crude train arrivals and departures that could interfere with schedule for coke trains that travel to and from the refinery to the coke silos and ships at the Port of Benicia?

What are Valero's risk management plans associated to the Project?

[Study: Project Description, p. I-9]

"The new rail car unloading facilities would include liquid spill containment. The rack would be sloped inward toward the centerline of the rack. A roadside curb would be provided east of the tracks near the fence line to further contain any minor spills and leaks." . . ."

"Part of the existing containment berm for the tank field would be removed and a new concrete berm would be constructed approximately 12 feet west of the existing earthen berm. The resulting containment capacity would continue to meet or exceed minimum regulatory containment requirements."

Is the containment berm, which is described as "*exceeding **minimum** [my emphasis] regulatory containment requirements*" capable to control a major spill involving more crude released than "*minor spills and leaks?*" What would routine daily risk management involve? What emergency response would be involved in the case of an overflow of the berm, (which, if seen in a larger context, would seem the size of a kid's swimming pool)?

Discussion of "off-site" potential hazards are not considered except as portrayed in Mitigation Measure TRAN-2 of the Checklist, (see comments below on Transportation and Traffic), wherein an accident is envisioned that could occur at the intersection of the RR tracks and Park Road. TRAN-2 is thus narrowly limited in scope. The lack of any descriptive analysis of potential off-site hazards represents to this reader an extreme, obfuscatory oversight of the Project Description, especially given that there is no evidence

given of the performance record of Union Pacific, and the national record to date of accidents involving crude-loaded trains.

8. Transportation and Traffic [Checklist; p. II-62 - 69]

With regard to performance and operational risks: under CEQA, a discussion of credible worst-case scenarios posed by a project must be considered. There will likely be a number of businesses in the industrial park that will want to comment on this issue considering that trains will be passing four times daily to and from Valero through the industrial park and crossing Park Road. Estimates are given with regard the likelihood of accidents at Park Rd. The Checklist's answer to the question "Would the project result in inadequate emergency access?" acknowledges that

"According to the 2012 emergency response data provided by the fire department, an average of about two emergency incidents a month occurred along the industrial areas of Park Road and Bayshore Road. The probability of an emergency incident occurring at the same time as a proposed Project train crossing is low. It is unlikely that the Project would cause the average emergency vehicle response time to increase to over 7 minutes for the Park Road and Bayshore Road industrial areas."

The Mitigation Measure TRAN-2 is designed to ensure that the City of Benicia Fire Department coordinates with Valero, and (presumably) other emergency services or county agencies

". . . to prepare an action plan in the event that an emergency occurs during a Project train crossing. The action plan would provide methods of adequately informing the Fire Department of the expected train crossing schedule and alternate routes to access the Park road and Bayshore Rd. industrial areas during the event that a train crosses Park Road."

CEQA requires that a mitigation measure must actually have a plan prepared and delivered to the lead agency at the time of the environmental review. The public must be able to review the mitigation plan. Thus, a mitigation plan cannot be promised and submitted at a later date, as suggested by the strange wording of TRAN-2, which makes it sound like an emergency response plan would be designed (only) "in the event that an emergency occurs." This notion of casual response planning is how the the Kalamazoo River spill in 2010 of "diluted bitumen" was horrendously mismanaged. (See Comment #10)

[Study: Project Description, p. I-11]

"A train with 200 feet of locomotive and 50 railcars in length would take about 7.3 minutes to cross Park Road at a speed of 5 mph. The at-grade crossing traffic controls provide a 30-second buffer time before and after each train crossing on Park Road. Each 50-railcar train movement is estimated to block traffic on Park Road for approximately 8.3 minutes. Operations would occur 24 hours per day/ 7 days per week/365 days per year."

Would there be need for signaling at Park Road to warn cars and trucks routinely traveling in the Industrial Park of a slow-moving approaching train? Which businesses would be most affected by the Project's use of the Union Pacific tracks through the area? (Traffic, Noise). What is the City's responsibility for traffic risk management in the Industrial Park? What recourse would businesses in the area have that use Park Rd. in the case where trains may be delayed, stalled or stopped on tracks? What "alternate route" plan for vehicles and trucks has been designed?

9. Mandatory Findings of Significance: [Checklist 18; p.11 - 74]

Item 18a

addresses whether the Project would degrade the quality of the environment, substantially reduce habitat of wildlife species, fish, biota etc. No significant impact is imagined. The Checklist of mandatory Findings of Significance apparently does not attempt to envision “off site” toxic spills or releases that could potentially degrade a sensitive ecologic area in the case of a severe, unexpected accident involving a crude-loaded train. Again, the Project is defined in such a way as seeming *not* to include the twice daily crude-loaded trains, each with 50 railcars destined for the Benicia refinery and traveling on Union Pacific tracks “off-site” through ecologically sensitive areas, nor account for potential significant impacts involving hazardous, toxic crude oil spilled into the Suisun Marsh or other such biologically diverse areas (wetlands, vernal pools, etc) in the Delta floodplain through which Union Pacific tracks extend.

A credible worst case scenario would be a train derailment, with leak or spill into the Suisun Marsh during the winter months when seasonal flooding occurs and vernal pools are created, and/or, during nesting season for birds, the Suisun Marsh being part of the Pacific Flyway. Since no accident or spill is discussed as a potential impact scenario, the Checklist doesn’t provide any mitigation measure or emergency plan for cleanup and recovery of a spill-site that would have to be sensitive to biota and wildlife.

It has been claimed by Valero publicly that the railcars that would be used are built with double walls, such that punctures to the cars would be next-to-impossible in the case of a derailment. That is a statement of *ideal conditions*. What about the foreseeable possibility of a crude-loaded train colliding with another Union Pacific train traveling at high speed – a “black swan” event? In any case, there is no visual representation in the Initial Study that shows the design features of a railcar built to carry crude oil safely. Are there special valves for off-loading that are safeguarded against accidental releases? Any special connectors for pipes used in loading and off-loading crude? What safety features are there to ensure that spills cannot occur in the case of train collision at usual traveling speeds off-site in the marsh area?

Emergency planning for a potential accident involving crude-loaded railcars cannot be routine. For example: Mitigation Measure TRAN-2 alludes to an *existing* emergency response plan in the limited case of an accident the Study does discuss– an accident envisioned at Park Road, where a crude-loaded train is crossing the road traveling at 5 mph toward the proposed off-loading rail rack on Valero property. The *existing* response plan referred to, (the “plan” is not described in full nor provided in the Appendix) is said to involve Benicia’s and Valero’s fire departments, and county officials involved with hazmat and public health risks – accordingly, the usual protocol in the case of any accident at the refinery with potential off-site consequences.

However, in the case of an off-site possible spill in Suisun Marsh of a sour crude blend that contains a diluted bitumen called “dilbit” – (bitumen being the actual product/substance extracted from mining Alberta, Canada’s tar sands) – there is currently no known method, practiced by EPA, to safely recover bitumen that doesn’t cause further damage and destruction to the environment. A case in point: the tragic, still unresolved Enbridge Energy pipeline spill in Michigan, July 2010, involving an Alberta tar sands “dilbit,” which poured into a stream that flowed into the Kalamazoo River. [Kalamazoo River oil spill - Wikipedia.](#) The Initial Study does not describe bitumen, nor identify it as a particular “problem” constituent of a “North American-sourced crude” type. Bitumen must be described. It is a heavy, thick, viscous, gooey, tacky, highly acidic, corrosive tar-like substance that cannot move through pipelines or be

transported in railcars without having other lighter petroleum based products added to it. When spilled on the ground or in a stream or riverbed, the bitumen has been found to separate from the other lighter, more liquid petroleum-based additives and sink down into whatever material it is spilled into. The volatile compounds themselves become a toxic gas. So, while those “dilutants” disperse in air, (releasing toxic air contaminants and GHG) the heavy sulfur and lead-laden toxic bitumen sinks into the biologically alive and stoney matrix of a riverbed, streambed, pool, marsh, wetland or floodplain, remaining stuck to gravel and rocks and embedded in soil structures. The only cleanup strategy for removing dilute bitumen that had been considered in the Kalamazoo spill was dredging the river bottom – an obviously highly destructive procedure that would further degrade, strip and ruin the 25 - 35 mile-long affected spill area in the river and floodplain. To date, the river and its river bank, its biota, rocks, soils and fish spawning areas remain impacted, subject of a \$765 million dollar cleanup effort (as of summer 2012) that still has not been resolved. Reporting on the spill’s cause, “[NPR](#) reported that “NTSB investigators determined that the six-foot gash in the pipe was caused by a flaw in the outside lining which allowed the pipe to crack and corrode.”

Item 18b

addresses the question of whether the Project would have impacts “*that are individually limited, but cumulatively considerable.*” The meaning of “*cumulatively considerable*” is given as

“ . . . incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

With respect to calculating cumulative air impacts and potential effects to the local environment and our Bay Area region with its many special ecologic areas: There is no mention in the Initial Study of the fact that Phillips 66 is now importing crude by rail, and that other Bay Area refineries may be jumping on board to build rail facilities for importing “North American-sourced crudes.” It would be most interesting to know whether Phillips 66’s rail project was permitted with an MND signed off by Contra Costa County or if an EIR was required. [Rodeo and Crocket are unincorporated communities]. Was the City of Benicia alerted to the Phillips 66 project at the time of its environmental review for its rail project? And concomitantly, has the City of Benicia, as lead agent, notified surrounding cities and unincorporated areas to let them know about the review of the Valero’s Crude-by-Rail Project and to invite their comments?

CEQA requires that cumulative effects of a Project be evaluated that would potentially cause significant adverse impacts to air quality, water, biota and sensitive habitat. The number of trains carrying crude oil into Bay Area refineries is likely to increase because of the new movement in the industry to access “North American-sourced crudes,” for which Union Pacific rails and the refineries’ rail off-loading facilities would serve. If this is the case, and there is projected to be more crude-loaded train traffic on Union Pacific routes through the Bay Area, the Initial Study lacks any discussion of current and future similar crude-by-rail projects in Contra Costa County that would increase the level of risk of accidents and damage to sensitive ecologic areas through which increased numbers of crude-loaded trains would inevitably pass.

The question of responsibility for “off site” environmental impacts is not dealt with in the Initial Study but deserves to be considered. The crude-loaded trains would be traveling many miles to get to Benicia. Would Union Pacific, as a corporation, account for the “vehicle miles traveled” of Valero’s trains? Which

corporate entity would be ultimately responsible to report VMT with respect to AB32, the California Global Warming Solutions Act? Calculations of VMT for Valero's train travel in miles would provide quantified evidence of a crucial transportation cost to the environment of transporting crude by rail; but this subject is not part of the Study's evaluation of GHG contributions of the Project. Nowhere is any mention of AB32 in the Initial Study or Environmental Checklist. Accordingly, there is no respect demonstrated in the environmental review of the intent and spirit of AB32. Where are the origin(s) of the loaded trains? What are the train routes that will be traveled by Union Pacific trains carrying crude to Benicia? How many highly sensitive ecologic areas would Valero's and other refineries' crude-loaded trains pass through? What would the operational risks at the trains' *loading* ends that could impact Air Quality and Biological Resources at that location? Whatever facts exist are hidden from the public by the Initial Study.

10. There is much deserved concern in Benicia, and beyond in the Bay Area, about the issue of what crude types would be imported by railcars to Benicia. There is growing public concern that tar sands “diluted bitumen” is planned to be among those “North American-sourced crudes” transported to Benicia and other Bay Area refineries by rail.

The primary reason for Valero's rail project in the first place is to be able to access certain crude types “*that have recently become available*” in North America. [Overview - I-1]. The 100 railcars per day that would contain sour crude blends with specific chemical properties and densities. These crude types, destined to be refined as part of Valero's daily processing “mix”, are *specific* products being transported for processing, so must indeed be considered intrinsic to the Project. Certainly, the essential reason for proposing and implementing the Project is to be able to import the various “*North American-sourced crudes*” that heretofore have been *inaccessible* to Valero by other means of transport (pipeline and marine vessel). Without this reason, the Project could not be characterized as needing to exist.

Among the heavy “North American-sourced crudes,” some, if not all, have presumably been “off limits” for Valero's Benicia refinery because of lack of feasible access; for even if the Keystone XL Pipeline were to be approved, Valero Benicia would not be accessing the particular tar sands “dilbits” (diluted bitumen) at the end of the Keystone pipeline's route. Rail transport from the midwest and Canada would serve to provide that access. In other words, without rail transport, there would be little opportunity, economically speaking, for Valero to import certain North American crude blends into Benicia, including tar sands blends from Alberta Canada. This issue was not discussed in the Initial Study. The general descriptive term “North American-sourced crude” implicitly suggests “proprietary information” that is not, *by corporate insistence*, to be disclosed. Regulatory agencies participate in protecting company “trade secrets.” The Project Description basically tells the reader, “trust Valero's word:” that it will make little or no difference where the “North American-sourced crudes” actually come from or what their chemical composition consists of.

[Study; Project Description, p. I-2]

“The Refinery does not anticipate a need to change the existing Refinery operations or process equipment, nor would emissions from Refinery operations change (with the exception of the storage tank service and rail unloading emissions) as a result of accepting and refining the proposed North American-sourced crudes.”

AND,

[Study, Project Description, I-6]

“The North American-sourced crude oil gravity is expected to range from 20 to 43.5° API, so it would be similar or somewhat lighter than some of the current constituent crude oils used in blending. The North American-sourced crude oil sulfur content would range from 0.06 to 3.1 by weight percent, but on average [my emphasis] would be similar to that of the current constituent crude oil used in blending. The North American-sourced crude oils are expected to replace crude oils of similar gravity and sulfur content that are currently brought in by ship. The Refinery’s crude oil feedstock is currently blended to achieve Refinery feedstock specifications, and the North American-sourced crude oils would be blended in the same manner. Since the North-American sourced crude oils would replace crude oils with similar properties, it is anticipated that the Refinery would continue to operate within its existing specifications for crude oil gravity and sulfur content range.”

The public has a right to know more about higher levels of sulfur and other constituents such as lead that the Study studiously avoids being clear about, especially alluding to “on average” comparisons with currently processed sour crude types. The obfuscation is dramatic. Obviously, the Study hits a sensitive nerve: there is no account of the corporation’s reasons for non-disclosure, nor acknowledgement of “trade secrets.” The most extensive reference in the Study to the types of crude to be imported is given as “North American-sourced crudes that have recently become available” [Study: Overview, p I-1]. This is hardly informational. On the contrary, what it doesn’t say represents the Initial Study’s enormous data gap. The *only mention* in the MND of the crude to be imported by rail into Benicia is entombed in the following sentence in the MND’s introduction:

“The crude oil to be transported by rail cars is expected to be of similar quality compared to existing crude oil imported by marine vessel.”

The Study does not say what specific types of “North American-sourced crudes” are intended to be imported to Benicia and where they would be coming from. This omission is purposeful and morally wrong, especially given the context of global warming and climate change caused by human activities and the increased GHG emissions represented by “the whole of the Project.” The Project Description gives no account of those actual sources, e.g., *actual locations where trains would be loaded with types of crude oil* (shale oil, “tight oil”, tar sands bitumen/dilbit). The Description gives only generalities about crude mixtures in feedstocks and similarities of “North American-sourced crudes” to currently imported and processed sour crude types; thus, basic information required to evaluate potential negative effects of the “Project as a whole” is wholly lacking!

The Study’s Overview [p.I-1.2] asks the public to accept generalities and comparisons about the range of qualities of acidity and density of “blended crude oil slate” regularly processed. The description wants to assure the reader that nothing possibly could be different, nor needs changing as a result of adding a percentage of the newly accessible “North American-sourced crudes” to the feedstock mix of crudes processed daily. Where is the actual evidence and data to support the Initial Study’s conclusions and assumptions about “benefits” to Air Quality, or that contribution to Greenhouse Gases will be minimal during the Project’s operations over time? Again, the Project Description doesn’t account for the intended lifespan of the Crude-by-Rail Project, nor its extensions, reaching out by rail far and wide.

[Initial Study, Overview, p I-1,2] :

“The quality of crude oil varies by oil well locations and reservoir formations; therefore, the quality of crude oil received from the same source may vary over time. Refineries are designed and equipped to process crude oil of a specific quality that is broadly defined by a range of gravity and sulfur content.”

“A blended crude slate is comprised of multiple individual crudes that when combined provide a crude mix that refinery hardware is designed to process. The proposed North American-source crudes will be a constituent in the Refinery’s blended crude oil slate.””The Refinery’s various crude oil feedstocks are currently blended to achieve Refinery feedstock specifications, and the North American-sourced crude oils would be blended in the same manner. Since the North American-sourced crude oils would be replacing crude oils [that have been imported by marine vessel] with similar properties, it is anticipated that the Refinery would continue to operate within its existing specifications for crude oil gravity and sulfur content range.

The Refinery does not anticipate a need to change the existing Refinery operations or process equipment, nor would emissions from Refinery operations change (with the exception of the storage tank service and rail unloading emissions) as a result of accepting and refine the proposed North American-sourced crudes.”

Why be concerned? The MND seems to say, “don’t be.”

We have known since the Valero Improvement Project was introduced to the community in 2002-03 that Valero would be retooling/upgrading the refinery to be able to accommodate a greater variety of heavy sour crudes. These were explained to be more corrosive (because of higher sulfur content) and also more productive of certain emissions; but the Valero Improvement Project would make technical improvements to account for the requirement to reduce increased sulfur emissions and other toxic air contaminants associated to processing more types of sour crudes and sour crude feedstock blends. It is my understanding, from conversations over the years with Valero regarding VIP, that early on after purchase of the refinery from Exxon, Valero foresaw that the corporation – the largest independent refiner in the U.S. – would be more dependent on purchasing sour crudes on the open market, after their initial 10-year contract with Exxon expired that had allowed Valero to continue to process a great percentage of Alaskan sweet, light crude (that had been extracted from Exxon’s own fields near Prudhoe Bay). And since the Benicia refinery had originally been designed to process Alaskan sweet crude, the VIP Project was essential to Valero’s intention to import more types of sour crudes.

The higher levels of sulfur in sour crudes also contributes to a growing risk of corrosion, which was the presenting cause of what became a catastrophic leak and fire at Chevron’s Richmond Refinery in August, 2012. The refining industries’ increased processing of more sour and heavier crude types represents a potential cumulative risk to safety of local communities, local air quality and public health.

“The North American-sourced crude oils are expected to replace crude oils of similar gravity and sulfur content currently brought in by ship.” [Study: Overview, p. I-2]

“Thus, the proposed Project could reduce marine vessel deliveries by up to 25,550,000 bbl per year. Based on a 3-year baseline period from December 10, 2009 through December 9, 2012, annual marine vessel deliveries could be reduced by up to 81 percent. Crude delivered by rail would not displace crude delivered to the Refinery by pipeline.” (Study: Overview, p. I-6]

The first sentence quoted does not claim *absolutely* that “North American-sourced crude oils” would replace crude oils of similar gravity and sulfur content as those crudes imported by ship; it simply says that Valero has the *expectation* that the crude oil types imported by rail will be *comparatively similar* to those sour crudes now being imported by marine vessels. The meaning of the second sentence, about advantages of replacing ships with trains, which would cause a reduction in total annual diesel emissions, may be taken at face value as a “good.” However, such value statements should be contextualized in the larger frame of total emissions calculated for the Project; thus, such a “good” must be factored as part of the the refinery’s *total emissions over time* that are owing to the processing of more sour crudes with greater sulfur content, metals such as lead, and other toxic air contaminants present, for example, in highly corrosive, acidic diluted bitumen, to make the point clear.

Cumulative potentially significant negative impacts to air quality and an account of *cumulative* GHG emissions that are related to the specific “North American-sourced crudes” planned to be imported must be described and discussed in sufficient detail with data to support claims in the context of the projected life-span of the Valero Project and other existing and planned Bay Area rail projects as well as other existing and planned large-scale industrial developments: therefore, to evaluate the cumulative impacts from all existing emissions sources within the vicinity of the Project, so that emissions contributed by specific “North American-sourced crudes” can be understood in full context of cumulative risk.

Accordingly, if Valero’s crude feedstock may, by virtue of permitting the Crude-by-Rail Project, regularly have as part of its mix a percentage of those tar sand dibits, this must raise the potential for significant and catastrophic foreseeable environmental effects of diluted bitumen (dilbit) if and when spilled. Without details of the chemical makeup of tar sands blends as well as other crude types imported by rail, the public cannot judge the toxicity and extent of potential environmentally significant impacts, and the difficulty, *if not impossibility* of cleaning up after a spill, say, in the Suisun Marsh or Sacramento River floodplain or Carquinez Strait or other such sensitive interior landscape through which Union Pacific tracks pass.

So I ask: if Alberta’s tar sands bitumen blends are intended to be transported by rail to Benicia, then, with as little information as provided by ESA’s Initial Study, how can the public accept a finding of *no potential significant impact to the environment anticipated that cannot be mitigated?*

[Enbridge Resisting Final Clean-Up of Its Michigan Oil Spill | InsideClimate News](#). See also [The Exxon Oil Spill in Mayflower, Ark.: Slide Show of Annotated Photographs and Maps | InsideClimate News](#)

One only has to “think Kalamazoo.”

11. Under the rubric of the full intent of AB32, the Project should be discussed and evaluated with regard to the vision for a sustainable economy that AB32 upholds – an economy and way of life that doesn’t continue to destroy the environment and the atmospheric conditions that make life on earth livable. I am talking about how I believe this Project represents the status quo and a level of desperation in the industry to continue to pursue the mining for crudes of every type, in every possible place of “reserves” in North America, to reap the benefits near term, in the case we are reviewing here, of what the industry would like to consider an “inexhaustible supply of crude” that would be consumed indefinitely into the future.

Twenty-five percent (25%) of America's "oil" is now coming from Alberta's vast network of tar sands mining operations, [Alberta Energy: Facts and Statistics](#), by means of a highly energy intensive and water-demanding open pit mining operation to extract bitumen – a tar-like substance which is not an oil, but which is naturally occurring in deep sand formations. It is heavy, highly acidic and so thick it must be washed out of the sand deposits by extraordinary amounts of hot water under pressure, using tons of natural gas to supply the energy to heat the water, and thus contributing to massive GHG emissions. The bitumen itself is too dense and heavy to be pumped through a pipeline without being made "lighter." To get the consistency required for pipelines or unheated railcars, the raw bitumen must be diluted with other lighter more liquid petroleum products.

To my knowledge, BAAQMD has not described the heavy crude "blended" types that have been created from the bitumen extracted from Alberta tar sands. Although the Initial Study doesn't give it a name, or any specifics, easy research online tells that the Canadian government is price-supporting Alberta tar sands' "crude blend," which is called "Western Canada Select," to compete against "West Texas Intermediate", the light sweet crude used historically as the pricing benchmark in the industry. Bitumen may contain metals –high lead levels – besides its high concentration of sulfur. Has the Air District made public whatever it knows about the processing of "Western Canada Select?" We need to know from the Air District or other experts if this particular blend would be imported to Benicia and whether it would cause emissions that might meet or exceed "thresholds of significance."

[Wikipedia entry on WCS](#)

[Cenovus Marketing page for WCS](#)

[CrudeMonitor.ca technical profile for WCS](#)

In the absence of more information from Valero, the public has the burden of trying to imagine the consequences of a 10 - 50 year life-span of the project. Again, there's no indication in the Initial Study of the Project lifespan.

12. [Initial Study: Overview p I-5]

"The Refinery is limited by its BAAQMD permit (condition 20820, part 50) to processing crude oil at a feed rate of 180,000 barrels per day on a maximum daily basis and 165,000 barrels per day on an annual average basis."

Thus, we must try to understand how the community might be impacted on any given day when the processing "feed rate" is at its maximum capacity permitted, of 180,000 barrels per day, as compared to how those impacts might be seen in the context of an annual average permitted feed rate of 165,000 barrels per day. To add to the complexity of estimating and evaluating emissions impacts, we have to consider the possible increased health risks from processing diluted bitumen blends if and when they are added to the feedstock to be processed at its maximum capacity on any given day.

13. There are no facts mentioned in the Study about other Bay Area importers of tar sands crude blends, yet getting the facts is essential to assessing the claims in the MND with regard to potential cumulative air quality impacts of the project and the possibility especially of dilbit-loaded trains involved in accidents.

“The crude-by-rail spike has also led to more U.S. railway oil spills -- 14 from 2007-09 to 158 between 2010-12, according to the Pipeline and Hazardous Materials Safety Administration. In a recent International Energy Agency report based on U.S. Department of Transportation data, the risk of a train spill was six times greater than a pipeline incident between 2004 and 2012. . . . On March 27, a train derailed in Minnesota, spilling 15,000 gallons of Canadian tar sands crude.”
[Canadian tar sands crude heads to refineries, Benicia's Valero may be on list - Vallejo Times Herald](#)

14. FINALLY, IN CONCLUSION:

Under CEQA, a thorough environmental review, a full EIR, should enable the public and stakeholders to understand the “whole of Valero’s Crude-by-Rail Project” and its ramifications and thereby to fairly judge, based on sufficient evidence and scientific information, the long-term, potentially significant and cumulative environmental impacts that would affect our local community, our local and regional lands and waters. CEQA would also require, in a full EIR, a thorough discussion of “Alternatives” to the Project, including the option of “No Project”, in order to more fully capture the contexts in which the proposed Project should be judged.

There is considerable concern across the region and nation for the ultimate impact of increasing GHG emissions from the processing of more varieties of dirty crudes for which the Valero Crude-By-Rail project is designed to enable. Although the Initial Study is 190 pages, and contains statistics and charts about GHG emissions *during construction phases*, there are very important concerns and questions regarding the long-term consequences for global warming and climate change if we as a nation continue to support the kind of environmentally destructive mining processes which could allow “business as usual” to be pursued for years to come, for the economic benefit in the short-run, since ultimately – in not so many years ahead – fifty? – we can mine ourselves out of crude oil, wherever reserves are located in North America that are technically made “easy to get at” now.

But what about the ethics, considering the future of our children and their children? Extracting, refining and indefinitely burning Alberta’s tar sands “dilute bitumen” is not sustainable, if we want to maintain civilization and the semblance of a temperate climate for humans and other living members of our “more-than-human-world.” This is the conclusion reached by the preeminent earth scientist and former director of NASA’s Goddard Institute, Dr. James Hansen.

There is no reference anywhere in the Initial Study to *any* literature on the subject of global warming and the impacts of continuing extraction and burning of fossil fuels. This is a significant omission. I hereby reference Dr. Hansen’s trenchant book “Storms of My Grandchildren,” and Canadian author, Andrew Mikiforuk’s widely acclaimed and quoted “Tar Sands: Dirty Oil and the Future of a Continent.”

The dangers represented by the total, extreme environmental costs of importing diluted bitumen from Alberta tar sands should be factored into evaluation of Valero’s proposed Project with respect for state and national goals for reducing GHG: the destruction and disappearance of thousands of square miles of pristine northern boreal forest, which serves as a carbon sink for the world; the excessive daily demand for fresh water and energy (natural gas) to extract bitumen from the sand; the miles of toxic lakes formed from the waste water after extraction; the degradation of regional and local air quality at the locations of the vast network of tar sands open pit mines (and hydraulic fracturing mining operations) and in communities with refineries processing the heavy crudes in their midst; degradation of rivers’ sensitive ecologies where spills and accidents leave their permanent imprint; the accelerating rate of the melt of permafrost, ice sheets and glaciers around the globe; the continuing, dangerously accelerating rise, in a short time of recent decades, of CO₂ in the atmosphere to 400 ppm, which is beyond what atmospheric scientists consider the “safe” threshold, at 350 ppm for human civilization. We thus continue to contribute

to climate change in the quest to burn more and more fossil fuels, and THIS should be raised as a moral imperative, an ethical, environmental issue of the Valero Crude-by-Rail venture, since the Project would materially support “business as usual”, (as evidently railroaded by the MND). This is a cruel fact that looms over the “whole of the Project” under review. Gross environmental costs are still considered “externalities” when evaluating projects, so they are not accounted for in the review of Valero’s proposed rail project. The brief discussion in the Initial Study regarding reductions of GHG during construction phases minimizes the whole larger question.

So, where does the “chain of custody” stop? From oil fields, tar sand mines, and fracking sites in shale oil country, to refinery to consumers – we’re all in this, allegedly trying to see our way to a sustainable economy and way of life that would depend for basic energy and transport on alternatives to fossil fuels. Pipe dream? We the people, burning fossil fuels, are part of the “chain of responsibility.” We can no longer say that what any one person does, or any one company or industry does, doesn’t matter. To protect communities at risk, we who have an industrial giant in our midst, need to raise our questions and be reasonably considered sane and responsible for doing so.

The long-range, dangerous environmental effects of encouraging further mining operations in Alberta’s tar sands, or at fracking sites in shale formations around the country; the encouragement for continuing “business as usual” by use of rail transport that makes “North American-sourced crudes” readily accessible and available to refiners, thus, bringing these sour crudes for processing here in the Bay Area: for all of these reasons and more, the Initial Study and MND for the Valero Crude-by-Rail Project represents a failure of responsibility to address the extent and reasonable concern of the public, for protection of the environment generally, and the health and safety of our community and the planet our children will inherit.

In my view, for all of my questions and reasons stated, the MND that would permit the proposed Valero Crude-by-Rail Project must be rejected by the Planning Commission, and a full Environmental Impact Report be required.

* * *

APPENDIX:

CEQA GUIDELINES §15064.4. Determining the Significance of Impacts from Greenhouse Gas Emissions.

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a

project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Note: Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Sections 21001, 21002, 21003, 21065, 21068, 21080, 21082, 21082.1, 21082.2, 21083.05, 21100, Pub. Resources Code; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099; *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98; *Berkeley Keep Jets Over the Bay Com. v. Board of Port Comm.* (2001) 91 Cal.App.4th 1344; and *City of Irvine v. Irvine Citizens Against Overdevelopment* (1994) 25 Cal.App.4th 868.

MARILYN J. BARDET
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July 11th, 2013

City Manager Brad Kilger, and staff, Amy Million,
Planning Commissioners: Chair Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell & Councilmembers Hughs, Schwartzman & Strawbridge
City of Benicia, 250 East L Street, Benicia CA 94510

SUBJECT: Additional comments: Valero Crude-By-Rail Project Initial Study/Mitigated Negative Declaration [IS/MND]

Dear Mr. Kilger, Planning Commission Chairman Sherry, Planning Commissioners, and Mayor Patterson, Councilmembers and Amy Million and staff of the Community Development Department.

Please add the following comments to those I officially submitted on July 1, to be included as part of the public record on the review of the IS/MND for the Valero Crude-by-Rail Project ["Project"].

The massive numbers of comments, reports, questions and documents that have been submitted on the Project to date express the level of concern of our citizenry that the City would consider adopting the Valero rail project with an incomplete Project Description, false and unsubstantiated claims, obfuscations, and therefore *fatally flawed and failed* Initial Study and Environmental Check List, and with the incredibly deficient account of potentially significant impacts with only a few mitigation measures called for. What has been presented to you to review would constitute a virtual "scoping session's worth" of comments for preparation of an EIR.

First, I want to incorporate by reference all comments provided by the Natural Resources Defense Council, both oral testimony given at the planning commission hearing tonight and the written reports submitted July 1st, including the expert reports by Phyllis Fox and The Goodman Group.

I also want it to be understood that 70 people attended the open public community meeting, held on July 9th at the Benicia Community Center, hosted by the Good Neighbor Steering Committee. Valero was personally invited by the GNSC to attend and answer questions, but they cordially declined. The community meeting offered Benicia residents a chance to hear from NRDC's Brant Olson and Diane Bailey, one of NRDC's staff scientists assigned to review the Project. NRDC is a highly respected national environmental organization with 1.4 million members. Their team of researchers learned of Valero's initial application and recognized it as the first crude-by-rail project proposed for a Bay Area refinery.

NRDC's comments, and those of Phyllis Fox and the Goodman Group regard the Initial Study and findings of the MND to be wholly flawed and inadequate, and that therefore, the Initial Study should be immediately withdrawn and a full EIR be drafted.

Some of the most important reasons cited by NRDC for rejecting the Initial Study and MND:

- there are no specifics given about the intended crudes to be imported and where they would come from. The importance of this information goes to the heart of the fatal flaw of the Initial Study and Environmental Checklist;
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-

- the complex specifics about the chemical constituents of the types of crudes that will be imported are not revealed or discussed with regard their characteristics during processing, thus emissions cannot be evaluated – generalities and assumptions substitute for evidence;
- There is no *current* emissions baseline to make comparisons with projected emissions increases from the Project plus refinery operational emissions;
- In the Initial Study, baseline emissions stats borrowed from VIP FEIR are considered by NRDC to be obsolete since they are up to 10 years old and were produced before new regulations were promulgated by BAAQMD, such as for PM 2.5 emissions;
- there is no discussion of increased cumulative emissions for entire refinery operations plus Project emissions, including also analysis of other contributors to those cumulative impacts from other industrial large-scale projects current or planned in the area, including the still-to-be-constructed new hydrogen unit which is intrinsic to processing dirty sour crudes;
- The Goodman Group reviewed the market trends in the industry and specifically what Valero Corp reports to its investors regarding the economic advantages of importing heavily discounted tar sands crude types that are diluted bitumen blends, or “dilbits” and light sweet crude from North Dakota’s Bakkan shale formation, neither of which would be accessible to Valero Benicia refinery without rail transport;
- Phyllis Fox’s report points out tar sands crude dilbits are the most dangerous to process from a public health and safety perspective, because of the constituents of bitumen including highly corrosive sulfur, lead, cadmium, nickel and other metals, as well as VOC’s from the lighter diluents that are mixed with the bitumen to make it flow, thus causing highly volatile gases to potentially leak more frequently from valves, compressors, stacks, and piping;
- potential for increasing numbers of accidental releases, fires and explosions from processing highly acidic dilbits, as described above, owing to more tendency to metal corrosion in pipes and pipe failure, such as the resulting huge catastrophic fire at the Chevron refinery fire in Richmond, August 2012;
- there is currently no BAAQMD regulatory framework or enforcement to ensure maintenance and strict performance testing for corrosion of piping, nor standards for upgrading piping, considering the age of metals, metal types used for pipes;
- potential increases in corrosion problems is especially troubling given that refineries are modifying their units to allow for greater processing of sour crude types, and without special consideration that Valero Corp has stated to its investors that it intends to import heaviest dirtiest crude, the tar sands dilbits;
- there will be a higher rate of petroleum coke production, thus more particulate matter (petcoke PM2.5 enters lung tissue, carrying VOC’s and other toxic emissions that attach to the particulate coke dust – more coke ships and coke trains are planned for under VIP.
- Health risks for cancer and non-cancer risks are inaccurately portrayed and underestimated, considering the highly possible crude slate that is likely to be processed on any given day, if up to 42% of crude imported by rail are “dilbits” would be coming from Alberta tar sands with the consequences of increased toxic emissions overall.

ADDITIONAL COMMENTS:

Concerning Project Operations: regarding rail car safety, accidents, schedules and Project Operations:

- 1) Estimates are that Valero purchased 5,000+ tank cars. What is the DOT class to be used? What types of rail cars has Valero purchased? Please compare to the typical DOT-111A – the standard, cylindrical tank car that currently makes up 69% of the US tank car fleet and 80% of Canada’s fleet? (according to Transport Canada).

- 2) Will the tank cars recently purchased by Valero for importing crude oil be modified and enhanced for security and safety? If so, how? Would thick (how thick?) doubled walls provide maximum strength in the case of collision or derailment?
- 3) Please cite any and all federal requirements regulating tank car construction for transporting crudes. If there are none that are specific to transporting crude, what kind of modification to the tank cars can be made that would especially address the problem of possible puncture that would cause dilbits to leak out (and catch fire) to prevent the kind of disaster that occurred in Lac-Megantic, Quebec?
- 4) Please describe the failure rate of DOT-111A tank cars from punctures to tank car walls during accidents (derailments, collisions, etc), according to *current and historic* Department of Transportation or other agency statistics, and factoring the increase daily train trips, accounting cumulative potential impacts, considering all clients' hazmat and other trains traveling on Union Pacific tracks that will also be carrying Valero crude trains.
- 5) Please describe Valero's, Union Pacific's and the City of Benicia's clean up strategy for removing bitumen in the case of a train accident with leaking tank cars enroute through wetlands, flood plains and marshes. Please consider the fact that EPA to date has not found any ecologically safe method to restore 35 miles of the Kalamazoo River, its riverbed and shoreline, following the Embridge Energy crude pipeline spill in 2010 that put 877,000 gallons of a tar sands dilbit into the river-- the largest on land oil spill in US history? Please address the indirect economic impact of the Kalamazoo disaster spill, considering that by 2012 more than \$765 million dollars had been spent trying to clean the river *without destructive dredging*, and the spill hasn't been resolved after 3 years?
- 6) Does the Federal Department of Transportation or other agency overseeing hazmat freight transport by rail have any special enforceable requirements or regulatory framework for RR operations involving shipments of crude oil in large "single unit" trains? Is there any federal limit on the number of railroad tank cars that can be part of one single train carrying crude oil?
- 7) On a daily schedule, how many *total number of trains*, managed and run by Union Pacific for Valero will be "on the tracks," and how far do Union Pacific's rail routes run that would be carrying crude in Valero's trains? Does Union Pacific have to switch operators for trains at any point enroute, that is, use another RR company and its tracks to reach Alberta and North Dakota?
- 8) How many trains of all sorts run daily by Union Pacific pass through Benicia? How many hazmat-loaded freight trains?
- 8) Who is financially responsible for spill cleanups "off-site" of the Project? On site? Who manages the coke trains now and who would manage crude trains if the Project is permitted?
- 9) How would the City of Benicia, Union Pacific and Cal Trans be involved if a train were backed up at Park Road and vehicles exiting I-680 were backed up trying to get into Benicia via Industrial Way and/or other access roads? Please consider this scenario in the case of a train derailment or collision, whether large or small accident?
- 10) How would Union Pacific handle a delay or change in crude train schedule on any particular day or night? Will crude trains take priority over passenger (AMTRAK) or other freight trains, including Valero coke trains?
- 11) Would there always be an engineer "on board" the crude trains? How will the trains be managed on site if "side-lined"?

- 12) What improvements and physical, mechanical upgrades have been made to date on Union Pacific tracks in Benicia and Solano County? Is Union Pacific prepared for the addition of two 50 car crude-loaded trains per day? What still needs to be done to ensure the safety of the rail bed and tracks themselves for handling crude-by-rail safely?
- 13) Please describe the hoses and valve connectors on the tank cars that would allow the off-loading of crude oil into the pipes leading to the #1776 Storage Tank. How long would it take to fix the hoses onto the connectors on a 50 car train? How many workers would be involved in this operation? What types of fugitive emissions from this operation are anticipated and what is the emission threshold for fugitive emissions during this operation? How would the emissions be measured in real time? Would vapors escape at the top of the crude tank cars? Will any valve or “top” be open to the atmosphere? Would the tank cars be pressurized? What reduces the volatile gases under pressure?
- 14) From a reliable source of information, it has been emphatically stated that it can be expected routinely that there would be a “liquid mess” underneath the rail cars, especially given the length of time of off-loading operation, the two 50 car trains off-loading daily, etc. How will the emissions from spilt crude be measured and mitigated?

Concerning AB32, the Benicia General Plan and Climate Action Plan:

- 1) Please describe Valero’s plan to meet AB32 requirements for GHG reductions by 2020, considering that Valero is the largest industrial producer of GHG emissions in the city. The Initial Study addresses GHG emissions during construction phases, but does not reference AB32 as a regulatory framework for the Project and refinery operations nor AB32’s targets for GHG reductions by 2020.
- 2) Please reference and supply hot links to all regulatory statutes, frameworks and guidelines that would govern the Project and refinery as related to potential and cumulative negative impacts on site and “off site,” for all areas of concern: Air Quality; Public Health; Biologic REsources; Transportation; Hazards; Odors; Seismic; Soils; Noise; etc, thus all CEQA areas of concern and public concern of the local community.
- 3) In the absence of enforceable regulations, (state or federal) please list issues of concern that depend on the refinery’s “voluntary compliance” to mitigate such concerns and impacts, such as potential, foreseeable problems with corrosion in pipes, valves, etc. wherein replacement of damaged parts could be warranted and whereas structural integrity can no longer be guaranteed.
- 4) Please specifically describe conditions and criteria for the City of Benicia to judge the sustainability of a project, as it contributes to the city’s well-being and economic health as a whole. “Sustainable development” is the integrating, overarching goal of Benicia’s 1999 General Plan. [General Plan, page 22]. The goal outlines the rippling effect of what we do here in our city. Please provide specific criteria and performance measures that would ensure that industrial polluters and newly planned developments, such as Valero’s Crude-by-Rail Project, would be obliged to adhere to and be evaluated by to meet the General Plan’s essential goal, which would be consistent also with AB32 and Benicia’s Climate Action Plan.
- 5) Please reference Benicia’s Climate Action Plan and the efforts that have been made by the Benicia Community Sustainability Commission to address the strategies pertinent to energy and water conservation and how the Crude-by-Rail project fits into the model for conserving energy and resources generally. Please do not use obsolete emission baseline stats for data comparisons. [See Phyllis Fox Report]

Thank you for your attention to my comments.

Marilyn Bardet, member of the Good Neighbor Steering Committee

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Combustion emissions from refining lower quality oil

Presented at the City of Richmond 4 April 2012 Greg Karras, CBE

Full WesPac DEIR Comment/Document:

Addressed below are my concerns pertaining to:

***POTENTIAL ENVIRONMENTAL IMPACTS NOT
ADDRESSED IN THE PITTSBURG WesPac DEIR :***

I. PHYSICALLY-INTERRELATED REFINERY PROJECTS FOR THE EVALUATION OF CUMULATIVE REGIONAL EFFECTS,

II. CUMULATIVE REGIONAL GREENHOUSE GAS AND NOXIOUS POLLUTION EFFECTS, AND

III. A CRITICALLY SIGNIFICANT INCREASE IN TOTAL BAY AREA REFINING CAPABILITY ENABLED BY THE WesPac PETROLEUM STORAGE DEPOT.

CONCLUSION: The WesPac PITTSBURG ENERGY INFRASTRUCTURE PROJECT, aka THE PITTSBURG PETROLEUM STORAGE DEPOT, WILL CRITICALLY ENABLE A SIGNIFICANT INCREASE IN TOTAL BAY AREA REFINING CAPABILITY AND OFF-SITE GREENHOUSE GAS PRODUCTION; LIKELY OFF-SITE EMISSIONS NOT DOCUMENTED IN THE DRAFT EIR.

Off-site emissions due to additional regional refining capability are dependent upon the WesPac Oil Storage Depot and are not directly addressed in the DEIR, but can be inferred by the size and scope of the overall oil storage and associated marine/ railroad/pipeline enhancement project.

The Pittsburg WesPac DEIR omits mention of the potential deleterious impacts on regional air quality, which the aforementioned Bay Area's destination refineries for WesPac crude will accrue when the WesPac Project is completed.

The WesPac oil terminal and storage tank project should not be seen in isolation in terms of off-site air emissions that it will enable and that need a full regional emissions assessment. The WesPac DEIR neglects to mention the recent and proposed changes in refinery technology and throughput that will impact WesPac's off-site emissions assessment. The WesPac DEIR, therefore, omits mention of the potential impacts that the destination refineries will engender for crude transiting the terminal, namely a significant increase in volume of refined products, in addition to refining a likely increased percentage of high-sulfur heavy crude oil, such as Canadian Tar Sands crude.

These quantity and quality factors related to the WesPac-transited crude will require far larger volumes of regional refinery hydrogen production and more heat production. Consequently, the refineries will also produce more greenhouse gasses and other airborne pollutants in the Bay Area and beyond, when considering the increased volume of manufactured end-products. Therefore, it is inaccurate and misleading to mention only the WesPac project's on-site air emissions analysis into emissions declarations, while ignoring

secondary off-site emissions for purposes of invoking the presumption that the project will have no significant regional impact.

The Pittsburg WesPac DEIR should be amended to include off-site GHGs, from the terminal's various destination refineries and also from their end-products, which will be engendered both by the terminal-enabled increase in yearly Bay Area refinery input quantity and the probable lower quality of the crude passing through the facility, in order to produce a more complete cumulative evaluation of regional effects.

Furthermore, for the WesPac DEIR to be in compliance and to have a more complete cumulative evaluation of regional air pollution effects, all recent and proposed major, relevant upgrades to WesPac crude destination refineries, which were omitted in the draft EIR, must be considered in detail.

Table 2-6: Refineries that May Receive-Crude-Oil-from and/or Deliver- Crude-Oil-to the Terminal Oil Refines

Address:

From Greg Karras: Communities for a Better Environment, email, Sept 12, 2013. on WesPac Project for Pittsburg.

Shell Martinez Refinery - 3485 Pacheco Boulevard Martinez, California 94553

Conoco Phillips Refinery - 1380 San Pablo Avenue Rodeo, California 94572

Tesoro Golden Eagle Refinery - 150 Solano Way Martinez, California 94553

Valero Benicia Refinery - 3400 East 2nd Street Benicia, California 94510

The Pittsburg WesPac Draft EIR failed to mention, as required, these “POTENTIAL PROJECTS FOR CUMULATIVE EFFECTS EVALUATION,” which are collectively listed below and are either proposed or recently completed, namely:

WesPac Pittsburg Petroleum Tank Project: Proposed

ConocoPhillips proposed the Clean Fuels Expansion Project (CFEP): Completed

[The Clean Fuels Expansion Project (CFEP) added new facilities and modified existing facilities to produce additional low-sulfur clean fuels. The Refinery would use the Heavy Gas Oil (HGO) that is normally produced at the Refinery and is currently sold into the HGO market, to produce cleaner-burning gasoline and ultra-low-sulfur diesel (ULSD) fuels targeted for the California market or fuel oil for the global market.]

PHILLIPS 66 PROPANE RECOVERY PROJECT:

Currently Proposed (*Propane and butane currently used as refinery gasses (RFGs) for heat, electricity and hydrogen production will subsequently be sold as de-sulfured commercial end-products and the RFG would be replaced by currently inexpensive natural gas*)

Chevron Richmond Revised [Hydrogen] Renewal Project and (proposed) Hydrogen pipeline to Martinez Shell Refinery.

City of Benicia: Valero Crude by Rail Project:

Plus: Marine Terminal Leases for Shell Martinez Refinery, NuStar Selby Marine Terminal and Tesoro Amorco.

The collective and significant increase in refining volume of the five local Bay Area Refinery Projects that are not on the Pittsburg WesPac site, but will be connected to WesPac, will

generate additional refinery and end-product Greenhouse Gasses and other pollutants in significant volumes. This enhanced Bay Area and consumer end-point GHG production will be significantly facilitated when the WesPac Project is completed. *Off-site emissions due to additional regional refining capability dependent upon the WesPac Oil Storage Depot are not directly addressed in the DEIR, but can be inferred by the size and scope of the overall oil storage and associated marine/railroad/pipeline enhancement project.* According to the WesPac DEIR:

“The total annual throughput for the entire Terminal would be approximately 70,200,000 BBLs of crude oil and/or partially refined crude oil per year.”

The regional refineries that will be connected to WesPac each have their own aforementioned projects that lock in coking, a process that require dense crude, such as the cheapest diluted bitumen from Canadian tar sands and high-sulfur heavy California shale oil. Coking removes carbon from the remaining refinery feed, leaving a product that can

be burned in the place of coal for electrical plants or for making steel. All Bay Area refineries have increased or plan on increasing hydrogen production, pipeline transport and consumption in order to accomplish desulfurization and hydrocracking, thereby increasing greenhouse gas production inherent in currently used methods of industrial hydrogen production. The coking for heavy process requires greater heat than is required for refining lighter crudes, and therefore, more production of GHGs and other airborne pollutants. Koch Carbon owns a petroleum coke (i.e., petcoke) storage/shipping plant in Pittsburgh, right on the water at 707 E. 3rd St.. Several Bay Area refineries use this bulk storage plant to send their petcoke to Asia from there.

Phillips 66 CEO Greg Garland “told analysts that the company was looking at railcars capable of transporting Canadian heavy crude to the West Coast.” The Valero project would provide the ability to process lower grades of raw crude and provide flexibility to substitute raw crudes. In addition, the project would optimize operations for efficient production of low-sulfur fuels, requiring more hydrogen production and consumption.

The EIR process for this WesPac Project presents a critical opportunity to engage in a genuine and thorough review of the full environmental impacts of WesPac’s proposed Project, specifically in the context of both the increased crude delivery capacity, the overall switch to lower crude quality by Bay Area

From Greg Karras: Communities for a Better Environment, email, Sept 12, 2013. on WesPac Project for Pittsburgh.

refineries connected to WesPac and the increased need for regional refinery hydrogen production.

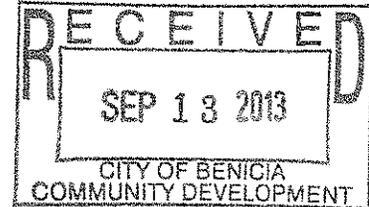
The proposed WesPac Project makes fundamental transportation (marine terminal and rail roads spurs), storage and associated equipment changes *designed specifically to enable the long-term crude quality switch* in refineries connected to WesPac. These Bay Area refinery changes are potentially irreversible, and although they are indirect to the WesPac Depot itself, the depot project will have *regional* environmental impacts that demand public and agency attention, and a full review from an air quality management perspective.

<http://www.ci.pittsburg.ca.us/Modules/ShowDocument.aspx?documentid=5675>

September 13, 2013

Via Fax and Email to

City of Benicia Community Development Department
Attn: Amy Million
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637
Email: amillion@ci.benicia.ca.us



Re: Notice of Preparation for an Environmental Impact Report for the Valero Crude by Rail Project

On behalf of the Natural Resources Defense Council (NRDC), which has over 1.4 million members and activists, 250,000 of whom are Californians and approximately 100 of whom reside in Benicia, we submit the following comments on the Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Valero Crude by Rail Project (Project). The NOP for the Project was issued on August 9, 2013 and indicated that the public comment period closes on September 13, 2013. Valero applied for a land use permit from the City of Benicia in December of 2012 to allow Valero to receive crude oil by train in quantities up to 70,000 barrels per day, in 100 rail cars per day.

We appreciate that the City of Benicia is preparing an EIR for this project. We also appreciate the list of potentially significant effects slated for evaluation. Our comments seek to enhance and broaden the list of important issues addressed in the EIR.

To avoid the harms presented by the project, the EIR must discuss alternatives and mitigation measures to reduce or avoid these significant environmental impacts. The EIR must describe a range of project alternatives, including a no-project alternative, and must analyze the environmental effects of each alternative. Cal Pub Res C § 21002; 14 Cal Code Regs § 15126.6. The EIR must also describe all feasible mitigation measures for each potentially significant impact that it identifies. These mitigation measures must be enforceable through conditions of approval, contracts, or other legally-binding means. See Cal Pub Res C § 21081.6(b); 14 Cal Code Regs § 15126.4(a)(2). In addition, when approving mitigation measures, the City must adopt a mitigation monitoring or reporting program to ensure compliance during project implementation. Cal Pub Res C § 21081.6(a)(1). This monitoring program should be described in the EIR so that the public and responsible agencies may comment on its effectiveness.

In particular, the EIR must fully evaluate the following potential impacts and mitigations measures:

Characteristics of the Crude Oil

The specific characteristics of the crude oil that this Project will bring to the Valero refinery are crucial pieces of information necessary to properly assess the impacts of the project during transport, handling and refining; this is because certain types of crude oils can have much greater air quality impacts when refined, can present increased risks of upset events at the refinery, and can present additional hazards when spilled relative to conventional crude. The following crude oil parameters must be disclosed and addressed in the EIR for each specific type of crude oil that the Project may handle:

- Trace elements (As, B, Cd, Cl, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, U, V, Zn)
- Nitrogen (total & basic)
- Sulfur (total, mercaptans, H₂S)
- Residue properties (saturates, aromatics, resins)
- Acidity (total acid number)
- Aromatics content
- Asphaltenes (pentane, hexane and heptane insolubles)
- Hydrogen content
- Carbon residue (Ramsbottom, Conradson)
- Distillation yields
- Properties by cut
- Hydrocarbon analysis by gas chromatography

In addition to the crude assay information listed above, each crude oil must be identified by API or specific gravity, and must describe the source of crude oil, indicate whether it has been blended, and identify the chemical materials with which it was blended. It is imperative that this information be disclosed and analyzed in the EIR in order to inform an accurate assessment of the full suite and magnitude of impacts of the Project and to inform appropriate project mitigation and project alternatives.

Air Quality Impacts

Air quality impacts from this Project are expected to be significant. Impacts will be even greater than anticipated in the Initial Study and Mitigated Negative Declaration for the Project, if the Project will result in Valero importing and refining dirtier crude oils than the current

slate, as is likely.¹ It is paramount that the EIR consider impacts related to *refining* the crude oil brought in by the Project in addition to the impacts of the rail terminal and storage tanks. The following must be fully evaluated and mitigated:

- Benzene and other toxic air emissions resulting from the transport, handling and refining of crude oils with lower APIs, higher sulfur or higher chemical contaminant levels (e.g. heavy metals or benzene) than the current slate. These higher emissions would be expected to occur from the use of diluent or lighter hydrocarbons that increase the volatility of the crude, increasing fugitive emissions from rail car unloading, tanks and refining.
- Contaminant emissions such as chromium, nickel and vanadium. Heavier crude oils may require additional energy and processing to refine. Air pollution resulting from increased boiler use, heating, steam, hydro-treating, hydrogen use and other processing must be assessed.
- Additional air emissions that could occur as a result of more corrosive new crude oils brought in by the Project contributing to an increased frequency of accident, upset and flaring events at the refinery.
- Creation of additional toxic byproducts, such as petroleum coke, including evaluation of coke dust and toxic constituents with coke dust particles.

Mitigation measures must include all possible measures addressing local community air quality, including but not limited to:

- Legally-binding requirements that diesel particulate filters and/or engines meeting the latest U.S. EPA emission standards on all diesel equipment, generators, vehicles and locomotives be used;
- Robust enforcement of engine idling limits;
- Electronic positioning systems for rail cars in the terminal;
- A permit condition that limits the sulfur levels and levels of other hazardous constituents in crude oil and sets parameters for the quality of the crude oil such as a minimum allowable API, in order to reduce the impacts of the Project; and
- All measures appropriate to address increased refinery emissions resulting from the Project.

Hazards and Hazardous Materials

Crude oil is a hazardous material that can be highly flammable and create a serious hazard to workers and the public. The EIR must assess and present appropriate mitigation strategies and project alternatives for the full range of increased hazards that could result from the project, including:

¹ For more discussion on the potential for this project to bring in dirtier crudes, see NRDC's July 1, 2013 comments on the Notice of Intent to Adopt a Mitigated Negative Declaration and the accompanying reports by the Goodman Group and Dr. Phyllis Fox.

- Rail car derailments, accidents, fires and spills could occur at any point along the rail line or in the terminal. The following issues must be addressed:
 - Are all rail lines that would be utilized in top repair and able to handle the very heavy tanker trains without risk of failure or derailment?
 - Have all communities, businesses and residents near the rail lines that would be utilized been notified of the Project?
 - In the event of an accident, are adequate emergency response personnel available to respond, and do they have sufficient response and containment equipment? Are they sufficiently trained for an effective and safe response?
 - In the event of a spill, particularly with unconventional heavy crudes mixed with diluents, are sufficient measures in place to prevent contamination of Suisun Bay and the fragile San Francisco Bay Delta?
- In the event of leaking tank or an accident related to handling and storage of the crude oil, are adequate emergency response personnel available to respond, and does Valero have sufficient response and containment equipment? Are Valero staff sufficiently trained for an effective and safe response?
- In the case of potentially more corrosive crude oils being transported to the refinery, are sufficient maintenance and metallurgy upgrade plans in place to handle a new crude oil? Are adequate emergency response personnel available to respond, and do they have sufficient response and containment equipment? Are they sufficiently trained for an effective and safe response?

Transportation and Public Safety

Additional rail traffic caused by this Project has the potential to disrupt traffic and impact public safety. The EIR must include a traffic study, and fully address the following:

- Mitigation measures to prevent traffic from backing up on the nearby freeway from the exit ramp;
- A grade separation to address traffic and safety hazards; and
- Mitigation measures to address impacts to emergency response access and response times to ensure that the additional rail crossings would not hinder ambulances and other emergency vehicles from reaching Benicia residents.

Noise and Quality of Life Impacts

Noise from trains is a common complaint often heard from communities near railyards or busy rail crossings. The Project has additional quality of life impacts, such as increased odors and dust that must be considered. The EIR must analyze and mitigate the following impacts:

- The Project is likely to increase rail activity, particularly at night. Noise impacts from the horns on trains, construction activity and other industrial activity must be fully addressed and mitigated.
- Some types of unconventional crudes, such as dilbits are associated with greater levels of strong odors due to their composition including a variety of sulfur containing

compounds, such as mercaptans, at higher levels. These odor impacts must be fully evaluated and mitigated.

- The potential for increased coke production must be evaluated, including how it would be stored and to what extent that storage could cause dust nuisance and toxic air contaminant exposures to the community. Any significant dust and air contaminant exposures from coke storage must be mitigated.

This Project has the potential for serious and irreversible harm to the greater San Francisco Bay Area caused by the import of exceptionally toxic substances. We support the City of Benicia's effort to perform a thorough Environmental Impact Review evaluating all of these impacts and all appropriate mitigation options. We hereby reference the detailed and expert comments submitted by the Natural Resources Defense Council on July 1, 2013; and strongly urge your consideration of our concerns.

Sincerely,

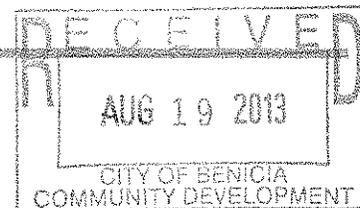


Diane Bailey, Senior Scientist
dbailey@nrdc.org
415-875-6127



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Amy Million - RE: Scoping Period comments, Valero Crude by Rail: Notice of Completion & Environmental Document Transmittal



From: <rogrmail@gmail.com>
To: "Amy Million" <Amy.Million@ci.benicia.ca.us>
Date: 8/19/2013 9:30 AM
Subject: RE: Scoping Period comments, Valero Crude by Rail: Notice of Completion & Environmental Document Transmittal
CC: "Brad Kilger" <BKilger@ci.benicia.ca.us>, "Belinda Smith" <bsmitgo@hotmail.com>

Ms. Million, planners and commissioners:

Again for the record as part of scoping for Valero's proposed Crude by Rail project, I want to expand on one item in my previous email. Under 1), I have asked that Scoping include Fiscal issues and impacts. I am particularly concerned that the impacts on city services and other costs be included in the study, including

- Financial impact on staffing in the Community Development Department and other city offices during the permitting process and construction
- financial implications of a possible emergency response and cleanup after an emergency spill, fire, explosion or other disaster, occurring on Valero property or on rail lines leading into Benicia
- financial impacts on current and future businesses in the Benicia Industrial Park (including the possibility of setbacks in recruiting should traffic, odors and safety be seen as unfavorable by potential incoming businesses, and also including impacts on city tax revenues plus from Valero, and minus from other potential BIPA losses)
- financial impacts on Benicia as a whole, should this project alter Benicia's public image as a Sustainable Community per our General Plan (including the possibility of setbacks in real estate, tourism and new green business, green research and development, again including city revenue projections)
- financial impacts on healthcare for refinery workers, industrial park owners and employees and Benicia residents, given the likelihood of increased pollutant releases during offloading and processing of heavy crudes, and given the new volume of pet coke wastes standing and in transit.

It seems to me that these financial impacts should be calculated over a period of at least the next 50 years.

Roger Straw

766 West J Street, Benicia, CA 94510
707.373.6826

From: rogrmail@gmail.com [rogrmail@gmail.com]
Sent: Monday, August 19, 2013 8:55 AM
To: 'Amy Million'
Cc: 'Brad Kilger'; Belinda Smith (bsmitgo@hotmail.com); Don Dean (donaldjdean@sbcglobal.net); George Oakes (oakes@earthlink.net); Rod Sherry (rsherry@csa-engineers.com); Stephen Young (escazuyoung@gmail.com); Susan Cohen Grossman (susancg@pacbell.net); Suzanne Sprague (Suzanne@solanolawgroup.com)
Subject: Scoping Period comments, Valero Crude by Rail: Notice of Completion & Environmental Document Transmittal

Amy Million, Principal Planner
Community Development Department

City of Benicia
 250 East L Street
 Benicia, CA 94510

RE: Scoping Period comments, Valero Crude by Rail

Dear Ms. Million:

With regard to the City's Notice of Completion & Environmental Document Transmittal, SCH # 2013052074, I want to raise a few immediate concerns for the public record, as follows:

1) I find that the section "**Project Issues Discussed in Document**" is incomplete. Surely this project will have impacts that should be reviewed under the categories:

- Coastal Zone
- Economic/Jobs
- Fiscal
- Septic Systems

Please revise the Notice with these additional factors included in scoping for the project.

2) I also find that the section "**Reviewing Agencies Checklist**" is incomplete. Please revise to include notification of the following listed agencies, and 4 additional agencies (**BOLD CAPS**) that are not listed.

- Dept of Boating & Waterways
- CalFire
- Coastal Commission
- Delta Protection Commission
- Dept of Education
- Energy Commission
- Dept of Health Services
- Integrated Waste Management Board
- Office of Emergency Services
- S.F. Bay Conservation & Development Commission
- San Joaquin River Conservancy
- SWRCB Water Quality
- SWRCB Water Rights
- Dept of Water Resources
- **SOLANO LAND TRUST** (since UP tracks apparently go through some of their land) and
- **SUISUN RESOURCE CONSERVATION DISTRICT** (which represents private landowners in the Suisun Marsh on a variety of issues at Federal, State, and local levels)
- **BAY AREA AIR QUALITY MANAGEMENT DISTRICT**
- **BAY CONSERVATION AND DEVELOPMENT COMMISSION**

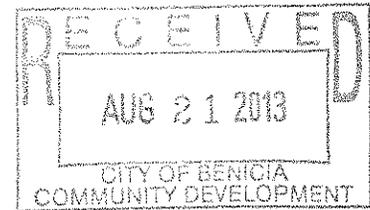
Thank you for your good work in facilitating this important public process.

Roger Straw

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August 20, 2013

Amy Million, Principal Planner
Community Development Department
City of Benicia
250 East L Street
Benicia, CA 94510

Dear Ms. Million:

I have spent countless hours recently studying documents related to the Valero Crude by Rail project. I am becoming more familiar with CEQA and in particular, Scoping Periods. Please accept my comments below in response to the City's August 9, 2013 **Notice of Preparation of an Environmental Impact Report and Notice of Scoping Meeting: Valero Crude by Rail Project**. Please enter my comments as part of the formal record for the Scoping Period, and respond as part of that process and the subsequent EIR.

First, I want to incorporate by reference all of my comments, those of the Natural Resources Defense Council, Dr. Phyllis Fox, The Goodman Group, and Benicia residents Marilyn Bardet, Kathy Kerridge, Mary Frances Kelley Poh, Constance Beutel, Steve Goetz, Ed Ruszel, Jack Ruszel, Bob Berman and others who wrote or spoke in opposition to the Initial Study/Mitigated Negative Declaration, including opposing comments submitted prior to, during and after the Planning Commission hearing on July 11, 2013.

Scoping Period concerns and questions for planners, Valero and Commissioners regarding the project's potentially significant effects:

1. *Transportation/Traffic*: Please describe the regulatory framework guiding interstate and intrastate transport of fossil fuels – in particular, diluted bituminous crude derived from tar sands and crude from hydraulic fracturing of shale deposits – and detail the conditions of authority and enforcement of those regulations that would be pertinent to the operation of the Valero Crude by Rail Project.
2. *Hazards and Hazardous Materials and Transportation/Traffic*: Please list and describe in detail all guidelines and any and all local, state and federal laws pertinent to regulation of rail transport of hazardous materials, including any special

regulations for transport of crude oil that would be applicable to the operations of the Valero Project. Specify any regulations that would be applicable in the case that Union Pacific tracks traveled in close proximity to schools, hospitals, cultural centers, civic centers, commercial and industrial centers and residential neighborhoods, and also in the vicinity of power plants, gas lines, lakes, dams, rivers, marshlands, bridges and water transport facilities.

3. *Hazards and Hazardous Materials and Transportation/Traffic:* Please describe to what extent Counties, Cities and other regulatory agencies are currently notified of the transport of potentially explosive fuels. Describe any plans for advance notification to be given to California cities, counties and regulatory agencies that are "up-rail" of Benicia given the anticipated significant increase in these shipments due to the Valero Crude by Rail project. Describe opportunities for these cities and counties to comment on the project in advance of its approval.
4. *Hazards and Hazardous Materials and Transportation/Traffic:* Please describe all federal requirements concerning tanker cars that may be used for transport of blended bitumen and heavy crude oil. Detail what exactly distinguishes an aging tanker car from state-of-the-art tanker cars, and describe the range of cars Valero and Union Pacific are planning to utilize. Describe specific safety precautions Valero is taking with the rail tanker cars to ensure that none of the crude transported could spill (e.g. double hulls, thicker gauge metal, additional engineers or trained personnel on board, additional track & equipment inspections, etc.) Please answer these related questions: What "DOT class" of rail cars will be required of Valero? What are the regulations governing required manufacturer's specifications for cylindrical tanker cars that may carry 1) diluted Alberta tar-sands bitumen, and 2) crude oil blends extracted from fractured shale deposits? What are the standards regarding design, manufacture, aging, testing for safety of these tanker cars? Do these requirements differ from those governing sweet crude delivered by rail?
5. *Hazards and Hazardous Materials and Transportation/Traffic:* Recent developments in methodologies for extracting bitumen from tar sands and extracting crude by hydraulic fracturing of shale involve blending the extracted bitumen or crude with other often toxic and highly acidic chemicals before transport. Please describe evolving safety standards for rail tanker cars that would prevent leaks, spills and worse disasters given the new blends. Describe Valero's plans and those of Union Pacific (or other rail companies) with regard to transport vehicles intended for use in transporting these toxic blends.

6. *Air Quality and Hazards and Hazardous Materials:* Please describe Valero's plan for normal procedures when offloading heavy crude at the refinery, including hose, valve connectors and clamp specifications. Include details regarding the allowable amount of fugitive emissions when connecting and disconnecting hoses; how much time will be necessary for how many refinery employees to connect and disconnect each car; the allowable amount of spill during an individual tanker car's connect/disconnect procedure; what records exist to document expectable levels of such spills during connect/disconnect; what is the likely fugitive emission level from vapors at the top of a tanker car while being offloaded; and again, what records exist to document expectable levels of such vapors.
7. *Air Quality and Hazards and Hazardous Materials:* Please describe in detail Valero's plan for disposal of pet coke, including estimates of increases in toxicity and in quantity of the pet coke following processing of the new diluted blends of crude, containers that will be used and methods for filling those containers, the location of the containers and the time they will be allowed to sit before transport, the method of transport and the destination for disposal. Describe the potential for leakage of pet coke dust into the air, including studies from other locations such as Detroit, and industry learnings from those problem locations, and mitigations and plans to prevent such hazards in and around Benicia.
8. *Air Quality, Hazards and Hazardous Materials, Transportation/Traffic, Fiscal:* Recent reports indicate that a newly revised project is undergoing a recirculated draft environmental review to develop a new crude oil import, storage and transfer facility in Pittsburg, CA, including a crude by rail component. See http://www.contracostatimes.com/contracostatimes/ci_23870322/oil-storage-and-transfer-facility-proposed-pittsburg-waterfront and <http://www.ci.pittsburg.ca.us/index.aspx?page=700>. The Pittsburg facility as proposed would import 240,000 barrels/day, over three times Valero's proposed crude by rail import. The EIR for Valero's proposed project should calculate *Indirect Impacts* and *Cumulative Impacts* for the Bay Area based on the combined totals of these two projects, and set both in context of an ever-expanding role for crude by rail in the several Bay Area refineries. Note also that approval of the Pittsburg project would certainly affect fiscal projections concerning the potential for success of the Valero project, and should be noted in a financial analysis. Valero could conceivably even choose to import crude from Pittsburg rather than by direct overland routes from the Midwest. This could alter plans considerably, and should be laid out as an alternative during the EIR.
9. *Hazards and Hazardous Materials and Transportation/Traffic:* Please locate and summarize findings in any official federal registry of all rail accidents, including the

extent of the cost of the accidents, including cleanup. If there is no federal registry, please cite the best source for such information, and again, summarize findings. Findings should include but not be limited to the following: How many at-grade train accidents have there been in California? Of those accidents, how many included loss of life, explosions, fires? What is the best estimate of the probable frequency of such accidents per 1000 at-grade crossings?

10. *Hazards and Hazardous Materials and Transportation/Traffic*: Please detail any regulations (in the United States or elsewhere) restricting the transport of fossil fuel on at-grade railroad crossings.
11. *Transportation/Traffic*: Describe the extent to which Union Pacific (or any other operator) may obstruct cars and trucks at-grade crossings. Cite the enforcement entity for regulation and enforcement of at-grade crossings. Make available the record for adequacy in responding to complaints and issuing fines in California and nationwide.
12. *Transportation/Traffic*: Describe how far rail cars will be permitted to extend outside of the proposed Valero off-loading facility and how many rail cars may be stockpiled at any one time, and for what duration.
13. *Hydrology and Water Quality, Biological Resources and Transportation/Traffic*: The Suisun Marsh, just east of Benicia and directly adjacent to Valero, is the largest brackish wetlands in western United States and a habitat for endangered species. Tracks going through the Suisun Marsh need constant maintenance because of the soil conditions. Please describe how these maintenance factors pertain to the condition and safety of the rails under increased usage by Valero's 100 cars/day carrying heavy crude? Describe in detail:
 - a. How much does a tanker car full of diluted bitumen (and other forms of crude oil) weigh?
 - b. What gauge steel is required to safely carry these weights?
 - c. Are the rails currently adequate? What cost might be incurred to upgrade and maintain such a rail line? What agency will bear this cost?
 - d. What authority monitors the safety and condition of these rail lines, and how often, and where can reports be reviewed?
 - e. Are heavy tanker cars carrying crude expected to cause more wear on rails and therefore require higher rail maintenance costs?
 - f. What mitigation measures are required to ensure survival of endangered species and air, water and land quality in the Suisun Marsh?

14. *Hydrology and Water Quality, Biological Resources, Hazards and Hazardous Materials, Transportation/Traffic, and Geology and Soils:* Describe in detail an interagency advance plan for a crude oil train accident.

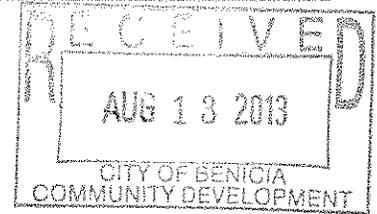
- a. *Suisun Marsh:* In the event of an accident occurring in the Suisun Marsh, when emergency responders from Valero, Benicia and Solano County are called upon, which agency would have lead authority for cleanup over a federally regulated entity such as an interstate railroad? What would be the appropriate authority to lead cleanup efforts extending into the Marsh? Because the accident involves interstate transportation, at what time would the federal government step in and take the lead? What agency or agencies would pay for the cleanup and restoration? What new methodologies will be needed to effectively clean up diluted bitumen? Are such methodologies known and in place in Solano County? (See 2010 Kalamazoo River spill - \$1 billion spent, not yet cleaned up www.epa.gov/enbridgespill/.) To what extent are private Duck Clubs protected or compensated for losses in the event of an accident?
- b. *Communities like Benicia all along the rail route:* The same concerns as in a. pertain. In the event of a rail accident in Benicia, or within a city along the route in California or beyond, when emergency responders are called upon, which agency would have lead authority for cleanup over a federally regulated entity such as an interstate railroad? What would be the appropriate authority to lead cleanup efforts near the railroad on public properties and/or private commercial, industrial and residential properties? Because the accident involves interstate transportation, at what time would the federal government step in and take the lead? What agency or agencies would pay for the cleanup and restoration? What new methodologies will be needed to effectively clean up diluted bitumen? Are such methodologies known and in place in Solano County? (See 2010 Kalamazoo River spill - \$1 billion spent, not yet cleaned up <http://www.epa.gov/enbridgespill/>.)

Thanks for your attention to these important considerations.

Roger D. Straw
766 West J Street
Benicia, CA 94510

Amy Million - Comments about Valero Rail Plans

From: Grant Cooke <grantcooke11@gmail.com>
To: <amillion@ci.benicia.ca.us>
Date: 8/13/2013 11:39 AM
Subject: Comments about Valero Rail Plans
CC: Roger Straw <rogrmail@gmail.com>, Elizabeth Patterson
<elopato@elizabet...>



Amy,

I'm glad to see that the city is calling for a full EIR on the Valero Crude by Rail proposal. This is a critical issue that will impact our community for years to come and it should be carefully and thoughtfully examined. There have been too many accidents and incidents involving oil refineries recently in the Bay Area, and cities need to be extremely vigilant.

Regards,
Grant

Grant Cooke

Principal

Sustainable Energy Associates, LLC

925-989-7117

Skype id: grant.cooke19

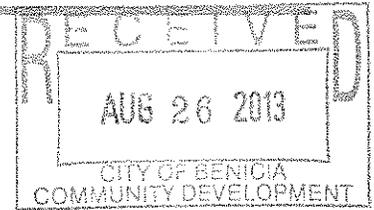
gcooke@sustainableenergyassc.com

www.sustainableenergyassc.com

Global Energy Innovation: Why America Must Lead by Woodrow Clark and Grant Cooke is now on sale at Amazon.

Amy Million - Valero crude by rail project

From: Dennis Lewis <lewylewy@pacbell.net>
To: "amillion@ci.benicia.ca.us" <amillion@ci.benicia.ca.us>
Date: 8/26/2013 10:32 AM
Subject: Valero crude by rail project



As a native Benician, I believe the crude by rail project should be given the go-ahead. I lived here when the Arsenal closed and saw the impact of losing revenue. Humble Oil, at the time, came in and rescued our dying city, or town as it was then. I have worked out there for contractors and have seen first hand how they operate, which looking at their track record, is pretty incredible. I support any endeavor they wish to embark upon, knowing that they will do it in a safe manner. They have been a good neighbor and they deserve our support. Thank you for allowing me to have my say, sincerely, Dennis Lewis

From: Plewis <pjlewis363@gmail.com>
To: "amillion@ci.benicia.ca.us" <amillion@ci.benicia.ca.us>
Date: 9/10/2013 7:45 PM
Subject: Comment for the public record, Valero Crude by Rail Project

Dear Ms Million,

I would ask that the following issues be considered in the full EIR being prepared for the Valero by rail project.

What will be the impact on greenhouse gas emissions when taking into account all that are produced from the obtaining the crude, transporting it, and refining it? As climate change is a global issue, it makes no sense just to evaluate what GHGs are emitted here in Benicia, as was done in the first report.

Can the sulphur content and other components in the crude that could produce a noxious odor be measured? On average, how many days is the prevailing wind blowing towards Benicia from the refinery?

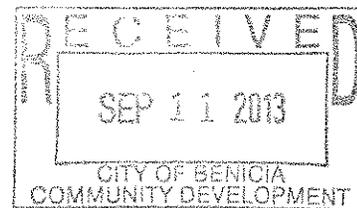
As a mitigating measure, could Valero be prevented from refining sour crude on those days?

Regarding transportation issues, how much does each fully loaded tanker car weigh? How much distance and how long would it take to stop a 50 tanker long train going at the top speed permitted in the vicinity of Benicia? How long is a 50 tanker train? What is the explosive force for each tanker car in the event of a crash and the fuel igniting? How large an area would be flattened in the event all 50 cars ignited?

Thank you for your consideration of these issues.

Rick Slizeski
Benicia

Sent from my iPad



TO: City of Pittsburg, Sep. 11th 2013
Development Services-Planning Division
Attention: Kristin Pollot
65 Civic Avenue, Pittsburg CA 94565

RE: Recirculated DEIR, EIR, NEPA and Environmental Justice Studies for WesPac
Pittsburg Energy Infrastructure Project West 10th Street

Please include the following statements, questions and exhibits in the administrative record OF ANY AND ALL LOCAL, STATE AND FEDERAL AGENCY INVOLVED IN REGULATION OR SITING OF THIS PROJECT.

For the purpose of clarity all comments and questions herein offered are to be considered as NEW COMMENTS AND QUESTIONS by the Recirculated DEIR and answered in writing in accordance with the California Environmental Quality Act (CEQA). These comments and questions are based on new evidence submitted by WesPac, and as such they are new to this proceeding. Failure to answer in writing as requires by law will be denial of my rights to participate in this proceeding. *Use of discriminatory State and Federal laws is a denial of my right to due process under the law as granted to all Citizens of the United States of America by our Constitution.*

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Executive Summary: The Residents of Pittsburg in the Impact Zone

The WesPac Pittsburg Energy Infrastructure hydrocarbon storage tank farm project is literally a stones throw away from a predominantly low-income, minority community consisting of approximately 120+ homes, two churches, one school and two community parks; Marina Park and Riverview Park. It is common in the summer time to see windows and doors of residences wide open for cooling due to the lack of air conditioning of homes. Residents retreat to the Riverview Park during the summer to cool off in the Delta breeze. Water sport and nature enthusiast use the park as access to the delta. Families bring their children to the park. **The homeless use the park for shelter.** . Subsistence fisherman use Riverview Park for access to the delta for fishing. The fish they are catching are known to be contaminated with industrial toxins and mercury. Residents report high levels of cancer and asthma. **WesPac Original Draft EIR estimates the increase in cancer at 14 in a million which is in excess of the thresholds of significance** identified in the Bay Area Air Quality Management District California Environmental Quality Act (CEQA). This is in addition to the 2005 EPA estimate of 50 in a million cancer rate for Pittsburg; brings the total cancer rate to an **estimated 64 in a million.** WesPac Project will result in an increase in cancer rates to all that use this park. **It is clear Pittsburg low-income minority community bears a disproportionate share of the cumulative burden of environmental exposure.** Furthermore these facts would indicate that Riverview Park is an important sensitive receptor site adversely impacted by the project. **Riverview Park needs to be included in the Recirculated Draft EIR as a sensitive receptor.**

Executive Summary: Facility Constructed as PG@E Power Plant with Fuel Storage for Plant

Bunker fuel #2 was imported to PG@E for the power plant needs and latter as back-up supplies for PG@E. The power plant was built and permits as such. It was never permitted as a primary retail or wholesale storage facility for rail, ship or pipeline exports. The use of this facility as proposed is a NEW USE.

Executive Summary: Sighting and Construction Concerns

The hydrocarbon tank farm was built over 50 years ago by PG&E on very poorly compacted marsh mud and sand; highly susceptible to **liquefaction, flooding and settling.** Many earthquake faults are nearby with an estimated **98.006% probability of a 5.0 quake, 61.613% probability of a 6.6 quake, and a 7.5 quake predicted as max in next 50 years.** Existing tanks are made of what is now known to be the wrong metals and used outdated welding techniques. The tanks have been abandoned with little or no up keep. Some tank tops have collapsed and other are severely rusted. This leaves these

tanks very susceptible to major failure due to brittle metal fractures. Computer modeling and on site inspection of tanks failures have confirmed that current tank specifications and secondary containment strategies are not sufficient. It is reasonably foreseeable that the hydrocarbon storage tank farm could experience a 7.5 earthquake; hydrodynamic loads on tanks during an earthquake will be 25 percent higher than current code specification. This combined with a near total loss of hydrocarbon tank foundation due to liquefaction and no reinforced hydrocarbon tank support down to bedrock will result in 25 percent of tank farm contents flooding neighborhood homes, a major Northern Californian electrical substation, a train yard full of industrial tank cars, and the Delta.

Executive Summary: The project is in a flood zone from both storm run off and Tidal Surge There is a reasonably foreseeable probability that the entire sit alone with the rail car could be submerged, tanks and rail cars afloat and leaking due to storm and tidal surge. (The "Ark Storm Scenario," prepared by the U.S. Geological Survey and released at the Ark Storm Summit in Sacramento on Jan. 13-14, combines prehistoric geologic flood history in California with modern flood mapping and climate-change projections to produce a hypothetical, **but plausible**, scenario aimed at preparing the emergency response. We think this event happen once every 100 or 200 years or so, which puts it in the same category as our big San Andreas earthquake/tsunami for this type of hazard <http://pubs.usgs.gov/of/2010/1312>

Executive Summary: Hydrocarbon tank failures common

June 5th 2006 Mississippi USA.
Dec 11th 2005. Burchfield oils storage, Hertfordshire
Sep 3rd 2005 Louisiana USA
Oct 25th 2004 Belgium
June 4th 2003 Brisbane, Australia
July 20th 2002 Nigeria
May 2002 Poland
August 21st 2001 five tanks go up Kansas USA
July 17th 2001 Delaware USA
2000 Ohio USA
1999 Michigan USA
USEPA 1990 to 2000 312 tank farm accidents USA
1997 Iowa USA
Oct 16th 1995 Pennsylvania USA
Aug 10th 1990. Three river Texas 30 are burned as small crude oil tank goes up USA
Dec 21st 1985 Naples, Italy
Losses due to earthquake
1964 Alaska; 1960 Chile; 1960 two in Japan: 1964 Niigata; 2003 Tokachi 1980 rupture of one 100000bbl crude oil storage tank did extensive damage to four block area, damage 8.5 million.

Executive Summary: Fires and Explosions are the Biggest Immediate Threat to Live and Property during a Hydrocarbon Spill

The hydrocarbon storage facility is very vulnerable to **fire and explosions** due to the extremely flammable nature of the hydrocarbons inside. As devastating and toxic as the hydrocarbons are to the environment and the human body, the biggest immediate threat to human live and property are fires and explosions. Within 15 minutes of a hydrocarbon spill an extremely explosive condition can result as the released heated hydrocarbons vaporizes and mixes with the oxygen in the air. This condition is referred to by the U.S. military as an air/ fuel bomb, and is a highly effective weapon. **Industry stands require hydrocarbon spills be completely foamed in 15 minutes to prevent this catastrophic explosion from happening.** Each rail car must be filled and stored in its own blast bunker, similar to how Concord Naval Weapons Station loaded rail cars. Rail right of way through Pittsburg protected on both sides with blast burms. A clear zone constructed .25 of a mile wide on each side. Remember Roseville train explosions of 1973? <http://www.insensitivemunitions.org/history/railroad-train-fires-and-munition-explosions/>

Executive Summary: Secondary Barrier Must Contain Shock Wave and Extreme Heat; NOT JUST SPILLED HYDROCARBONS as the applicant and others would have you believe. In this video you can see a relatively small amount of fuel is first dispersed into the air creating an air/ fuel mixture, then detonated with the result of total destruction of 2 story structure from the shock wave and the release of a massive fire ball. <https://www.google.com/url?sa=t&ret=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CD0QtwIwAw&url=http%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3Dzf7m7hN5Szc&ei=wEkrUp6IEOXF2wW0o4GgDw&usg=AFQjCNEykvij9JHCR0rj8qK8NJYBq8gtKA>

Executive Summary: Need for Onsite Safety Equipment to Protect Live and Property

It is reasonably foreseeable that in place safety equipment and trained personal will be needed: backup power supply capable of running the entire facility even if facility is completely under water. A self contained on site foaming rings around each tank top, foaming into double wall constructed tanks, **secondary blast containment structure** around each hydrocarbon tank equipped with self contained foaming ring and capable of stopping any lateral blast of complete storage tank assembly into another storage tank or the community. A third outer containment barrier with yet another self contained foaming ring and automated water/foam monitors manned by a dedicated 24 hour firefighting crew. All vapors from all scores must be collected and not allowed to be released into the environment where it might get detonated. **If you have a vapor release point into the environment you have oxygen introduction point into the system.** All has to be able to withstand extreme temperatures, total loss of foundation stability do to liquidation, 7.5 earth quake (25% stronger than current code) and complete flooding of the facility (10 feet or more) from storm runoff and tidal action. Nitrogen replacement of atmosphere into ships, tank, pipes, double halls and rail car as crude is removed. This will significantly lessen but not stop the chance of a highly explosive condition forming of oxygen and hydrocarbon vapor. In addition to the 24 hour firefighting grew, 24 hour

skimmer and spilled hydrocarbon recover crew, the facility needs to maintain a minimum 5 man operation crew 24 hours a day. The facility must be equipped with state of the art computer controls, sensors, redundant back up pumps, pipes and tanks. There must be enough redundant pumps, pipes and tanks to transfer the entire hydrocarbon storage if needed in an emergency. Blast shelters and walls need to be built at near by schools, churches and community accessible places. Blast shelters to be equipped to handle multiple severely burned and injured patients. School personal and community members trained on how to treat severely burned children and adults. It is reasonably foreseeable Firefighters response will not be in time to prevent multiple blocks of Pittsburg burning to the ground in the event of fire if the aforementioned safeties are not in place.

Executive Summary: Need for State of the Art Monitoring

The tanks must be constantly monitored for water buildup at bottom of tank. Water build up can lead to a very dangerous and uncontrollable condition known as a boil over. Tank bottoms must be monitored constantly for any deformation that could collect water at bottom of tank. Tank foundation monitored for any ground subsidence that might compromise the integrity of the tanks. Tanks monitored for excessive pressures, vacuum, temperatures and over fill.

Executive Summary: Need For Protection Agents Terrorist Attack

This extreme flammability, easy access to facility by already existing public access, and nearby major electrical substation, rail cars full of flammable and toxic materials, military ammunition trains; possibly with nuclear war heads (neither confirmed or denied by the U.S.) makes this project reasonably foreseeable as an ideal target for terrorist attack. Hydrocarbon and rail facilities are routinely targeted for terrorist attack world wide. This project will have NO defense agents such attacks. **Loss of a very near by major electrical substation could leave Northern California blacked out for weeks, costing the Nation's economy billions. (Congressional report Contra Costa County is potential target terrorist attack**

<http://www.co.contra-costa.ca.us/archives/42/Terrorism%20SFC%207.7.05.pdf>)

There is such a high and real present danger to the citizens of Pittsburg to a terrorist attack that specifics of the Congressional study have been classified. This fact standing on its own is enough to warrant the stopping of this project. If government agencies allow this project to go forward it will be sending only one message. Persons who can afford an air line ticket are more valuable than the citizens of Pittsburg.

To this day government agencies have done **absolutely nothing** to protect the citizens of Pittsburg. There are rail cars after rail cars of some of the most dangerous materials known to man just yards away from homes and schools. It is literally possible to pull over to the side of the road, get out of your car and walk right up to these rail cars. No fences, no blast berms, no security force. These rail car stay next to schools even though just a few miles west there is a rail facility that was built and run by the U.S. government which was specifically built to handle and secure dangerous rail car materials: Concord Naval

Weapon Station. This facility is now in the process of being dismantled so rich developers can get even richer at the expense of Pittsburg residents' safety.

Executive Summary: Need For Protection of Wildlife, Scenic, Recreational Habitats and Antioch Dunes National Wildlife Refuge

West Pac tank farm is 3000ft upwind of Browns Island Regional Shoreline; 14000ft up wind of Dow Wetland land Persevere and Sherman Island Water fowl Management Area, and 24000ft up wind of **Antioch Dunes National Wildlife Refuge**. All have endangered plants and animals. All will be adversely affected by air pollution and hydrocarbon spill damage during flood tide. Their scenic value obscured by ships and pollution haze. All could be permanently lost just buy one minor hydrocarbon spill. These areas will need permanent hydrocarbon barriers install and maintained, tons of hydrocarbon dispersant, miles of movable containment booms, dozens of hydrocarbon skimmers on site and manned 24 hr a day.

Executive Summary: Need for Project not Supported by Evidence

The need for this terminal has not been verified or supported by the evidence. The California Energy Commission (CEC) reports cited by the Recirculated Draft EIR does not take into account refineries in the S.F. bay are well aware of projected decrease of hydrocarbon delivery to refineries by pipe line. Refineries are in the process of at least doubling their ship handling capacity. All refinery ship terminals provide a shorter shipping route than the Pittsburg terminal. **Using refinery terminals directly will result in millions of tons of reduction of air pollution compared to using the WesPac facility.** Air pollution that is produced will be spread out over a larger area with lower concentration in any one location. There is also a less likelihood of tanker mishaps in bay and delta, and less likelihood of invasive species contaminating the bay and delta.

Executive Summary: The California Energy Commission (CEC) Report in Violation of CEQA

The CEC report was produced without pubic notifications and input, furthering the self interests of the oil industry. The CEC has a record for discouraging pubic input (calfree.com). **The CEC has no authority in sighting oil facilities.** Yet the Recirculated Draft EIR quotes the CEC as unquestionable authoritative proof of need. It is obvious the decision to build has already been made by the CEC. The process at this point is nothing more than a smokescreen to disguise this fact.

Executive Summary: History of Discrimination of Pittsburg Residents by Public Agencies

The Recirculated Draft EIR still does not address why the applicant stated in the Original Draft EIR air pollution and ship traffic is of major concern when it is located in the middle of the playground of rich yacht owners and homeowners but is ok when concentrated in the midst of homes, schools, churches and playgrounds of low-income, minority community. Is it because the applicant is convinced that agencies are more likely to approve the project if they believe the project will benefit the wealthy over low-income communities? Humanity deserves an answer to this question.

A cursory look at S.F. bay area agency actions might support such a conclusion. The BAAQMD, CARB and the state of California continue to support a discriminatory practice of letting applicants buy pollution credits from outside the adversely affected community and concentrating pollution within already polluted low- income, minority communities, even when the affected community is already above state and federal pollution levels.

BART and highway extension through Pittsburg did not include the completion of Range Road overpass even though the City, police, fire department, school district and emergency responders all testified that the overpass was needed to better protect and serve the community. Agencies response was that Pittsburg was not deserving of an overpass and splitting the community permanently was not their problem. When we look at what those same agencies did for Lafayette and Walnut Creek we see for Lafayette they built 6 under passes (between Acalanes Rd to Pleasant Hill Rd on Highway 24) and for Walnut Creek two major over passes (between Pleasant Hill Rd to Ygnacio Valley) to serve only a few wealthy homeowners, homes that had other means of access to the nearby community.

A thriving, finically lucrative and community supporting fishing industry in Pittsburg was destroyed by public agencies allowing the Delta water to be diverted away and polluted by industry. This destruction of Pittsburg fishing economy was for the so purpose of making rich property owners, developers and industry stock holders richer.

Pittsburg Unified School District had to close a school and sign a voluntary letter of compliance to answer concerns of racial discrimination.

Keller Canyon land fill was located in Pittsburg so that wealthy equestrians would not lose their riding range even though their location would have been more centrally located, producing less truck traffic and pollution

The CEC, BAAQMD, CARB and the state of California allowed power plants to use outdated emissions controls and concentrate pollution in Pittsburg by use of pollution credits from outside the affected area. CEC did not require an EJ analysis as there are **“not enough minorities in Pittsburg to study.”** **The CEC went as far as to hold seminars for other state agency to teach them how to handle low income minority communities, thus institutionalizing discrimination against EJ communities in California.**

Local and state agency allow GWF to build several small dirty Petroleum Coke burning power plants instead of one large one to get around strict pollution standards

PUC only gave PG&E a warning when it was found out PG&E went ahead with power line upgrades without public input, thus denying Pittsburg the opportunity to have high power lines underground. High voltage power lines are now strung all over Pittsburg, detracting from the landscape and bringing down property values.

Pittsburg Unified School District Files EJ complaint agents the City of Pittsburg, BAAQMD, CEC and CARB because of these agencies continued attracts on the health and welfare of Pittsburg Students and **the major adverse effects on the learning environment, due to health problems from air pollution.**

Los Medanos Community College was built with false smoke stacks and fake industrial doors so student would become accustomed to the environment in with they are expected to live.

Original Draft EIR attempts to use past discrimination to justify continued discrimination:

The original Draft EIR suggests continued discrimination is OK since public agencies have already destroyed Pittsburg recreational and scenic value as a tourist destination by killing off sport fishing, filling Pittsburg's hills with trash and by walling off the delta from public view and use with industrial blight. They have made sure that Pittsburg residents will not prosper by providing poor educational opportunities and closing off access to near by health care. They have blighted the City with high voltage lines, cut the City in half with BART and allowed the air to be polluted above State and Federal standards. Original Draft EIR goes on to suggest that if public and private agencies have been successful in dummied down a community's expectations that this dummied down expectation is what should be used to judge a project; not what is right: That every man, women and child desires the right to live in a as clean and as beautiful an environment as anyone else. **Civil Rights title VI, Cal Gov. Code 11135, Presidential Executive Order 12898**

The **Recirculated Draft EIR** once again tries to use discriminatory Federal law to justify continued discrimination of the residents of Pittsburg. "As railroad operations are preempted from local and state environmental regulations by federal law (under the Interstate Commerce Commission Termination Act), the movements of locomotives to and from the Rail Transload Facility and within areas of potential impact for the project are included in this EIR for evaluation and discussion purposes only. The City of Pittsburg and other state and local responsible agencies are preempted from imposing mitigation measures, conditions or regulations to reduce or mitigate potential impacts of BNSF train movements"

Imagine if:

- [Ralph Abernathy](#) (1926–1990) clergyman, activist, [Southern Christian Leadership Conference](#) (SCLC) official
- [Susan B. Anthony](#) (1820–1906) [Women's suffrage](#) leader, speaker, inspiration
- [Ella Baker](#) (1903–1986) SCLC activist, initiated [Student Nonviolent Coordinating Committee](#) (SNCC)
- [James Baldwin](#) (1924–1987) essayist, novelist, public speaker, SNCC activist
- [Daisy Bates](#) (1914–1999)

- [Dana Beal](#) (1947–) pro-hemp activist, organizer, speaker, initiator
- [Jeremy Bentham](#) (1748-1832) British philosopher, writer, and teacher on civil rights, inspiration
- [James Bevel](#) (1936–2008) SCLC's main strategist, organizer, and Action leader
- [Claude Black](#) (1916–2009)
- [Antoinette Brown Blackwell](#) (1825-1921) - founded [American Woman Suffrage Association](#) with [Lucy Stone](#) in 1869
- [Julian Bond](#) (1940–) activist, politician, scholar, lawyer, [NAACP](#) chairman
- [Lenny Bruce](#) free speech advocate, comedian, satirist
- [Lucy Burns](#) (1879–1966) women's suffrage/voting rights leader
- [Stokely Carmichael](#) (1941–1998) SNCC and Black Panther activist
- [Carrie Chapman Catt](#) (1859–1947) suffrage leader, president [National American Woman Suffrage Association](#), founder [League of Women Voters](#) and [International Alliance of Women](#)
- [Cesar Chavez](#) (1927–1993) Chicano activist, organizer, trade unionist
- [Claudette Colvin](#) (1939–) [Montgomery Bus Boycott](#) pioneer, independent activist
- [Marvel Cooke](#) (1903–2000), journalist, writer, trade unionist^[1]
- [Humberto "Bert" Corona](#) (1918–2001) labor and civil rights leader
- [Dorothy Cotton](#) (1930–) SCLC activist, organizer, and leader
- [Norris Wright Cuney](#) (1846–1898), Texas politician
- [Eugene Debs](#) (1855–1926) organizer, campaigner for the poor, women, dissenters, prisoners
- [Frederick Douglass](#) (1818–1895) [abolitionist](#), women's rights, writer, organizer
- [W. E. B. Du Bois](#) (1868–1963) writer, scholar, founder of NAACP
- [Charles Evers](#) (1922–) Civil Rights Movement activist
- [Medgar Evers](#) (1925–1963) NAACP official
- [James Farmer](#) (1920–1999) [Congress of Racial Equality](#) (CORE) leader and activist
- [Louis Farrakhan](#) (1933–) Minister, National Representative of the Nation of Islam
- [James Forman](#) (1928–2005) SNCC official and activist
- [Marie Foster](#) (1917–2003) activist, local leader in [Selma Voting Rights Movement](#)
- [Betty Friedan](#) (1921–2006) writer, activist, feminist
- [Mohandas Gandhi](#) (1869–1948) activist, writer, philosopher, inspiration
- [William Lloyd Garrison](#) (1805–1879) writer, organizer, feminist, initiator
- [Dick Gregory](#) civil rights movement, free speech advocate, comedian
- [Olympe de Gouges](#) (1748–1793) women's rights pioneer, writer, beheaded after French Revolution
- [Prathia Hall](#) (1940–2002) SNCC activist, civil rights movement speaker

- [Fannie Lou Hamer](#) (1917–1977) activist in [Mississippi movements](#)
- [Harry Hay](#) (1912–2002) early leader in American [LGBT rights](#) movement, founder [Mattachine Society](#)
- [Lola Hendricks](#) (1932–) activist, local leader in [Birmingham Movement](#)
- [Jack Herer](#) (1939–2010) pro-hemp activist, speaker, organizer, author
- [Gordon Hirabayashi](#) (1918–2012) Japanese-American civil rights hero
- [Myles Horton](#) (1905–1990) teacher of nonviolence, pioneer activist, [Highlander Folk School](#)
- [T.R.M. Howard](#) (1908–1976) founder of Mississippi's Regional Council of Negro Leadership
- [Julia Ward Howe](#) (1818–1910) writer, organizer, suffragette
- [Dolores Huerta](#) (1930–) labor and civil rights activist
- [John Peters Humphrey](#) (1905–1995) author of [Universal Declaration of Human Rights](#)
- [Jesse Jackson](#) (1941–) clergyman, activist, politician
- [Nellie Stone Johnson](#) (1905–2002) labor and civil rights activist
- [Abby Kelley](#) (1811–1887) abolitionist and suffragette
- [Coretta Scott King](#) (1927–2006) SCLC leader, activist
- [Martin Luther King, Jr.](#) (1929–1968) SCLC co-founder/president, activist, author, speaker, inspiration
- [James Lawson](#) (1928–) teacher of nonviolence, activist
- [Bernard Lafayette](#) (1940–) SCLC and SNCC activist and organizer
- [John Lewis](#) (1940–) [Nashville Student Movement](#), SNCC activist, organizer, speaker, politician
- [Joseph Lowery](#) (1921–) SCLC leader and co-founder, activist
- [Clara Luper](#) (1923–2011) sit-in movement leader, activist
- [James Madison](#) (1751–1836) introduced and lobbied for the U.S. Bill of Rights
- [Nelson Mandela](#) (1918–) South African statesman, leading figure in anti-apartheid movement
- [George Mason](#) (1725–1792) wrote [Virginia Declaration of Rights](#), influenced U.S. Bill of Rights
- [Rigoberta Menchú](#) (1959) - Guatemalan indigenous rights leader, co-founder Nobel
- [James Meredith](#) (1933–) independent student leader and self-starting activist
- [Mamie Till Bradley Mobley](#) held open casket funeral for son, [Emmett Till](#); speaker, activist
- [Charles Morgan, Jr.](#) (1930–2009) attorney, established principle of "one man, one vote"
- [Harvey Milk](#) (1930–1978) politician, gay rights activist
- [Bob Moses](#) (1935–) leader, activist, and organizer
- [Diane Nash](#) (1938–) SNCC and SCLC activist and organizer
- [Edgar Nixon](#) (1899–1987) Montgomery Bus Boycott organizer, civil rights activist

- [James Orange](#) (1942–2008) SCLC activist and organizer, trade unionist
- [Emmeline Pankhurst](#) (1858-1928) one of the founders and the leader of the [British Suffragette Movement](#)
- [Rosa Parks](#) (1913–2005) NAACP official, activist, Montgomery Bus Boycott inspiration
- [Alice Paul](#) (1885–1977) major women's suffrage/women's rights leader, strategist, and organizer
- [Thomas Paine](#) (1737-1809) English-American activist, author, theorist, wrote *Rights*
- [Elizabeth Peratrovich](#) (1911–1958) Alaska activist for native people
- [A. Philip Randolph](#) (1889–1979) [socialist](#), labor leader
- [Amelia Boynton Robinson](#) (1911–) voting rights activist
- [Jo Ann Robinson](#) (1912–1992) Montgomery Bus Boycott activist.
- [Eleanor Roosevelt](#) (1884–1962) women's rights, human rights activist in United Nations
- [Bayard Rustin](#) (1912–1987) civil rights activist
- [Al Sharpton](#) (1954–) clergyman, activist, media
- [Charles Sherrod](#) civil rights activist, SNCC leader
- [Judy Shepard](#) (1952–) gay rights activist, public speaker
- [Kate Sheppard](#) (1847–1934) New Zealand suffragist in first country to have universal suffrage
- [Fred Shuttlesworth](#) (1922–2011) clergyman, activist, SCLC co-founder, initiated Birmingham Movement
- [Elizabeth Cady Stanton](#) (1815–1902) women's suffrage/women's rights leader
- [Gloria Steinem](#) (1934–) writer, activist, feminist
- [Lucy Stone](#) (1818–1893) women's suffrage/voting rights leader
- [Thich Quang Duc](#) (1897–1963) Vietnamese monk, freedom of religion self-martyr
- [Desmond Tutu](#) (1931–) South African anti-apartheid organizer, advocate, inspiration
- [Karl Heinrich Ulrichs](#) (1825-1895) German writer, organizer, and the pioneer of the modern [gay rights movement](#).
- [C.T. Vivian](#) (1924–) American student civil rights leader, SNCC activist
- [Wyatt Tee Walker](#) activist with NAACP, CORE, and [SCLC](#)
- [Ida B. Wells](#) (1862–1931) journalist, women's suffrage/voting rights activist
- [Walter Francis White](#) (1895–1955) [NAACP](#) executive secretary
- [Elie Wiesel](#) (1928–Present) Jewish rights leader
- [Roy Wilkins](#) (1901–1981) [NAACP](#) executive secretary/executive director
- [Frances Willard](#) (1839–1898) women's rights, suffrage/voting rights leader
- [Hosea Williams](#) (1926–2000) civil rights activist, SCLC organizer
- [Robert F. Williams](#) (1925–1996) organizer
- [Victoria Woodhull](#) (1838–1927) suffragette organizer, women's rights leader

- [Malcolm X](#) (1925–1965) author, activist
- [Andrew Young](#) (1932–) clergyman, [SCLC](#) activist and executive director
- [Whitney M. Young, Jr.](#) (1921–1971) Exec. Director [National Urban League](#), advisor to U.S. Presidents
- [William Wilberforce](#) (1759-1833) leader of English [abolition movement](#)
- [Alexander Fred MacDonald \(1920-2006\) union leader, civil rights activist, my father](#)

Imagine if all these people said “Oh... let’s go home ladies and gentlemen the law says it’s ok for them to discriminate.”

And again in the **Recirculated Draft EIR** as in the **Original Draft EIR** they make this ridiculous claim that somehow this project will reduce the number of ship in the SF bay; knowing tanker ships have to transfer some of their load to other tanker ships in order to move into the shallow upper bay.

Wait: this just in!

Northern Waterfront Economic Development Initiative - Authored by Supervisor Federal Glover <http://www.cccounty.us/DocumentCenter/View/26503> **Note:**

Shipping Channel Deepening Project Study Area – 35 feet increased to 45 feet (See map on page 6 in cc county project link) PITTSBURG CA

"Gateway to Pacific Rim and Western U.S." (for Dirty Tar Sands Crude and Petroleum Coke.) Note: Existing Koch Carbon marine shipping facility in Pittsburg for Petroleum Coke (i.e., PetCoke) Export – derived from Bay Area Refineries that have increasingly received PetCoke–producing low–quality Canadian Tar Sands heavy crude oil by railroad, i.e., Valero, etcetera.

("Bottom–of–the–Barrel" garbage in, PetCoke garbage out.)

April 23, 2013 Board of Supervisors Approve Northern Waterfront development Initiative Work Plan –

What is the Northern Waterfront?

- **Approximately 50–miles of shoreline stretching from Hercules to the Antioch Bridgehead area – San Pablo Bay to the Sacramento and San Joaquin Rivers**

- **Approximately 15% General Plan designation for Heavy Industrial (HI) use**

- **Covers both cities and unincorporated areas**

- **Hosts several major petroleum/chemical manufacturing facilities, other manufacturing industries, class 1 railroads, docks, and ports**

- **Gateway to Pacific Rim and Western U.S. – Why Northern Waterfront?**

- **Rail–served by the UPRR and BNSF**

- **Deep–water wharfs for exports/imports, as well as, transbay shipments**

Primary Contact: Rich Seithel (925) 674-7869 Rich.Seithel@dcd.cccounty.us

Ok I see, with Federal Glover leading the charge and the CCC Supervisors and CEC right behind him it must be a slam dunk for approval of deep water shipping channels throughout the upper Bay going to all refineries and new projects (tax payers money used to maintain them of course). **But how in June of 2012 when the original draft EIR came out did the authors know the Contra Costa County Supervisors would Approve Northern Waterfront development Initiative Work Plan, April 23 2013? Is this why a Recirculated DEIR; so the dates of these action would be in the proper order of independent agency action?**

Executive Summary: Wetland Lease is in Violation of the "Public Trust Doctrine"
Senate Bill No. 551 CHAPTER 422 SEC. 3. (a) The trust lands shall be held by the trustee in trust for the benefit of all the people of the state for purposes consistent with the public trust doctrine,
(3) "Public trust doctrine" means the common law doctrine, as enunciated by the court in National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, and other relevant judicial decisions, specifying the state's authority as sovereign to exercise a continuous supervision and control over the navigable waters of the state, the lands underlying those waters, and nonnavigable tributaries to navigable waters, including the maritime or water dependent commerce, navigation, and fisheries, and the preservation of lands in their natural state for scientific study, open space, wildlife habitat, and water-oriented recreation

It is clear that the WesPac facility is not for the benefit of all the people. Will have a detrimental effect on fisheries, wildlife habitats and water- oriented recreation and is in violation of public trust doctrine. Terms of Trust require lands to stay open to and for public use.

The City is legally bond by the use condition of the trust to deny lease of wetlands.

Executive Summary: Project Dose not Conform to the Mandate of State Legislature
Johnston-Baker-Andal-Boatwright Delta Protection Act of 1992

29701. The Legislature finds and declares that the Sacramento-San Joaquin Delta is a natural resource of statewide, national, and international significance, containing irreplaceable resources, and it is the policy of the state to recognize, preserve, and protect those resources of the delta for the use and enjoyment of current and future generations.

29702. The Legislature further finds and declares that the basic goals of the state for the Delta are the following:

(a) Achieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.

(b) Protect, maintain, and, where possible, enhance and restore the overall quality of the Delta environment, including, but not limited to, agriculture, wildlife habitat, and recreational activities.

29705. The Legislature further finds and declares that the delta's wildlife and wildlife habitats, including waterways, vegetated unveeved channel islands, wetlands, and riparian forests and vegetation corridors, are highly valuable, providing critical wintering habitat for waterfowl and other migratory birds using the Pacific Flyway, as well as certain plant species, various rare and endangered wildlife species of birds, mammals, and fish, and numerous

amphibians, reptiles, and invertebrates, that these wildlife species and their habitat are valuable, unique, and irreplaceable resources of critical statewide significance, and that it is the policy of the state to preserve and protect these resources and their diversity for the enjoyment of current and future generations.

29706. The Legislature further finds and declares that the resource values of the delta have deteriorated, and that further deterioration threatens the maintenance and sustainability of the delta's ecology, fish and wildlife populations, recreational opportunities, and economic productivity.

29708. The Legislature further finds and declares that the cities, towns, and settlements within the delta are of significant historical, cultural, and economic value and that their continued protection is important to the economic and cultural vitality of the region.

Executive Summary: Less Discriminatory Alternatives

Less Discriminatory Project Alternatives, Best protection of bay endangered species

1:

Have Bay Area refineries build a pipe line out to sea so that ships can unload out side of the bay, **less air pollution, less ship traffic and less chance of invasive species contaminating the bay and delta.** No rail export of raw or partially refined crude. The existing pipe line from refineries to the Central Valley used to transport raw product to a rail faculty away from residential housing. For those of you that are now hopping up and down proclaiming this to be preposterous, ludicrous, outlandish, unthinkable, undoable and dose not conform to the **Master Plan already pushed through the CEC**; here is a link to a map of The Golf Mexico showing some of the:

25,000 miles of pipe line in the Golf. And you say you do not have the expertise to build and run just one? What dose this say about your ability to build and run a complete shipping/rail and storage facility? <http://stateofthecoast.noaa.gov/energy/gulfenergy.html>

Less Discriminatory Project Alternatives 2:

Have bay refineries at least double their ship handing capacity and add on site storage. All refinery ship terminals provide a shorter shipping route than the Pittsburg terminal. **Using refinery terminals directly will result in millions of tons of reduction of air pollution compared to using the Wes Pac facility.** Air pollution that is produced will be spread out over a larger area with lower concentration in any one location. The existing pipe line from refineries to the Central valley used to transport raw product to a rail faculty away from residential housing. There is also a less likelihood of tanker mishaps in bay and delta, and less likelihood of invasive species contaminating the bay and delta. No rail export of raw or partially refined crude.

Less Discriminatory Project Alternatives 3:

Continue the current practice of holding ships in the bay until needed by refineries. No rail export of raw or partially refined crude. The existing pipe line from refineries to the

Central valley used to transport raw product to a rail facility away from residential housing.

Less Discriminatory Project Alternatives 4:

Find a suitable site west of Bay Point to Martinez. Most of this land is zoned industrial with very few residents. No rail export of raw or partially refined crude. The existing pipe line from refineries to the Central valley used to transport raw product to a rail facility away from residential housing.

Executive Summary: Cumulative Impact

It is reasonably foreseeable project will lead to higher PM10 and PM2.5 concentrations, air pollution, greenhouse gases, explosions, exposure to carcinogenic compounds and poisonous chemicals, **higher illness and asthma rates** and deaths within Pittsburg.

Higher illness rates among students and family members have been shown to be a major detriment to student learning. It is reasonably foreseeable there will be an increase in non-indigenous species and deterioration of the delta habitat, reducing the economic prosperity of the delta. This project will have no significant impact on reducing air pollution in the SF bay as stated in Original Draft EIR. It is reasonably foreseeable Project may become a target for terrorist attack. **(Congressional report Contra Costa County is potential target terrorist attack**

<http://www.co.contra-costa.ca.us/archives/42/Terrorism%20SFC%207.7.05.pdf>)

It is reasonably foreseeable there is a 98.006% chance of tank failure within the next 50 years just due to earthquake alone. This does not include other causes of failure such as poor design and containment strategies, lightning strike, metal cracking or rusting, water in tanks, flooding, wrong construction materials used, poor welds, lack of inspection and repair, subsidence, tornados, high winds, terrorists, boil over and explosions from overheating hydrocarbons, operator or human error is very likely.

It is reasonably foreseeable a nearby facility failure could easily cause major tank failures. These include but are not limited to the power plant, under ground pipe lines **(remember San Bruno? http://en.wikipedia.org/wiki/2010_San_Bruno_pipeline_explosion)**, a major PG&E substation and Pittsburg Power, trans-bay terminal (both are very high energy ignition point), a rail yard full of explosive liquids, train derailment, or terrorist attack. The barbeques in the backyards of some of the homes are close enough to set off tank fumes.

It is reasonably foreseeable a problem at any one of these sites would quickly spread to all the others. Everything within .5 mile could be destroyed, a major electrical blackout of the Bay Area, rails, pipe lines and tank cars destroyed with major release of toxins, local industry unable to receive or ship supplies, millions of barrels of crude oil in the Delta and bay and substantial loss of life.

With the successful destruction of Pittsburg's very last recreational and scenic habitat it is reasonably foreseeable the demise of the marina, yacht club and down town redevelopment. It will be slow but enviable. Boaters and wild life enthusiast

will find that their wonderland on the delta has been replaced with messy oily stained ships. Their nostrils filled with a smelly noxious hydrogen sulfide and sulfur Dioxide gas that turns their stomach, burn their eyes and throat. The sky turned brown and the scenic view obscured with ships, particulate matter and smog. Wild live gone, stinky algae blooms and fish kill more prevalent from the increase in nutrients in the water from ships stirring up the sediments. Their view obscured by a brown haze reaching far into the Central Valley. Persons who never experienced breathing problems before will find their lungs getting tighter and breathing getting labored. For those who already have breathing problem more emergency room visits more missed days from work and school. The community will experience a higher death rate from cancer and *chemically induced asthma*. (Yet we sham others for gassing their own people). Those who can will leave and not come back to Pittsburg. Pittsburg downtown will become boarded up as before, the housing become predominantly low income and section 8: a place for the” poor” as it was once envisioned by some to always remain.

Executive Summary: Statistical Analysis; Science or Pseudo-Science?

The age old dispute (science or Pseudo-Science?) on statistical analysis has irrevocably been settled with the advent of the Fukushima Daiichi nuclear disaster. Statistical analysis for what is most likely to happen has once again been shown to be fundamentally flawed! The question is not what is most likely to happen but what can happen! **Everything in this report has already happened and is reasonably foreseeable will happen once again.** It is not a question of if but where, when and to whom. Residents should not be made to put their health and the lives of their families on the line so the applicant can save a few buck.

Executive Summary: Conclusion

Video of a very, very small crude oil tank boilover going up, 30 burned, Texas USA March 02 2011

<http://video.msnbc.msn.com/documentaries/41907756/#41907756>

These firefighters were well trained in fighting such fires but were not able to control it. With the aforementioned safety equipment and blast walls this fire could have been easy controlled by just one person with the push of just one button. **The concept of using innovation to solve today’s problems is referred to as progress, moving forward, not living in the past or just common good since; It use to be called “the American way”. Let’s put America back to work doing what The United States of America was second to none in doing and made you proud to be an American: building it right.**

Questions:

1 Why no heath studies of Pittsburg residents living in the down town? Pittsburg, especially the area around the project, is a low-income, minority community. Pittsburg

residents are burdened with an unfair amount of pollution while having the least access to health care. Pittsburg air pollution is above State and Federal standards. Pittsburg residents' health is deserving of protection under the Federal Environmental Justice Memorandum of Understanding and Presidential Executive Order 12898 (Environmental Justice).

2 Why not include near by parks, churches and schools in this study? The selection of sensitive receptors .5 miles around the project does not accurately represent the possible impact zone for this project. BAAQMD records should show complaints of very foul odors and eye and throat irritation caused by former operator Mirant's transfer of fuel several years ago; odors from tank can still be smelled at times to this day. Complaints came from residents at least one mile down-wind and very wide spread. A community meeting was held by Mirant to apologize to the community for being such a bad neighbor. Air model studies should be performed to detail total area that may be affected by the project. A minimum of 10 miles down wind should be studied.

3 Why not include the following sites in your study?

Senior housing complex, Railroad Ave and 8th Street

Marina Vista Elementary School, Railroad Ave and 8th Street

St Peter Martyr School, West 4th Street

Riverview Park, River Park Dr.

Stewart Memorial Christian Methodist Episcopal Church, Linda Vista Way and Front

First Baptist Church, Odessa Dr.

St. Peter Martyr Catholic Church, Black Diamond St. and 8th St.

Greater McGluthen Memorial Temple Church, 550 Black Diamond St.

Parkside Elementary School, within 1000ft of KLM alt 1 connection.

Pittsburg High School, School St.

El Pueblo Federal Housing Project, El Pueblo

All section 8 housing within 5 miles of project

4 What are all possible compounds that may be in crude, their percentages and known health effects on children and the elderly? Which of these compounds cause eye, throat and skin irritation; asthma, bad smells and/or vomiting?

5 Why not documented, monitor and determine long term effects on residents' health?

6 Why not give free health services, including but not limited to cancer and asthma screening and treatment in the exposure zone?

7 Can anyone build electric or hydrogen powered ships and trains?

8 Will ships going to Pittsburg need to moor in the SF bay to "lighter" (transfer some of their load to other ships to reduce their draft) before entering the upper bay and Delta?

9 Why not build a pipe line out to sea to off load from? Ocean-going ships are a major source of non-indigenous species of clam, plants, crabs and parasites in the Delta. This invasion has damaged the quality and economic vitality of the Delta habitat.

10 What will you stop shoreline and levee erosion from ships?

11 how will you stop the stirring up of sentiments from the ships water displacement and props?

12 What emergency staff and supplies will be on site incase of accident?

13 Can WesPac get air pollution credits from sources that currently effect near by residents?

14 In the event of an accident what agency will be notified and what will be their response? How fast and in what number will help come?

15 How much money will applicant put toward getting, maintaining and training fire fighters per year?

16 The concept of "shelter in place" implies that there is something the homeowner can do to save themselves incase of a catastrophe. Will residents be given home fire fighting equipment, gas masks, first aid supplies and fire resistant suits?

17 Which agency has been notified for their input on Environmental Justice issues for this project?

18 Which agency does the City of Pittsburg expect to do an Environment Justice study?

19 Why not a study on a reasonably foreseeable worst-case scenario: sabotage to the facility, including the possibility 5000,000BBL tank content vaporizing into an explosive air/fuel mix and detonated? With LPG, ammonia, and chlorine storage railroad cars being engulfed in shock wave and flames at their storage site approximately 1/4 mile south of the facility What effect would such a worst-case scenario have on the nearby residents and power substation just northwest of project? The electric power substation is a major supplier of power in California. It is vital to both the economic success of California and National Security that this substation remains safe from any possible threat.

20 how much insurance coverage dose applicant have?

21 Will applicant be required to put up a bond covering the total expense of insurance coverage for the next 30 years or more?

22 How close to existing water ways are tanks?

23 CCC fire department is being downsized and is already under manned. How much would it cost to have onsite fire fighting equipment and personal to completely foam site and *within the industry standard of 15 minuets?*

24 Will Riverview Park be closed or made smaller?

25 What is the cancer rate and pollution for Brown Island?

26 What is the cancer rate and pollution for the Pittsburg yacht Club?

27 How many persons in Pittsburg have asthma? How many die from asthma?

28 What are you going to do to protect the scenic value of the Delta?

29 Will the facility be closed down on spare the air day?

30 Will the facility be closed down when wind speeds drop below 10 miles an hour?

31 What steps will be taken to trap air pollution so that it dose not pollute the environment?

32 Why should children be allowed to get asthma so WesPac can make a profit?

References:

PUSD's OCR Complaint 4/17/00

<http://www.calfree.com/OCRDelta.html>

EPA 94565 web site

[http://www.epa.gov/myenv/myenvview2.html?](http://www.epa.gov/myenv/myenvview2.html?minx=-122.11853&miny=37.94041&maxx=-121.73744&maxy=38.07837&ve=11,38.00946,-121.92805&pSearch=94565,CA)

[minx=-122.11853&miny=37.94041&maxx=-121.73744&maxy=38.07837&ve=11,38.00946,-121.92805&pSearch=94565, CA](http://www.epa.gov/myenv/myenvview2.html?minx=-122.11853&miny=37.94041&maxx=-121.73744&maxy=38.07837&ve=11,38.00946,-121.92805&pSearch=94565,CA)

Congressional report Contra Costa County is potential target terrorist attack

<http://www.co.contra-costa.ca.us/archives/42/Terrorism%20SFC%207.7.05.pdf>

[safety](#)

www.intergraph.com/assets/pdf/.../HydrocarbonEngineeringJune2011.pdf- [Block all](#)

[www.intergraph.com results](#)

File Format: PDF/Adobe Acrobat

most oil storage tank damage is attributable to age deterioration, corrosion or (in some locations) ... these tanks stored such materials as crude oil, gasoline, fuel oil and ... tanks. In the us in 1978, a tank failure at a complex in Texas City, texas...

[Failure Analysis of a ... - ASM Materials Information - ASM International](#)

products.asminternational.org/fach/data/fullDisplay.do?... - [Cached](#)- [Block all](#)
[products.asminternational.org results](#)

Abstract: A 100000 barrel crude oil storage tank rupture caused extensive property damage in Dec. 1980, in Moose Jaw, Saskatchewan, Canada. Failure was ...

[REVIEW OF FAILURES, CAUSES & CONSEQUENCES IN THE ...](#)

www.lightningsafety.com/nlsi_lls/Causes-of-Failures-in-Bulk-Storage.pdf

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The cataclysmic events, which occurred at the Buncefield Oils Storage Depot in Hertfordshire ... The failure of above ground atmospheric storage tanks, of which a variety of types are ... June 2003, where a floating roof crude tank was struck by ...

[Tank Failure Modes and Their](#)

www.risk-support.co.uk/vmt-tank_failure.pdf

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atmospheric (Crude Oil) designs. An analysis of the consequences of an assumed axisymmetric mode of failure of a liquid storage tank is presented in an effort ..

[REVIEW OF FAILURES, CAUSES & CONSEQUENCES IN THE ...](#)

www.lightningsafety.com/nlsi_lls/Causes-of-Failures-in-Bulk-Storage.pdf

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[Catastrophic Tank Failures: Highlights of Past Failures along with ...](#)

www.epa.gov/oem/docs/oil/fss/fss02/cornellpaper.pdf- [Block all www.epa.gov results](#)

File Format: PDF/Adobe Acrobat

A few of the more prominent failures have been listed below. On November 31, 2001, a storage tank holding almost 100000 gallons of crude oil ignited, throwing ..

[Geospatial Settlement Monitoring of Above Oil Storage Tank](#)

jeteas.scholarlinkresearch.org/articles/SUBSIDENCE%20MONITORING.pdf- [Block all](#)

[jeteas.scholarlinkresearch.org results](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

by R Ehigiator-Irughe - 2010

There are ten crude oil tanks each 21m high and diameter 76.2m (Ehigiator, 2005). Others are two emulsion tanks, and continuous hydration tanks. Storage ...

[Fawley Crude Oil Storage Tank - TWI](#)

www.twi.co.uk/content/oilgas_casedown25.html

Two storage tanks failed during hydrotest after receiving weld repairs. Assessment of the material ...

Fawley crude oil storage tank failure. Storage tank failure ...

On line documents

<http://www.mediafire.com/?o5oiyj4jjganh>

Sincerely,

James B. MacDonald

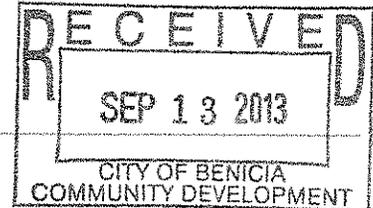
274 Pebble Beach Loop

Pittsburg, Ca. 94565

jbmd56@yahoo.com

Amy Million - Comments for the Scoping of Valero's EIR

From: Lynne Nittler <lnittler@sbcglobal.net>
To: "amillion@ci.benicia.ca.us" <amillion@ci.benicia.ca.us>
Date: 9/13/2013 4:30 PM
Subject: Comments for the Scoping of Valero's EIR



September 12, 2013

Amy Million, Principal Planner

amillion@ci.benicia.ca.us

Benicia Community Development Department

Comments for the Scoping of Valero's EIR

Dear Amy Million,

I have just begun to educate myself on the increased rail transportation of crude oil to various refineries in the Bay Area, most recently the application of Valero Benicia for an increase of two trains of 100-tanker car loads per day! Not many articles appear in the local papers, so I have to hunt for them. Having followed the dramatic increase in rail accident oil spills as more Tar Sands oil is moved by rail, and having noted also that such heavy crude cannot be adequately cleaned up, I am not at all pleased to have more trains rumbling through my home town of Davis, California.

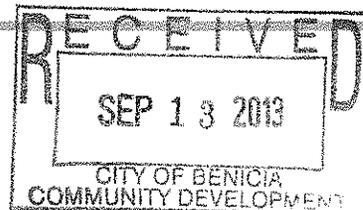
It appears that the underlying intent is most likely to bring Albert Tar Sands crude to Benicia for processing, dirty oil that is best left in the ground. It destroys forest lands that help mitigate the effects of global warming we are already experiencing. Instead, we strip the land, apply toxics to force the bitumen from the ground and discard the waste water in toxic ponds that pollute water downstream. Then we take on the risks of shipping that dirty bitumen across Canada and the US through my home town to the bay area where the refining of the high sulfur content pollutes the air there! All this to create fuels that once burned contribute still more greenhouse gases to add to our global warming overload. Not one segment of this story meets the test of helping create a healthy and habitable planet where our children can thrive.

I strongly urge you to notify all communities that may possibly be affected by the rail transport with its potential for oil spill accidents, sulfur dioxide air pollution and the increased greenhouse gas emissions of bringing more tar sand crude to Benicia.

I have alerted the Davis City Council and the Yolo County Supervisors to this critical issue and will continue to send them articles as I find them, as this is clearly a matter that should concern us.

Thank you for taking my comments into consideration.
Lynne Nittler and Richard McAdam
2441 Bucklebury Road
Davis, CA 95616
530-756-8110

Amy Million - "Valero Crude by Rail Project, to Amy Million, Principal Planner, Community Development Department, City of Benicia,



From: Milton Kalish <milton@miltonkalish.com>
To: <amillion@ci.benicia.ca.us>
Date: 9/12/2013 6:13 PM
Subject: "Valero Crude by Rail Project, to Amy Million, Principal Planner, Community Development Department, City of Benicia,"

corrected copy

To whom it may concern

I am Milton Kalish of Davis California, writing as a citizen of Davis and as co-coordinator of Yolando Climate Action. The Vallejo Good Neighbor Steering Committee has invited me to speak at tonight's meeting concerning railroad shipments of crude oil through Davis to Benicia. I am writing because I am unable to attend the meeting due to a family emergency.

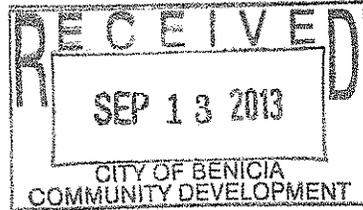
We in Davis are just becoming aware that crude oil is being shipped by through our city, and of the associated risks to public safety and health, especially in light of the disastrous loss of life and property in Lac-Megantic, Quebec on July 6. We are taking this very seriously.

We urge the city of Benicia to put public safety and health as the top priorities in any decisions involving shipment of crude oil.

Please feel free to contact me for further information, or if you wish to discuss this matter further.

Respectfully submitted,
Milton Kalish, LCSW

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September 12, 2013

Mary Frances Kelly Poh

643 Windsor Drive
Benicia, CA 94510
Phone: 707-745-5461
Mfpoh@pacbell.net

▶ **Amy Million, Principal Planner
Community Development Department
City of Benicia,
250 East L Street
Benicia, CA 94510**

Dear Ms. Million

Scoping Comments for Valero Crude by Rail

Valero Crude by Rail is probably the most important project to come to the City of Benicia in decades. Both the City of Benicia and the public need sufficient time to prepare and review the necessary documents. Therefore I request that the comment period for the DEIR be 60.

I have previously written regarding the need for an EIR and request those questions and concerns be addressed in the DEIR.

Specifically the plan must address emergency planning all the rail lines that the tank cars will travel. Additionally emergency plans can only be vague if the people preparing the plans don't know specifically what the train cars contain. I understand Valero is going to blend the crude in their facility so that it essentially is the same as what they refine there now, But the tank cars will not contain the crude mixture that Valero now refines. All crude oil is not alike. Some contain more sulfur and often 2-4 times the amount of "sweet north slope crude" contains. Also included needs to be training plans so that all first responders know how to respond and protect the citizens all along the train route. There needs to be developed something similar to Bay Keeper which responds to oil spills in the Bay waters to respond to spills on the land.

I also wrote about the need to accurately document the presence of two federally listed endangered species, specifically Soft Bird's Beak and the Suisun Song Sparrow. Both must be searched for at the appropriate times and if found mitigations must be developed to protect both of these species. The easiest time to find the Soft Bird's Beak is April and May when it is in bloom. There are other species which also must be considered as the train passes through the Suisun Marsh which is a shallow tidal estuary on the Pacific Flyway in which migratory birds from Alaska travel as far as Patagonia and back again. There are migratory bird treaties which will come into play here. A spill in this area could prove difficult to clean up and have devastating consequences in the marsh, delta and the Carquinez Strait. A spill into Sulfur Springs Creek, which runs parallel to the train tracks on the Valero property, and empties into the Suisun Delta, could be very problematic and difficult to clean up.

This project is more than just putting in a rail spur in the refinery in isolation. There are a number of other local and statewide organizations which need to be invited to comment on issues to be addressed in the DEIR. They

include The Solano Land Trust, Suisun Delta Resource Conservation District, California Native Plant Society, Solano County Fire Chief's Association, and all the cities along the train's route here in California. This project is part of larger changes which are occurring in Bay Area refineries. This project must be examined for its cumulative impacts. Mitigations must be identified and explained so that the public can understand the project and participate in the solutions.

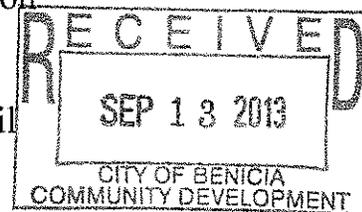
Sincerely,

Mary Frances Kelly Poh

Mary Frances Kelly Poh

Amy Million - Re: Additional comment for the record, Valero Crude By Rail

From: Mary Frances Kelly Poh <mfph@pacbell.net>
To: "rogrmail@gmail.com" <rogrmail@gmail.com>, 'Amy Million'
 <Amy.Million@ci...
Date: 9/12/2013 1:40 PM
Subject: Re: Additional comment for the record, Valero Crude By Rail
CC: 'Brad Kilger' <BKilger@ci.benicia.ca.us>, Belinda Smith
 <bsmitgo@hotmail...



Oh, what a great thought! And Valero does have the minds and the ability to pull this forward thinking off. Even me, who drives an all electric car, knows that value and necessity of petroleum. I have to drive either on concrete or asphalt or go regressive drive on dirt.

Mary Frances

From: "rogrmail@gmail.com" <rogrmail@gmail.com>
To: 'Amy Million' <Amy.Million@ci.benicia.ca.us>
Cc: 'Brad Kilger' <BKilger@ci.benicia.ca.us>; Belinda Smith <bsmitgo@hotmail.com>; Don Dean <donaaldjDean@sbcglobal.net>; George Oakes <oakes@earthlink.net>; Rod Sherry <rsherry@csa-engineers.com>; Stephen Young <escazuyoungs@gmail.com>; Susan Cohen Grossman <susancg@pacbell.net>; Suzanne Sprague <Suzanne@solanolawgroup.com>
Sent: Thursday, September 12, 2013 9:12 AM
Subject: Additional comment for the record, Valero Crude By Rail

For the record, Valero Crude By Rail:

Like so many others who have expressed concerns and questions regarding Valero's proposed Crude By Rail project, I resent the suggestion that I simply want to run Valero out of town. We all are dependent on fossil fuels at this moment in history. Valero knows, as do we all, that there are cleaner ways to produce energy, and that fossil fuels will eventually give way to other forms of manufacturing power. What is at issue in our community is the pace of transition, the security of our City's economic base, and the health of the planet. Major issues, indeed! As for me, I'd prefer that Valero NOT buy into what might be called a "Last Gasp" strategy of refining the earth's dirtiest sources of oil for a short term profit and a small extension on the time of transition to cleaner fuels. Imagine the day when even the tar-sands and shale crudes are gone. Valero knows there will come a time when the refinery will need to re-tool its efforts completely. No, I don't imagine that our good neighbor refinery will shut down and leave, although I guess that would be a possibility. Rather, I see a day when, under a continuing ownership or a new owner, our refinery moves into electrical generation by wind/solar/water production or by an as yet undetermined clean and safe methodology. Now having imagined that, just imagine it sooner rather than later, with Valero LEADING the oil industry into a more responsible and sustainable future.

Roger Straw

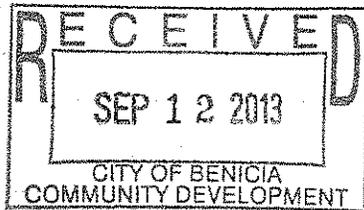
766 West J Street, Benicia, CA 94510
707.373.6826

09-12-13

City of Benicia Planning Commission Meeting

Questions for meeting:

1. Do Environmental Science Associates take the lead in the EIR. How do they and the city verify verify information submitted?
2. Do the environmental effects of strip mining for crude oil in Canada or fracking for crude oil in north Dakota related to this EIR or within the purview of the planning commission?
3. For this meeting please ask speakers to detail their level of expertise on the related issue. Education, work experience ect. Not "I stayed at a Holiday Inn last night so I am a Scientist."

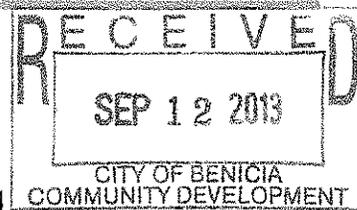


Clark Duggars
58 Buena Vista
Benicia Ca
745-1225

50 yr resident

Amy Million - Additional comment for the record, Valero Crude By Rail

From: <rogrmail@gmail.com>
To: "'Amy Million'" <Amy.Million@ci.benicia.ca.us>
Date: 9/12/2013 9:12 AM
Subject: Additional comment for the record, Valero Crude By Rail
CC: "'Brad Kilger'" <BKilger@ci.benicia.ca.us>, "Belinda Smith" <bsmitgo@hotmail.com>



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As for me, I'd prefer that Valero NOT buy into what might be called a "Last Gasp" strategy of refining the earth's dirtiest sources of oil for a short term profit and a small extension on the time of transition to cleaner fuels.

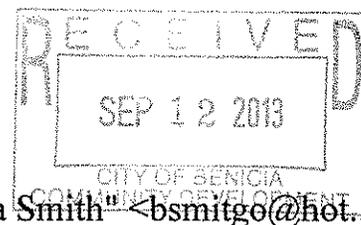
Imagine the day when even the tar-sands and shale crudes are gone. Valero knows there will come a time when the refinery will need to re-tool its efforts completely. No, I don't imagine that our good neighbor refinery will shut down and leave, although I guess that would be a possibility. Rather, I see a day when, under a continuing ownership or a new owner, our refinery moves into electrical generation by wind/solar/water production or by an as yet undetermined clean and safe methodology. Now having imagined that, just imagine it sooner rather than later, with Valero LEADING the oil industry into a more responsible and sustainable future.

Roger Straw

766 West J Street, Benicia, CA 94510
707.373.6826

Amy Million - Public Comment - Valero Crude By Rail

From: <rogmail@gmail.com>
To: "'Amy Million"' <Amy.Million@ci.benicia.ca.us>
Date: 9/12/2013 9:07 AM
Subject: Public Comment - Valero Crude By Rail
CC: "'Brad Kilger"' <BKilger@ci.benicia.ca.us>, "Belinda Smith" <bsmitgo@hot...



Amy – please include my letter below in the record for Scoping for the proposed Valero Crude By Rail project, and distribute to all parties concerned. My letter was published in this morning’s Benicia Herald, and offers a clarification on the distinction between shipments of “tar sands crude” (bitumen) and “diluted bitumen” (dilbit). I am asking Valero and the consultant to clarify Valero’s previous statements and I suggest mitigations that would prevent shipment of diluted bitumen anytime in the future if this project goes forward. Thank you.

Roger Straw

766 West J Street, Benicia, CA 94510
707.373.6826

From: rogrmail@gmail.com [rogmail@gmail.com]
Sent: Tuesday, September 10, 2013 12:23 PM
To: 'Benicia Herald'
Subject: Letter to the Editor

Editor:

Thank you for your September 10 article, “Questions on crude-by-rail to get airing Thursday.” The issues covered in the article, in Steve Young’s op ed, and at Thursday’s meeting of the Planning Commission are deeply significant here in Benicia and beyond.

While the Herald’s article covered the facts pretty well, I am concerned about a contrast drawn between Valero’s statements and those who have voiced concerns about tar-sands crude. Ms. Weilenmann writes, “Company and refinery officials have repeatedly stated that the Benicia plant isn’t equipped to process the heavier Canadian tar sands crude, and what would be brought in by train is the same quality of crude that is brought in from overseas countries and Alaska by oil tanker ships.” Then she contrasts the refinery’s statement with this: “...many residents, including members of the Good Neighbor Steering Committee have said at Planning Commission and other meetings that they suspect the less-expensive but heavier and more polluting crude is what would arrive by rail.”

Concerned Benicia citizens’ claims (and those of experts from the National Resources Defense Council) need to be clarified to be understood. Valero has indeed stated that they would not be shipping Canadian tar sands crude. Of course not. Tar sands crude (bitumen) is too thick and goeey to be shipped by pipeline or rail car. But Valero has not stated publicly that they would refrain from shipping the “heavier and more polluting” crude that is a *blend* of tar sands bitumen and other lighter volatile chemicals. This blend is referred to as diluted bitumen, or dilbit, and it is by far the dirtiest, most polluting source of fossil fuel in existence today. The stripping of the earth and despoiling of forests and rivers at the source is catastrophic for the health of the earth, as well as for human and other inhabitants. Movement of this blended crude by rail is extremely dangerous in every town, passing through community centers and rumbling past nearby schools, residential neighborhoods and commercial and manufacturing centers. Then, when it finally creaks through our protected Suisun Marsh, it would arrive in our fair village for a refining process that is dirtier than that of other crudes, producing more

greenhouse and volatile gases and resulting in a huge increase in a nasty refinery byproduct, petroleum coke (or petcoke), which is usually sold overseas and burned as a fuel that is itself dirtier than coal. A spill or an accident anywhere along the way could cost a billion dollars or more to clean up.

The list of reasons for NOT allowing diluted tar sands crude into Benicia can go on for pages, but I will leave it there.

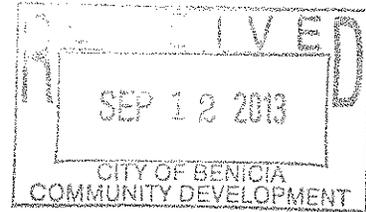
Valero should be required to clarify, as part of the Environmental Impact Report and before this project is approved, whether they plan to import DILUTED BITUMEN, originating as tar sands crude in North America. And given that plans change, I would personally ask that a method of enforcing this plan far into the future be built into the project as a mitigating measure, and under penalty of law.

Roger Straw

766 West J Street, Benicia, CA 94510
707.373.6826

Kathy Kerridge
771 West I Street
Benicia, CA 94510
kkerridge@sbcglobal.net

Amy Million, Principal Planner
Community Development Department
250 East L Street
Benicia, CA 94510



Scoping Comments for Valero Crude by Rail

First, I would request that the comment period for the EIR be 60 days rather than 30 or 45 days. This gives ample time for the public to study and comment on the draft EIR. I would also ask that the comments period not be in December. That would reduce public input.

I would like to incorporate all of the comments I made in my prior letter regarding the need for an EIR into a request that these concerns and questions to be addressed in an EIR. That letter follows. I also believe that the comments by NRDC, the Goodman Group and Dr. Fox be thoroughly analyzed and the concerns addressed.

This project must be evaluated as part of a broad range of projects involving oil importation that are planned in the Bay Area. It cannot be viewed in isolation. The project should not be evaluated in the narrow way that was done in the negative declaration. Off site as well as on site impacts must be addressed. This project is not just about construction of a rail road. It is about what that construction will lead to. It is about how what is refined may change and about the public health consequences of that change. This must all be considered in the EIR. I would like the following specific issues addressed:

1. What will be the future economic impact on the Industrial Park? Would a large rail project have a negative impact on the attraction of new businesses and retention of current businesses? How would an increase in traffic congestion impact business attraction and retention? What are the safety issues of increased traffic back up on to the freeways? If Valero refines diluted bitumen oil with its higher emissions, its stronger odors, its greater risk of accident, with increased production of coke and its increased and dangerous particulate matter will other businesses want to locate in our industrial park? Will we lose businesses in the industrial park if this happens? What will be the consequences over the next 10 years, 30 years, 50 years? What will the economic impact of that potential loss be? What will be the impact of increased dependence on one business for our tax base if other businesses leave?
2. In light of the recent train disaster in Canada I want much more information about how these trains will be staffed, what kind of rail cars are they, and are they the safest possible? Are the rail cars double hulled? Would there be an increased risk of accident if higher sulfur oil, which is more corrosive, was carried in these rail cars? What kind of plans will be in effect to prevent a runaway train? What are the safety plans in effect now, not ones to be developed in the future? What would happen if there was a derailment in the industrial park near an oil tank? What are the mitigations for the inevitable dripping that will take place in a transfer of oil from the tank cars to the refinery?
3. How would a derailment be handled in any of the areas the train passes through? Will first responders know what is in the rail cars? Will they know how to treat a spill of diluted bitumen, if that is

ever transported? What are the plans to clean up an oil spill or a spill of tar sands oil if that ends up being imported? Will there be a bond in place to ensure clean up? The cost of the tar sands spill cleanup in the Kalamazoo River is approaching one **billion dollars**. Who will pay for a spill here? If the crude is reclassified as something besides oil, since it is so thick, who will pay for this cleanup since the industry is trying to exempt this from laws requiring cleanup? How will trains be impacted by the flooding that occurs in the marsh now? How will the rise in sea level impact the trains going through the marsh? What mitigation would there be? Could mitigation be no refining of this dangerous crude? What are the public health dangers of a spill of unconventional crude? Would local population be at risk from the release of the toxic chemicals used to dilute tar sands crude? What are the risks to the native wildlife and the bay if there was a derailment and spill in the marsh?

4. What exactly will be brought in by these rail cars? How will the public know what is brought in? How will the public know if the type of oil being brought in changes? How will a change in the source of oil impact our community?

5. The totality of this project must be addressed in the EIR, not just the small rail construction part. What will be the impact if the type of crude changes to tar sands, which produced more odor, more emissions, is more corrosive, and produces more pet coke?

6. Our general plan puts sustainability first. It specifically states on p. 22 "what is done at the project or local level can affect all levels of the environment, including the local community, neighboring regions, the country, and the world." This means to me that we must take a large view of this project. If tar sands are imported doesn't that directly go against providing for a more sustainable future? There are tremendous greenhouse gas emissions from the tar sands. We live in a community susceptible to sea level rise. What are the effects on this low lying community if the refining of oil that creates more greenhouse gases causes quicker sea level rise? Can a mitigation of this project be no diluted bitumen, no tar sands allowed?

7. How does the potential importation of tar sands crude impact AB 32 and the low carbon fuel standards? How can we strive for lower emissions if we encourage the development of the dirtiest fuels? How would any additional off site as well as onsite emissions be mitigated? What will the greenhouse gas emission be when considering off site as well as on site impacts? What will be the mitigation if tar sands with their extremely high emissions are refined?

8. If tar sands Dilbits are imported how will we know? What will happen when the VIP is fully implemented? How will the implementation of the VIP affect the type of crude oil that is imported and refined? How will the completion of the Hydrogen Plant affect the type of oil that is processed? How will a change in the crude oil impact emissions? This should consider not just average emissions, but emissions from the heaviest, sour crude that could be refined? How will a change to heavy, sour crude affect public health, cancer rates, asthma and other lung diseases? How will a change affect plant safety and the possibility of more accidents? Will the crude mix change over time? Will Valero tell us if it changes its sources after the project is approved? Would we have any say in it at that time? Would an EIR have to be then or does it need to be done now to address this threat?

9. Air quality needs to be evaluated not only during the project construction, but in light of possible change in emissions with a change in crude supply. Without knowing exactly what Valero will be refining it is impossible to tell how emissions will be impacted. What kind of air monitoring will tell us if there is a change in emissions? There is no fence line monitoring in place now. If there is an accident

how will we know what we are being exposed to? How will we know if we need to shelter in place or evacuate? What are the mitigations for increased emissions caused by a change in the crude being refined?

10. What is the cumulative impact of this project along with other projects in the Bay Area, such as the West Pac Energy Infrastructure Project in Pittsburg, and projects in Martinez and at the other refineries? If all of the refineries in the Bay Area change how they get their oil and the composition of the crude changes what will the public health impacts be? What are all the other projects that are being considered by other refineries? How will the cumulative impacts of all of these projects be mitigated?

11. What are the public health issues associated with refining diluted bitumen? What are the public health impacts from more pet coke production? What are the impacts besides increased cancer risk? How will this projects possible long term change of crude oil affect asthma rates, and other lung conditions? What are the long term impacts of inhalation of small particular matter? How would this change if diluted bitumen is brought in? The refining of tar sands crude increased the production of pet coke which contains lead and nickel, both of which are hazardous to human health? How will the impacts from this be mitigated? What will prevent small particles from blowing off of these pet coke piles into the bay and into Benicia? What are the mitigations? What are the cumulative impacts if more of the refineries in the Bay Area refine tar sands Dilbits? What will the cumulative effects be on the San Francisco Bay if there is more pet coke production and more pollution from particulate matter?

Sincerely,

Kathy Kerridge

Kathy Kerridge
771 West I Street
Benicia, CA 94510

July 1, 2013

Dear Planning Commissioners, Mayor Patterson, City Council and Brad Kilger,

I am writing to urge you to reject the MND on the Valero Crude- by –Rail Project and to require a full Environmental Impact Report

CEQA requires that there be an evaluation of all foreseeable cumulative contributions to negative impacts including air quality, public health, local and regional sensitive ecology (land and water), traffic/transportation, and global warming. The initial study and negative declaration does none of that. As the study explains “all environmental evaluation must take into account the whole action involved including offsite as well as onsite, cumulative as well as project level, indirect as well as direct, and construction as well as operational impacts.” The possible impacts of an oil spill in the Suisun Marsh, or any other waterway in California is not mentioned. The cumulative effect of not just increased rail for Valero but for all the other refineries in the area is not mentioned. Yet this is foreseeable. Maybe 25 cars will have little impact, 100 more, but what if we start having 500 rail cars a day coming through a sensitive wetland that flows to the Bay?

The biological mitigation only looked at on site mitigations that would be implemented at the project site. There was no discussion of offsite mitigations, despite the fact that these rail cars will be going through sensitive habitats off site as well. Have other agencies been notified about this such as the Suisun Resource Conservation District and the Department of Fish and Wildlife?

The derailment of a train carrying the herbicide, metam sodium, in Dunsmuir in 1991 shows what an environmental disaster can happen when a rail car derails. This derailment killed everything for 38 miles of the Upper Sacramento River. This same area was the site of a derailment on 6-13-2013. The Dunsmuir spill can provide valuable lessons. In Dunsmuir the train operators had no idea what they were dealing with and raised no warning that there was a toxic spill. The same thing happened in the Kalamazoo, Michigan pipeline burst where not only did the local people have no idea what was in the pipeline, but the company ignored their own warning signals, increased the pumping of oil and never gave a thought to contacting the local authorities. This pipeline was carrying diluted bitumen from the Canadian Tar Sands. This cleanup is in its third year and is still incomplete. It has cost \$809 million dollars so far. Are our safety plans adequate? Has an emergency response plan been prepared for a crude oil spill being imported by rail in sensitive areas? Do we even know what will be in these rail cars? These are off site concerns that must be responded to. The initial study acknowledges that there are hazards of shipping by rail, but concludes that those are offset by the hazards of shipping by boat. That is not an adequate analysis. The analysis should be what are the hazards of shipping by rail and how can they be mitigated.

Will this expansion lead to bringing in crude oil from the tar sands of Canada? Valero has stated and the initial study says that the crude brought in will be similar to what they are already processing. Will that always be so? Are they bringing in oil that is from the tar sands that has been blended prior to being shipped? Oil from the tar sands are a toxic stew when transported. They don't react in a spill in the way

that traditional crude does. If Valero is not importing tar sands diluted bitumen blend now, will it do so in the future?

The initial project claims that there will be no need to modify the refinery to be able to process the new North American crude variety since VIP upgrades have been accomplished. Would Valero have to modify the refinery to accept dilute bitumen crude blends? Would the processing of diluted bitumen increase certain kinds of emissions and what would they be? The community would want additional notification if this happened.

The Alberta Tar Sands is an environmental disaster. Not only is it extremely energy intensive in the way the oil is produced; it is also destroying vast tracts of forest and using immense quantities of fresh water. The oil that is produced has to be heated and mixed with some very toxic chemicals in order to be shipped. When it spills these chemicals evaporate and a toxic cloud is released. The resultant heavy tar does not float to the top of water to be scooped up, but rather sinks to the bottom. It is more corrosive than lighter crude. This corrosive crude is so dangerous that British Columbia will not allow a pipeline to be built through their province to the ocean. The greenhouse gas emissions from the production of these oils are much greater than normal oil production. Will this project lead to this being brought in? What would the greenhouse gas emissions be like if that were considered? These are potential cumulative, off site impacts that must be considered.

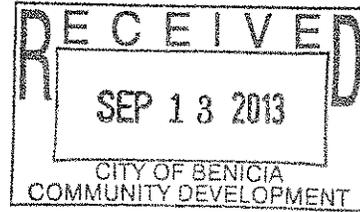
Under section 18 "Mandatory Finding of Significance" of the initial report all finding were less than significant either with or without mitigation. The only reason for this is the failure of the initial report to look beyond the narrow scope of the project, which was treated only as a construction project. There is no analysis of offsite problems with rail transport of hazardous materials, no in depth analysis of what would happen with an offsite derailment or spill in sensitive environments and no analysis of the broader impact of increased GGH emissions that would happen if there was the importation of diluted bitumen from the Canadian Tar Sands.

For all of these reasons a complete Environmental Impact Report should be required.

Sincerely,

Kathy Kerridge

Sept - 15, 2013



Dear Amy Million,

As a concerned citizen of Benicia, I am writing to you and the Benicia Planning Commission in regard to the "Crude by Rail Project" submitted by The Valero Refinery. The last two BPC meetings about this proposal have provided quite an education about this complex subject, leading me to further explore the issues involved.

I am grateful that the Planning Commission chose to order an independent EIR to consider the ramifications, both direct and indirect, this project poses. Based on what has been shared, through the extensive research presented, I have come to the conclusion that significant health and safety issues need to be addressed to protect our environment, our citizens, and our neighboring communities. At this point, I am not in favor of allowing the refinery to carry out this project of transporting crude via the railroad. I do not view this as a "green alternative," and also do not see it as a benefit to the city. The supposed new jobs that Valero has said would come from this change would not necessarily be given to Benicia residents, and I feel even if they were, it would be a poor substitute for what it might cost the city down the road due to potential health, safety and traffic problems. Since the details of health and safety were well substantiated at the meeting, I won't repeat them here.

Air space is shared, and the accumulative effect of several refineries seeking crude could have potentially damaging effects, even if no unexpected accident occurs. The latter is an obvious concern but much has already been said about those possibilities. We have been forewarned by the tragic results from recent crude oil disasters elsewhere in the US.

The major traffic increase along the corridors Union Pacific trains run also feels problematic, since only UP has control over the timing of when those trains come through. Since they will cross several states, our end location isn't the only one to consider. Many towns will experience the same kind of traffic flow disruptions we will experience if the plan goes through, yet they won't have the opportunity to address the project in the way that we can, since we live at the tail end of the line, where the refinery is located. Whatever decision we make, they will have to live with it, without their needs being considered ahead of time.

Based on last night's revelations that new track is being laid, followed by a personal conversation with Valero Representative, Chris Howe, in which he would not confirm what kind of construction was going on at the Valero site, I decided to take a little field trip to the refinery today. I was accompanied by Benicia resident, Karen Schlumpp. We were held up for several minutes while we waited for a long tank train to pass through at Park Street around 12:20 p.m. , during what I assume was the traditional lunch break time for those who work in the Industrial Park.

Although Chris Howe denied any unusual construction going on at the Valero site that would relate to the proposed project, I saw lots of fresh, new railroad track had been laid on their land with large piles of supplies stacked up for more tracks to be laid within their property lines. I was able to speak with a UP train workman who told us that new track lines were going in as well as major repairs on older lines that had been vacant for many years, (since the 1960's, he said). This sounds like a major change for UP to be making in preparation for the Valero project being passed. It's costing UP several million dollars to do this upgrade and they stand to receive handsomely from their efforts. This indicates that more is being done than the two lines that were shown during last night's simplistic presentation. There appeared to other tracks being updated perhaps for holding areas for tanks?

I also found out that the heavier track being laid is considered to be necessary for the heavier loads that are being anticipated to be coming through. It will take three locomotives for each train to carry the large tanks of crude per train run, (two in front and one in back), which is two more locomotives than was specified in the report we received at the July BPC meeting from which the original air quality report was estimated.

It appears that construction is currently being implemented by UP, yet I sense it is being triggered by a contract between UP and Valero in preparation for this influx of anticipated heavy deliveries the tracks will have to support. From what I understand, the UP doesn't need the city's approval to make railroad track changes, yet I can't help but feel these changes are contractual between Valero and the railroad even before the project has been approved by our city. The new lines I saw, (there may be others being reconstructed in the park, as well), were on various portions of Valero's land. I feel it would be worth the BPC's time to go to the site and check it out. Having this done ahead of time before the city approves the project, feels presumptuous. I also felt Chris Howe was not being honest about the construction being done when questioned directly about it.

The profit/gain is obvious for both UP and Valero. But would we actually see a substantial drop in costs at the pump? I doubt that. For business reasons, oil companies are naturally drawn to the least expensive options for themselves, which is understandable. UP stands to gain an estimated \$400,000 per day to run these shipments on their tracks. This adds up to even more than Valero will receive by purchasing the cheap grade, toxic crude, (estimated to be about \$7 to \$10 a barrel).

Although I haven't been told anything of this nature, I would imagine Valero has or will offer the Good Neighbor Steering Committee a goodly sum to see this project through. Valero has been a generous supporter to our town. In addition to their gifts, they provide a significant tax revenue to the city. To some extent, I understand and certainly appreciate what they have offered to the community during my 33 years of residency here. Yet even in acknowledgement and gratitude for the gifts received, I ask you to weigh these against the potential effects this requested change would have on our town and the outlying areas, some of which would be more affected than we are due to wind currents. Please pay careful attention to ALL aspects of this proposal, including setting reliable stipulations for independent monitoring requirements to assure safe air quality on a regular basis. Also, if this passes, please make sure Valero has the ability, financially and physically, to quickly and safely respond to any unexpected disasters that may occur from the highly toxic quality of this new form of dirty oil. When I heard last night that there have been 20 derailments since 2002 in the Industrial Park, I was alarmed. These loads Valero will be bringing in, two trains arriving daily, with each train car carrying 70,000 gallons of crude, if the figures are remembered correctly, would be a lot heavier and more dangerously toxic than what has formerly been carried on the railroad line. Some of the projected holding areas are in very sensitive locations for the environment and the town. I also noticed some of these areas are getting fresh track as well. I hope each of you will investigate this further and not just rely on the information provided by Valero.

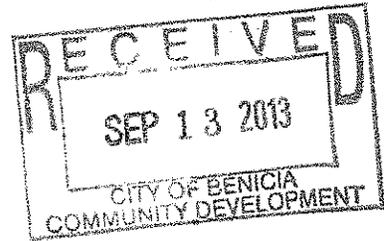
I was stunned and disappointed that Chris Howe, the Valero Representative, did not respond to any of our questions from the July meeting. Valero had stated they needed more time to go over the comments to prepare a statement, yet did not follow through on addressing any of our concerns. I don't know if this bothered any of you, but I felt discounted by them not choosing to reply. When asked about that, Chris replied, "that's what the EIR is for." It seemed to me that the only creative problem solving suggestions for the issues we're grappling with came from the audience.

Thank you for your attention to these matters. We are counting on you and the other 18 environmental agencies you've contacted to make sure that a thorough EIR is done to protect our city and the environs that surround us.

Sincerely,

Judith S. Sullivan

Amy Million, Principal Planner
Community Development Department
250 East L Street
Benicia, CA 94510



From
Ed Ruszel
2980 Bayshore Rd.

September 13, 2013

Subject: Notice of Preparation of an EIR for the Valero Crude by Rail Project

I respectfully submit comments to be considered and included in the preparation of the EIR for the above-mentioned project.

Alternatives to the Project;

A thorough discussion of the "No Project" option must be included. Valero's facility is designed around Ship transport for the bulk of their crude deliveries. The Rail facilities existing in the Industrial park were designed for the US Armies needs in the '40s and are inadequate and conflict with modern auto and truck traffic. There are other Crude by rail facilities existing and being planned on the west coast that could serve transfer crude to ships to be delivered to the refinery.

The rail unloading facility could be located on the lower waterfront, connect to existing piping to Valero's Crude Tank Farm. This would avoid the substantial traffic impacts to Bayshore Rd and Park Rd.

Subjects to be included in an EIR

Air Quality:

A description of Emissions from rail activities outside of Valero's property needs to be included. This needs to include specific information on the types, number and operations of locomotives thought the industrial park.

Hazards and Hazardous Materials:

The shipping industry has in place a dedicated emergency response contractor, Marine Spill Response Corporation, MSRC. The EIR should evaluate the capacity of UPRR in the event of a spill and compare it to Ship transport safety.

Transportation and Traffic:

The EIR must include an extensive discussion of the rail facilities outside Valero's property.

Current rail movement to and through Valero's property needs to be included.

Rail traffic for Amports car movement needs to be included as a spokesperson from UPRR stated that automobile car shipments are up "30%".

Extensive work by UPRR is currently being performed to separate rail traffic between the Amports rail yard and the Bayshore Rd tracks.

Additional rail infrastructure improvements, currently being performed by UPRR, need to be discussed. See Attachment A.

Improvements to UPRR's facilities, outside Valero's property, that needs to be made to support the CBR Project, need to be identified.

Updated site plans for the project need to be included. Will the "Wye Connector" be included as originally proposed? See attachment B.

A complete review of Federal, State and local authority governing Rail Roads need to be included.

Possible Mitigation to be considered:

Provide a grade level separation of the railroad tracks and Park Rd.

Construct alternative rail connection from the Industrial Way RR siding area to the UPRR East bound main line. (UP has tracks to within .20 miles of the main line near Teal Ct and Industrial way.)

Include the "Wye Connector" on Valero property that is configured to allow train movement to the Industrial Way RR sidings without having to shunt train across Park Rd.

Widen the eastbound 680 off ramp at Bayshore Rd. to two lanes with a right turn lane.

Warning signs should be erected on e bound 680 to alert traffic to delays at Park and Bayshore Rd.

The gate on the northwest side RR tracks leading to the Industrial Way siding should be changed to a remote operated gate similar to the gate near Park Rd.

The 3 private RR crossings on Bayshore Rd need to be specifically addressed in the Emergency Response plan and an alternative means of egress should be provided.

The crude rail traffic should be limited to 50 cards per day, which is the maximum capacity of Valero's on site rail facilities.

Union Pacific Railroad Track Upgrade & Maintenance Project in Benicia Port Area: June to October 2013

Beginning June 8 and working through the summer, Union Pacific Railroad will perform maintenance work to enhance existing rail infrastructure in Benicia. The project requires temporary closure of public and private crossings, as well as public roadways in the port area specifically.

Project Area:

Union Pacific's maintenance project will occur within the City of Benicia near the port. Public roadways and crossings impacted include Industrial Way, Park Road, Oregon Street, East Channel Road and Bayshore Road. Roadway and crossing closures are being planned to minimize impacts to businesses and the public, but motorists and area residents should be aware that temporary closures will occur.

Project Benefits:

The maintenance project consists of replacing five miles of old rails and railroad ties, removing rail embedded in the intersection at Park Road and Industrial Way, replacement of existing crossing surfaces and repaving. When complete, the project will result in:

- Improved railroad crossings including concrete pads and new asphalt.
- An enhanced Park Road/Industrial Way intersection to improve traffic flow.
- Improved freight train fluidity.



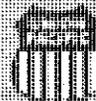
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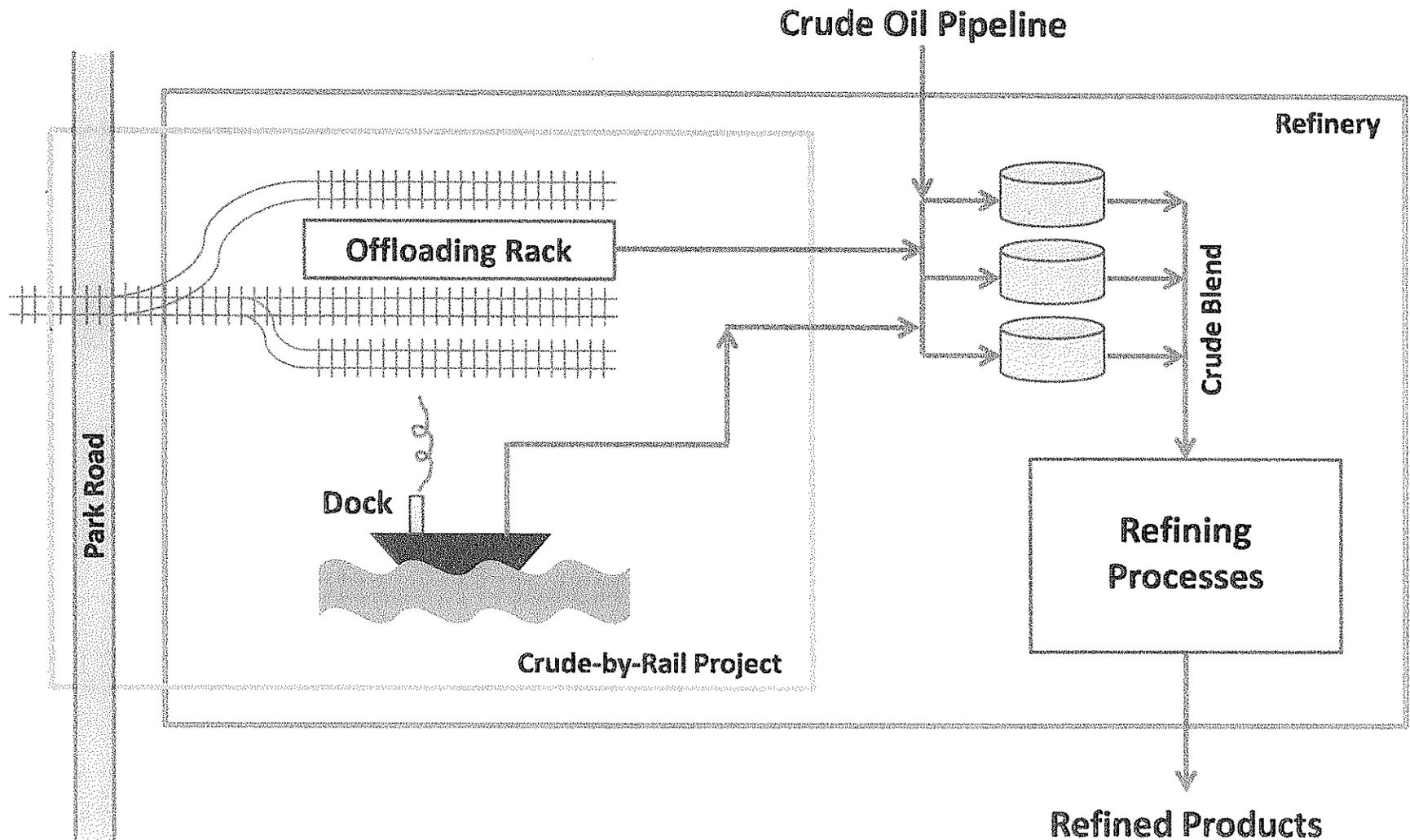
Roadway Traffic Plans:

Before any roadway crossings or roadways are temporarily closed, Union Pacific coordinates with the local roadway authority in order to prepare comprehensive traffic reroute plans that will minimize vehicle delays. In advance of the project, signs will be placed throughout the project area so the traveling public is aware of the pending crossing and road closures. Detour signs will also be staged in order to easily identify alternate routes.

Union Pacific Railroad Project Contacts:

Erik Kreutzberg, Project Manager	916-789-6155, eakreutz@up.com
Liisa Stark, Public Affairs	916-792-9160, lstark@up.com





**Valero Benicia Refinery
Crude-by-Rail Project Description**

To: Kristin Pollot, kpollot@pittsburg.ca.us, City of Pittsburg CA Planning Division

From: Charles Davidson. 2108 Drake Lane, Hercules CA 94547

RE: WesPac PITTSBURG ENERGY INFRASTRUCTURE PROJECT

Dear Kristin,

I do not live in Pittsburg, but I live in Hercules near Phillips 66, a refinery connected to and very much dependent upon the scope and capabilities of the Pittsburg WesPac Energy Infrastructure Project, aka the WesPac Pittsburg Petroleum Depot Project.

Addressed below are my concerns pertaining to:

POTENTIAL ENVIRONMENTAL IMPACTS NOT ADDRESSED IN THE PITTSBURG WesPac DEIR :

I. PHYSICALLY-INTERRELATED REFINERY PROJECTS FOR THE EVALUATION OF CUMULATIVE REGIONAL EFFECTS,

II. CUMULATIVE REGIONAL GREENHOUSE GAS AND NOXIOUS POLLUTION EFFECTS, AND

III. A CRITICALLY SIGNIFICANT INCREASE IN TOTAL BAY AREA REFINING CAPABILITY ENABLED BY THE WesPac PETROLEUM STORAGE DEPOT.

Please consider my recommendation to amend the following omissions stated in sections I to III.

Regards,

Charles Davidson
(510) 837-8441

CONCLUSION: The WesPac PITTSBURG ENERGY INFRASTRUCTURE PROJECT, aka THE PITTSBURG PETROLEUM STORAGE DEPOT, WILL CRITICALLY ENABLE A SIGNIFICANT INCREASE IN TOTAL BAY AREA REFINING CAPABILITY AND OFF-SITE GREENHOUSE GAS PRODUCTION – LIKELY OFF-SITE EMISSIONS NOT DOCUMENTED IN THE DRAFT EIR.

Off-site emissions due to additional regional refining capability are dependent upon the WesPac Oil Storage Depot and are not directly addressed in the DEIR, but can be inferred by the size and scope of the overall oil storage and associated marine/railroad/pipeline enhancement project.

The Pittsburg WesPac DEIR omits mention of the potential deleterious impacts on regional air quality, that the aforementioned Bay Area's destination refineries for WesPac crude will accrue when the WesPac Project is completed.

The WesPac oil terminal and storage tank project should not be seen in isolation in terms of off-site air emissions that it will enable and that need a full regional emissions assessment. The WesPac DEIR neglects to mention the recent and proposed changes in refinery technology and throughput that will impact WesPac's off-site emissions assessment. The WesPac DEIR, therefore, omits mention of the potential impacts that the destination refineries will engender for crude transiting the terminal, namely a significant increase in volume of refined products, in addition to refining a likely increased percentage of high-sulfur heavy crude oil, such as Canadian Tar Sands crude.

These quantity and quality factors related to the WesPac-transited crude will require far larger volumes of regional refinery hydrogen production and more heat production, and consequently, the refineries will also produce more greenhouse gasses and other airborne pollutants in the Bay Area and beyond, when considering the increased volume of manufactured end-products. Therefore, it is inaccurate and misleading to mention only the WesPac project's on-site air emissions analysis into emissions declarations, while ignoring secondary off-site emissions for purposes of invoking the presumption that the project will have no significant regional impact.

The Pittsburg WesPac DEIR should be amended to include off-site GHGs, from the terminal's various destination refineries and also from their end-products, which will be engendered both by the terminal-enabled increase in yearly Bay Area refinery input quantity and the probable lower quality of the crude passing through the facility, in order to produce a more complete cumulative evaluation of regional effects. Furthermore, for the WesPac DEIR to be in compliance and to have a more complete cumulative evaluation of regional air pollution effects, all recent and proposed major, relevant upgrades to WesPac crude destination

refineries, which were omitted in the draft EIR, must be considered in detail.

BACKGROUND AND DISCUSSION

I. PHYSICALLY INTERRELATED REFINERY PROJECTS FOR CUMULATIVE REGIONAL EFFECTS EVALUATION ARE REQUIRED FOR WesPac's DEIR, BUT WERE OMITTED.

The main components of the project consist of the modernization and reactivation of the existing fuel storage and distribution systems at the facility, including: (1) the marine terminal; (2) the onshore storage terminal, including both the East and South Tank Farms; and (3) the pipeline connection to the existing San Pablo Bay Pipeline and a proposed new pipeline connection to the existing KLM Pipeline. An existing 1-mile-long railroad siding leading into and around the GenOn Pittsburg Generating Station would allow for the facility to receive crude oil by rail cars, instead of—or in addition to—waterborne vessels.

The WesPac Pittsburg Energy Infrastructure Project (i.e., Petroleum Tank Storage Depot) DEIR, however, does not disclose pertinent information relating to the anticipated source and quality of the crude feedstock moving through the WesPac facility, for stored crude oil, that the destination refineries need for the crude slate that they plan on processing. The WesPac Tank Project must be seen within a larger context to the Bay Area refineries, that it is connected to, that each have undergone recent (or have planned) renovations allowing for the processing of lower quality feedstock, such as Canadian Tar Sands.

The Pittsburg WesPac Draft EIR, failed to mention, as required, several other "POTENTIAL PROJECTS FOR CUMULATIVE POLLUTION EFFECTS EVALUATION", at local Bay Area refineries, that are critically enabled by the WesPac project.

See: *Orinda Ass'n v. Board of Supervisors* (1986) 182 CA3d 1145, 1171 ("A public agency is not permitted to subdivide a single project into smaller individual subprojects in order to avoid the responsibility of considering the environmental impact of the project as a whole.").

The named, likely destination Bay Area refineries for crude transiting the Pittsburg WesPack Oil Storage facility are Chevron (Richmond) , Shell

(Martinez), Phillips 66 (Rodeo) , Tesoro (Martinez) and Valero (Benecia). According to the WesPac DEIR:

Table 2-6: Refineries that May Receive-Crude-Oil-from and/or Deliver- Crude-Oil-to the Terminal Oil Refinery

Address

Shell Martinez Refinery
3485 Pacheco Boulevard Martinez, California 94553

Conoco Phillips Refinery
1380 San Pablo Avenue Rodeo, California 94572

Tesoro Golden Eagle Refinery
150 Solano Way Martinez, California 94553

Valero Benecia Refinery
3400 East 2nd Street Benecia, California 94510

The Pittsburg WesPac Draft EIR, failed to mention, as required, these “POTENTIAL PROJECTS FOR CUMULATIVE EFFECTS EVALUATION”, which are collectively listed below and which are either proposed or recently completed, namely:

WesPac Pittsburg Petroleum Tank Project: Proposed

ConocoPhillips proposed the Clean Fuels Expansion Project (CFEP): Completed

[The Clean Fuels Expansion Project (CFEP) added new facilities and modified existing facilities to produce additional low-sulfur clean fuels. The Refinery would use the Heavy Gas Oil (HGO) that is normally produced at the Refinery and is currently sold into the HGO market, to produce cleaner-burning gasoline and ultra-low-sulfur diesel (ULSD) fuels targeted for the California market or fuel oil for the global market.]

PHILLIPS 66 PROPANE RECOVERY PROJECT: Currently Proposed

(Propane and butane currently used as refinery gasses (RFGs) for heat, electricity and hydrogen production will subsequently be sold as de-sulfured commercial end-products and the RFG would then be replaced by currently inexpensive natural gas)

Chevron Richmond Revised [Hydrogen] Renewal Project and (proposed) Hydrogen pipeline to Martinez Shell Refinery.

City of Benicia: Valero Crude by Rail Project:

Plus: Marine Terminal Leases for Shell Martinez Refinery NuStar Selby Marine Terminal and Tesoro Amorco.

The collective and significant increase in refining volume of the five local Bay Area Refinery Projects that are not on the Pittsburg WesPac site, but will be connected to WesPac, will generate additional refinery and end-product Greenhouse Gasses and other pollutants in significant volumes. This enhanced Bay Area and consumer end-point GHG production will be significantly facilitated when the WesPac Project is completed. **Off-site emissions due to additional regional refining capability dependent upon the WesPac Oil Storage Depot and are not directly addressed in the DEIR, but can be inferred by the size and scope of the overall oil storage and associated marine/railroad/pipeline enhancement project.** According to the WesPac DEIR:

“The total annual throughput for the entire Terminal would be approximately 70,200,000 BBLs of crude oil and/or partially refined crude oil per year.”

Moreover, the indirect nature of these off-site emissions, from both additional Bay Area refinery emissions and the emissions of the refined end-products, cannot be ignored as “it is inaccurate and misleading to mention only the WesPac project's air emissions analysis into on-site emissions, while ignoring secondary off-site emissions for purposes of invoking the presumption the project will have no significant regional impact.” Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692, 717. Thus the DEIR requires a sufficient analysis and discussion of these emission sources.

II. CUMULATIVE REGIONAL GREEN HOUSE GAS AND NOXIOUS POLLUTION EFFECTS REQUIRE EVALUATION:

The Pittsburg WesPac DEIR omits mention of the potential deleterious impacts on regional air quality, that the aforementioned Bay Area destination refinery's for WesPac crude will accrue when the WesPac

Project is completed. These deleterious effects are due to both the increased crude oil delivery capacity facilitated by the proposed Pittsburg WesPac Oil Storage Depot and the increased crude oil refinery throughput, that was not mentioned in the WesPac DEIR, but which is predicated upon the need for a regional depot facility such as WesPac. The WesPac-related and pipeline interrelated refineries are namely: Chevron (Richmond) , Shell (Martinez), Phillips 66 (Rodeo), Tesoro (Martinez) and Valero's (Benecia),

The regional refineries that will be connected to WesPac each have their own aforementioned projects that lock in coking, a process that require dense crude, such as the cheapest diluted bitumen from Canadian tar sands and high-sulfur heavy California shale oil. Coking removes carbon from the remaining refinery feed, leaving a product that can be burned in the place of coal for electrical plants or for making steel. All Bay Area refineries have increased or plan on increasing hydrogen production, pipeline transport and consumption in order to accomplish desulfurization and hydrocracking, thereby increasing greenhouse gas production inherent in currently used methods of industrial hydrogen production. The coking for heavy process requires greater heat than is required for refining lighter crudes, and therefore, more production of GHGs and other airborne pollutants. Koch Carbon owns a petroleum coke (i.e., petcoke) storage/shipping plant in Pittsburg, right on the water at 707 E. 3rd St.. Several Bay Area refineries use this bulk storage plant to send their petcoke to Asia from there.

Phillips 66 CEO Greg Garland “told analysts that the company was looking at railcars capable of transporting Canadian heavy crude to the West Coast.” The Valero project would provide the ability to process lower grades of raw crude and provide flexibility to substitute raw crudes. In addition, the project would optimize operations for efficient production of low-sulfur fuels, requiring more hydrogen production and consumption.

The EIR process for this WesPac Project presents a critical opportunity to engage in a genuine and thorough review of the full environmental impacts of WesPac's proposed Project, specifically in the context of both the increased crude delivery capacity, the overall switch to lower crude quality by Bay Area refineries connected to WesPac and the increased need for regional refinery hydrogen production.

The proposed WesPac Project makes fundamental transportation (marine

terminal and rail roads spurs), storage and associated equipment changes designed specifically to enable the long-term crude quality switch in refineries connected to WesPac. These Bay Area refinery changes are potentially irreversible, and although they are indirect to the WesPac Depot itself, the depot project will have regional environmental impacts that demand public and agency attention, and a full review from an air quality management perspective.

III. WesPac PETROLEUM STORAGE DEPOT WILL CRITICALLY ENABLE A SIGNIFICANT INCREASE IN CUMULATIVE BAY AREA REFINING CAPABILITY:

The WesPac project should not be seen in isolation in terms of off-site emissions that it will enable and that need a full regional emissions assessment. The DEIR omits mention of the potential impacts that several of the destination refineries' now produce a significantly increased volume of refined products and it fails to explicitly detail how exactly the Project will meet stated projected Bay Area refinery export objectives, using their expected surplus above domestic market needs nor does it the account for GHGs produced by those exports.

Importantly, current and proposed regional refinery projects substitute inexpensive natural gas in place of each of the refineries' former usage of heavy gas oil (HGO), propane or butane (all collected during the refining process) as the refinery fuel gas of choice, for heat, electricity and hydrogen production. Switching to natural gas in order to operate the refinery allows for significantly more refined value-added products to be produced for sale by each of the refineries connected to WesPac. In turn, this refinery gas switch to an external input of natural gas will require that each of the refineries supplied by the WesPac Depot be provided with proportionately more crude petroleum input (ie, feedstock in order to accomplish their increased production goals). For example, Phillips' recently completed CFEP, that converted to using cheap HGO for refinery operations rather than for sale, that yielded 35% more highly valued gasoline and 21.5% more diesel fuel per day compared to before the CFEP was completed. Phillips' currently proposed Propane Recovery Project will capture the propane and butane for sale, instead of using it as another refinery fuel gas (RFG) and replacing them with inexpensive natural gas.

The interconnectedness of the Pittsburg WesPac Project with the various Bay Area refineries is perhaps most apparent in light of the WesPac DEIR that calls for the existing San Pablo Bay Pipeline, a 42-mile-long pipeline

extending from the Chevron Refinery in the City of Richmond, to be extended to the Pittsburg WesPac Depot by reactivating an unused, adjacent 13.2-mile-long currently idle section of the pipeline.

The reactivated pipeline would be used to transport crude oil between the WesPac Terminal to nearby San Francisco Bay Area refineries, terminals, and other existing active common-carrier pipelines. In turn, the Richmond Chevron hydrogen pipeline DEIR is proposed to go back north to the Phillips 66 refinery in Rodeo and will end at the Shell refinery in Martinez.

The total annual throughput for the entire WesPac Terminal would be approximately 70,200,000 BBLs of crude oil and/or partially refined crude oil per year, corresponding to a proportionate increase in total, overall Bay Area Refining capacity, which is increasingly dependent upon a corresponding massive increase in the natural gas usage by the WesPac-connected Bay Area refinery operations.

<http://www.ci.pittsburg.ca.us/Modules/ShowDocument.aspx?documentid=5675>

City of Pittsburg 1.0 Introduction and Project Goals and Objectives

The proposed petroleum Terminal is located at 696 West 10th Street in the City of Pittsburg (City) in Contra Costa County (County), California, approximately 32 miles northeast of Oakland and along the shores of Suisun Bay. The Terminal would consist of approximately 125 acres of land situated within the current NRG property/facility. The land and facilities for the project, including storage tanks and the dock, are expected to be purchased from NRG by WesPac.

1.2 PROPOSED PROJECT SUMMARY

The proposed project would modernize and reactivate an existing oil storage and transportation facility, to be known as the WesPac Energy-Pittsburg Terminal (Terminal). The Terminal includes existing oil storage tanks that would be updated to accommodate the storage of crude oil and partially refined crude oil on-site. The Terminal would be designed to receive shipments of oil from trains, pipelines, and marine vessels; store these oil shipments for varying periods of time; and transfer stored oils out to local refineries via new and existing pipelines connected to the site. The Terminal would also have the capability to load marine vessels for shipment to other destinations. For the delivery of crude oil and

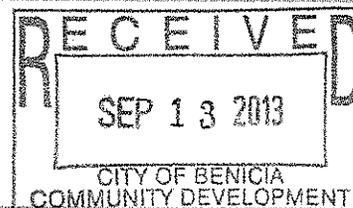
partially refined crude oil by train, the project would include the construction of a new Rail Transload Operations Facility (Rail Transload Facility) within a nearby BNSF Railway Company (BNSF) rail yard. As stated above, all products received at the Terminal would be transported to the Terminal by rail, pipeline, ship, or barge. The proposed project includes no product transportation via truck.

1.2.1 Locomotive Operations

All movements of trains bringing rail tank cars to and from the Rail Transload Facility would be performed by BNSF, on BNSF property, and on trains operated by BNSF employees. The City of Pittsburg and other State and local responsible agencies are preempted from imposing mitigation measures, conditions, or regulations to reduce or mitigate potential impacts of BNSF train movements.

Amy Million - Scoping Comment on Valero CBR Project

From: Donald Dean <donaldjdean@sbcglobal.net>
To: Amy Million <Amy.Million@ci.benicia.ca.us>
Date: 9/13/2013 1:22 PM
Subject: Scoping Comment on Valero CBR Project



Amy,

Additional scoping question on Valero CBR Project-

It's clear that air quality and possible new or increased emissions are an issue with the CBR project. My understanding is that the BAAQMD will be addressing air quality issues as part of a revised permit for the project. The DEIR should explain the BAAQMD process and how it interrelates to the City's permit process. What issues is the BAAQMD addressing as a function of its permit? What is the timing of the BAAQMD permit? Any information or determinations generated by the BAAQMD for the Valero project should be included in the DEIR.

Thanks,

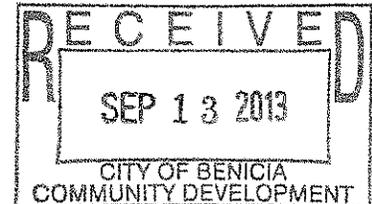
Donald Dean
257 West I Street
Benicia

Amy Million - Benicia Valero Crude-by-Rail Project

From: Charles Davidson <charlesdavidson@me.com>
To: "Amy.Million@ci.benicia.ca.us" <Amy.Million@ci.benicia.ca.us>
Date: 9/13/2013 4:22 PM
Subject: Benicia Valero Crude-by-Rail Project
CC: Charles Davidson <charlesdavidson@me.com>

To: Amy.Million@ci.benicia.ca.us

From: Charles Davidson
2108 Drake Lane. Hercules CA. 94547
(510) 837-8441 <charlesdavidson@me.com>



Re: Benicia Valero Crude-by-Rail Project

Dear Benicia Planning Dept.

The proposed Benicia Valero Crude-by-Rail Project was presupposed by the now completed Valero Improvement Project (VIP) that allowed for the increased volume of refining of low-quality high-sulfur heavy crude oil as refinery feedstock. No mention was made in the VIP EIR of a now VIP-necessitated massive increase in rail traffic to the refinery that will impinge upon the quality of life and safety of Valero refinery neighbors and UP railroad neighbors. The necessity of massive rail traffic to Benicia Valero for Canadian Tar Sands and domestic shale oil was known at that time, but not disclosed in the VIP EIR. For the reason of previous non-disclosure in the VIP EIR of neighbor, safety and environmental impacts of a massive increase in projected rail traffic of canadian and domestic high sulfur heavy crudes, permission for the Valero Crude-by-Rail project should be denied.

Regards,

Charles Davidson

APPENDIX G

Initial Study Comment Period Written Comments

DEPARTMENT OF TRANSPORTATION

111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
TTY 711



Flex your power!
Be energy efficient!



June 27, 2013

SOL680059
SOL-680-R2:58
SCH#2013052074

Ms. Amy Million
City of Benicia
250 East L Street
Benicia CA 94510

Dear Ms. Million:

Valero Crude by Rail / Mitigated Negative Declaration

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above.

Traffic Operations

Please consider in your mitigation measures ways to reduce the impacts your project may have on Interstate (I-) 680. We are particularly concerned about how your project will impact I-680 / Bayshore Road intersection. The Level of service (LOS) on I-680 Northbound off ramp goes from a LOS D to a LOS F. Please find ways to mitigate this impact your project has on this off ramp to maintain or improve the LOS.

Should you have any questions regarding this letter, please contact Keith Wayne of my staff by telephone at (510) 286-5737; or by email at keith_wayne@dot.ca.gov.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development – Intergovernmental Review

c: Scott Morgan, State Clearinghouse



APS West Coast, Inc.
P.O. Box 315
1997 Elm Road
Benicia, CA 94510
Tel: (707) 745-2394
Fax: (707) 746-1485



June 27, 2013

Brad Kilger
City Manager and Benicia Planning Commission
City of Benicia
250 East L Street
Benicia, CA 94510

Re: Letter of Clarification (Valero Crude by Rail Project)

Dear Mr. Kilger,

There appears to be a fair amount of misinformation regarding the Valero crude by rail project and its potential impact on AMPORTS and the Port of Benicia.

For clarification, Valero operates their own marine terminal. A reduction in vessels delivering crude to their terminal will have no economic or operational impact on AMPORTS or our port operations

The record should also show, AMPORTS operates Valero's petcoke silos and provides the associated marine terminal services at AMPORTS pier. This operation should be unaffected by the crude by rail project as well.

If you have any questions regarding the impact of this project on AMPORTS or the Port of Benicia, please do not hesitate to give us a call.

Best Regards,

A handwritten signature in black ink, appearing to read "Randy Scott".

Randy Scott
General Manager
Amports - Benicia

July 1, 2013

Via Fax to

City of Benicia Community Development Department
Attn: Amy Million
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637

Re: Notice of Intent to Adopt a Mitigated Negative Declaration for the Valero Crude
by Rail Project

Dear Ms. Million:

On behalf of the Natural Resources Defense Council (NRDC), which has over 1.4 million members and activists, 250,000 of whom are Californians and approximately 100 of whom reside in Benicia, we submit the following comments on the Notice of Intent to Adopt a Mitigated Negative Declaration for the Valero Crude by Rail Project. The Notice of Intent for the project was issued on May 28, 2013, and indicated that the public comment period closes on July 1, 2013. Valero applied for a land use permit from the City of Benicia in December of 2012 to allow Valero to receive crude oil by train in quantities up to 70,000 barrels per day, in 100 rail cars per day.

Although the May 31, 2013 Initial Study/Mitigated Negative Declaration [IS/MND] on the Valero Crude by Rail Project assumed the project would cause no significant unmitigated effects on the environment, the IS/MND failed to consider all potential impacts. Our evaluation of the Project, as well as that of two independent experts retained by NRDC to evaluate the project, indicates that it will likely result in significant environmental impacts that have been neither discussed in the Initial Study nor mitigated under the IS/MND. Our comments below focus on air quality, public health, public safety, noise, general hazards and ecological risks.¹

Because this Project could result in significant impacts to the environment, an Environmental Impact Report [EIR] must be prepared and circulated for public comment before the City may lawfully approve the project. Any significant impacts revealed by the EIR should be thoroughly analyzed and fully mitigated.

I. Air Quality and Public Health Impacts

The two key premises of the IS/MND's air quality analysis—that the new “North American-sourced crudes” received by the refinery as a result of the project will have a sulfur

¹ Selected sources cited have been provided to the City of Benicia in hard copy. All sources cited in NRDC's comments and in the expert reports will be provided in CD to follow.

content and density similar to the refinery's current slate, and that as a result, air emissions will not significantly change—is both unsupported and demonstrably wrong. The range of sulfur contents and densities projected for the new crude slate is wide, and air impacts could vary substantially within that range. Even more importantly, air emissions from crude refining depend on a host of characteristics other than sulfur content and density, and likely changes in those other characteristics are not disclosed or discussed by the IS/MND at all. Nor are other potentially significant air impacts, as further discussed below. The IS/MND thus fails to recognize the full suite of potential air quality and public health impacts of this project or provide any meaningful mitigation for those impacts.

No mitigation is included for the operational phase of this project. The operation of this project has very serious implications for air quality and public health that are not discussed in the IS/MND because the IS/MND fails to consider the appropriate scenarios of crude oils that may be transported by rail.

Valero's application states that “[t]he crude oil to be transported by rail cars is expected to be of similar quality compared to existing crude oil imported by marine vessel” and that the Project would not result in changes in refinery emissions. The May 31, 2013 IS/MND also assumes that there would be no significant change in crude oil slate due to the Project and no change in refinery emissions. But neither Valero's application nor the IS/MND provide data, let alone any analysis, sufficient to support these assumptions.

We have included as attachments to our comment letter, two expert reports that evaluate whether this Project would impact the crude oil slate or refinery emissions. The first report, by The Goodman Group, discusses changes to the refinery's crude slate that would likely occur due to the Crude by Rail Project. The report concludes that, although much of the relevant information needed to evaluate the proposed Project's exact effect on crude oil slate was not made publically available by either Valero or the City of Benicia, the Project is likely to significantly affect crude quality. In particular, the project is likely in the long-term to facilitate the refinery's use of Canadian tar sand crudes blended with diluent or “DilBits.”

The second report, by Dr. Phyllis Fox, concludes that Canadian tar sand crudes blended with diluent have the potential to significantly change the profile of and increase air emissions compared to current crude slates. These changes may be, and indeed are likely to be, significant. The transport and refining of dilbits could significantly increase emissions of a wider range of pollutants including but not limited to volatile organic compounds (VOCs); hazardous air pollutants, including benzene and lead; and highly odiferous sulfur compounds. This additional pollution would degrade ambient air quality, adversely affect the health of workers and residents around the subject facilities, and create public nuisance odors. Further, the high acid levels in these crudes would accelerate corrosion of refinery components, contributing to equipment failure and increased accidental releases.

Unfortunately, contrary to CEQA's goals of public disclosure and evaluation, the IS/MND does not disclose enough specific information about the chemical composition of the crudes that would be imported and the crudes that would be displaced to fully assess crude quality changes and resulting air quality and other impacts. The number and nature of the

deficiencies are so substantial that the IS/MND should be withdrawn. The City should prepare an EIR with a complete Project description and a thorough environmental impact analysis.

The minor mitigations included for the construction component of the project amount to little more than dust control. The construction phase of the project should require all trucks, construction equipment and any other equipment utilizing a diesel engine to meet the latest and cleanest U.S. EPA emission standards or be retrofitted with exhaust controls to achieve similar emission reductions.

A. Increased Air Emissions Due to Heavier, Lower Quality Crude Oil

The IS/MND fails to disclose or quantify the increases in emissions that could and likely would result from modifications to the crude slate at the Valero refinery that could and likely would result from the Crude by Rail Project. As noted in the concurrently submitted expert report of The Goodman Group, publicly disclosed information supports a finding that the rail project could foreseeably lead to replacing as much as 40% or more of the refinery's current crude slate (70,000 barrels per day) with tar sands crudes. This would make the refinery's overall crude slate heavier, increase emissions, and result in significant environmental impacts.

The CEQA baseline that must be considered for this project is the current slate of crude oil. Current refinery conditions and current air emissions must be analyzed. The use of the proper CEQA baseline is critical to accurately evaluate impacts. The Refinery operates under a permit issued by the Bay Area Air Quality Management District (BAAQMD). This permit establishes maximum amounts of regulated pollutants that can be emitted. However, even if emissions increases from the Crude by Rail Project fell within the limits of existing permits and plans, those increases may still be significant for purposes of CEQA. A long line of Court of Appeal decisions and a California Supreme Court decision hold that impacts of a proposed project are to be compared to the actual environmental conditions existing at the time of CEQA analysis, rather than to allowable conditions defined by a plan or regulatory framework, such as the BAAQMD permit. The California Supreme Court specifically concluded, regarding the ConocoPhillips refinery in Los Angeles, that the pre-existing permits did not establish the baseline for CEQA analysis. *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310.

Thus, even if the emission increases identified below, when fully analyzed, fell within existing permit limits, or potential future emissions analyzed with respect to other projects,² this would not exclude them from CEQA review for the Crude by Rail Project. The increases in emissions that will occur from importing "North American-sourced crudes" must be quantified and evaluated under CEQA as of current conditions. (And even if those increased emissions had

² Although the IS/MND neglected to discuss the Valero Improvement Project (VIP) that began in 2002 and remains in progress, that Project envisioned process changes designed to facilitate the import and processing of much higher sulfur and heavier crudes than the current slate. Documents related to the VIP are relevant to our comments because those VIP documents articulate Valero's clear intent to process much dirtier crudes, and provide some insight into the additional energy usage required and potential increased air emissions.

been considered earlier, they would now have to be evaluated now within the regulatory and other framework on the ground now.)

In fact the potential air emissions increases related to this project would be significant, would exceed BAAQMD CEQA significance thresholds and potentially would contribute to adverse health impacts, malodors, and major accidental releases, as well as degradation of ambient air quality. The IS/MND fails to evaluate these potential emission increases and their environmental consequences, yet we find that they are significant and unmitigated, requiring the preparation of an EIR.

1) Changes in Crude Slate and Chemical Composition

The air quality impacts of refining North American-sourced crudes such as tar sands depends on the chemical and physical composition of the refinery slate with tar sands crude compared to the current slate. The current slate includes very little tar sands, from 0.5% to 2% of the Refinery total crude slate over the period 2010 to 2012. The Crude by Rail Project could increase the heavy, sour tar sands crude by up to 70,000 BPD, or up to 42% of the permitted refinery throughput. This represents a significant increase in a crude with a dramatically different chemical composition, which will change the emissions profile and cause significant increases in emissions of some pollutants compared to the emissions from the Refinery's current crude slate.³

The U.S. Geological Survey ("USGS"), for example, reported that "natural bitumen," the source of all Canadian tar sands-derived oils, contains 102 times more copper, 21 times more vanadium, 11 times more sulfur, six times more nitrogen, 11 times more nickel, and 5 times more lead than conventional heavy crude oil, such as those currently refined from Ecuador, Columbia, and Brazil.⁴ These pollutants contribute to smog, soot, acid rain, and odors that affect residents nearby.

³ Straatiev and other, 2010, Table 1; Brian Hitchon and R.H. Filby, *Geochemical Studies - 1 Trace Elements in Alberta Crude Oils*, http://www.ag.gov.ab.ca/publications/OFR/PDF/OFR_1983_02.PDF; F.S. Jacobs and R.H. Filby, *Trace Element Composition of Athabasca Tar Sands and Extracted Bitumens*, *Atomic and Nuclear Methods in Fossil Energy Research*, 1982, pp 49-59, available at <http://link.springer.com/book/10.1007/978-1-4684-4133-8/page/1>; James G. Speight, *The Desulfurization of Heavy Oils and Residua*, Marcel Dekker, Inc., 1981, Tables 1-1, 2-2, 2-3, 2-4 and p. 13 and James G. Speight, *Synthetic Fuels Handbook: Properties, Process, and Performance*, McGraw-Hill, 2008, Tables A.2, A.3, and A.4; Pat Swafford, *Evaluating Canadian Crudes in US Gulf Coast Refineries*, Crude Oil Quality Association Meeting, February 11, 2010, Available at: http://www.coqa-inc.org/20100211_Swafford_Crude_Evaluations.pdf.

⁴ R.F. Meyer, E.D. Attanasi, and P.A. Freeman, *Heavy Oil and Natural Bitumen Resources in Geological Basins of the World*, U.S. Geological Survey Open-File Report 2007-1084, 2007, p. 14, Table 1, Available at <http://pubs.usgs.gov/of/2007/1084/OF2007-1084v1.pdf>.

Additionally, many of these chemicals pose a direct health hazard from air emissions. These metals, for example, mostly end up in the coke. Greater amounts of coke are produced by the tar sands crudes than the current crude slate. The California Air Resources Board has classified lead as a pollutant with no safe threshold level of exposure below which there are no adverse health effects. Thus, just the increase in lead from switching up to 42% of the slate to tar sands crude is a significant impact that was not disclosed in the IS/MND. Accordingly, crude quality is critical to a thorough evaluation of the impacts of a crude switch, such as proposed here.

A good crude assay is essential for comprehensive crude oil evaluation.⁵ The type of data required to evaluate emissions would require, at a minimum, the following information:

- Trace elements (As, B, Cd, Cl, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, U, V, Zn)
- Nitrogen (total & basic)
- Sulfur (total, mercaptans, H₂S)
- Residue properties (saturates, aromatics, resins)
- Acidity
- Aromatics content
- Asphaltenes (pentane, hexane and heptane insolubles)
- Hydrogen content
- Carbon residue (Ramsbottom, Conradson)
- Distillation yields
- Properties by cut
- Hydrocarbon analysis by gas chromatography

Valero is likely to have access to the crude assay or "fingerprint" of the oil, but it was not made available to the public, foreclosing any meaningful public review. The IS/MND does not contain any crude assays for the current refinery slate, the crude that would be imported by rail, or the crude that is currently imported by ship but would be replaced. The IS/MND also does not contain an analysis of the impact of changes in crude quality on air emissions, asserting that there would be no change. The Initial Study should have evaluated the impacts of refining tar sands crudes on air emissions and other residuals or included conditions of certification specifically prohibiting their import, as publicly available information indicates that Valero is considering tar sands crudes and they would arrive at the Refinery with the largest discount relative to other crudes.

⁵ CCQTA, Canadian Crude Oil Quality Past, Present and Future Direction, February 7, 2012, pp. 8 ("Need more than sulfur and gravity to determine the "acceptability and valuation" of crude oil in a refinery. The crude oil's hydrocarbon footprint and contaminants determine the value of crudes.."), Available at: http://www.choa.ab.ca/index.php/ci_id/9210/la_id/1/, provided as Appendix I to TGG Comments.

Although specific information is lacking, significant impacts can reasonably be expected from including tar sands crudes in the crude slate. The IS/MND claims that new "North American-sourced crudes" will not significantly change the range of sulfur content and density of the crude slate; however, it is possible and probable for the range of API and sulfur reported in the IS/MND to remain similar, yet with relatively small shifts in the average levels of sulfur and density and with major shifts in other properties, for emissions to increase. Essentially, the premise of the IS/MND that the composition of the crude slate will not change and thus will not impact air emissions, is inherently false.

For example, sulfur content of crude oils represents a complex collection of individual chemical compounds such as hydrogen sulfide, mercaptans, thiophene, benzothiophene, methyl sulfonic acid, dimethyl sulfone, thiacyclohexane, etc. Each crude has a different suite of individual sulfur chemicals. The impacts of "sulfur" depend upon the specific sulfur chemicals and their relative concentrations, not on the range of total sulfur expressed as a percent of the crude oil by weight. Although a range in the total sulfur content of rail-imported crude and the current crude slate may appear similar, even a small increase in total sulfur content can have profound impacts, and the composition of sulfur species also matters. A minor increase in sulfur content was reported by the Federal Chemical Safety Board (CSB) as a major contributing factor in the recent (August 2012) catastrophic fire at the Chevron Richmond Refinery in California.

Similarly, while the lighter sulfur compounds such as mercaptans and disulfides found in light sweet crudes may not significantly increase the overall weight percent sulfur in the crude slate, as claimed in the IS/MND, they do lead to impacts, such as aggressive sulfidation corrosion, which can lead to accidental releases.⁶ As another example, the specific sulfur compounds will determine which compounds will be emitted from storage tanks and fugitive component, some of which could result in significant odor impacts, e.g., mercaptans. Thus, regardless of what crude might be brought in by rail, there are potential significant environmental impacts that are due to characteristics of that oil besides total sulfur and API gravity.

The specific chemicals in crude oil also determine which ones will be volatile and lost through equipment leaks and outgassed from tanks, which ones will be difficult to remove in hydrotreaters and other refining processes (thus determining how much hydrogen and energy must be expended to remove them), which ones will cause malodors, and which ones might aggravate corrosion, leading to accidental releases. The IS/MND failed to consider these finer details that have important implications for air quality and public health, and thus, failed to satisfy the disclosure requirements of CEQA and failed to analyze relevant impacts.

2) *Heavier Crudes Require More Processing*

Canadian tar sands bitumen is distinguished from conventional petroleum by the small concentration of low molecular weight hydrocarbons and the abundance of high molecular

⁶ See, for example, Jim McLaughlin, *Changing Your Crude Slate*, Becht New, May 24, 2013, Available at: <http://becht.com/news/becht-news/>.

weight polymeric material.⁷ Crudes derived from Canadian tar sands bitumen—DilBits, Synthetic crude oils (SCOs) and the combination of the two (SynBits)—are heavier, i.e., have larger, more complex molecules such as asphaltenes,⁸ some with molecular weights above 15,000.⁹ They generally have higher amounts of coke-forming precursors; larger amounts of contaminants (sulfur, nitrogen nickel, vanadium) that require more intense processing to remove; and are deficient in hydrogen, compared to other heavy crudes.

Thus, to convert them into the same refined products requires more utilities -- electricity, water, heat, and hydrogen. This requires that more fuel be burned in most every fired source at the refinery and that more water be circulated in heat exchangers and cooling towers. Further, this requires more fuel to be burned in any supporting off-site facilities, such as power plants that may supply electricity or Steam-Methane Reforming Plants that may supply hydrogen. Under CEQA, these indirect increases in emissions caused by a project must be included in the impact analysis. The increases in fuel consumption also releases increased amounts of NO_x, SO₂, VOCs, CO, PM10, PM2.5, and HAPs as well as greenhouse gas emissions (GHG). The IS/MND fails to analyze these impacts of crude composition on the resulting emissions from generating increased amount of these utilities.

a. Higher Concentrations of Asphaltenes and Resins

The severity (e.g., temperature, amount of catalyst, hydrogen) of hydrotreating crude oil in a refinery depends on the type of compound a contaminant is bound up in. Lower molecular weight compounds are easier to remove. The difficulty of removal increases in this order: paraffins, naphthenes, and aromatics.¹⁰ Most of the contaminants of concern in tar sands crudes are bound up in high molecular weight aromatic compounds such as asphaltenes that are difficult to remove, meaning more heat, hydrogen, and catalyst are required to convert them to lower molecular weight blend stocks. Some tar sands-derived vacuum gas oils (VGOs), for example, contain no paraffins of any kind. All of the molecules are aromatics, naphthenes, or sulfur species that require large amounts of hydrogen to hydrotreat, compared to other heavy crudes.¹¹

⁷ O.P. Strausz, *The Chemistry of the Alberta Oil Sand Bitumen*, Available at: http://web.anl.gov/PCS/acsfuel/preprint%20archive/Files/22_3_MONTREAL_06-77_0171.pdf.

⁸ Asphaltenes are nonvolatile fractions of petroleum that contain the highest proportions of heteroatoms, i.e., sulfur, nitrogen, oxygen. The asphaltene fraction is that portion of material that is precipitated when a large excess of a low-boiling liquid hydrocarbon such as pentane is added. They are dark brown to black amorphous solids that do not melt prior to decomposition and are soluble in benzene and aromatic naphthas.

⁹ O.P. Strausz, *The Chemistry of the Alberta Oil Sand Bitumen*, Available at: http://web.anl.gov/PCS/acsfuel/preprint%20archive/Files/22_3_MONTREAL_06-77_0171.pdf.

¹⁰ James H. Gary, Glenn E. Handwerk, and Mark J. Kaiser, *Petroleum Refining: Technology and Economics*, 5th Ed., CRC Press, 2007, p. 200 and A.M. Aitani, Processes to Enhance Refinery-Hydrogen Production, *Int. J. Hydrogen Energy*, v. 21, no. 4, pp. 267-271, 1996.

¹¹ See, for example, the discussion of hydrotreating and hydrocracking of Athabasca tar sands cuts in. Gary R. Brierley, Visnja A. Gembicki, and Tim M. Cowan, *Changing Refinery Configurations for Heavy and Synthetic Crude Processing*, 2006, pp. 11-17. Available at:

Asphaltenes and resins generally occur in tar sands bitumens in much higher amounts than in other heavy crudes. They are the nonvolatile fractions of petroleum and contain the highest proportions of sulfur, nitrogen, and oxygen.¹² They have a marked effect on refining and result in the deposition of high amounts of coke during thermal processing in the coker. They also form layers of coke in hydrotreating reactors, requiring increased heat input, leading to localized or even general overheating and thus even more coke deposition. This seriously affects catalyst activity resulting in a marked decrease in the rate of desulfurization. They also require more intense processing in the coker required to break them down into lighter products. These factors require increases in steam and heat input, both of which generate combustion emissions -- NO_x, SO_x, CO, VOCs, PM₁₀, and PM_{2.5}.

Further, if the crude includes a synthetic crude, SCO, for example, the material has been previously hydrotreated. Thus, the remaining contaminants (e.g., sulfur, nitrogen), while present in small amounts, are much more difficult to remove (due to their chemical form, buried in complex aromatics), requiring higher temperatures, more catalyst, and more hydrogen.¹³

The higher amounts of asphaltenes and resins generate more heavy feedstocks that require more severe processing than lighter feedstocks. The coker, for example, makes more coker distillate and gas oil that must be hydrotreated, compared to conventional heavy crudes. Similarly, the Crude Unit makes more atmospheric and vacuum gas oils that must be hydrotreated.¹⁴ This increases emissions from these units, including fugitive VOC emissions from equipment leaks and combustion emissions from burning more fuel.

b. Hydrogen Deficient

Tar sands crudes are hydrogen deficient compared to heavy and conventional crude oils and thus require substantial hydrogen addition during refining, beyond that required to remove contaminants (sulfur, nitrogen, metals). This again means more combustion emissions from burning more fuel.

<https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BA07DE342-E9B1-402A-83F7-36B18DC3DD05%7D&documentTitle=5639138>.

¹² James G. Speight, The Desulfurization of Heavy Oils and Residua, Marcel Dekker, Inc., 1981, Tables 1-1, 2-2, 2-3, 2-4 and p. 13 and James G. Speight, Synthetic Fuels Handbook: Properties, Process, and Performance, McGraw-Hill, 2008, Tables A.2, A.3, and A.4.

¹³ See, for example, Brierley et al. 2006, p. 8 ("The sulfur and nitrogen species left in the kerosene and diesel cuts are the most refractory, difficult-to-treat species that could not be removed in the upgrader's relatively high-pressure hydrotreaters."); Turini et al. 2011 p. 4.

¹⁴ Turini et al. Processing Heavy Crudes in Existing Refineries, prepared for AIChE Spring Meeting, Chicago, IL 2011, p. 9.; available at: <http://www.aiche-fpd.org/listing/112.pdf>

c. Higher Concentrations of Catalyst Contaminants

Tar sands bitumens contain about 1.5 times more sulfur, nitrogen, oxygen, nickel and vanadium than typical heavy crudes.¹⁵ Thus, much more hydrogen per barrel of feed and higher temperatures would be required to remove the larger amounts of these chemicals. These impurities are removed by reacting hydrogen with the crude fractions over a fixed catalyst bed at elevated temperature. The oil feed is mixed with substantial quantities of hydrogen either before or after it is preheated, generally to 500 F to 800 F.¹⁶

Canadian tar sands crudes generally have higher nitrogen content, 3,000 to >6,000 ppm¹⁷ and specifically higher organic nitrogen content, particularly in the naphtha range, than other heavy crudes.¹⁸ This nitrogen is mostly bound up in complex aromatic compounds that require a lot of hydrogen to remove. This affects emissions in five ways.

First, additional hydrotreating is required to remove them, which increases hydrogen and energy input. Second, they deactivate the cracking catalysts, which requires more energy and hence more emissions to achieve the same end result. Third, they increase the nitrogen content of the fuel gas fired in combustion sources, which increases NO_x emissions from all fired sources that use refinery fuel gas. Fourth, nitrogen in tar sands crudes is present in higher molecular weight compounds than in other heavy crudes and thus requires more hydrogen and energy to remove. Fifth, some of this nitrogen will be converted to ammonia and other chemically bound nitrogen compounds, such as pyridines and pyrroles. These become part of the fuel gas and could increase NO_x from fired sources. They further may be routed to the flares, where they would increase NO_x emissions.

These types of chemical differences between the current crude slate and the new crude slate facilitated by the Crude by Rail Project were not addressed at all in the IS/MND. Some of these increased utility impacts were revealed in the VIP FEIR as of 2002. For example, the VIP FEIR indicated that the then-proposed changes in the crude slate would cause: (1) an increase in electricity demand of 23 MW; (2) an increase in natural gas consumption of 9.6 MMscf/day; (3) an increase in the firing rate of heaters and boilers of 400 MMBtu/hr; (4) an increase in the hydrogen capacity of 30 MMscf/day; and an increase in coker capacity of 5,000 BPD. Mitigations were proposed in the VIP FEIR for these significant increases in utility demands. However, this decades-old analysis has not been re-evaluated to determine if the current

¹⁵ R.F. Meyer, E.D. Attanasi, and P.A. Freeman, Heavy Oil and Natural Bitumen Resources in Geological Basins of the World, U.S. Geological Survey Open-File Report 2007-1084, 2007, p. 14, Table 1, Available at <http://pubs.usgs.gov/of/2007/1084/OF2007-1084v1.pdf>.

¹⁶ James H. Gary, Glenn E. Handwerk, and Mark J. Kaiser, Petroleum Refining: Technology and Economics, 5th Ed., CRC Press, 2007, p. 200 and A.M. Aitani, Processes to Enhance Refinery-Hydrogen Production, Int. J. Hydrogen Energy, v. 21, no. 4, pp. 267-271, 1996.

¹⁷ Murray R. Gray, Tutorial on Upgrading of Oil Sands Bitumen, University of Alberta, Available at:

<http://www.ualberta.ca/~gray/Links%20&%20Docs/Web%20Upgrading%20Tutorial.pdf>.

¹⁸ See, for example, James G. Speight, Synthetic Fuels Handbook: Properties, Process, and Performance, McGraw-Hill, 2008, Appendix A.

proposed change in crude slate would result in further increased impacts or if the changed regulatory framework requires more aggressive mitigation.

3) *Failure to Mitigate Air Emissions of Crudes*

The VIP environmental analysis was performed over 10 years ago. Much has changed in the last 10 years, from the suite of tar sands products available in the market, to the transportation options (marine shipping may have been the focus 10 years ago, while the current development is for rail), to the timing of implementation of the VIP, to the regulatory framework. Thus, a new, full, thorough analysis is required in conjunction to the proposed Crude by Rail Project and the crude slate composition. The impacts of importing unidentified crudes by rail cannot be reasonably evaluated without considering and re-evaluating the impacts of the VIP modifications to the refinery.

a. VOC emissions of the Project are Significant and Unmitigated

The VIP FEIR, for example, assumes that the use of a higher percentage of sour crudes would mitigate increases in VOC emissions from increasing crude throughput.¹⁹ However, the dilbits that may now be imported with this Project would result in much higher VOC emissions than the originally anticipated heavier crude oil. These VOC emissions include large amounts of hazardous air pollutants, such as benzene, toluene and xylenes that result in significant health impacts, including elevated cancer risk.

Increased VOC emissions impacts have not been sufficiently analyzed for the current project. While we have focused our comments mainly on the reasonably foreseeable possibility that the Crude by Rail project will bring in heavy bitumen tar sands crudes, the IS/MND asserts that the imported crudes could include up to 70,000 BPD of light, low density crudes, which would create increased VOC emissions. These crudes have a much higher vapor pressure than the crude slate contemplated in the VIP FEIR and would significantly increase VOC emissions from tanks, pumps, compressors, valves, and connectors throughout the Refinery compared to the scenario analyzed in the VIP FEIR. Further, the FEIR explicitly assumes that the imported heavy sour crudes would mitigate increases in VOC emissions. This assumption did not consider the fact that diluents are now widely used to blend with the crudes, which similarly have significant VOC emissions increases associated with them, discussed below.

¹⁹ ESA, Valero Refining Company's Land Use Application for the Valero Improvement Project, Environmental Impact Report, Draft, October 2002 (DEIR), The Benicia Planning Commission certified the Final EIR, consisting of the DEIR and the Responses to Comments in Resolution No. 03-4. This FEIR was amended in 2007. See VIP RTC, p. IV-61. Supporting documents available at: http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC=%7B737165B4-11C5-4974-9B0B-0AE4AC535ECC%7D.

The BAAQMD CEQA significance threshold for VOCs is 15 tons/year based on conservative 1999 guidance.²⁰ Assuming 70,000 BPD of the crude throughput or 42% of the total, is light sweet crude, as now asserted in the Crude by Rail project, the VOC emissions would increase to more than 104 tons/year or by 31 tons/year. This exceeds the BAAQMD CEQA significance threshold by a factor of two and is a very significant unmitigated impact, triggering an EIR. Actual increases could be much higher under any of the currently understood plausible scenarios, importing light sweet crude under the Crude by Rail Project, or importing diluent-blended DilBit under the VIP project, as explored further below.

b. Cumulative impacts of simultaneous construction of the VIP Project and the Crude By Rail Project are significant and unmitigated.

The Initial Study for the Crude by Rail Project estimated that the daily average construction exhaust emissions from building the rail terminal would be 51.9 lb/day.²¹ The CEQA significance threshold is 54 lb/day.²² Taken together with NOx emissions from the VIP Project, which is still being constructed, cumulative NOx emissions are likely to exceed the significance threshold. The last portion of the VIP project, the new Hydrogen Plant, will be under construction at the same time that the new rail terminal is being constructed. The VIP FEIR did not calculate construction emissions, as this was not required at the time, which is an example of the change in regulatory framework. If the NOx emissions from constructing the Hydrogen Plant would exceed 2.1 lb/day, cumulative NOx emissions from simultaneously constructing the Hydrogen Plant and the Crude by Rail project would be cumulatively significant. The IS/MND does not analyze cumulative NOx emissions and provides no support for an implicit assumption that NOx emissions from constructing the Hydrogen Plant would be less than 2.1 lb/day (i.e., 25 times less than from constructing the rail terminal). It is reasonable to assume—at least absent contrary analysis—that the emissions from constructing the Hydrogen Plant will exceed 2.1 lb/day (i.e., not be 25 times less than for constructing the rail terminal) and that the cumulative impacts of constructing the two projects simultaneously will exceed the significance threshold.

c. Emissions must be reduced to assure that regulatory levels are not exceeded.

Ten years have passed since the environmental analysis was done for the VIP and the FEIR was certified. As the VIP FEIR was certified in 2003, and amended in 2007, the regulatory and informational framework within which the Project would be developed today has

²⁰ Newer guidelines adopted in 2010 lowered the thresholds of significant for VOCs and other pollutants to 10 tons per year. However, the newer guidance is on hold due to ongoing litigation. See: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx>

²¹ ESA, Valero Crude by Rail Project, Initial Study/Mitigated Negative Declaration, Use Permit Application 12PLN-00063, Prepared for City of Benicia, May 2013, Table 3-1.

²² BAAQMD Recommended CEQA Threshold of Significance, Available at: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/Staff-Recommended%20and%20Existing%20CEQA%20Thresholds%20Table%2010-07-09.ashx?la=en>.

changed dramatically, rendering the 2002 analysis obsolete.

Since the VIP FEIR was certified in 2003, new scientific evidence about the potential adverse impacts of air pollutants has become available, and in response, new guidance has been published and several federal and state ambient air quality standards have been revised. These include:

- The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
- The EPA lowered the 24-hour PM_{2.5} standard from 65 µg/m³ to 35 µg/m³ in 2006. EPA designated the Bay Area as nonattainment of the PM_{2.5} standard on October 8, 2009.
- On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010.
- The EPA promulgated a new 1-hour NO₂ standard of 0.1 ppm, effective January 22, 2010.
- The EPA issued the greenhouse gas tailoring rule in May 2010, which requires controls of GHG emissions not contemplated in the VIP FEIR.
- The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
- The EPA issued a final rule for a national lead standard, rolling 3-month average, on October 15, 2008.

Emissions must be reduced to assure that these new regulatory levels are not exceeded. Lead, for example, can be present in very high concentrations in fugitive dusts from coke storage, handling, and export, especially when heavy sour crudes are being processed. There is a long history of nuisance coke dust issues at this Refinery that impact residents.²³ The VIP would increase coke production and thus fugitive coke dust emissions with elevated lead levels. The proposed Crude by Rail Project also could increase coke production, depending upon the specific "North American-sourced crude" that it imports.²⁴ Coke contains many contaminants including lead.²⁵ The California Air Resources Board has concluded there is no safe threshold level of exposure for lead; any amount poses significant health risks. Thus, the cumulative increase in coke fugitive emissions estimated in the VIP EIR and facilitated by the Crude by Rail Project are a significant public health impact.

²³ See, e.g., VIP DEIR, p. 4.2-14.

²⁴ The VIP DEIR did not disclose the actual coke increase, but did acknowledge that it would increase coke exports over the dock by 12 ships per year and by rail of 5 rail cars per day. VIP DEIR, p. 3-52. The capacity of a coke ship and coke rail cars was not disclosed.

²⁵ For example, see a Material Safety Data Sheet for Petroleum Coke:
http://www.tsocorp.com/stellent/groups/corpcomm/documents/tsocorp_documents/msdspetrocoke.pdf

Further, the VIP DEIR assumed health impacts from coke dust exposure would be mitigated by complying with the then-current PM10 and PM2.5 regulations.²⁶ However, these have been significantly lowered and an ambient air quality standard for lead has been promulgated. There has been no demonstration that the increase in lead and heavy metal-laden coke dust, that could reasonably be expected to result from the Crude to Rail Project, could comply with these new standards, or that such compliance would mitigate lead health impacts, given CARB's zero threshold finding, or that other contaminants in coke dust would not pose a significant risk to public health.

B. Increased Air Emissions from Diluent

The majority of the crudes that will eventually be transported by rail will likely be a blend of bitumen and diluent due to their discounted price compared to conventional light sweet crudes. When heavy crude is shipped by pipeline, it needs to be diluted so that it will flow in the pipe, and this is similarly the case for un-heated railcars. We estimate that the Dilbit likely to be imported by this project will contain 20% to 30% diluent based on the description of the rail facility in the IS/MND.²⁷

Regardless, the mixture of diluent and bitumen does not behave the same as a conventional crude, as the distribution of hydrocarbons is very different. The blended lighter diluent evaporates easily when exposed to ambient conditions, leaving behind the heavy ends, the vacuum gas oil (VGO) and residuum.²⁸ Thus, when a DilBit is released accidentally, it will generally create a difficult to cleanup spill as the heavier bitumen will be left behind.²⁹ Further, in a storage tank, the diluent also can be rapidly evaporated and emitted through tank openings.

These conventional DilBits, which are the most likely "North American-sourced crude" to be imported by rail over the long term, given the current economic outlook, are sometimes referred to as "dumbell" or "barbell" crudes as the majority of the diluent is C₅ to C₁₂ and the majority of the bitumen is C₃₀₊ boiling range material, with very little in the more desirable

²⁶ VIP DEIR, p. 4.8-14.

²⁷ Bitumen blended to pipeline specifications can be loaded on and off conventional rail tank cars like other light crudes. The amount of diluent depends on the type of rail tank car and design details of the offloading facilities. Although this information was not provided in the IS/MND, the document did discuss the use of conventional rail cars and a conventional unloading terminal. Further, the number of rail cars, 100 per day, or 700 barrels per car, suggests a lighter material, with more diluent.

²⁸ The residuum is the residue obtained from the oil after nondestructive distillation has removed all of the volatile materials. Residua are black, viscous materials. They may be liquid at room temperature (from the atmospheric distillation tower) or almost solid (generally vacuum residua), depending upon the nature of the crude oil.

²⁹ A Dilbit Primer: How It's Different from Conventional Oil, Inside Climate News. Available at: <http://insideclimatenews.org/news/20120626/dilbit-primer-diluted-bitumen-conventional-oil-tar-sands-Alberta-Kalamazoo-Keystone-XL-Enbridge?page=show>.

middle range.³⁰ Thus, they yield very little middle distillate fuels, such as diesel, heating oil, kerosene, and jet fuel and much more coke, than other heavy crudes. A typical DilBit, for example, will have 15% to 20% by weight light material, basically the added diluent, 10% to 15% middle distillate, and the balance, >75% is heavy residual material (vacuum gas oil and residue) exiting the distillation column. These characteristics show major differences between DilBits and the crudes currently refined at Benicia.³¹

The large amount of light material in DilBits is very volatile and can be emitted to the atmosphere from storage tanks and equipment leaks of fugitive components (pumps, compressors, valves, fittings) in much larger amounts than other heavy crudes that it would replace. It is unlikely that any other heavy crudes processed at the Refinery currently arrive with diluent, since EIA crude import data do not identify any crudes that are blended with diluent. Thus, the use of diluent to transport tar sands crudes is likely an important difference between the current heavy crude slates processed at the Refinery and the tar sands crudes that could replace them. This diluent will have impacts during railcar unloading as well as at many processing units within the Refinery.

The diluent is a low molecular weight organic material with a high vapor pressure that contains high levels of VOCs, sulfur compounds, and HAPs. These would be emitted during unloading and present in emissions from the crude tank(s) and fugitive components from its entry into the Refinery with the crude until it is recovered and marketed, or at least between the desalter and downstream units where some of it is recovered. The presence of diluent would increase the vapor pressure of the crude, substantially increasing VOC and HAPs emissions from tanks and fugitive component leaks compared to those from displaced heavy crudes not blended with diluent. The IS/MND and the VIP FEIR did not disclose the potential presence of diluent and made no attempt to estimate these diluent-derived emissions.

The composition of some typical diluents is reported on the website, www.crudemonitor.ca.³² The specific diluents that would be used by the Project are unknown. However, the CrudeMonitor information indicates that several different types of diluents contain very high concentrations (based on 5-year averages) of the hazardous air pollutants

³⁰ Gary R. Brierley and others, *Changing Refinery Configuration for Heavy and Synthetic Crude Processing*, 2006, Available at: <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BA07DE342-E9B1-402A-83F7-36B18DC3DD05%7D&documentTitle=5639138>.

³¹ Stratiev and others, 2010, Table 1, compared to DilBit crude data on www.crudemonitor.ca.

³² Condensate Blend (CRW) - <http://www.crudemonitor.ca/condensate.php?acr=CRW>; Fort Saskatchewan Condensate (CFT) - <http://www.crudemonitor.ca/condensate.php?acr=CFT>; Peace Condensate (CPR) - <http://www.crudemonitor.ca/condensate.php?acr=CPR>; Pembina Condensate (CPM) - <http://www.crudemonitor.ca/condensate.php?acr=CPM>; Rangeland Condensate (CRL) - <http://www.crudemonitor.ca/condensate.php?acr=CRL>; Southern Lights Diluent (SLD) - <http://www.crudemonitor.ca/condensate.php?acr=SLD>.

(HAPs) benzene (5,200 ppm to 9,800 ppm); toluene (10,300 ppm to 25,300 ppm); ethyl benzene (900 ppm to 2,900 ppm); and xylenes (4,600 ppm to 23,900 ppm).

The sum of these four compounds is known as "BTEX" or benzene-toluene-ethylbenzene-xylene. The BTEX in diluent ranges from 27,000 ppm to 60,900 ppm. The BTEX in DilBits, blended from these materials, ranges from 8,000 ppm, to 12,400 ppm.³³ Similarly, the BTEX in synthetic crude oils (SCOs) ranges from 6,100 ppm to 14,100 ppm.³⁴ These are very high concentrations that were not considered in the emission calculations in the IS/MND nor in the VIP FEIR. These high levels could result in significant worker and public health impacts.

The ATC estimated emissions of these compounds (ATC, Table 3-3) from Tank 1776 and fugitive components using the "default speciation profile" for crude oil from the EPA program, TANKS4.09d, for all constituents except benzene. For benzene, the IS/MND variously claims it substituted either 0.06 wt % or 0.6 wt % for the default value.³⁵ Thus, the IS/MND's assumptions as to benzene in fugitive emissions are inconsistent. The default crude oil speciation profile from the TANKS4.09d model reports benzene at 0.6 wt %.³⁶ Thus, the

³³ DilBits: Access Western Blend (AWB) -<http://www.crudemonitor.ca/crude.php?acr=AWB>; Borealis Heavy Blend (BHB) -<http://www.crudemonitor.ca/crude.php?acr=BHB>; Christina Dilbit Blend (CDB) -<http://www.crudemonitor.ca/crude.php?acr=CDB>; Cold Lake (CL) - <http://www.crudemonitor.ca/crude.php?acr=CL>; Peace River Heavy (PH) - <http://www.crudemonitor.ca/crude.php?acr=PH>; Seal Heavy (SH) - <http://www.crudemonitor.ca/crude.php?acr=SH>; Statoil Cheecham Blend (SCB) - <http://www.crudemonitor.ca/crude.php?acr=SCB>; Wabasca Heavy (WH) - <http://www.crudemonitor.ca/crude.php?acr=WH>; Western Canadian Select (WCS) - <http://www.crudemonitor.ca/crude.php?acr=WCS>; Albian Heavy Synthetic (AHS) (DilSynBit) - <http://www.crudemonitor.ca/crude.php?acr=AHS>.

³⁴ SCOs: CNRL Light Sweet Synthetic (CNS) - <http://www.crudemonitor.ca/crude.php?acr=CNS>; Husky Synthetic Blend (HSB) - <http://www.crudemonitor.ca/crude.php?acr=HSB>; Long Lake Light Synthetic (PSC) - <http://www.crudemonitor.ca/crude.php?acr=PSC>; Premium Albian Synthetic (PAS) - <http://www.crudemonitor.ca/crude.php?acr=PAS>; Shell Synthetic Light (SSX) - <http://www.crudemonitor.ca/crude.php?acr=SSX>; Suncor Synthetic A (OSA) - <http://www.crudemonitor.ca/crude.php?acr=OSA>; Syncrude Synthetic (SYN) - <http://www.crudemonitor.ca/crude.php?acr=SYN>.

³⁵ See Appendix A.1 of the IS/MND (The Air Permit Application or Authority To Construct, "ATC"), p. 11, pdf 17, in the note following Table 3-3, states that benzene in crude oil was assumed to be 0.6%. However, in Table 3-5, p. 12, pdf 18, it is stated that benzene in the crude oil was assumed to be 0.06%. Similarly, the supporting appendices indicate that 0.06% benzene was actually used in the fugitive emissions calculations. ATC, Attach. B-3, Fugitive Component Emissions, pdf 33. Similar data for tank emission calculations cannot be checked as it is claimed to be confidential. ATC, Attach. B-2.

³⁶ The profile, "Tanks_Crude_Speciation.xls" can be extracted from the TANKS409d model available at <http://www.epa.gov/ttnchie1/software/tanks/> by using the "Data --> Speciation

IS/MND apparently lowered the benzene concentration in rail-imported crude oil by a factor of ten.³⁷ This contradicts published crude composition for the range of North American-sourced crudes that could be imported by the Project, as reviewed above and summarized in Table 1. The benzene value used in the IS/MND substantially underestimates the amount of benzene that would be present in tank and fugitive component emissions when processing either DilBits or Bakken crudes.

Table 1 compares the concentration of BTEX used to estimate BTEX emissions in the IS/MND with the BTEX concentrations in various diluents, two widely traded DilBits, including the DilBit that Valero used in its cost analysis (Fig. 2), Western Canadian Select, and Bakken crude oils. This table shows that regardless of which material is imported by the Crude by Rail Project, benzene emissions would be much higher than estimated in the IS/MND. Further, benzene emissions are higher in the most recently collected samples than in the five-year averages in Table 1. These benzene emissions would result in significant health impacts.

Profiles --> Export" menu selection and choosing crude oil. This spreadsheet confirms that the default benzene level for crude oils is 0.6wt.%.

³⁷ The information in IS/MND Appendix A confirms that the lower value for benzene in crude, 0.06wt.%, was used to calculate benzene emissions.

Table 1
Comparison of BTEX Levels Assumed in IS/MND with Levels in Diluents and DilBits

	Default Crude ATC Attach.B-3 (wt.%)	Diluents (5-yr Avg) ³⁸ (wt.%)	Christina DilBit ³⁹ (5-yr Avg) (wt.%)	Western Canadian Select ⁴⁰ (5-yr Avg) (wt.%)	Bakken ⁴¹ Crude (wt.%)
Benzene	0.06	0.83-1.27	0.27	0.15	0.1-1.0
Ethylbenzene	0.4	0.11-0.33	0.06	0.06	0.33
Toluene	1.00	1.32-2.89	0.44	0.27	0.92
Xylenes	1.4	0.59-2.71	0.34	0.27	1.4

The ATC discloses that annual emissions of benzene from Tank 1776 exceed the BAAQMD chronic trigger level (6.4 lb/yr trigger level compared to a net increase of 28.3 lb/yr).⁴² Further, the IS/MND and underlying ATC fail to disclose that benzene emissions from fugitive components, when calculated using the correct benzene level (at least 0.6%, rather than 0.06%), also exceed the BAAQMD screening level (6.4 lb/hr screening level compared to 20 lb/hr emitted, adjusted to 0.6% benzene).

The Initial Study conducted a screening health risk assessment. It found no significant health impact.⁴³ However, the benzene emissions used in this analysis apparently (the records lacks sufficient data to be certain) were underestimated by factors of 2.5 to 4.5 assuming DilBits and up to a factor of 17 for Bakken crudes. Although there is one DilBit with an unusually low benzene concentration of 0.06 wt.%, Borealis Heavy Blend, there is no evidence that this is the only DilBit that would be imported by rail.

³⁸ The reported range includes the following diluents: Condensate Blend, Saskatchewan Condensate, Peace Condensate, Pembina Condensate, Rangeland Condensate, and Southern Lights Diluent. The composition data for all of these diluents is found at <http://www.crudemonitor.ca>. Concentrations reported in volume % (v/v) in this source were converted to weight % by dividing by the ratio of compound density in kg/m³ at 25 C (benzene = 876.5 kg/m³, toluene = 866.9 kg/m³, ethylbenzene 866.5 kg/m³, and the xylenes 863 kg/m³) to crude oil density in kg/m³, as reported at www.crudemonitor.ca, 5-year average. See also Cenovus Energy Inc. Material Safety Data Sheet, Condensate (Sour) and Condensate (Sweet), Available at: <http://www.cenovus.com/contractor/msds.html>.

³⁹ Christina DilBit Blend (CDB) - <http://www.crudemonitor.ca/crude.php?acr=CDB>. Concentrations reported in volume % (v/v) converted to weight % as explained in footnote 44..

⁴⁰ Western Canadian Select (WCS) - <http://www.crudemonitor.ca/crude.php?acr=WCS>. Concentrations reported in volume % (v/v) converted to weight % as explained in footnote 44..

⁴¹ Cenovus Energy, Material Safety Data Sheet for Light Crude Oil, Bakken (benzene), Available at: http://www.cenovus.com/contractor/docs/CenovusMSDS_BakkenOil.pdf. Other components of BTEX from Keystone DEIS, Tables 3.13-1 (density) and 3.13-2 (BTEX).

Concentrations reported in volume % (v/v) converted to weight % as explained in footnote 44.

⁴² ATC, p. 17-18 & Table 4-3.

⁴³ IS, p. II-15.

Although crude oil contains many different chemicals that are carcinogens, benzene is the only carcinogen included in the HAP emission calculations in the IS/MND.⁴⁴ The only sources of benzene disclosed in the IS/MND is Tank 1776 and fugitives, which were underestimated due to the use of an anomalously low crude concentration. Thus, the cancer risks reported in the IS/MND in Table 3-3 can be adjusted for this error by multiplying that cancer risk by the benzene ratios reported above. With this correction, the cancer risk to the maximum exposed worker increases from the 4 in a million reported in the IS/MND to up to 20 in a million for DilBits and up to 76 in a million for Bakken crudes. For the maximum exposed residential receptor, the reported cancer risk increases from 2 in a million reported in the IS/MND to up to 10 in a million for DilBits and to 39 in a million for Bakken crudes. These cancer risk levels equal or exceed the assumed cancer significance threshold of 10 in a million. Thus, these are significant unmitigated impacts both to workers and nearby residents that were not disclosed in the IS/MND and are directly caused by the failure of the IS/MND to consider the composition of the crude that is being imported.

Information on diluents from the CrudeMontior also indicates elevated concentrations of volatile mercaptans (9.9 to 103.5 ppm), which are highly odiferous and toxic compounds that will create odor and nuisance problems at the Refinery in the vicinity of the unloading area, crude storage tanks and supporting fugitive components. Mercaptans can be detected at concentrations substantially lower than will be present in emissions from the crude tanks and fugitive emissions from the unloading rack and related components, including pumps, valves, flanges, and connectors.⁴⁵

Thus, unloading, storing, handling and refining bitumens mixed with diluent and shale crudes such as Bakken would emit VOCs, HAPs, and malodorous sulfur compounds, not found in comparable levels in conventional crudes, depending upon the DilBit or shale crude source. There are no restrictions on the crudes, diluent source or their compositions nor any requirements to monitor emissions from tanks and leaking equipment where DilBit-blended and other light crudes would be handled. As the market has experienced shortages of diluents, any material with a suitable thinning ability could be used, which could contain still other hazardous components, with the potential for even greater air quality and health impacts than discussed here.

C. Health Impacts of Chemical Constituents in DilBits

Heavy bitumen tar sands and diluents are composed of hundreds of chemicals with known health impacts. Below is a summary of the health impacts of some of those hazardous compounds associated with refining dirtier crude oils. Many of these compounds present significant hazards to human health at varying levels of exposure.

⁴⁴ IS/MND, Appx. A.

⁴⁵ American Industrial Hygiene Association, Odor Thresholds for Chemicals with Established Occupational Health Standards, 1989; American Petroleum Institute, Manual on Disposal of Refinery Wastes, Volume on Atmospheric Emissions, Chapter 16 - Odors, May 1976, Table 16-1.

1. Hydrogen Sulfide is a flammable and colorless gas that smells like rotten eggs. It is a broad spectrum poison that can be lethal at high concentrations. At low concentrations, hydrogen sulfide can cause irritation to the eyes, nose and throat. Additionally, exposure may result in incoordination, memory loss, hallucinations, personality changes, loss of sense of smell, cough, and shortness of breath; people with asthma may experience difficulty breathing. In occupational settings, workers have died from exposure to high levels of hydrogen sulfide.⁴⁶
2. Mercaptans⁴⁷ are a large class of toxic compounds that generally have a strong and unpleasant odor even at very low concentrations. They are added in small amounts to natural gas to help detect gas leaks. Because they are extremely flammable, mercaptans present fire and explosion hazards in industrial processes. Exposure to mercaptans may cause irritation of the skin, eyes, and upper respiratory tract. All mercaptans negatively affect the central nervous system. Workers accidentally exposed to high levels of mercaptans experienced muscular weakness, nausea, dizziness, stupor, and unconsciousness (narcosis).⁴⁸
3. Thiophene⁴⁹ is a highly flammable and hazardous component of petroleum.⁵⁰ Exposure to thiophene results in adverse effects to the skin, eyes, nose and throat.⁵¹ Workers breathing thiophene vapors generated from normal handling of the material may experience respiratory irritation, dizziness, fatigue, unconsciousness, loss of reflexes, lack of coordination, and vertigo. Long term exposure to thiophene may damage the liver, or produce asthma-like symptoms which may continue for months or years after exposure to the chemical stops.⁵²
4. Benzothiophene⁵³ is a solid compound with an odor similar to naphthalene (mothballs). It is found in petroleum, and used primarily in industries such as pharmaceuticals and in

⁴⁶ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Hydrogen Sulfide*, U.S. Department of Health and Human Services, July 2006.

⁴⁷ Mercaptans are also commonly known as thiols, thioalcohols, or sulphydrates.

⁴⁸ Stellman, Jeanne Mager, *Encyclopaedia of Occupational Health and Safety*, vol. 4, Geneva: International Labor Office, 1998.

⁴⁹ Thiophene is also called divinylene sulphide, thiacyclopentadiene, and thiofuran

⁵⁰ National Library of Medicine Hazardous Substances Databank, 'Thiophene', <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?/.temp/~xIH0IB:1> (accessed June 2013)

⁵¹ New Jersey Department of Health and Senior Services, 'Thiophene Hazardous Substance Fact Sheet', December 2000, <http://nj.gov/health/eoh/rtkweb/documents/fs/1851.pdf> (accessed June 2013)

⁵² Santa Cruz Biotechnology, 'Thiophene Material Safety Data Sheet' March 2009, <http://datasheets.scbt.com/sc-251237.pdf> (accessed June 2013)

⁵³ Benzothiophene is also known as thianaphthene, benzo(b)thiophene, 1-benzothiophene, 1-thiaindene, 2,3-benzothiophene, benzothiofuran, benzothiophen, thianaphthene, thianaphthen, thianaphthene, and thionaphthene

research.⁵⁴ A person exposed to benzothiophene may experience irritation of the eyes, skin, or respiratory tract.⁵⁵

5. Methylsulfonic acid⁵⁶ is used in the process of refining petroleum. The general population is exposed through breathing outdoor air.⁵⁷ Methylsulfonic acid is harmful to humans and can irritate or burn the eyes, skin, and mucous membranes.⁵⁸ Inhaling methylsulfonic acid vapor is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.⁵⁹
6. Dimethyl sulfone^{60,61} is an odorless, combustible liquid and vapor. If inhaled as a dust, it may cause respiratory irritation. It may also cause irritation to the eyes.⁶²
7. Thiacyclohexane⁶³ is a sulfur containing component of crude oil. It is highly flammable, and exists in both liquid and vapor form. Exposure to thiacyclohexane may cause skin or eye irritation. At present, the short and long-term toxicity of this compound is not fully

⁵⁴ Merck Index, 'Thianaphthene Structure Details', n.d., <http://themerckindex.cambridgesoft.com/themerckindex/Forms/Search/ContentArea/ChemBioVizSearch.aspx?FormGroupId=200000&AppName=THEMERCKINDEX&AllowFullSearch=true&KeepRecordCountSynchronized=false&SearchCriteriaId=5&SearchCriteriaValue=95-15-8&CurrentIndex=0> (accessed June 2013)

⁵⁵ National Institute of Health Haz-Map Database, 'Benzothiophene Haz-Map Category Details', *Haz-Map*, n.d., <http://hazmap.nlm.nih.gov/category-details?id=12230&table=copypblagents> (accessed June 2013)

⁵⁶ Methylsulfonic acid is also called methanesulfonic acid

⁵⁷ National Library of Medicine Hazardous Substances Data Bank, 'Methanesulfonic Acid -', *Toxnet: Toxicology Data Network* <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/a?dbs+hsdb:@term+@DOCNO+5004> (accessed June 2013)

⁵⁸ Occupational Safety and Health Administration 'Methanesulfonic Acid Chemical Sampling Information', n.d., http://www.osha.gov/dts/chemicalsampling/data/CH_250710.html (accessed June 2013)

⁵⁹ National Library of Medicine Hazardous Substances Data Bank, 'Methanesulfonic Acid', <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/a?dbs+hsdb:@term+@DOCNO+5004> (accessed June 2013)

⁶⁰ Dimethyl sulfone is also known as methyl sulfone, methylsulfonylmethane, sulfonylbismethane, methane, sulfonylbis-, and dimethyl sulphone

⁶¹ Dimethyl sulphone is commonly known as methylsulfonylmethane, or MSM, and used widely as a food supplement and medicine.

⁶² Gaylord Chemical Corporation, 'Dimethyl Sulfone Material Safety Data Sheet', August 20, 2004, <http://www.clean.cise.columbia.edu/msds/dimethylsulfoxide.pdf> (accessed June 2013)

⁶³ Synonyms include thiapyran, tetrahydro- (4CI), thiopyran, tetrahydro- (6CI), pentamethylenesulfide, penthiophane, tetrahydro-2H thiopyran, tetrahydrothiapyran, tetrahydrothiopyran, thiacyclohexane, thiane. Search for this compound using thiane, or its CAS number 1613-51-0.

understood.⁶⁴

8. Pentane⁶⁵ is a volatile organic compound (VOC) commonly found in natural gas and crude oil. Aside from the fact that it is highly flammable—mixtures of pentane and air can be explosive—pentane has been identified as a central nervous system (CNS) depressant.⁶⁶ Exposure to pentane vapors can cause irritation to the eyes, skin, and respiratory system, as well as, nausea, vomiting, headaches, and dizziness.^{67,68} Chronic or long-term exposure can result in anoxia, or a severe lack of oxygen to body organs and tissues.⁶⁹ Exposure to high levels of pentane can be deadly.⁷⁰
9. Naphtha⁷¹ is a highly flammable, toxic organic solvent distilled from petroleum with a wide range of industrial and commercial uses. Exposure to naphtha can cause headaches, dizziness, nausea, and vomiting.⁷² Naphtha vapor is a central nervous system depressant as well as an irritant of the mucous membranes and the respiratory tract—exposure to high concentrations can cause fatigue, lightheadedness, and loss of consciousness.⁷³ Female workers exposed to naphtha experienced reproductive impacts in the form of disturbances in menstrual cycles, abnormal uterine bleeding, and a disturbance of the ovarian function.⁷⁴ Long-term exposure may cause damage to the liver, kidneys, blood, nervous system, and skin.⁷⁵ Naphtha contains benzene which is a known carcinogen.⁷⁶

⁶⁴ Alfa Aesar, 'Tetrahydrothiopyran Material Safety Data Sheet', June 2011, http://www.msds.com/servlet/B2BDocumentDisplay?document_version_nri=5175301&manuf_nri=704&manuf_name=&supplier_nri=704&page_number=1&search_source=centraldb&CLIENT_session_key=A736334_Kitty89&CLIENT_language=2 (accessed June 2013)

⁶⁵ Also known as n-Pentane, normal-Pentane

⁶⁶ National Library of Medicine Hazardous Substances Data Bank, 'PENTANE', <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?/.temp/~mKkbnT:1> (accessed June 2013)

⁶⁷ NIOSH, 'CDC - NIOSH Pocket Guide to Chemical Hazards - n-Pentane', November 2010, <http://www.cdc.gov/niosh/npg/npgd0486.html> (accessed June 2013)

⁶⁸ NIOSH, 'n-Pentane International Chemical Safety Cards', October 1999 <http://www.cdc.gov/niosh/ipcsneng/neng0534.html> (accessed June 2013)

⁶⁹ National Library of Medicine Hazardous Substances Data Bank, 'Pentane', <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?/.temp/~mKkbnT:1> (accessed June 2013)

⁷⁰ NIOSH, 'n-Pentane International Chemical Safety Cards', October 1999 <http://www.cdc.gov/niosh/ipcsneng/neng0534.html> (accessed June 2013)

⁷¹ Like pentane, naphtha may be used as a diluent in heavy crude oils.

⁷² New Jersey Department of Health and Senior Services, 'Naphtha Hazardous Substance Fact Sheet', April 2007, <http://nj.gov/health/eoh/rtkweb/documents/fs/0518.pdf> (accessed June 2013)

⁷³ National Library of Medicine Hazardous Substances Data Bank, 'Naphtha', <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?/.temp/~PqjFcw:1> (accessed June 2013)

⁷⁴ National Library of Medicine Hazardous Substances Data Bank, 'Naphtha', <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?/.temp/~PqjFcw:1> (accessed June 2013)

⁷⁵ Collection Care, 'Naphtha Material Safety Data Sheet', June 27, 2011, <http://www.collectioncare.org/MSDS/naphthamsds.pdf> (accessed June 2013)

BTEX: The following compounds (benzene, toluene, ethylbenzene, and xylene) are some of the VOCs found in petroleum.

10. Benzene is a common component of crude oil and gasoline, and a widespread environmental pollutant resulting mainly from refinery activity.⁷⁷ People are primarily exposed to benzene through breathing contaminated air. Benzene is a known carcinogen; long term exposure can cause leukemia.⁷⁸ Inhalation of high doses of benzene may impact the central nervous system leading to drowsiness, dizziness, irregular heartbeat, nausea, headaches, and depression.⁷⁹ Female workers experiencing high exposure levels over the course of many months experienced reproductive impacts, such as a decrease in the size of their ovaries. In animal studies, breathing benzene was associated with developmental effects such as low birth weight, delayed bone formation, and bone marrow damage.⁸⁰

11. Toluene is a volatile organic compound (VOC) used widely in industry as a raw material and as a solvent. Toluene concentrations are highest in areas of heavy traffic, near gas stations and petroleum refineries. According to California's list of chemicals known to cause cancer or reproductive toxicity, toluene is listed as a developmental toxicant.⁸¹ Similar to many organic solvents, toluene acts as a respiratory tract irritant, particularly at high air concentrations.⁸² For this reason, it can be more harmful to people with asthma. A ubiquitous air pollutant, exposure to toluene constitutes a serious health concern as it has negative impacts on the central nervous system. Exposure to toluene can cause headaches, impaired reasoning, memory loss, nausea, impaired speech, hearing, and vision, amongst other health effects.⁸³ Long term exposure may damage the

⁷⁶ New Jersey Department of Health and Senior Services, 'Naphtha Hazardous Substance Fact Sheet', April 2007, <http://nj.gov/health/eoh/rtkweb/documents/fs/0518.pdf> (accessed June 2013)

⁷⁷ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Benzene*, U.S. Department of Health and Human Services, August 2007.

⁷⁸ California EPA Office of Environmental Health Hazard Assessment, 'Chemicals Known to the State to Cause Cancer or Reproductive Toxicity', 2013, http://oehha.ca.gov/prop65/prop65_list/files/P65single052413.pdf (accessed June 2013)

⁷⁹ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Benzene*, U.S. Department of Health and Human Services, August 2007.

⁸⁰ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Benzene*, U.S. Department of Health and Human Services, August 2007.

⁸¹ California EPA Office of Environmental Health Hazard Assessment, 'Chemicals Known to the State to Cause Cancer or Reproductive Toxicity', 2013, http://oehha.ca.gov/prop65/prop65_list/files/P65single052413.pdf (accessed June 2013)

⁸² Agency for Toxic Substances and Disease Registry, *Toluene Toxicity: Case Studies in Environmental Medicine*, U.S. Department of Health and Human Services, Division of Toxicology and Environmental Medicine, February 2001, <http://www.atsdr.cdc.gov/csem/toluene/docs/toluene.pdf> (accessed June, 2013)

⁸³ Agency for Toxic Substances and Disease Registry, *Toluene Toxicity: Case Studies in Environmental Medicine*, U.S. Department of Health and Human Services, Division of

liver and kidneys.⁸⁴

12. Ethylbenzene is a commonly occurring component of petroleum. Once refined, it is used in many consumer products such as gasoline, pesticides, varnishes and paints. Ethylbenzene has been recently classified as a possible human carcinogen by the International Agency for Research on Cancer (IARC)⁸⁵, and has been associated with a number of adverse health outcomes. Breathing high levels can cause dizziness as well as throat and eye irritation; chronic, low-level exposure over several months to years can result in kidney damage as well as hearing loss.⁸⁶
13. Xylene⁸⁷ is a VOC in petroleum. Short term exposure to xylene may result in a number of adverse human health effects including irritation of the skin, eyes, nose and throat, difficulty breathing, damage to the lungs, impaired memory, and possible damage to the liver and kidneys. Long term exposure may affect the nervous system presenting symptoms such as headaches, lack of muscle coordination, dizziness, confusion, and loss of balance.⁸⁸ More serious long term health effects include memory impairment, red and white blood cell abnormalities, abnormal heartbeat (in laboratory workers), liver damage, mutagenesis (mutations of genes), reproductive system effects, and death due to respiratory failure.⁸⁹
14. Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during incomplete combustion.^{90,91,92} Infants and children are *especially*

Toxicology and Environmental Medicine, February 2001,

<http://www.atsdr.cdc.gov/csem/toluene/docs/toluene.pdf> (accessed June, 2013)

⁸⁴ National Institute for Occupational Safety and Health, 'Toluene', *NIOSH Pocket Guide to Chemical Hazards*, 2010, <http://www.cdc.gov/niosh/npg/npgd0619.html> (accessed June 2013)

⁸⁵ Henderson, Leigh, David Brusick, Flora Ratpan, and Gauke Veenstra, 'A Review of the Genotoxicity of Ethylbenzene', *Mutation Research/Reviews in Mutation Research*, 635 (2007), 81-89 <doi:10.1016/j.mrrev.2007.03.001>

⁸⁶ Agency of Toxic Substances and Disease Registry, *Toxicological Profile for Ethylbenzene, ToxFAQs*, 2010, <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=382&tid=66> (accessed June 2013)

⁸⁷ Also known as dimethyl benzene

⁸⁸ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Xylene*, U.S. Department of Health and Human Services, August 2007.

⁸⁹ Zoveidavianpoor, M., A. Samsuri, and S. R. Shadizadeh, 'The Clean Up of Asphaltene Deposits in Oil Wells', *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 35 (2013), 22–31 <doi:10.1080/15567036.2011.619630>

⁹⁰ Salmon A.G. and Meehan T. Potential Impact of Environmental Exposures to Polycyclic Organic Material (POM) on Children's Health, California Office of Environmental Health Hazard Assessment (OEHHA).

http://www.oehha.ca.gov/public_info/public/kids/pdf/PAHs%20on%20Children's%20Health.pdf

susceptible to the hazards of PAHs, a class of known human mutagens, carcinogens, and developmental toxicants found in diesel exhaust.⁹³ Greater lifetime cancer risks result from exposure to carcinogens at a young age. These substances are known to cross the placenta to harm the unborn fetus, contributing to fetal mortality, increased cancer risk and birth defects.⁹⁴ Prenatal exposure to PAHs may also be a risk factor for the early development of asthma-related symptoms and can adversely affect children's cognitive development, with implications for diminished school performance.⁹⁵ Exposure of children to PAHs at levels measured in polluted areas can also adversely affect IQ.⁹⁶

15. Lead is a well-known toxic heavy metal with diverse and severe health impacts.⁹⁷ In particular, lead is associated with neurological, hematological, and immune effects on children, and hematological, cardiovascular and renal effects on adults. Children are particularly sensitive to the effects of lead, including sensory, motor, cognitive and behavioral impacts. Cognitive effects of special concern include decrements in IQ scores and academic achievement, as well as attention deficit problems. Children in poverty and black, non-Hispanic children face higher exposures to lead and are consequently more susceptible to lead's health impacts. Reproductive effects, such as

⁹¹ Agency for Toxic Substances and Disease Registry, Public Health Statement for Polycyclic Aromatic Hydrocarbons (PAHs). August 1995.

<http://www.atsdr.cdc.gov/PHS/PHS.asp?id=120&tid=25>

⁹² Perera FP. DNA Damage from Polycyclic Aromatic Hydrocarbons Measured by Benzo[a]pyrene-DNA Adducts in Mothers and Newborns from Northern Manhattan, The World Trade Center Area, Poland, and China *Cancer Epidemiol Biomarkers Prev* 2005;14(3):709–14.

⁹³ Salmon A.G. and Meehan T. "Potential Impact of Environmental Exposures to Polycyclic Organic Material (POM) on Children's Health," California Office of Environmental Health Hazard Assessment (OEHHA).

http://www.oehha.ca.gov/public_info/public/kids/pdf/PAHs%20on%20Children's%20Health.pdf

Agency for Toxic Substances and Disease Registry, Public Health Statement for Polycyclic Aromatic Hydrocarbons (PAHs). August 1995.

<http://www.atsdr.cdc.gov/PHS/PHS.asp?id=120&tid=25>.

⁹⁴ Perera FP. "DNA Damage from Polycyclic Aromatic Hydrocarbons Measured by Benzo[a]pyrene-DNA Adducts in Mothers and Newborns from Northern Manhattan, The World Trade Center Area, Poland, and China," *Cancer Epidemiology Biomarkers & Prevention* 14, no. 3 (2005):709–14.

⁹⁵ Perera FP, Rauh V, Tsai WY, Kinney P, Camann D, et al. "Effects of transplacental exposure to environmental pollutants on birth outcomes in a multiethnic population," *Environmental Health Perspective* 111 (2003): 201–205.

Perera FP et. al. "Effect of Prenatal Exposure to Airborne Polycyclic Aromatic Hydrocarbons on Neurodevelopment in the First 3 Years of Life among Inner-City Children," *Environmental Health Perspective* 114 (2006):1287–1292.

⁹⁶ Perera, FP et. al. "Prenatal Airborne Polycyclic Aromatic Hydrocarbon Exposure and Child IQ at Age 5 Years," *Pediatrics* 124 (2009):e195–e202.

⁹⁷ The lead health impacts are also derived from the final rule on the National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66964, 66975-76 (Nov. 12, 2008).

decreased sperm count in men and spontaneous abortions in women, have been associated with lead exposure. EPA has classified lead as a probable human carcinogen.

16. Nickel is associated with chronic dermatitis, respiratory impacts and potentially also reproductive impacts.⁹⁸ The EPA has classified nickel refinery subsulfide as a Group A, human carcinogen and nickel carbonyl as a Group B2, probable human carcinogen.

D. Accidental Releases

The Benicia Refinery was built before current American Petroleum Institute (API) standards were developed to control corrosion and before piping manufacturers began producing carbon steel in compliance with current metallurgical codes. While some of Benicia's metallurgy was updated as part of the VIP, metallurgy used throughout much of the Refinery is likely not adequate to handle the unique chemical composition of tar sands crudes without significant upgrades. There is no assurance that required metallurgical upgrades would occur as they are very expensive and not required by any regulatory framework. Experience with changes in crude slate at the nearby Chevron Refinery in Richmond suggests that failure to perform required metallurgical upgrades can lead to catastrophic accidents.⁹⁹ The IS/MND is silent on corrosion issues and metallurgical conditions of the Refinery.

Both DilBit and SynBit crudes have high Total Acid Numbers (TAN), which indicates high organic acid content, typically naphthenic acids. These acids are known to cause corrosion at high temperatures, such as occur in many refining units, e.g., in the feed to cokers. Crude oils with a TAN number greater than 0.5 mg KOH/g¹⁰⁰ are generally considered to be potentially corrosive and indicative of a level of concern. A TAN number greater than 1.0 mg KOH/g is considered to be very high. Canadian tar sands crudes are high TAN crudes. The DilBits, for example, range from 0.98 to 2.42 mg KOH/g.¹⁰¹

Sulfidation corrosion from elevated concentrations of sulfur compounds in some of the heavier distillation cuts is also a major concern, especially in the vacuum distillation column, coker, and hydrotreater units. The specific suite of sulfur compounds may lead to increased corrosion. The IS/MND did not disclose either the specific suite of sulfur compounds or the TAN for the proposed crude imports.

⁹⁸ Agency for toxic substances and Disease Registry, Public Health Statements, <http://www.atsdr.cdc.gov/>

⁹⁹ U.S. Chemical Safety and Hazard Investigation Board, Interim Investigation Report, Chevron Richmond Refinery Fire, Chevron Richmond Refinery, Richmond, California, August 6, 2012, Draft for Public Release, April 15, 2013, Available at; <http://www.csb.gov/chevron-refinery-fire/>.

¹⁰⁰ The Total Acid Number measures the composition of acids in a crude. The TAN value is measured as the number of milligrams (mg) of potassium hydroxide (KOH) needed to neutralize the acids in one gram of oil.

¹⁰¹ www.crudemonitor.ca.

A crude slate change could result in corrosion from the particular suite of sulfur compounds or naphthenic acid content, which can lead to significant accidental releases, even if the crude slate is within the current design slate basis, due to compositional differences. This recently occurred at the nearby Chevron Richmond Refinery, which gradually changed crude slates, while staying within its established crude unit design basis for total weight percent sulfur of the blended feed to the crude unit. The IS/MND and VIP FEIR assume, however, that crude slate changes within the refinery design range of sulfur and API will not be a problem. In fact, although the sulfur composition at Chevron Richmond remained within the design range, they did change significantly over time.¹⁰² This change increased corrosion rates in the 4-sidecut line, which led to a catastrophic pipe failure in the #4 Crude Unit on August 6, 2012. This release sent 15,000 people from the surrounding area for medical treatment due to the release and created huge black clouds of pollution billowing across the Bay. It also put workers at the unit in grave danger, with several escaping the gas cloud and inferno narrowly.

These types of accidents can be reasonably expected to result from incorporating tar sands crudes into the Benicia slate, even if the range of sulfur and gravity of the crudes remains the same, unless significant upgrades in metallurgy occur, as these crudes have a significant concentration of sulfur in the heavy components of the crude coupled with high TAN and high solids, which aggravate corrosion. The gas oil and vacuum resid piping, for example, may not be able to withstand naphthenic acid or sulfidation corrosion from tar sands crudes, leading to catastrophic releases.¹⁰³ Catastrophic releases of air pollution from these types of accidents were not considered in the IS/MND.

Refinery emissions released in upsets and malfunctions can, in some cases, be greater than total operational emissions recorded in formal inventories. For example, a recent investigation of 18 Texas oil refineries between 2003 and 2008 found that “upset events” were frequent, with some single upset events producing more toxic air pollution than what was reported to the federal Toxics Release Inventory database for the entire year.¹⁰⁴ These potential emissions must be evaluated and mitigated.

E. Unmitigated Impacts of Locomotive Emissions

The location of air emissions matters a great deal with respect to exposure levels and resulting health impacts to workers and residents. Yet the IS/MND fails to evaluate the likely pollutant exposure levels from locomotive activity of the proposed project compared to the marine shipping activity that would be replaced. In fact, the IS/MND states that the resulting emissions from rail activity will be lower than shipping. It is not clear whether that comparison accounted for all of the environmental regulations that shippers must now comply with

¹⁰² US Chemical Safety and Hazard Investigation Board, 2013, p.34 (“While Chevron stayed under its established crude unit design basis for total wt. % sulfur of the blended feed to the crude unit, the sulfur composition significantly increased over time. This increase in sulfur composition likely increased corrosion rates in the 4-sidecut line.”).

¹⁰³ See, for example, Turini and others, 2011.

¹⁰⁴ J. Ozymy and M.L. Jarrell, Upset over Air Pollution: Analyzing Upset Event Emissions at Petroleum Refineries, Review of Policy Research, v. 28, no. 4, 2011.

including much cleaner, lower sulfur marine fuels. Regardless, the slightly lower locomotive emissions reported are misleading because those emissions are occurring much closer to residential populations and thus may result in significantly higher exposure to toxic diesel exhaust.

The diesel engines in locomotives emit fine particulate matter (particles that are 2.5 microns or less in diameter or “PM2.5”), NO_x, and VOCs along with many other toxic chemicals.¹⁰⁵ The soot in diesel exhaust—diesel PM—is especially toxic, not only due to the very small size of the soot particles, but also because these particles contain roughly 40 different toxic air contaminants, 15 of which are recognized carcinogens.¹⁰⁶ In fact, diesel PM itself has been identified as a carcinogen by the World Health Organization as well as the State of California,¹⁰⁷ which lists it as a “Toxic Air Contaminant.” Dozens of studies have shown a high risk of lung cancer in occupations with high diesel exposures, including rail workers, truck drivers, and miners. Recent studies of miners indicate that the most heavily exposed workers have a risk of lung cancer approaching that of heavy smokers; studies also show that elevated risks of lung cancer apply not only to workers but to the general population in areas with high levels of diesel PM (*e.g.*, near freeways and busy freight corridors).¹⁰⁸

Moreover, diesel pollution is estimated to contribute to roughly 60,000 or more premature deaths attributable to outdoor air pollution in the U.S.¹⁰⁹ People who live or go to school near

¹⁰⁵ NRDC, *Clean Cargo: A Guide to Reducing Diesel Air Pollution from the Freight Industry in Your Community*, January 2013.

¹⁰⁶ Diesel exhaust contains the following toxic constituents: acetaldehyde, acrolein, aniline, antimony compounds, arsenic, benzene, beryllium compounds, biphenyl, bis[2-ethylhexyl]phthalate, 1,3-butadiene, cadmium, chlorine, chlorobenzene, chromium compounds, cobalt compounds, cresol isomers, cyanide compounds, dioxins and dibenzofurans, dibutylphthalate, ethyl benzene, formaldehyde, hexane, inorganic lead, manganese compounds, mercury compounds, methanol, methyl ethyl ketone, naphthalene, nickel, 4-nitrobiphenyl, phenol, phosphorus, POM including PAHs and their derivatives, propionaldehyde, selenium compounds, styrene, toluene, xylenes.

www.oehha.ca.gov/public_info/facts/dieselfacts.html;

www.oehha.ca.gov/air/toxic_contaminants/html/Diesel%20Exhaust.htm.

¹⁰⁷ www.oehha.ca.gov/prop65/prop65_list/files/P65single021712.pdf;

http://press.iarc.fr/pr213_E.pdf.

¹⁰⁸ Silverman, D.T., et al. “The Diesel Exhaust in Miners Study: A Nested Case-Control Study of Lung Cancer and Diesel Exhaust,” *Journal of the National Cancer Institute*, Vol. 104, No. 11, June 6, 2012,

www.oxfordjournals.org/our_journals/jnci/press_releases/silvermandjs034.pdf.

¹⁰⁹ According to U.S. EPA, the following regulations avoid 52,000 annual premature deaths by 2030: 2001 highway Diesel (8,300); 2004 Nonroad Diesel (12,000), 2008 Locomotive/Marine (1,100), 2010 Emission Control Area (IMO ECA)/marine fuel (31,000). Assuming a 90% diesel PM reduction from each rule (though some of the rules yield 95% reductions), this means that diesel PM emissions led to roughly 58,200 premature deaths before the rules were in place. This is likely a significant under-estimate since several diesel PM sources are not accounted for here, such as light duty diesel trucks and stationary diesel engines.

rail yards face disproportionately higher exposure to diesel exhaust and associated health impacts, including increased risks of asthma and other respiratory effects, cancer, adverse birth outcomes, adverse impacts to the brain (including potentially higher risk of autism),¹¹⁰ heart disease, and premature death.¹¹¹

¹¹⁰ Autism spectrum disorders (ASDs) - a group of developmental disabilities that can cause significant social, communication and behavioral challenges - have increased 78 percent since 2002 to impact 1 in 88 children, according to the Centers for Disease Control and Prevention (CDC), see <http://www.cdc.gov/Features/CountingAutism/>. While experts are still working to better understand the risk factor, they agree that risk factors are not only genetic but environmental. Several recent studies in California have shown how air pollution contributes to autism, finding elevated risks in areas of elevated air pollution and in close proximity to freeways.

¹¹¹ Kim, J., et al. "Traffic-Related Air Pollution and Respiratory Health: East Bay Children's Respiratory Health Study," *American Journal of Respiratory and Critical Care Medicine* 2004;170:520-526.

McConnell, R., et al. "Childhood Incident Asthma and Traffic-Related Air Pollution at Home and School," *Environmental Health Perspectives* 2010; 118(7):1021-1026.

Van Vliet, P., M. Knape, et al. "Motor Vehicle Exhaust and Chronic Respiratory Symptoms in Children Living Near Freeways," *Environmental Research* 1997; 74(2):122-32.

Appatova, A.S., et al. "Proximal Exposure of Public Schools and Students to Major Roadways: A Nationwide U.S. Survey," *Journal of Environmental Planning and Management* 2008; 51(5):631-646.

Nicolai, T., D. Carr, S.K. Weiland, H. Duhme, O. Von Ehrenstein, C. Wagner, and E. von Mutius. "Urban Traffic and Pollutant Exposure Related to Respiratory Outcomes and Atopy in a Large Sample of Children," *European Respiratory Journal* 2003;21:956-963.

Brunekreef, B.; N.A. Janssen, J. de Hartog, H. Harssema, M. Knape, and P. van Vliet. "Air Pollution From Truck Traffic and Lung Function in Children Living Near Motorways," *Epidemiology* 1997; 8(3):298-303.

Duhme, H., S.K. Weiland, et al. "The Association Between Self-Reported Symptoms of Asthma and Allergic Rhinitis and Self-reported Traffic Density on Street of Residence in Adolescents," *Epidemiology* 1996; 7(6):578-582.

Edwards, J., S. Walters, et al. "Hospital Admissions for Asthma in Preschool Children: Relationship to Major Roads in Birmingham, United Kingdom," *Archives of Environmental Health* 1994; 49(4):223-227.

Gauderman W.J., et al. "Childhood Asthma and Exposure to Traffic and Nitrogen Dioxide," *Epidemiology* 2005; 16:737-743.

McConnell, R., Berhane K, Yao L, Jerrett M, Lurmann F, Gilliland F, et al. 2006. Traffic, susceptibility, and childhood. *Environ Health Perspect* 2006; 114(5):766-772.

Gauderman WJ et al. Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study. *Lancet* 2007; 369(19561): 571-7.

Wilhelm et al.. Environmental Public Health Tracking of Childhood Asthma Using California Health Interview Survey, Traffic, and Outdoor Air Pollution Data. *Environmental Health Perspectives* 2008;116(8):1254-1260.

Meng et al.. Are Frequent Asthma Symptoms Among Low-Income Individuals Related to Heavy Traffic Near Homes, Vulnerabilities, or Both? *AEP* 2008; 18(5):343-350.

Detailed health assessments of some major California rail yards found extremely high cancer risk from the operations, with elevated cancer risk extending as far as eight miles away.¹¹² Locomotives may produce about half of all harmful diesel particulate matter emissions in rail yards.¹¹³ Locomotive engines are not only highly polluting, they are incredibly long-lasting, which means many older, high-polluting locomotives are still in operation throughout the U.S.¹¹⁴ Emissions standards for locomotives lag behind the standards for trucks and even off-road equipment. New Tier 4 standards, comparable to those for modern trucks, will not start

Venn et al. Living Near A Main Road and the Risk of Wheezing Illness in Children. *American Journal of Respiratory and Critical Care Medicine* 2001; 164:2177-2180.

Lin, Munsie, Hwang, Fitzgerald, and Cayo.. Childhood Asthma Hospitalization and Residential Exposure to State Route Traffic. *Environmental Research, Section A* 2002; 88:73-81.

English P., Neutra R., Scalf R. Sullivan M. Waller L. Zhu L. Examining Associations Between Childhood Asthma and Traffic Flow Using a Geographic Information System. *Environmental Health Perspectives* 1999; 107(9):761-767.

van Vliet et al.. Motor exhaust and chronic respiratory symptoms in children living near freeways. *Environmental Research* 1997; 74:12-132.

Pearson et al.. Distance-weighted traffic density in proximity to a home is a risk factor for leukemia and other childhood cancers. *Journal of Air and Waste Management Association* 2000; 50:175-180.

Raaschou-Nielsen, O., Hertel, O., Thomsen, B.L., & Olsen, J.H. Air Pollution from traffic at the residence of children with cancer. *Am J Epidemiol* 2001; 153:433-443.

Knox and Gilman. Hazard proximities of childhood cancers in Great Britain from 1953-1980. *Journal of Epidemiology and Community Health* 1997; 51:151-159.

Hoek, Brunekreef, Goldbohn, Fischer, van den Brandt. Association between mortality and indicators of traffic-related air pollution in the Netherlands: a cohort study. *Lancet* 2002; 360(9341):1203-9.

Finkelstein et.al. Traffic Air Pollution and Mortality Rate Advancement Periods. *Am J Epidemiol* 2004; 160:173-177.

Gan, W. Q. Changes in Residential Proximity to Road Traffic and the Risk of Death from Coronary Heart Disease. *Epidemiology* 2010; 21(5):642-649.

Heather E. Volk, PhD, MPH; Fred Lurmann; Bryan Penfold; Irva Hertz-Picciotto, PhD; Rob McConnell, MD. Traffic-Related Air Pollution, Particulate Matter, and Autism. *JAMA Psychiatry*. 2013;70(1):71-77. doi:10.1001/jamapsychiatry.2013.266.

¹¹² California Air Resources Board, Railyard Health Risk Assessments and Mitigation Measures, www.arb.ca.gov/railyard/hra/hra.htm. Cancer risks exceed 1,000 per million next to some of the largest railyards.

¹¹³ “Supplement to the June 2010 Staff Report on Proposed Actions to Further Reduce Diesel Particulate Matter at High-Priority California Railyards.” California Air Resources Board, July 5, 2011. Available at: <http://www.arb.ca.gov/railyard/commitments/suppcomceqa070511.pdf>, page 2.

¹¹⁴EPA, Fact Sheet: EPA Finalizes More Stringent Emissions Standards for Locomotive Engines and Marine Compression-Ignition Engines (PDF) (5 pp, 134K, EPA420-F-08-004, March 2008); available at:

<http://www.epa.gov/otaq/regs/nonroad/420f08004.pdf>

to be phased in until 2015; these Tier 4 locomotives will emit 80 percent less NO_x and 90 percent less PM than a train engine built in 2008.¹¹⁵ Where Tier 4 locomotives are not yet available, diesel particulate filters (DPFs) and selective catalytic reduction (SCR, a common catalyst based technology used to reduce NO_x emissions) can be installed on existing locomotives to achieve emissions reductions similar to those of certified Tier 4s.¹¹⁶

Also, very high concentrations of NO₂ are present in the exhaust emissions from diesel train engines that would be used at the newly proposed rail terminal.¹¹⁷ These NO₂ emissions are routinely high enough to exceed the new 1-hour NO₂ standard. While annual NO₂ emissions may be offset by reducing ship imports, the ambient impacts would occur at different locations and times, exceeding the new 1-hour NO₂ standard. This was not considered in the IS/MND and is a significant impact that requires that an EIR be prepared. These emissions can and must be mitigated, for example by using an electronic positioning system,¹¹⁸ rather than the locomotive engine, to move the cars through the unloading facility.

In addition to electronic positioning systems, mitigations for line haul locomotives should also be included. We recommend tier 4 compliant locomotives or locomotives retrofitted with exhaust controls that can meet tier 4 standards; and a commitment not to idle locomotive engines in the unloading facility, including the use of locomotive idle controls.

II. Public Safety and Noise Impacts

With residential areas just 3,000 feet away from this project (IS/MND at I-2), noise from this project is certain to be a major nuisance. It appears from the project description (IS/MND at I-11 and elsewhere) that the rail activity of four 50-car trains per day would occur predominantly at night. Operations would occur constantly, “24 hours per day/7 days per week/365 days per year.” (IS/MND at I-11) Each train crossing Park Road would block that intersection for more than eight minutes for a total of more than half an hour per day of that intersection being blocked (IS/MND at I-11).

While the travel delays caused by lengthy rail crossings may pose a safety concern and a nuisance to the community, our primary concern over health impacts related to the additional rail traffic is in regard to noise. The analysis erroneously dismisses noise from the additional train traffic as “not result[ing] in substantial permanent increases in ambient noise levels,” and

¹¹⁵ U.S. Environmental Protection Agency. “EPA Finalizes More Stringent Emissions Standards for Locomotives and Marine Compression-Ignition Engines.” Regulatory Announcement EPA420-F-08-004, March 2008. Available at: <http://www.epa.gov/otaq/regs/nonroad/420f08004.htm>.

¹¹⁶ West Coast Collaborative, Locomotive and Rail Sector meeting materials, 2012, <http://westcoastcollaborative.org/wkgrp-loco.htm>.

¹¹⁷ See attached expert report from Dr. Phyllis Fox.

¹¹⁸ See, for example, Oregon Department of Environmental Quality, Standard Air Contaminant Discharge Permit, Coyote Island Terminal, LLC, July 24, 20120, p. 3, Condition 1.1.a (an electric powered positioning system for maneuvering railcars through the Railcar Unloading Building).

the project “noise would be similar to noise levels generated by existing refinery operations.” (IS/MND at II-53 and II-54) The analysis fails to consider the horns and noise of the four additional trains going through at-grade crossings, particularly at night when most of the activity is expected. Grade separations at major rail crossings should be considered as mitigation.

The IS/MND also fails to adequately address residents’ existing noise concerns or to discuss the adverse effects that noise has on people. The IS/MND provides no attempt to gauge existing levels of communication interference, sleep interference or physiological responses and annoyance, nor does it attempt to predict future levels associated with the Project.

The IS/MND also dismisses impacts related to construction noise, on the basis that the nearest residence is 2,700 feet away and thus the project is in compliance with local performance standards (IS/MND at II-53). However, compliance with a certain standard does not necessarily mean noise impacts are insignificant.¹¹⁹ This is especially true in an area that is already adversely impacted by high noise levels. The IS/MND (at II-52) concedes that worst case noise impacts could be 58 dBA at the nearest residence. In fact, noise from locomotive horns may be much higher and it is not clear that this was considered in the IS/MND. The Federal Rail Administration estimates that railroad horns are in the 95-115 dBA range from 100 feet away and that “the noise resulting from the sounding of train horns has a similar impact to that of low flying aircraft and emergency vehicle sirens.”¹²⁰

In any case, noise levels from this project are likely to be above the level that the U.S. Environmental Protection Agency (“EPA”) states is significant. EPA holds that a noise impact is significant if it exceeds 55 DNL, identified as the requisite level with an adequate margin of safety for areas with outdoor uses, including residential and recreational uses.¹²¹ However, the IS/MND offers no mitigation for these impacts. Mitigating noise impacts is important not only to address the nuisance aspect of it but also because research on noise from transportation shows significant health impacts.

A. Communication Interference

A primary concern in environmental noise problems is communication interference including speech interference and interference with activities such as watching television. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

¹¹⁹ See *Oro Fino Gold Mining Corporation v. County of El Dorado*, 225 Cal. App. 872, 881-82 (1990).

¹²⁰ Federal Rail Administration, Horn Noise FAQ, available at: <http://www.fra.dot.gov/Page/P0599>

¹²¹ See EPA, “Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety” 21 (March, 1974), <http://www.nonoise.org/library/levels74/levels74.htm>.

B. Sleep Interference

Sleep interference is a major noise concern in noise assessment and is most critical during nighttime hours. Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages and cause awakening. Noise may also cause awakening which a person may or may not be able to recall. Extensive research has been conducted on the effect of noise on sleep disturbance. Recommended values for desired sound levels in residential bedrooms range from 25 to 45 dBA, with 35 to 40 dBA being the norm.

The National Association of Noise Control Officials has published data on the probability of sleep disturbance with various single event noise levels. Based on experimental sleep data as related to noise exposure, a 75 dBA interior noise level event will cause noise induced awakening in 30 percent of the cases.

C. Physiological Responses

These are measurable effects of noise on people such as changes in pulse rate and blood pressure. Generally, physiological responses are a reaction to a loud short term noise such as a rifle shot or a loud jet overflight, or in this case the horn of a train. Noise above 60 decibels (“db”) has been shown to have distinct psychological impacts, such as worsening children’s mental health, concentration, and classroom behavior in children at school.¹²² Other studies show that chronic noise exposure contributes to a worsening of heart disease and higher rates of stroke, after accounting for the risks association with air pollution.¹²³

¹²² Matsuoka, M., Hricko, Al, Gottlieb, R., and De Lara, J., *Global Trade Impacts: Addressing the Health, Social and Environmental Consequences of Moving International Freight through Our Communities*, Occidental College and University of Southern California (Los Angeles, 2011) (hereinafter “Global Trade Impacts”), citing World Health Organization, *Guidelines for Community Noise*, Chapter 3, *Adverse Health Effects of Noise* (1999), available at: <http://www.who.int/docstore/peh/noise/Comnoise3.htm>; van Kempen, E.E., van Kamp, I., Stellato, R.K., et al., “Children’s Annoyance Reactions to Aircraft and Road Traffic Noise,” *J. Acoust. Soc. Am.* (2009) 125(2): 895-904; U.S. Department of Transportation, Federal Railroad Administration, *The General Health Effects of Transportation Noise* (2002), Document # DTS-34-RR297-LR2 FRS/RDV-03/01; Lercher, P., “Ambient Neighborhood Noise and Children’s Mental Health,” *Occup. Environ. Med.* (2002) 59(6): 380-6; Evans, G.W., “Child Development and the Physical Environment,” *Annual Review of Psychology* (2006) 57: 423-51.

¹²³ *Global Trade Impacts*, 18, citing Babisch, W., “Transportation Noise and Cardiovascular Risk: Updated Review and Synthesis of Epidemiological Studies Indicate that the Evidence Has Increased,” *Noise & Health* (Jan. 2006), Vol. 8, Iss. 30, 1-29; Sorensen, M., Hvidberg, M., Andersen, Z. J., et al., “Road Traffic Noise and Stroke: A Prospective Cohort Study,” *Eur. Heart J.* (Jan. 25, 2011).

Annoyance is a very individual characteristic which can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability. The level of annoyance depends on the characteristics of the noise, defined as the loudness, frequency, time and duration of the noise, and how much speech and/or sleep interference results from the noise. The level of annoyance is also a function of the attitude of the receiver. Personal sensitivity to noise varies widely. It has been estimated that 2 to 10 percent of the population is highly susceptible to annoyance from noise not of their own making, while approximately 20 percent is unaffected by noise.

III. General Hazards and Ecological Risks

The IS/MND completely fails to consider or mitigate the potential for rail car accidents or spills. While the IS/MND concedes that crude oil is a hazardous material (IS/MND at II-37), it erroneously concludes that the “quantities of crude delivered by rail and marine vessel offset each other, it is, at a minimum, expected that the relative risks offset each other and that rail transport would present no new significant hazard above the current Refinery baseline risk for marine transport of crude oil to the Refinery.” In fact, there is a history of major spills of hazardous materials along California rail routes.¹²⁴

Due to the nature of the very dense and toxic diluted bitumen that the rail cars are likely to carry, as discussed above, these fuels in particular pose an especially serious environmental and public health threat when accidentally released into the environment. EPA recently noted that spills of diluted bitumen require different response action or equipment than for conventional oil spills.¹²⁵ Dilbit spills are simply more difficult and more expensive to clean up.¹²⁶ In fact, three years after a major spill of dilbit into the Kalamazoo River in Michigan, the heavy oil remains at the bottom of the river requiring dredging and \$1 billion clean-up cost.¹²⁷ The IS/MND fails entirely to consider the possibility of a dilbit spill into the fragile San Francisco Bay Delta, and what the wildlife, ecosystem, economic and human health implications would be.

It is important to note that human health impacts of bituminous oil spills can be quite serious. We are only beginning to understand the full potential of impacts but spills like the one in Marshall, Michigan give a cautionary sense of how severe impacts can be. There public health officials found numerous acute health impacts lasting for days and spanning numerous areas: Cardiovascular, dermal, gastrointestinal, neurological, ocular, renal, respiratory and other

¹²⁴ For example, there was a very major spill into Upper Sacramento River in 1991. See: <http://www.dfg.ca.gov/ospr/NRDA/Cantara.aspx>

¹²⁵ EPA, Comment letter to US Department of State regarding the Supplemental Draft Environmental Impact Statement from TransCanada’s proposed Keystone XL project, 2013.

¹²⁶ Environmental Working Group, Poisons in the Pipeline, Tests Find Toxic Stew in Oil Spill, June 2013, page 6.

¹²⁷ EPA, 2013

impacts.^{128, 129}

IV. Conclusion

The Crude by Rail Project has significant unmitigated effects on the environment. These effects must be analyzed in an Environmental Impact Report and fully mitigated before this Project may lawfully be approved.

Sincerely,

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¹²⁸ Michigan Department of Community Health, *Acute Health Impacts of the Enbridge Oil Spill*, November 2010.

http://www.michigan.gov/documents/mdch/enbridge_oil_spill_epi_report_with_cover_11_22_10_339101_7.pdf [accessed 19 June 2013]

¹²⁹ U.S. Department of Health and Human Services and ATSDR, *Kalamazoo River/Enbridge Spill: Evaluation of Crude Oil Release to Talmadge Creek and Kalamazoo River on Residential Drinking Water Wells in Nearby Communities*, 27 February 2013, p. 90.

http://www.michigan.gov/documents/mdch/enbridge_oil_spill_epi_report_with_cover_11_22_10_339101_7.pdf [accessed 20 June 2013]

**Comments on
Initial Study/Mitigated Negative Declaration (IS/MND)
Valero Crude by Rail Project
Benicia, California**

Use Permit Application 12PLN-00063

Ian Goodman
Brigid Rowan



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July 1, 2013

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1. Introduction

As described in the draft Initial Study/Mitigated Negative Declaration (IS/MND) issued by the City of Benicia:¹

The proposed Valero Crude by Rail Project would allow the Valero Benicia Refinery (Refinery) access to additional North American-sourced crude oil for delivery to the Refinery by railroad. The Project would involve the installation and modification of Refinery non-process equipment that would allow the Refinery to receive a portion of its crude oil deliveries by railcar replacing equal quantities of crude currently being delivered to the Refinery by marine vessel. Valero intends to replace up to 70,000 barrels per day of the crude oil currently supplied to the Refinery by marine vessel with an equivalent amount of crude oil transported by rail cars. **The crude oil to be transported by rail cars is expected to be of similar quality compared to existing crude oil imported by marine vessels. Crude delivered by rail would not displace crude delivered to the Refinery by pipeline.**

Valero has applied to the Bay Area Air Quality Management District (BAAQMD) for a construction permit for the proposed Crude by Rail Project (the Project). The Authority to Construct Application (ATC) is Appendix A1 to the IS/MND.² In the BAAQMD proceeding, Valero responded to questions by the BAAQMD in an April 11, 2013 letter (Valero Response to BAAQMD April 11, 2013).³

The IS/MND assumes that the Project will not significantly affect crude quality and will not displace crude delivered by pipeline. As further explained in the Comments on IS/MND submitted by Dr. Phyllis Fox (Fox Comments), refinery air emissions can increase due to changes in crude quality. Thus, to meaningfully evaluate the proposed Valero Refinery Crude by Rail Project, it is necessary to consider how the crudes delivered by rail might differ from those that would be delivered by marine vessel and pipeline. Simple summary information (such as

¹ ESA, Valero Crude by Rail Project, Initial Study/Mitigated Negative Declaration, Use Permit Application 12PLN-00063, Prepared for City of Benicia, May 2013, MND p. 1 (emphasis added).

² In these Comments, all references to the ATC are to the Public Document. We have not been provided with access to the full version of this document, which includes content that Valero claims to be Confidential Business Information.

³ In these Comments, all references to the Valero April 11, 2013 Response to BAAQMD are to the Public Document. We have not been provided with access to the full version of this document, which includes content that Valero claims to be Confidential Business Information.

API gravity and sulfur content) is not sufficient as a measure of crude quality, since refinery processing is affected by a wide range of crude quality attributes.⁴

These Comments were prepared by Ian Goodman⁵ and Brigid Rowan⁶ of The Goodman Group, Ltd. (TGG), a consulting firm specializing in energy and regulatory economics.⁷ TGG was retained to provide a Market Analysis to evaluate how the proposed Crude by Rail Project could affect crude supply (and thus quality) for the Refinery.⁸ The evaluation undertaken by TGG is therefore also an input provided to assist Dr. Fox in her evaluation of the proposed Project. TGG and Phyllis Fox conferred during the preparation of their respective Comments, and (where relevant) each of the Comments makes reference to the other.

In evaluating complex energy issues, TGG's orientation is to undertake a deep and comprehensive analysis of the relevant economic and other issues. However, the IS/MND touches upon a very wide range of issues regarding rapidly evolving crude markets. As further discussed in Sections 2, 3, and 4 and the Fox Comments, much of the relevant information relating to the proposed Project is incomplete and/or not publicly available. In some instances, relevant information has not been publicly disclosed because Valero claims it to be Confidential Business Information.⁹ In other instances, the IS/MND and other Project documents have failed to consider the Project's relevant context, and thus do not adequately evaluate the relevant issues based on the relevant information. Put more simply, in many instances, relevant information is not even identified, much less evaluated. Given the limited time, information, and other resources available, it is simply impractical for TGG to undertake a full independent analysis.

In light of these constraints, TGG has provided a sound alternative analysis that offers useful guidance to policymakers. In particular, the alternative analysis provided in these Comments provides more useful guidance than does the IS/MND. Based on flawed, simplistic, and

⁴ See Fox Comments, Section 2 below, and, e.g., Canadian Crude Oil Quality, Past, Present and Future Direction: A Historical Perspective. Canadian Crude Quality Technical Association (CCQTA), Presented to the Canadian Heavy Oil Association (CHOA) February 7, 2012, attached to these Comments as Appendix I (especially pp. 4, 6-14, 19-25).

⁵ Resume of Ian Goodman is provided as Appendix A to these Comments.

⁶ Resume of Brigid Rowan is provided as Appendix B to these Comments.

⁷ www.thegoodman.com

⁸ These Comments were co-authored by Ian Goodman and Brigid Rowan, co-authors of "Report evaluating the Keystone XL (KXL) Draft Supplemental Environmental Impact Statement (DSEIS) Market Analysis" that was filed April 22, 2013 as an attachment to the DSEIS Comments jointly submitted by the Sierra Club, NRDC, and 14 other environmental and public interest organizations:
<http://switchboard.nrdc.org/blogs/aswift/Comments%20of%20Sierra%20Club%2C%20et.%20al.%2C%20on%20the%20Keystone%20XL%20DSEIS.4.22.13.pdf>

⁹ As discussed in footnotes 2 and 3, we do not have access to the full version of certain Project documents, which include content that Valero claims to be Confidential Business Information. We thus have access to only the Public Document versions of the ATC (which is Appendix A1 to the IS/MND) and the Valero Response to BAAQMD April 11, 2013.

incomplete data and assumptions, the IS/MND assumes that the proposed Project will not significantly affect crude quality. From the information now available, TGG concludes that the proposed Project could significantly affect crude quality. Based on guidance from our alternative analysis, the Fox Comments, and other input received as part of the Comment process, the City of Benicia should undertake a full Environmental Impact Report (EIR) in order to provide a sound basis for decision-making on the proposed Valero Crude by Rail Project.

Sections 2 and 3 demonstrate how the IS/MND issued by the City of Benicia depends on incomplete and flawed information and analysis that do not constitute a meaningful basis for decision-making. The relevant information and analysis for meaningful evaluation of the Project are available and are in fact used by Valero as a basis for its business decisions; but Valero has chosen not to consider or disclose this relevant information. Issues relating to historical and future crude supply for the Benicia Refinery are considered at length in Section 4.

Section 2 discusses the broader market context, which informs Valero's decisions. This section demonstrates that in order to evaluate the Project, Valero would have already undertaken an extensive market analysis involving detailed information on crude supply and quality. At Valero (and other refiners), refinery planning, operations, and capital project decisions are based on very detailed analysis that explicitly considers the broader market and the specifics of each refinery, processing units, feedstock and product. However, instead of providing the relevant information on crude supply and quality (that Valero already possesses and uses for its internal decision-making), Valero has instead provided a vague and incoherent consideration of crude supply and quality for the IS/MND (and for the ATC, which is Appendix A1 to the IS/MND).

Section 3 highlights another major flaw in Valero's Project proposal: the complete failure to disclose and consider the Valero Improvement Project (VIP), another major and related project at the Benicia Refinery. The VIP is a large-scale ongoing reconfiguration project at the Refinery to enable a large shift in crude supply to Cost-Advantaged heavier, sour crudes. Therefore the VIP creates significant and ongoing changes to the Refinery configuration and affects crude supply and quality. The proposed Crude by Rail Project can only be meaningfully evaluated in the context of the VIP. Again, because of Valero's failure to consider and disclose information on the VIP as part of its Project proposal, the IS/MND is based on incomplete and flawed information and analysis.

As demonstrated in Sections 2 and 3, the IS/MND has failed to provide adequate information regarding crude supply and quality, which is necessary in order to evaluate the impact of the Project. However, information provided elsewhere does offer some insight into the crudes now being processed at Benicia and thus what type of crudes might be delivered by rail. Based on this information, Section 4 discusses issues related to historical and future crude supply for the Refinery and draws some conclusions regarding the impact of the Project on crude supply and quality.

2. Context and Information for Market Analysis of the Proposed Project

Petroleum markets are large, complex, and highly interconnected. In turn, Petroleum Market Analysis can be highly complex, with significant interrelationships between its various elements. Petroleum markets are also highly dynamic and interactive.

Refining is a very information-intensive activity. Valero is particularly well-positioned to have high-quality information resources, and to use these resources to be successful in all aspects of refining. As the world's largest independent refiner,¹⁰ Valero is involved in a very wide range of activities relating to refining:

Valero has grown from a regional energy company with a single refinery to the world's largest independent refiner, with 16 refineries stretching from California to Canada to the United Kingdom. With this network of refineries, Valero has a combined throughput capacity of approximately 3 million barrels per day.¹¹

Through its corporate website and other channels, Valero discloses extensive ongoing information to investors, including events and presentations; key commodity prices and other industry fundamentals; financial reports, filings and statements; and other disclosures. Information currently posted on the Valero Investor Relations website is shown in Appendix C.

Valero's most recent Investor Presentation (UBS Global Oil and Gas Conference, May 21-22, 2013) is attached to these Comments as Appendix D. This Presentation provides useful information regarding the proposed Crude by Rail Project at the Benicia Refinery and more generally about Valero's plans to use rail and other logistics to access Cost-Advantaged Crudes from the Canadian tar sands and other sources.¹²

As this Presentation clearly shows, development of the proposed Benicia Crude by Rail Project is not occurring in isolation. Rather, this Project is very much part of the dramatic shifts now underway throughout the North American oil system.¹³ This Project can only be meaningfully

¹⁰ Independent refiners (such as Valero and Tesoro) do not have their own crude production, so their entire crude supply must be sourced from third parties. Integrated oil companies (such as Chevron and Shell) engage in both crude production (oil wells) and crude processing (oil refineries).

¹¹ <http://www.valero.com/OURBUSINESS/Pages/RefiningOurBusiness.aspx>

¹² Appendix D, pages 6-11, 25, 32, 44-45.

¹³ These shifts, and their implications for the Benicia Crude by Rail Project, will be addressed in Section 4 of these Comments.

evaluated within the broader Market Analysis context; Valero's internal decision-making in regard to the proposed Project is based on its evaluation of this broader market context.

This broader context is not adequately considered in the IS/MND and other Project Documents. However when communicating with investors, Valero has provided much more useful information resources concerning this broader context. Valero's most recent "Refining 101" Presentation (January 2013) is attached as Appendix E. The focus of that presentation is on the fundamentals of refining, which are generally relevant for Valero's refineries throughout the US, Canada, and globally.

But the content in the general Refining 101 Presentation is also similar to the content provided by Valero in Investor Presentations specific to the Benicia Refinery. Presentations for Benicia Refinery Tours on July 9, 2007 and August 17, 2010 are attached as Appendices F and G, respectively. There is very substantial overlap between the content in Valero's Presentations for Refining 101 (Appendix E) and the Benicia Refinery Tours in 2007 and 2010 (Appendices F and G).

The Refining 101 and Refinery Tour Presentations show the framework and types of information that Valero utilizes in undertaking Market Analysis and crude sourcing for the Benicia Refinery. These Presentations provide confirmation that issues relating to crude supply and quality can only be meaningfully evaluated in the context of refinery configuration.

Moreover, despite Valero's broad and repeated claims as to what is Confidential Business Information in regard to the IS/MND and other Project documents, the framework and information that Valero utilizes in undertaking Market Analysis and crude sourcing is (in various ways) not unique to Benicia or Valero. Other refiners (including Valero's direct competitors) utilize similar framework and information in undertaking Market Analysis and Crude Sourcing. For example, Marathon Petroleum (another leading independent refiner) also has a "Refining 101" Presentation (attached as Appendix H) that is quite similar to that which Valero has provided. There is very substantial overlap between the content in Marathon's Refining 101 Presentation (Appendix H) and Valero's Presentations (Appendices E, F, and G).

The vague and incoherent consideration of crude quality in the IS/MND and other publicly available Project Documents is in notable contrast to how Valero (and other refiners) actually undertake refinery planning, operations, and capital decisions. At Valero (and other refiners), refinery planning, operations, and capital project decisions are based on very detailed analysis that explicitly considers the highly differentiated specifics of each type of refinery, processing unit, feedstock, and product.

As emphasized in the attached Presentations (Appendices E, F, G, and H), each petroleum refinery is uniquely configured to process a set of raw materials (crude slate) into a desired set

of products (product slate). Moreover, each type of crude is also unique. Refinery configuration is key in determining the suitability of crudes for a given refinery.¹⁴ Crude selection is based on the relative economics of available choices, assisted by analysis using Linear Programming (LP) models. These complex LP models incorporate representations of each refinery unit's operations, every potential feedstock and product, and take into account varying properties and pricing:

- **Refinery configuration plays a large part in determining the suitability of crudes and feedstocks in a given refinery**
- Crude and feedstock selection is based on the relative economics of available choices assisted by analysis using LP models¹⁵
- [...]
- Valero uses linear programming models (LP) to optimize its refineries
- LPs are complex models that incorporate:
 - Representations of each refinery unit's operations
 - **Every potential feedstock, intermediate, and product**
 - **Takes into account varying properties and pricing**
- LP results guide decisions on refinery utilization, feedstock purchases, and product yields
- **Valero does this by unit, by refinery, and across its portfolio of refineries**¹⁶

Each type of crude has unique physical and chemical properties, and crudes differ widely in their characteristics. Crude quality is a central element in refinery planning, operations, and capital project decisions. High quality and very detailed crude oil assay¹⁷ information is essential for refinery planning, operations, and capital project decisions:

¹⁴ The simplest refinery configuration, called a topping refinery, consists of tankage, a distillation unit, recovery facilities for gases and light hydrocarbons, and the necessary utility systems (steam, power, and water-treatment plants). Topping refineries may produce large quantities of unfinished oils.

The addition of hydrotreating and reforming units to this basic configuration results in a more flexible hydroskimming refinery, which can also produce desulfurized distillate fuels and high-octane gasoline. But these refineries still produce a large portion of their output as heavy (residual) fuel oil, asphalt, and other heavy (and typically low value) products.

The most versatile refinery configuration is known as a conversion refinery. A medium conversion refinery incorporates all the basic building blocks found in both the topping and hydroskimming refineries, but it also features gas oil conversion plants such as catalytic cracking and hydrocracking units, olefin conversion plants such as alkylation or polymerization units.

A high conversion refinery also has coking units for sharply reducing or eliminating the production of residual fuels. High conversion refineries can produce a large portion of their output as gasoline, with the balance distributed between distillates (diesel, jet fuel, and light fuel oil), liquefied petroleum gases (propane/butane), and a small quantity of petroleum coke.

¹⁵ Valero Refining 101 Presentation (Appendix E, p. 19, emphasis added).

¹⁶ Valero Refining 101 Presentation (Appendix E, p. 17, emphasis added).

¹⁷ A crude oil assay is a test performed by a laboratory on a sample to evaluate the crude's physical and chemical properties. Crude oil assays typically measure viscosity, density, acidity and sulfur content, and other properties. For sources and additional information regarding crude oil assays, see footnote 18; Intertek Crude Oil Assay (footnote continued on next page)

Crude Oil Assay Program

- Crude oils are characterized utilizing a very comprehensive testing slate
- Typical full crude assay cost:
 - \$10,000 - \$20,000 per crude
- Information is used for:
 - Purchase decisions
 - Refining planning and optimization
 - Capital project decisions

[...]

Analytical Testing

- A representative sample of the crude is distilled in the laboratory under similar conditions as the refinery.
- Ten or more boiling range fractions are obtained.
- Very extensive testing is conducted on the whole crude and the various fractions.
- Tests performed are selected based on the products.

[...]

Converting Information to Intelligence

- Following the analytical testing, special software programs are used to put the raw analytical data into a form that conclusions, comparisons, and correlations can be made.
- Sophisticated computer models use the crude assay data together with operational data and price information to allow for optimal planning and operation.¹⁸

(footnote continued from previous page)

Testing <http://www.intertek.com/petroleum/crude-assay/>; and Alberta Ministry of Energy <http://www.energy.alberta.ca/OilSands/1708.asp>.

¹⁸ Marathon Petroleum Refining 101 Presentation (Appendix H, pp. 13, 14, 16, emphasis bold in original, emphasis underlining added). The crude oil assay program activities described by Marathon Petroleum are representative of those at Valero and across the oil industry. Assay data are used by refineries to determine if a crude is compatible for a particular refinery or if it could cause yield, quality, production, environmental and other problems. There is extensive collaboration between refiners and across the industry in regard to crude quality, notably via Crude Oil Quality Association (COQA <http://www.coqa-inc.org/>) and Canadian Crude Quality Technical Association (CCQTA <http://www.ccqta.com/>). See, for example, CCQTA, Canadian Crude Oil Quality Past, Present and Future Direction, February 7, 2012, attached to these Comments as Appendix I, p. 8: "Need more than sulfur and gravity to determine the "acceptability and valuation" of crude oil in a refinery. The crude oil's hydrocarbon footprint and contaminants determine the value of crudes;" Valuing Opportunity Crudes with Haverly H/COMET, David Alexander, Haverly Systems. March 7, 2013 (showing use of assay data by refiners and across the industry http://www.coqa-inc.org/20130306-07_Alexander.pdf); and Domestic Sweet/WTI Specifications, June 2010 (involving both Marathon and Valero http://www.coqa-inc.org/06102010_Sutton.pdf).

As discussed in the Fox Comments, the crude assay information relied upon by Valero (and other refiners) provides the types of detailed data required to evaluate refinery air emissions.¹⁹ But Valero has failed to publicly disclose the information required to meaningfully evaluate emissions for the proposed Crude by Rail Project at the Benicia Refinery.

The vague and incoherent consideration of crude quality in the IS/MND and other publicly available Project documents does not meaningfully reflect how Valero (and other refiners) actually undertake refinery planning, operations, and capital project decisions. The issue of concern is not whether Valero has the information regarding crude quality that is required to meaningfully evaluate the proposed Crude by Rail Project, since Valero clearly does have this information. Rather, the issue of concern is that Valero has failed to disclose the relevant information that it utilized internally to evaluate the proposed Project, And in turn, the broader and most relevant issue of concern then becomes that the IS/MND issued by the City of Benicia depends on incomplete and flawed information and analysis that do not constitute a meaningful basis for decision-making.

¹⁹ As shown in the Marathon Petroleum Refining 101 Presentation (Appendix H, p. 17) and footnote 18, the crude assay information relied upon by Valero and other refiners provides the types of data identified in the Fox Comments as required to evaluate emissions.

3. Benicia Refinery Reconfiguration Project (VIP)

3.1. Introduction

As demonstrated in Section 2, the IS/MND and other publicly available Project documents fail to disclose and consider relevant information, notably in regard to the Market Analysis context and crude quality. But the failure to disclose and consider relevant information is actually even more profound and pervasive than would be concluded based just on Section 2. As discussed below and in the Fox Comments, the IS/MND and all publicly available Project documents completely fail to disclose and consider the Valero Improvement Project (VIP), another major (and related) project at the Benicia Refinery. Once again, the IS/MND depends on incomplete and flawed information and analysis that do not constitute a meaningful basis for decision-making.

The VIP is a large-scale ongoing reconfiguration project at the Benicia Refinery to enable a large shift in crude supply to Cost-Advantaged heavier, sour crudes. The proposed Crude by Rail Project can only be meaningfully evaluated in the context of the Benicia Refinery configuration and crude supply. Any changes in the Refinery configuration (particularly substantial and ongoing changes) that significantly affect crude supply must also be considered as part of a meaningful evaluation of the proposed Project.

The VIP clearly creates significant and ongoing changes to the Refinery configuration and crude supply. The VIP is specifically intended to affect Benicia crude supply, notably to enable a large shift to Cost-Advantaged heavier, sour crudes. Therefore, the proposed Crude by Rail Project can only be meaningfully evaluated in the context of the VIP. But there is no mention of the VIP in the IS/MND and all publicly available Project documents. Meanwhile, the VIP is prominently featured in Valero's disclosures to investors regarding the Benicia Refinery.

The VIP is a very large and complex project that is being implemented over an extended period, both preceding and overlapping implementation of the proposed Crude by Rail Project. The VIP affects crude supply, both preceding and overlapping implementation of the proposed Crude by Rail Project. The IS/MND and other publicly available Project documents fail to disclose and consider the VIP and also provide only vague generalities in regard to which crudes have been and will be processed at the Benicia Refinery. Meanwhile, Valero's publicly available disclosures to investors provide considerably more and better information regarding Refinery crude supply.

3.2. Nexus with the Proposed Rail Project

As explained in the Benicia Refinery Tour - July 9, 2007 Presentation:



Valero Benicia Refinery

- Significant modifications and upgrades have made the refinery one of the most complex and profitable refineries in the United States²⁰

Benicia Feedstocks

- Crude slate includes Alaska North Slope (ANS), San Joaquin Valley (SJV), and a wide variety of other crudes
 - 80% received by ship across Refinery docks
 - 20% received by pipeline
- Shifting crude slate
 - When acquired in 2000, 80% of Benicia's crude was ANS
 - Today, less than 40% ANS
- Versatile, high-conversion facility with ability to process heavy, sour crudes
 - 35% heavy sour, 47% medium/light sour, 2% acidic sweet, 16% other
- Capable of processing imported intermediate feedstocks²¹

Benicia Projects in Development

- Valero Improvement Project (VIP) development under way for 2010 turnaround and beyond
 - Crude "Sour-up" to reduce dependence on ANS
 - New desalter
 - Sulfur removal and sulfur recovery capacity improvements
 - Flue gas scrubber for Coker and FCC
 - New hydrogen manufacturing unit²²

The Benicia Refinery Tour - July 9, 2007 Presentation also provides a flow diagram for the Refinery.²³ Meanwhile, in the permitting process for the proposed Crude by Rail Project, Valero claims that the Process Flow Diagram is Confidential Business Information.²⁴

As compared with the Benicia Refinery Tour - July 9, 2007 Presentation, the August 17, 2010 Refinery Tour Presentation provides similar and updated information in regard to which crudes have been and will be processed at the Refinery:

Benicia Feedstocks

- Crude slate includes a wide variety of international crudes, San Joaquin Valley (SJV), and Alaska North Slope (ANS)
 - 75% received by ship across refinery docks
 - 25% received by pipeline
- Shifting crude slate

²⁰ Appendix F, p. 20 (emphasis bold in original).

²¹ Appendix F, p. 23 (emphasis bold in original, emphasis underlining added).

²² Appendix F, p. 26 (emphasis bold in original, emphasis underlining added).

²³ Appendix F, p. 29.

²⁴ Valero Authority to Construct Application to BAAQMD (ATC), Appendix A, which is in turn Appendix A1 to the IS/MND.

- When acquired in 2000, 80% of Benicia’s crude was ANS
- Today, less than 10% ANS
- Versatile, high-conversion facility with ability to process heavy, sour crudes
 - 35% heavy sour, 47% medium/light sour, 18% other
- Capable of processing imported intermediate feedstocks²⁵

The information provided in the two Refinery Tour Presentations reveals that crude slate for the Benicia Refinery has shifted dramatically, since this refinery was acquired by Valero in 2000. ANS was 80% of crude supply in 2000, dropping to less than 40% in 2007 and less than 10% in 2010. There has also been a smaller shift towards crudes delivered by pipeline, which rose from 20% of total crude supply in 2007 to 25% in 2010. Issues relating to historical and future crude supply for the Benicia Refinery will be considered at length in Section 4.

In 2010, the VIP to reconfigure the Refinery was ongoing, and construction of the massive flue gas scrubber is featured prominently in the 2010 Refinery Tour Presentation.²⁶

The proposed Crude by Rail Project is intended to modify Refinery crude supply, notably via a shift to North American-sourced crude that can be delivered by rail. As noted above and disclosed to investors by Valero, issues relating to crude supply and quality can only be meaningfully evaluated in the context of refinery configuration:

Refinery configuration plays a large part in determining the suitability of crudes and feedstocks in a given refinery²⁷

Thus, as indicated above, the proposed Crude by Rail Project can only be meaningfully evaluated in the context of the Benicia Refinery configuration. Any changes in the Refinery configuration (particularly significant and ongoing changes) that could significantly affect crude supply must also be considered as part of a meaningful evaluation. The VIP clearly creates significant and ongoing changes to the Refinery configuration: it is specifically intended to affect Benicia crude supply, notably to enable a large shift to Cost-Advantaged heavier, sour crudes.

Moreover, as discussed below and in the Fox Comments, the VIP is a very large and complex project that is being implemented over an extended period, both preceding and overlapping implementation of the proposed Crude by Rail Project. Hence, the VIP has the potential to interact with the proposed Crude by Rail Project in a variety of ways. Put simply, the VIP is a key part of the relevant context for the Crude by Rail Project, but the VIP has not been disclosed or considered in the IS/MND and other Project Documents.

²⁵ Valero Presentation, Benicia Refinery Tour, August 17, 2010 (Appendix G, p. 29, emphasis bold in original, emphasis underlining added).

²⁶ Appendix G, pp. 31-34.

²⁷ Valero Refining 101 Presentation (Appendix E, p. 19).

Initiated in 2002, the VIP²⁸ was designed to enable a large shift in crude supply to Cost-Advantaged heavier, sour crudes:

The VIP would implement a series of modifications and additions that are focused on four objectives.

1. **Provide ability to process lower grades of raw materials.** [footnote 1 in original: As used in this document, the term “raw materials” is defined as crude oil and gas oil feedstocks.]
2. Provide flexibility to substitute raw materials – crude oil instead of gas oil.
3. Optimize operations for efficient production of clean burning fuels.
4. Mitigate project-related impacts to avoid detrimental effects on the community.²⁹

[...]

The refinery currently imports and processes two primary raw materials – crude oil and gas oil. **Currently, about 30% of the refinery feedstocks are lower-grade raw materials, with higher levels of sulfur and higher heavy pitch content. The VIP changes would allow the refinery to purchase and process additional volumes of lower-grade raw materials (crude oils or gas oils). In general terms, the refinery would be able to increase this percentage to about 60%, raising the average sulfur content of the imported raw materials from current levels of about 1 - 1.5% up to future levels of about 2 - 2.5%.**

With the increase in maximum crude rate, there would also be an opportunity for the refinery to reduce processing of gas oil when economics favor the substitution of crude oil. Although the project would result in a nominal increase of about 25% in crude oil processing capacity that increase in capacity is expected to result in only a 10% increase in gasoline production. This is because a reduction in gas oil processing would be called for to keep the refinery operations balanced.

It should be further noted that any increase in gasoline production capacity would be contingent upon the availability of optimum crude blends to meet the refinery's

²⁸ ESA, Valero Refining Company's Land Use Application for the Valero Improvement Project, Environmental Impact Report, Draft, October 2002 (VIP DEIR)

<http://www.ci.benicia.ca.us/vertical/sites/%7B3436CBED-6A58-4FEF-BFDF-5F9331215932%7D/uploads/%7B529090B4-087B-435C-9799-5C137730DD7F%7D.PDF>

The Benicia Planning Commission certified the Final EIR, consisting of the DEIR and the Responses to Comments in Resolution No. 03-4. This FEIR was amended in 2007-2008. Supporting documents available at:

http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC=%7B737165B4-11C5-4974-9B0B-0AE4AC535ECC%7D.

²⁹ VIP DEIR, p. 1-1, emphasis added.

capabilities. **The refinery purchases crude and gas oil in the market place, and the optimum blends are not always available. The proposed project provides the refinery with the flexibility to utilize diverse qualities of raw materials, especially the lower priced ones that are higher in sulfur content,** but it does not necessarily imply that there would be an increase in gasoline production.

The implications of the differences in crude oil and variations in feedstocks with respect to the operation and equipment changes for the affected refinery units are described and discussed under the descriptions of the project components in Section 3.4.3 that follows. Furthermore, the material changes in the environmental effects that would result from processing the different feedstocks are described in detail in Chapter 4, Environmental Setting, Impacts and Mitigations, of this document.³⁰

As indicated in the citation above, the VIP was designed to enable a doubling in the processing of heavier, sour feedstocks (from 30% to 60% of total feedstocks), and also to provide flexibility to process more crude oil and less gas oil. Put simply, the VIP enables a very large shift in Refinery crude supply to heavier, sour crudes.

To enable this very large shift in crude supply, the VIP includes large-scale modifications to many parts of the Refinery. As further discussed in the Fox Comments, these modifications consist of expansions and other upgrading of the units required to process heavier, sour crudes (including modifications to the coker, hydrocracking, hydrofining, hydrogen production, and crude tankage):

The VIP would modify and install typical refining equipment -- piping, heat exchangers, instrumentation, catalytic reactors, fractionation equipment, pumps, compressors, furnaces, tanks, and their associated facilities. These changes would include installation of new facilities as well as minor changes to existing facilities. The components of the project include the following:

- Pipestill modifications to increase crude oil processing capacity by approximately 25%
- Fluid Catalytic Cracker Unit Feed Flexibility modifications to process different feeds
- **Coker Unit modifications to process additional feed**
- **Increased refinery capacity to remove and recover sulfur**
- Flue Gas Scrubber to reduce emissions from the main stack
- **Additional hydrogen production to support hydrofining and hydrocracking**
- **Hydrofining optimization changes**

³⁰ VIP DEIR, p. 3-20 – 3-25, emphasis added.

- **Modifications to maximize hydrocracking, alkylation, and reforming capacity**
- Adding a Guard Reactor to the Hydrotreater
- Modifications to optimize fractionation processes
- New and modified existing combustion sources
- Use of additional water
- Modifications to the wastewater treatment facility
- Added support facilities and infrastructure
- **Added new crude tankage**
- **Import and export changes**³¹

The VIP import and export changes relate to increased imports of crude (and other feedstocks) and increased exports of refinery products:

IMPORT AND EXPORT LOGISTICS

Introduction

*The increased import of crude oil and gas oil and export of refinery products will result in increases in surface transportation.*³²

In particular, the VIP was estimated to increase Benicia Refinery shipments of both inputs and outputs:

- increased ship traffic due to increased imports of crude,³³
- increased ship traffic due to increased exports of coke production,³⁴ and
- increased train, truck, and pipeline shipments to deliver increased production of coke and various other refinery products.³⁵

The VIP was estimated to have substantial transportation impacts, with overall ship traffic (imports and exports) estimated to increase by over 10%.³⁶

The VIP is a very large-scale project, with very large impacts on Refinery crude supply, production, and marine and other transportation.

³¹ VIP DEIR, pp. 1-1 – 1-2, emphasis added.

³² VIP DEIR, p. 3-51, emphasis bold and italics in original.

³³ Crude imports increase by 36 ships per year, partially offset by a decrease of 24 ships and barges per year for gas oil imports, with a resulting net increase of 12 ships per year for crude and gas oil dock movements (VIP DEIR, pp. 3-51 – 3-52, 4.8-14).

³⁴ The VIP includes coker modifications to expand coker capacity from approximately 30,000 bpd to 35,000 bpd and to otherwise facilitate increased processing of heavier feedstocks, with a resulting increase in production of petroleum coke and other products (VIP DEIR, pp. 3-30 – 3-32). Coke exports increase by 12 ships per year, with 5 additional rail cars per day of coke to dock area (VIP DEIR, p. 3-51 – 3-52).

³⁵ VIP DEIR, pp. 3-51 – 3-52; see also footnote 34 regarding rail shipments of coke to dock area.

³⁶ Baseline ship visits of 229 per year increase by 24 per year (net increase of 12 additional ships per year for crude and gas oil imports (see footnote 33), plus 12 additional ships per year for coke exports (see footnote 34); (VIP DEIR, p. 3-51 – 3-52, 4.8-14).

Interactions between the VIP and Crude by Rail Project are of particular concern given the timing of the two projects. As further discussed in the Fox Comments, the VIP is a very large and complex project that is being implemented over an extended period, both preceding and overlapping implementation of the proposed Crude by Rail Project. Completion and full operation of the VIP has been delayed. The Hydrogen Plant is not expected online until the end of 2014, and Valero has filed a request with the BAAQMD to extend the construction permit for the Hydrogen Plant through December 2014 to accommodate this delay.³⁷ Moreover, as further explained in the Fox Comments, delays relating to the Hydrogen Plant can significantly affect other aspects of the VIP.³⁸

Hence, the VIP has the potential to substantially interact with the proposed Crude by Rail Project in a variety of significant ways. As emphasized above, the VIP is a key part of the relevant context for the Crude by Rail Project, but the VIP has not been disclosed or considered in the IS/MND and other Project Documents.

As the above discussion of the VIP clearly shows, the Benicia Crude by Rail Project proposal is not occurring in isolation. Rather, this Project is very much related to the VIP. This Project can only be meaningfully evaluated within the context of the VIP, and Valero's internal decision-making in regard to the proposed Project is based on its evaluation of how these related projects would interact.

As also discussed in the Fox Comments, Valero has failed to publicly disclose the information required to meaningfully evaluate the proposed Crude by Rail Project at the Benicia Refinery, in combination with the ongoing VIP.

The consideration of proposed Project, absent mention of the VIP, in the IS/MND and other publicly available Project documents does not meaningfully reflect how Valero (and other refiners) actually undertake capital project decisions. The issue of concern is not whether Valero has the information regarding VIP that is required to meaningfully evaluate the proposed Crude by Rail Project, since Valero clearly does have this information. Rather, the issue of concern is that Valero has failed to disclose the relevant information that it utilized internally to evaluate the proposed Project, And in turn, the broader and most relevant issue of concern then becomes that the IS/MND issued by the City of Benicia depends on incomplete and flawed information and analysis that do not constitute a meaningful basis for decision-making.

³⁷ ENSR Corporation, Environmental Analysis, Valero Improvement Project Amendments, September 2007 (2007 Amendments), Table 2.5.1-1 and VIP Semi-Annual Construction Report for the first half of 2012 - Revised, August 1, 2012 (showing the Hydrogen Plant starting up 4th quarter of 2014).

³⁸ Heavier, sour crudes (and especially Canadian tar sands crudes) require intensive refinery processing that is hydrogen-intensive.

4. Benicia Refinery Crude Supply

As demonstrated in Sections 2 and 3, the IS/MND has failed to provide adequate information regarding crude supply and quality, which is necessary in order to evaluate the impact of the Project. However, information provided elsewhere does offer some insight into the crudes now being processed at Benicia and thus what type of crudes might be delivered by rail and displaced by rail. This section first explains why adequate information on the impact of the Project on crude supply and quality is essential. Then, based on information provided elsewhere, this section discusses issues related to historical and future crude supply for the Refinery and draws some conclusions regarding the impact of the Project on crude supply and quality.

To meaningfully evaluate the proposed Valero Refinery Crude by Rail Project, it is necessary to consider how the crudes delivered by rail might differ from those that would be delivered by marine vessel.

Moreover, while the IS/MND assumes that crude delivered by rail would not displace crude delivered to the Refinery by pipeline, no basis for this assumption is provided. Likewise, the MND does not impose any conditions to restrict displacement of pipeline deliveries. Thus, to meaningfully evaluate the proposed Valero Refinery Crude by Rail Project, it is also necessary to consider how the crudes delivered by rail might differ from those that would be delivered by pipeline.

The IS/MND does not provide sufficient information to meaningfully evaluate crude quality for the crudes that would be delivered by rail. Likewise, the IS/MND does not provide sufficient information to meaningfully evaluate crude quality for the crudes that would be displaced by rail deliveries (i.e., crude deliveries by marine vessel and possibly by pipeline). In turn, the IS/MND does not provide sufficient information to meaningfully evaluate the impact on crude quality as a result of the shift (crude by rail displacing crude by marine vessel, and possibly pipeline).

This paucity of information is notable. As indicated above and further explained below, Valero has extensive, high-quality information regarding crude quality, but Valero has chosen not to disclose this information. Thus, we are left to make educated guesses based on the very limited publicly available information.

As the operator of the Refinery, Valero has very high-quality information regarding historical crude supply and quality attributes. Such information is essential for crude procurement and

refinery operations. Put simply, Valero needs to know what it is buying: the attributes of each specific crude affect its value and how it will be processed at the refinery.³⁹

Likewise, in analyzing whether to undertake the proposed Project, Valero had to project what type of crudes will be available by rail vs. marine vessel (and pipeline), and how a shift to rail would affect the cost of crude supply, refinery operations, product output, and profitability.

Despite the paucity of information provided by Valero, the IS/MND has accepted and repeated Valero's simplistic assumptions that the proposed Project will not significantly affect crude quality.

Echoing Valero,⁴⁰ the IS/MND provides inadequate detail on the quality of the crude oil delivered by rail, identifying it only as "North American-sourced crude oil" that is "expected to be of similar quality compared to existing crude oil delivered by marine vessels" (MND, p. 1).

The Initial Study indicates the Refinery currently processes a blended slate of crude oil with a gravity ranging from 20° to 30° API⁴¹ and a sulfur content ranging from 0.6% to 1.9%, based on 2011 to 2012 data.⁴² Beyond that, no information about this crude slate is disclosed. The Initial Study also claims that the "North American-sourced crude oils are expected to replace crude oils of similar gravity and sulfur content currently brought in by ship," reporting the rail deliveries to have a gravity that ranges from 20° to 43.5° API and a sulfur content that ranges from 0.06% to 3.1%.⁴³

Thus, the Initial Study concludes that "it is anticipated that the Refinery would continue to operate within its existing specifications for crude oil gravity and sulfur content range."⁴⁴ Further, it concludes that the Refinery would not need to change existing operations or process equipment, "nor would emissions from Refinery operations change (with the exception of the

³⁹ As discussed in Valero Response to BAAQMD April 11, 2013 (pp. 3, 8), Valero typically blends crudes together to meet Refinery specifications. Detailed information regarding each crude is required as input to decisions on crude sourcing and blending. See Appendix E (Valero Refining 101, pp. 17-21), Appendix H (Marathon Refining 101, pp. 12-18), Appendix I (CCQTA Presentation: Canadian Crude Oil Quality: Past, Present, and Future Direction), and Valero Response to BAAQMD April 11, 2013 (p. 8).

⁴⁰ Environmental Resources Management (ERM), Valero Crude by Rail Project Description, Benicia Refinery, Benicia, California, March 2013, pp. 5-6.

⁴¹ As also explained in the Fox Comments, the specific gravity of crude oil is typically measured using the American Petroleum Institute (API) standard or the API gravity of the crude oil. The API gravity is a measure of the weight of crude oil in relation to the weight of water (which has an API gravity of 10 degrees). Heavy crude oil has an API gravity of 18° or less. The oil is viscous and resistant to flow. Intermediate crude has an API greater than 18° but less than 36°. Light crude has an API gravity of greater than 36°.

⁴² IS, pp. 1-2, 1-6.

⁴³ IS, pp. 1-2, 1-6.

⁴⁴ IS, pp. 1-2, 1-6.

storage tank service and rail unloading emissions) as a result of accepting and refining the proposed North American-sourced crudes." IS, pp. 1-2, 1-6, 1-7.

As further discussed in Fox Comments, Valero has now claimed the crudes delivered by rail will actually tend to be lighter and sweeter than the existing crude supply that would be displaced. Valero has applied to the Bay Area Air Quality Management District (BAAQMD) for a construction permit for the Crude by Rail Project. The Authority to Construct Application (ATC) is Appendix A1 to the IS/MND. In the BAAQMD proceeding, Valero responded to questions by the BAAQMD in an April 11, 2013 letter. In this letter, Valero repeatedly describes the crudes that would be imported as light sweet crudes that will cause the current slate to become "sweeter", "lighter in gravity and lower in sulfur than the average Padd V or average Valero crude slate," and as "ANS look-alikes or sweeter". (4/11/13 BAAQMD RTC).⁴⁵

The Refining 101 Presentation (Appendix C, p. 7) provides a chart of Basic Refining Concepts, which has also been provided in Valero Response to BAAQMD April 11, 2013 (p. 4). The Refining 101 Presentation (Appendix C, p. 5) also provides a chart of Crude Oil Quality by Types.⁴⁶ The Valero Response to BAAQMD April 11, 2013 (p. 8) makes reference to a similar chart, which Valero appears to have redacted from the Public Document, based on a claim that it is Confidential Business Information:

The graph below identifies Padd V historical data, the blended crude feedstock criteria for the Valero refinery (green box), and historic crudes processed at this refinery from 2007 through 2012. The crudes proposed to be brought in by rail are those that fall into the lower right corner of the graph, which would be lighter in gravity and lower in sulfur than the average Padd V or average Valero crude slate.

⁴⁵ Letter from Susan K. Gustofson, Valero to Thu Bui, BAAQMD, transmitting Crude by Rail Project, Response to BAAQMD 3/20/2013 Project Questions, April 11, 2013, Public Version, pp. 5 ("North American sourced crudes are typically characterized as "sweet" meaning they contain less than 0.5 wt% sulfur. The North American sourced crudes currently available to the Valero Benicia refinery are expected to have sulfur below 0.5 wt% which is well below the typical crude slate average of 1.4 wt%. Therefore, these crudes directionally sweeten the crude slate and reduce the amount of refinery fuel gas sulfur treatment required."), 6 ("...the crude slate is expected to be sweeter with the introduction of North American sourced crudes."), 7 ("North American sourced crudes are expected to be sweeter than existing average crude slate", "North American sourced crudes are characterized as sweet and are expected to have sulfur content lower than current crude slate sulfur average"), 8 ("The crudes proposed to be brought in by rail are those that fall into the lower right corner of the graph, which would be lighter in gravity and lower in sulfur than the average Padd V or average Valero crude slate."), 8 ("...the proposed North American sourced crudes are expected to be ANS look-alikes or sweeter...there is not expected to be any difference in emissions...compared to existing operations."), 9 ("North American-sourced crudes proposed to be received by railcar are ANS look-alikes or sweeter..").

⁴⁶ A similar chart of Crude Oil Quality by Types is provided in Valero Presentation, Benicia Refinery Tour, July 9, 2007 (Appendix F, p. 5).

Based on Valero's chart of Crude Oil Quality by Types (The Refining 101 Presentation, Appendix C, p. 5), the North American-sourced crudes that "fall into the lower right corner of the graph" and are "ANS look-alikes or sweeter", and are likely to be delivered by rail, are Bakken and possibly Eagle Ford.⁴⁷

Meanwhile, as also shown on Valero's chart of Crude Oil Quality by Types (The Refining 101 Presentation, Appendix C, p. 5), the other North American-sourced crudes and tar sands Dilbits (WCS and Cold Lake). These heavy, sour crudes are upper left corner of the graph.

So as further discussed in Fox Comments, the North American-sourced crude that are likely to be delivered by rail are either very light and sweet, or very heavy and very sour. Hence, depending on the specific crudes that would be delivered by rail, crude quality could differ enormously. And as discussed in Fox Comments, crude quality has very important implications in terms of air emissions and other impacts.

Thus, to meaningfully evaluate the proposed Crude by Rail Project, it is essential that the analysis be based on a detailed representation of the specific crude types that would be delivered by rail, and those that would be displaced. Put simply, in this context, even more than usual, meaningful project evaluation requires good information.

Yet as emphasized above, in the context of the Benicia Crude by Rail Project IS/MND, very little information has been provided regarding crude supply and quality. But information provided elsewhere does offer some insight into the crudes now being processed at Benicia and thus what type of crudes might be delivered by rail.

As disclosed by Valero to investors and discussed in Section 3, the Benicia Refinery used to process very large amounts of Alaska North Slope (ANS), a medium sour crude delivered by marine vessel. But in recent years, Benicia has shifted away from processing ANS and by 2010 it was reported to be less than 10% of total supply.⁴⁸

As also disclosed by Valero to investors and discussed in Section 3, the Benicia Refinery processes sizable amounts of San Joaquin Valley (SJV) crude received by pipeline, comprising

⁴⁷ The North American-sourced crudes that "fall into the lower right corner of the graph" and are "ANS look-alikes or sweeter" appearing on the chart also include LLS Light and WTI, but these crudes are not commonly delivered by rail.

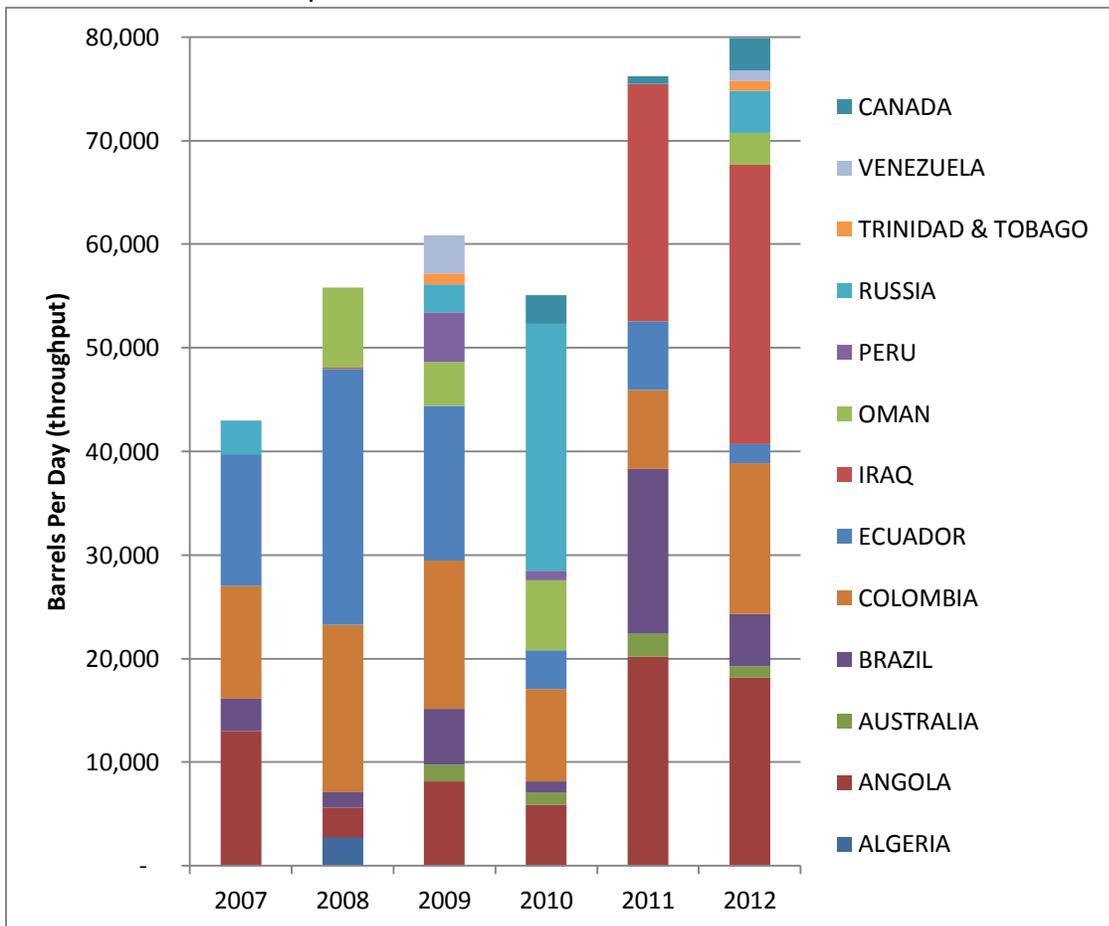
⁴⁸ Valero Presentation, Benicia Refinery Tour, July 9, 2007 (Appendix F, p. 23); Valero Presentation, Benicia Refinery Tour, August 17, 2010 (Appendix G, p. 29). ANS was 80% of crude supply when Valero acquired the Refinery in 2000, dropping to less than 40% in 2007.

20% of total supply in 2007 and 25% in 2010.⁴⁹ This heavy, viscous crude is produced in California and transported to Bay Area refineries in a heated pipeline.⁵⁰

The Benicia Refinery also processes large amounts of imported crudes delivered by marine vessel. There is some information available regarding these imports, via reports from US EIA.⁵¹

Figure 1 shows the breakdown of imports by country of origin over the 2007-2012 period.

Figure 1
Imported Crudes Refined at Valero Benicia 2007-2012



⁴⁹ Valero Presentation, Benicia Refinery Tour, July 9, 2007 (Appendix F, p. 23); Valero Presentation, Benicia Refinery Tour, August 17, 2010 (Appendix G, p. 29).

⁵⁰ California Crude Oil Production And Imports, California Energy Commission Staff Paper, April 2006, CEC-600-2006-006 <http://www.energy.ca.gov/2006publications/CEC-600-2006-006/CEC-600-2006-006.PDF>

⁵¹ EIA Data for Company Level Imports, with destination, country of origin, quantity, API gravity, and sulfur content for each shipment. <http://www.eia.gov/petroleum/imports/companylevel/>

Over the last 3 years (2010-2012), the Benicia refinery has imported an average of about 70,000 barrels per day (bpd), but the trend has been upward (approximately 55,000 bpd in 2010, 76,000 bpd in 2011, and 80,000 bpd in 2012).⁵²

Meanwhile, according to data in the IS/MND, total crude deliveries by marine vessel to the Benicia Refinery have averaged about 86,000 bpd over the same period.⁵³ This indicates that marine deliveries to the Benicia Refinery are now virtually all imports, with only a small amount of other crudes by water (notably domestic ANS).

Thus, to the extent that the proposed Project would displace deliveries of crude by marine vessel, these would be mainly imported crudes, and also possibly a small amount of domestic ANS. Therefore, the crude quality attributes of imported crudes could be an important factor in assessing the impacts of the proposed Crude by Rail Project, since these may be indicative of quality for the crude supply that would be displaced.

The EIA data on imports does not provide any in-depth information on crude quality. But data are reported for each shipment, specifying country of origin gravity, and sulfur content. Thus, some rough matching to crude type is possible.

For example, starting in 2010, the Benicia Refinery has been importing Canadian crudes with API gravity ranging from 20.8° to 22.3° and sulfur content exceeding 3.5%. These characteristics are consistent with those of tar sands Dilbits.⁵⁴

⁵² As defined in the IS/MND (p. I-6), the 3-year Baseline period for the Crude by Rail Project is December 10, 2009 through December 9, 2012. However, the US EIA import data is reported for monthly periods, such that it is not possible to differentiate between imports occurring earlier or later within a month. Thus, the EIA data for December 2009 and 2012 imports during the Baseline Period (December 10, 2009 – December 31, 2009 and December 1, 2012- December 9, 2012) cannot be distinguished from data for December 2009 and 2012 imports outside of the Baseline Period (December 1, 2009 – December 9, 2009 and December 10, 2012- December 31, 2012). Given this data limitation and the large amount of overlap between the Baseline Period and calendar years, the analysis of EIA import data in these Comments is based on the 3-year period 2010-2012. The results of this analysis of calendar year data for 2010-2012 will likely closely approximate the results of analysis based on the 3-year Baseline Period (December 10, 2009 through December 9, 2012). Valero has all of the data required to analyze crude supply in the Baseline Period, and these data should be disclosed in order to enable meaningful (and efficient) review of the proposed Crude by Rail Project.

⁵³ IS p. I-1 estimates 70,000 bpd of Crude by Rail could displace 81% of marine deliveries, based on 3-year baseline period December 10, 2009 – December 9, 2012. This implies total marine deliveries of about 86,000 bpd (70,000 / 0.81 = 86,420). IS Att. B-4, p. 1 reports marine vessel deliveries for 3-year baseline period total 93,361,985 barrels, so about 85,000 bpd (93,361,985 / 365 * 3 = 85,262).

⁵⁴ There is extensive discussion of Alberta tar sands Dilbits in the Fox Comments. For characteristics of specific tar sands dilbits see CrudeMonitor <http://www.crudemonitor.ca>, including:
Access Western Blend (AWB) -<http://www.crudemonitor.ca/crude.php?acr=AWB>;
Borealis Heavy Blend (BHB) -<http://www.crudemonitor.ca/crude.php?acr=BHB>;
Christina Dilbit Blend (CDB) -<http://www.crudemonitor.ca/crude.php?acr=CDB>;
Cold Lake (CL) -<http://www.crudemonitor.ca/crude.php?acr=CL>;
(footnote continued on next page)

Moreover, as will be further discussed later in this section, pricing for tar sands crudes (and especially Dilbits) has been heavily discounted, such that it is economically attractive for Valero to utilize these crudes at the Benicia Refinery (which can process heavy sour crudes, such as tar sands Dilbits). The constraint has been that there has been very limited capability to deliver these crudes to West Coast refineries. There are currently no crude pipelines linking Alberta and California, and only one, relatively small pipeline and marine terminal that can deliver crude from Alberta to the West Coast.

Thus, the only practical delivery method to Benicia has been via the Trans Mountain Pipeline from Alberta to British Columbia, and then by marine vessel from the Westridge Marine Terminal in Burnaby (near Vancouver) to California. But demand for transportation via this pipeline and terminal has far exceeded supply.⁵⁵

So even if additional shipments of tar sands crudes to Benicia might have been profitable, they have not been feasible. Thus, averaged over the 2010-12 period, the Benicia Refinery has imported only about 2,000 bpd of tar sands Dilbits (approximately 3,000 bpd in 2010 and 2012, but less than 1,000 bpd in 2011). As will be further discussed below, the proposed Benicia Crude by Rail Project would enable much larger deliveries of tar sands Dilbits to this Refinery.

While the Refinery has been able to import only small amounts of tar sands crudes, it has instead been importing significant amounts of other heavy and medium crudes. Over the 2010-12 period, Benicia imported crudes with API gravity ranging from 17.6° to 23.0° from a variety of countries other than Canada (Angola, Australia, Brazil, Columbia, Ecuador, and Peru). These

(footnote continued from previous page)

Peace River Heavy (PH) - <http://www.crudemonitor.ca/crude.php?acr=PH>;

Seal Heavy (SH) - <http://www.crudemonitor.ca/crude.php?acr=SH>;

Statoil Cheecham Blend (SCB) - <http://www.crudemonitor.ca/crude.php?acr=SCB>;

Wabasca Heavy (WH) - <http://www.crudemonitor.ca/crude.php?acr=WH>;

Western Canadian Select (WCS) - <http://www.crudemonitor.ca/crude.php?acr=WCS>;

Albian Heavy Synthetic (AHS) (DilSynBit) - <http://www.crudemonitor.ca/crude.php?acr=AHS>.

⁵⁵ Trans Mountain Pipeline has filed a Project Description with the Canadian National Energy Board to initiate the application process for authorization to substantially expand the capacity of this pipeline and marine terminal.

<http://www.neb.gc.ca/clf-nsi/rthnb/pplctnsbfrthnb/trnsmntnxpnsn/trnsmntnxpnsn-eng.html>

Likewise, Enbridge is seeking authorization to construct the Northern Gateway Project, which would also include a pipeline from Alberta to British Columbia and a marine terminal.

<http://gatewaypanel.review-examen.gc.ca/clf-nsi/hm-eng.html>

Both of these projects could enable increased deliveries of tar sands crudes to West Coast refineries. But both of these projects are also subject to very strong opposition, delays, and may never be completed.

See e.g., discussion of Trans Mountain and Northern Gateway Pipelines in the Keystone XL Draft Supplemental EIS <http://keystonepipeline-xl.state.gov/documents/organization/205644.pdf> pp. 2.2-19, 27.

Thus, the Benicia Crude by Rail Project could enable large scale deliveries of tar sands crudes sooner than would these other projects involving pipelines and marine terminals in British Columbia.

other imports have averaged about 16,000 bpd over the 2010-12 period (approximately 10,000-12,000 bpd in 2010 and 2012, but more than 27,000 bpd in 2011).

But while these other crude imports have been similar in gravity to tar sands Dilbit, they typically have had much lower sulfur content (approximately 1.5% in 2010, but only about 1.0% in 2011 and 2012).⁵⁶ Thus, if the proposed Crude by Rail Project delivers large amounts of tar sands Dilbits, this could displace all (or at least most) of heavy and medium crude imports from other countries now delivered by marine vessel. Moreover, imports of Canadian tar sands Dilbits would have much higher sulfur content than the heavy and medium crude imports from other countries during the 2010-2012 period.

In general, and all else being equal, higher sulfur crudes are discounted relative to lower sulfur crudes. As discussed in the Fox Comments, higher sulfur crudes require more processing to remove the sulfur and are thus more costly to refine. Alternatively, to the extent that is feasible/permissible to produce/market refined products with higher sulfur content, these products typically are discounted relative to products with lower sulfur content.

Given that crudes with higher sulfur content are typically discounted relative to lower sulfur crudes, it is notable that the crudes actually processed by Valero in the 2010-2012 period did not have particularly high sulfur content. Notably, with the exception of a small amount of tar sands Dilbits (which had sulfur content exceeding 3.5%), crude imports had a sulfur content averaging 1.0-1.5% (including even the relatively heavy crudes imported from countries other than Canada).

The IS/MND and various materials submitted by Valero for the Crude by Rail Project (and disclosed publicly) do not provide a useful explanation of crude sourcing during the 3-year Baseline Period and subsequently. But considerable insight is provided by consideration of the VIP in connection with the Crude by Rail Project. As further discussed in the Fox Comments and in Section 3, the VIP is nowhere mentioned in the IS/MND or any of the other materials relating to the Crude by Rail Project. But the VIP is key to understanding crude sourcing during the Baseline Period and how it may change subsequently (and in connection with the Crude by Rail Project).

Notably, as further discussed in the Fox Comments and Section 3, the VIP includes an expansion in hydrogen production (and specifically a new Hydrogen Plant) to support hydrofining (desulfurization), with refinery capacity to remove and recover sulfur increasing by

⁵⁶ For all Benicia Refinery imports (all gravities from all countries), sulfur content averaged about 1.0% in 2010, 1.4% in 2011, and 1.3% in 2012. Thus, the sulfur content of heavy and medium crude imports from countries other than Canada were similar to (and often lower than) the sulfur content of all imports. Stated another way, over the 2010-2012 period, crudes that were more heavy were not more typically more sour, except for the imports of tar sands Dilbits (that were relatively heavy and very sour).

50% (from 320 ton/day to 480 ton/day).⁵⁷ But as also discussed in the Fox Comments, completion of the Hydrogen Plant has been delayed and, is not estimated to startup until the end of 2014.⁵⁸

Hence, crude sourcing during the 3-year Baseline Period appears to have been shaped by two major constraints. First, deliveries via marine vessel provided very little capability to access tar sands crudes. Second, capability to process sour crudes may have substantially limited by desulfurization capability (which in turn was affected by delays in completing the new Hydrogen Plant). As a result of these two constraints operating in tandem, crude supply during the Baseline Period included only minimal amounts of tar sands crudes. Specifically, there were only 1,000-3,000 bpd of Dilbits (which are relatively heavy and have high sulfur content).

More generally, imported crude supply during the Baseline Period was not especially heavy or sour. Gravity averaged around 29 in 2010, 25 in 2011, and 27 in 2012. Sulfur content averaged about 1.0% in 2010, 1.4% in 2011, and 1.3% in 2012.

But both of these major constraints (i.e., limited access to tar sands crudes and limited desulfurization capability) may be removed relatively soon. Refinery crude supply could then shift substantially towards heavier, sour crudes, and specifically tar sands Dilbits.

The Benicia Crude by Rail Project would provide capability to deliver 70,000 bpd of crude supply. As the Project is now proposed, there would not be any specific and separate conditions limiting the types of crudes that could be supplied by rail. Valero could thus use the facility to bring in any crudes that can be handled by the facility and processed at the Benicia Refinery. As further discussed in the Fox Comments, heavy, sour tar crudes (and specifically Dilbits) are likely to comprise a large portion of deliveries by rail, especially as unit train loading facilities are built out in Alberta.

Likewise, as also further discussed in the Fox Comments, the new Hydrogen Plant is estimated to be in-service by 2015. The Refinery could then process the very heavy sour crude slate that the VIP was designed for. Heavy sour crudes With the VIP fully operational, this Refinery could process approximately 100,000 BPD of heavy sour crudes.⁵⁹ Thus, the full 70,000 BPD capacity

⁵⁷ VIP DEIR, pp. 3-33, 39-40. See footnote 28 for more information on the VIP.

⁵⁸ Valero filed a request with the BAAQMD to extend the construction permit for the Hydrogen Plant through December 2014 to accommodate this delay. ENSR Corporation, Environmental Analysis, Valero Improvement Project Amendments, September 2007 (2007 Amendments), Table 2.5.1-1 and VIP Semi-Annual Construction Report for the first half of 2012 - Revised, August 1, 2012 (showing the Hydrogen Plant starting up 4th quarter of 2014).

⁵⁹ "The Refinery's crude oil processing rate is limited to an annual average of 165,000 barrels per day (daily maximum of 180,000 barrels per day) by Bay Area Air Quality Management District (BAAQMD) permit." (IS p. I-1) 60% of 165,000 BPD equals 99,000 BPD. Even if some of these heavy sour crudes are delivered by pipeline, most (if not all) of the crude by Rail could be heavy, sour. In the 2007-2010 period, the refinery received 20-25% of its (footnote continued on next page)

of the Crude by Rail Project could be used for heavy sour crudes, and specifically tar sands Dilbits, from 2015 onward. And even before then, tar sands dilbits could comprise a sizable portion of overall crude deliveries by rail.

As further discussed in the Fox Comments, evaluation of the proposed Crude by Rail Project should consider a range of potential scenarios, and particularly scenarios that are worst case in terms of adverse impacts. Thus, the City of Benicia should undertake a full EIR in order to provide a sound basis for decision-making on the proposed Valero Crude by Rail Project.

(footnote continued from previous page)

crude by pipeline, so in the order of 25,000-35,000 BPD (Valero, Benicia Refinery Tour Slides, July 9, 2007, Appendix F, p. 26; Valero, Benicia Refinery Tour Slides, August 17, 2010, Appendix G p. 29). Also, while it is assumed in the IS/MND that Crude by Rail deliveries will only displace marine deliveries, it is possible that rail deliveries will displace pipeline deliveries. The crude being delivered by pipeline is very heavy and viscous. So to the extent that Crude by Rail deliveries displace deliveries of very heavy crude by pipeline, very large amounts of tar sands dilbitDilbits could be processed at the Benicia Refinery (up to and even exceeding the full 70,000 bpd capacity of the proposed Crude by Rail Project).



APPENDICES

- A: Resume of Ian Goodman**
- B: Resume of Brigid Rowan**
- C: Valero Investor Relations Website: Information Posted**
- D: Valero Presentation: UBS Global Oil and Gas Conference**
- E: Valero Presentation: Refining 101**
- F: Valero Presentation: Benicia Refinery Tour - July 9, 2007**
- G: Valero Presentation: Benicia Refinery Tour - August 17, 2010**
- H: Marathon Petroleum Presentation: Refining 101**
- I: CCQTA Presentation: Canadian Crude Oil Quality: Past, Present and Future Direction**

Comments
on
Initial Study/Mitigated Negative Declaration
(IS/MND)
for the
Valero Crude by Rail Project
Benicia, California

Use Permit Application 12PLN-00063

July 1, 2013

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I. INTRODUCTION

The Valero Benicia Refinery (Refinery) is proposing to import certain unidentified "North American-sourced crude oils" to the Refinery by railroad (Project). The City of Benicia has issued a draft Initial Study/Mitigated Negative Declaration (IS/MND)¹ for this Project. I was asked to review the IS/MND and prepare comments on the impact of the imported crude on air emissions from the Refinery.

My analyses, presented below, indicate the subject "North American-sourced crudes" that would be imported by rail are likely to include Canadian tar sand crudes blended with diluent or "DilBits". These have the potential to increase emissions compared to the current crude slate, which would result in potentially significant impacts not disclosed in the IS/MND. The "North American-sourced crudes" may also include light sweet shale oil crudes, such as Bakken, which also have the potential to increase emissions, and result in significant environmental impacts, compared to the current crude slate.

The pollutants in the diluent blended with these DilBit crudes and in the light sweet shale crudes include significant amounts of hazardous air pollutants, such as benzene, a potent carcinogen. These would be emitted at many fugitive components in the Refinery, including compressors, pumps, valves, fittings, and tanks, in greater amounts than from other crudes that are currently being refined or have otherwise been proposed.

These increased emissions would result in significant air quality impacts not acknowledged in the IS/MND. These include significant increases in volatile organic compounds (VOCs); hazardous air pollutants, including benzene and lead, which will cause significant health impacts; and highly odiferous sulfur compounds that would individually and cumulatively cause malodors, degrade ambient air quality, increase the incidence of accidental releases, and adversely affect the health of workers and residents around the Refinery. Further, the high acid levels in these crudes would accelerate corrosion of refinery components, contributing to equipment failure and increased accidental releases. Thus, an EIR should be prepared to properly analyze these impacts and identify mitigation measures.

Finally, the Project description is very incomplete and inadequate to sustain the conclusions in the IS/MND. The *sine qua non* of a CEQA analysis is a baseline (physical condition of environment, e.g., emissions, at time of analysis). The baseline is required to evaluate the significance of increases due to the Project. The IS/MND contains no baseline conditions for any impact.

The Project description fails to identify the crudes that would be imported, the crudes that would be displaced, all of the key chemical composition data required to

¹ ESA, Valero Crude by Rail Project, Initial Study/Mitigated Negative Declaration, Use Permit Application 12PLN-00063, Prepared for City of Benicia, May 2013.

assess crude quality and resulting impacts, and Project process flow diagrams and design documents essential to assess impacts. In short, the IS/MND fails to provide a meaningful description of the Project. The number and nature of the deficiencies are so substantial that the IS/MND should be withdrawn and replaced with a draft EIR with a complete Project description and a thorough environmental impact analysis.

My resume is included in Attachment 1 to these comments. I have over 40 years of experience in the field of environmental engineering, including air emissions and air pollution control; greenhouse gas emission inventory and control; air quality management; water quality and water supply investigations; hazardous waste investigations; environmental permitting; nuisance investigations (odor, noise); environmental impact reports, including CEQA/NEPA documentation; risk assessments; and litigation support.

I have a M.S. and Ph.D. in environmental engineering from the University of California at Berkeley with minors in Hydrology and Mathematics. I am a licensed professional engineer (chemical, environmental) in five states; a Board Certified Environmental Engineer, certified in Air Pollution Control by the American Academy of Environmental Engineers; and a Qualified Environmental Professional, certified by the Institute of Professional Environmental Practice.

I have prepared comments, responses to comments and sections of EIRs for both proponents and opponents of projects on air quality, water supply, water quality, hazardous waste, public health, risk assessment, worker health and safety, odor, risk of upset, noise, land use and other areas for well over 100 CEQA documents. This work includes Environmental Impact Reports (EIRs), Negative Declarations (NDs), and Mitigated Negative Declarations (MNDs) for all California refineries as well as various other permitting actions for tar sands refinery upgrades in Indiana, Louisiana, Michigan, Ohio, South Dakota, Utah, and Texas. My work has been cited in two published CEQA opinions: (1) *Berkeley Keep Jets Over the Bay Committee, City of San Leandro, and City of Alameda et al. v. Board of Port Commissioners* (August 30, 2001) 111 Cal.Rptr.2d 598 and *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310.

Ian Goodman and Brigid Rowan of The Goodman Group, Ltd. (TGG) are also submitting Comments on IS/MND (TGG Comments) and specifically are undertaking an evaluation of crude supply. I have relied on their report in my analysis. I conferred with TGG (Ian Goodman) during the preparation of our respective Comments, and (where relevant), each of the Comments makes reference to the other.

II. AIR EMISSIONS WOULD INCREASE DUE TO CHANGES IN CRUDE QUALITY

The Project will allow the Refinery to replace up to 70,000 barrels per day (BPD) of crude oil currently transported by marine vessel with an equivalent amount of crude oil transported by rail. MND, p. 1; IS, p. I-1. The crude oil imported by rail is identified

only as "North American-sourced crude oil" that is "expected to be of similar quality compared to existing crude oil imported by marine vessels." MND, p. 1; IS, p. I-1. The specific "North American-sourced crude oils" are not identified. As discussed below, all crudes are not created equal.

The IS/MND also asserts that imports by rail would not displace crude delivered by pipeline (heavy sour San Joaquin Valley crudes), would not result in an increase in the production of existing products or byproducts, and would require no modification to Refinery process equipment. MND, p. 1, IS, p. I-1. However, the Initial Study does not contain any of the information required to evaluate these claims and their resulting environmental impacts. In fact, key project description and emissions data required to assess this claim and resulting environmental impacts are claimed as confidential (ATC, Appx. A, Appx. B (Attachs. B-1, B-2, B-4)), preventing meaningful public review. Further, the MND does not recommend any conditions that would assure these fundamental (and undisclosed) assumptions are in fact implemented. The MND, for example, does not limit the quality of the rail imports, the origin of the rail imports, nor the quality of displaced ship imports. These are serious flaws as crude quality determines environmental impacts, as explained elsewhere in these comments.

The emissions from a refinery depend upon the composition of the crude that it refines. The Initial Study indicates the Refinery currently processes a blended slate of crude oil with a gravity that ranges from 20° to 30° API² and a sulfur content that ranges from 0.6% to 1.9%, based on 2011 to 2012 data. IS, pp. I-2, I-6. However, nothing else about this crude slate is disclosed. The undisclosed information determines the environmental impacts.

The Initial Study also asserts that the "North American-sourced crude oils are expected to replace crude oils of similar gravity and sulfur content currently brought in by ship," reporting the rail imports to have a gravity that ranges from 20° to 43.5° API and a sulfur content that ranges from 0.06% to 3.1%. IS, pp. I-2, I-6. Thus, the Initial Study concludes that "it is anticipated that the Refinery would continue to operate within its existing specifications for crude oil gravity and sulfur content range." *Ibid.* Further, it concludes that the Refinery would not need to change existing operations or process equipment, "nor would emissions from Refinery operations change (with the exception of the storage tank service and rail unloading emissions) as a result of accepting and refining the proposed North American-sourced crudes." IS, pp. I-2, I-6, I-7. These conclusions are unsupported and likely wrong.

First, the ability of a refinery to process a particular crude and the resulting emissions depend upon many more variables than just the API gravity and sulfur

² The specific gravity of crude oil is typically measured using the American Petroleum Institute (API) standard or the API gravity of the crude oil. The API gravity is a measure of the weight of crude oil in relation to the weight of water (which has an API gravity of 10 degrees). Heavy crude oil has an API gravity of 18° or less. The oil is viscous and resistant to flow. Intermediate crude has an API greater than 18° but less than 36°. Light crude has an API gravity of greater than 36°.

content.³ Valero certainly knows this and could not evaluate crudes to include in its swap without substantially more information than disclosed in the IS/MND. The same information Valero uses to select crudes is required to assess environmental impacts. This critical information is missing from the record. The public has been left in the dark to guess what the crude quality and thus impacts might be. This contravenes the information disclosure requirements of CEQA. There are major chemical differences between the crudes currently imported by ship and available "North American-sourced crude oils" that could only arrive by rail.⁴

Second, the range of two crude characteristics does not reveal anything about the median and average value of those parameters, which ultimately determine emissions. The sulfur content of the crude slate, for example, could continue to fluctuate between 0.6% to 1.9% while the average sulfur content of the slate could creep up, which has in fact happened at California refineries⁵ as well as elsewhere.⁶

Third, the IS/MND does not include any conditions of certification that would prevent the selection of any North American-sourced crude available by rail, either currently or in the future. Many such crudes have unique chemical characteristics that would result in significant environmental impacts not disclosed in the IS/MND. As discussed elsewhere in these comments, the Refinery is in the process of being modified to allow it to process a larger amount of also unidentified heavy high sulfur crudes, which Valero admits would increase the sulfur content of the crude and make it heavier. The refining of many of these crudes would result in significant environmental impacts. In fact, the most economically attractive heavy high sulfur crudes, those derived from Canadian tar sands bitumens, are only available in large quantities to the Refinery by rail. Thus, absent conditions of certification to the contrary, it is possible that a rail terminal would allow the import of heavy high sulfur crudes in the future, after the current

³ See, for example, CCQTA, Canadian Crude Oil Quality Past, Present and Future Direction, February 7, 2012, pp. 8 ("Need more than sulfur and gravity to determine the "acceptability and valuation" of crude oil in a refinery. The crude oil's hydrocarbon footprint and contaminants determine the value of crudes.."), Available at: http://www.choa.ab.ca/index.php/ci_id/9210/la_id/1/, provided as Appendix I to TGG Comments.

⁴ D. Stratiev and others, Evaluation of Crude Oil Quality, Petroleum & Coal, v. 52, no. 1, pp. 35-43, 2010, Available at: http://www.vurup.sk/sites/vurup.sk/archivedsite/www.vurup.sk/pc/vol52_2010/issue1/pdf/pc_1_2010_stratiev_051.pdf. See also www.crudemonitor.ca.

⁵ Margaret Sheridan, California Crude Oil Production and Imports, California Energy Commissions Staff Paper, April 2006.

⁶ EIA, Crude Oil Input Qualities, Available at: http://www.eia.gov/dnav/pet/PET_PNP_CRQ_A_EPC0_YCS_PCT_M.htm; Greg L. Armstrong, Crude Oil Trends & Recent Developments, January 11, 2012, pp. 19-20, Available at: <http://www.ipaa.org/meetings/ppt/2012TIPRO/January/012012-Armstrong.pdf> and Edward J. Swain, Sulfur, Coke, and Crude Quality - Conclusion U.S. Crude Slate Continues to Get Heavier, Higher in Sulfur, *Oil & Gas Journal*, January 9, 1995, Available at: <http://www.ogj.com/articles/print/volume-93/issue-2/in-this-issue/refining/sulfur-coke-and-crude-quality-conclusion-us-crude-slate-continues-to-get-heavier-higher-in-sulfur.html>.

modifications are complete, that would increase emissions relative to the current baseline, causing significant undisclosed environmental impacts.

This would be consistent with statements in the IS/MND that rail imports are "expected to be of similar quality compared to existing crude oil imported by marine vessels." MND, p. 1; IS, p. I-1. Further, many of the tar sands crudes fall within the range of API gravity and sulfur content reported in the IS/MND, from 20° to 43.5° API and a sulfur content that ranges from 0.06% to 3.1%. IS, pp. I-2, I-6. Crude oil import data reported by Valero to the U.S. Energy Information Administration (EIA) and discussed below indicate that the Refinery is currently importing Canadian tar sands crudes.

Thus, without crude assay data and conditions of certification that restrict crude quality to that analyzed in the CEQA documents, and at least annual reporting to assure compliance, the Refinery has the discretion to import any crude that is cheaper, regardless of environmental impacts. This could include heavy sour Canadian tar sands crudes. As discussed elsewhere in these comments, heavy sour Canadian tar sands crudes are a worst case for environmental impacts. They would increase air emissions and result in other significant impacts, relative to the current baseline, that were not considered in the IS/MND.

A. Related Projects Not Disclosed

Valero is currently in final phases of constructing the Valero Improvement Project or VIP, which will not be fully operational until the end of 2014. The Crude by Rail Project should be evaluated in the context of the VIP FEIR, not through an isolated IS/MND that fails to even disclose this precedent, related project that it is modifying.

The VIP is designed to facilitate the import and processing of much higher sulfur and heavier crudes than the current slate. The VIP would permit the Refinery to process heavier, high sulfur feedstocks as 60% of total supply, up from just 30% prior to the VIP.⁷ The VIP has been permitted and is in the final stages of construction. VIP DEIR 2002.⁸ The VIP project includes the following elements that are designed specifically to allow a shift to a much lower quality crude slate:

⁷ VIP DEIR, p. 3-20 ("The refinery currently imports and processes two primary raw materials – crude oil and gas oil. Currently, about 30% of the refinery feedstocks are lower-grade raw materials, with higher levels of sulfur and higher heavy pitch content. The VIP changes would allow the refinery to purchase and process additional volumes of lower-grade raw materials (crude oils or gas oils). In general terms, the refinery would be able to increase this percentage to about 60%, raising the average sulfur content of the imported raw materials from current levels of about 1 - 1.5% up to future levels of about 2 - 2.5%.")

⁸ ESA, Valero Refining Company's Land Use Application for the Valero Improvement Project, Environmental Impact Report, Draft, October 2002 (DEIR), The Benicia Planning Commission certified the Final EIR, consisting of the DEIR and the Responses to Comments in Resolution No. 03-4. This FEIR was amended in 2007. Supporting documents available at:

- Pipestill (crude unit) modifications to increase crude oil processing capacity from 135,000 BPD to 165,000 BPD, or by approximately 25% (VIP DEIR, p. 3-27);
- Fluid Catalytic Cracker Unit Feed Flexibility modifications to process different feeds and increase process rate from 72,000 BPD to 75,000 BPD or higher on occasion (VIP DEIR, p. 3-28; VIP Amend., p. 2-21);
- Coker Unit modifications from 30,000 BPD to 35,000 BPD (VIP DEIR, p. 3-30);
- Increased refinery capacity to remove and recover sulfur from 320 ton/day to 480 ton/day (VIP DEIR, p. 3-33)
- Flue Gas Scrubber to reduce emissions from the main stack (VIP DEIR, Sec. 3.4.3.5);
- Increase hydrogen production from 160 to 190 MMscf/day to support hydrofining and hydrocracking (VIP DEIR, p. 3-39);
- Hydrofining optimization changes (VIP DEIR, Sec. 3.4.3.7);
- Modifications to maximize hydrocracking, alkylation, and reforming capacity (VIP DEIR, Sec. 3.4.3.8);
- Adding a Guard Reactor to the Hydrotreater (VIP DEIR, Sec. 3.4.3.9);
- Modifications to optimize fractionation processes (VIP DEIR, Sec. 3.4.3.10);
- New and modified existing combustion sources (VIP DEIR, Sec. 3.4.3.11);
- Use of 150 gpm of additional water (VIP DEIR, Sec. 3.4.3.12);
- Modifications to the wastewater treatment facility (VIP DEIR, Sec. 3.4.3.13);
- An additional desalter vessel to remove salts and solids (VIP Adden., Table 2.1.1-1);
- Added support facilities and infrastructure (VIP DEIR, Sec. 3.4.3.14);
- Added new crude tankage (VIP DEIR, Sec. 3.4.3.15);
- Increased import and export ship and train traffic (VIP DEIR, Sec. 3.4.3.16).

These are the types of modifications that would be required to increase the amount of heavy sour crude processed at the Refinery. These modifications were

http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC=%7B737165B4-11C5-4974-9B0B-0AE4AC535ECC%7D.

estimated to increase electricity demand by 23 MW⁹ and natural gas consumption by 9.6 MMscf/day. (VIP DEIR, pp. 2-3). They were also estimated to increase the firing rate of heaters and boilers throughout the Refinery by 400 MMBtu/hr (VIP DEIR, p. 3-47)¹⁰. These increased utility demands increase emissions.

They also would have other adverse impacts not disclosed in the VIP FEIR that must be disclosed in the Crude by Rail Project. Most of the modifications have started up. However, the last major part of the VIP project, the Hydrogen Plant, the critical link required to tie the rest of the Project together, is not estimated to startup until the end of 2014. Valero filed a request with the BAAQMD to extend the construction permit for the Hydrogen Plant through December 2014 to accommodate this delay.¹¹

The VIP was specifically designed to allow the Refinery to shift to a much heavier, higher sulfur crude slate. The subject crudes would have sulfur contents up to 4% and would require heated tanks for storage.¹² These are "heavy sour crudes". There are only a few crudes with these characteristics that might meet Valero's other goal of lowering the cost of petroleum feedstocks. VIP DEIR, pp. 3-32, 3-35. As further

⁹ Increased by 1.5 MW in 2007 with the addition of a new desalter. VIP Environmental Analysis, September 2007, p. 2-21.

¹⁰ In the 2007 amendment, reduced by 100 MMBtu/hr by installing a new, more efficient Hydrogen Unit than originally planned for in the 2003 VIP FEIR and increased by 70 MMBtu/hr to facilitate FCCU modifications. VIP Environmental Analysis, September 2007, pp. 2-18, 2-21.

¹¹ ENSR Corporation, Environmental Analysis, Valero Improvement Project Amendments, September 2007 (2007 Amendments), Table 2.5.1-1 and VIP Semi-Annual Construction Report for the first half of 2012 - Revised, August 1, 2012 (showing the Hydrogen Plant starting up 4th quarter of 2014).

¹² VIP DEIR, pp. 1-1 (The purpose of the VIP is to allow the Refinery to process certain "lower grades of raw material" (crude oil and gas oil), 3-16 ("lower grade of crude"), 3-28 (the FCCU would be modified to allow it to "develop the flexibility to process heavier feedstocks.."), 3-30 ("[a] key characteristic of the new petroleum crude blends to be processed...is a higher percentage of heavier hydrocarbons than in the crude mix now processed.."), 3-32 ("the VIP would enable the refinery to process lower cost petroleum feedstocks (crudes) that could contain up to twice the sulfur content of the crudes presently processed at the refinery."), 3-35 ("[t]he VIP modifications to the refinery would enable the processing of additional lower cost heavy petroleum feedstocks (crudes) with higher sulfur. One characteristic of these crudes is that they could contains about 4% sulfur, up to twice the average sulfur content of the crudes presently processed at the refinery. Though these crudes are not necessarily new to the refinery, there would be more of them processed."), 3-45 (with the changes in feed stock characteristics anticipated after the VIP modifications..."), 3-46 ("The VIP would require more heat provided by combustion because more oil products will be processed than at present and because the VIP new crude blends will consist of heavier components which require more heat for processing...than the present crude blend."), 3-49 ("Several tanks that would store heavy feedstocks would need to be fitted with steam heating equipment. By heating the heavy oil, the viscosity would be reduced enough to allow more efficient pumping."), 4.2-19 ("The VIP proposes to process a higher percentage of lower grades of crude oil with greater sulfur content than it presently can process."), 4.5-3 (The project would...allow lower grade materials to be refined there."), p. 4.8-10 ("[t]he lower grade crude oils expected in the project..."), 4.8-11 ("heavier crude feedstocks", "heavier feedstock", "feedstock changes"), 4.8-14 (there will be about three additional ships per month for crude oil transport and a reduction of two barges and ships for gas oil transport.), 8-4 ("Valero proposes to develop the capability to economically process additional heavy crudes and crudes with more sulfur on average than those processed at the refinery since 1970.").

discussed in TGG Comments and Section C below, Canadian tar sands are the most proximate and cost effective option to achieve Valero's goals for the Benicia Refinery.¹³

Thus, clearly, Valero is in the process of implementing a major expansion project to allow it to process increased amounts of heavy sour crude, consistent with the composition of Canadian tar sands crudes. The VIP is nearly complete. The last component, a new Hydrogen Plant, is scheduled to startup at the end of 2014. An increase in hydrogen is essential to refining increased amounts of heavy sour crude. Thus, the anticipated increase in heavy sour crude has not yet occurred. This is confirmed by the U. S. Energy Information Administration (EIA) crude import data,¹⁴ which shows only a tiny amount of heavy sour (>3.5%) crudes delivered to Benicia. The EIA crude import data for 2010 to 2012 indicate 0.5% to 2% of the crude slate originated in Canada with an API gravity (20.8°-22.6°) and sulfur content (3.54%-3.75%) consistent with Canadian tar sand crudes.¹⁵

Thus, for purposes of CEQA analysis, the baseline for the Crude by Rail Project is the period 12/10/10 to 12/9/12 (IS, p. I-6), a period when very little Canadian tar sands crude was being processed. The Crude by Rail CEQA analysis must evaluate impacts relative to physical conditions as they existed during this period. The IS/MND assumes the proposed crude switch could occur without any change to Refinery process equipment or increases in production of existing products or byproducts. IS, p. I-1. This would likely be feasible if full buildout of the VIP is assumed as the baseline.

B. All Increases In Emissions Must Be Considered Under CEQA

The IS/MND fails to disclose or quantify the increases in emissions that could result from modifying the crude slate. However, replacing 70,000 BPD or 81% of its ship imports or nearly half ($70/165 = 0.43$) of its entire current crude slate with tar sands crudes in the long term would make the overall slate heavier, increase emissions, and result in significant environmental impacts.

The use of the proper CEQA baseline is critical to accurately evaluate impacts. The Refinery operates under a permit issued by the Bay Area Air Quality Management District (BAAQMD). This permit establishes maximum amounts of regulated pollutants that can be emitted, including those permitted pursuant to the VIP. The Crude by Rail Project may result in increases in emissions that fall within the limits in this and other permits and plans, such as the VIP FEIR and still result in significant impacts. Permit limits and conditions of certification in previous CEQA actions do not establish the baseline for purposes of the CEQA review for the Crude by Rail Project.

¹³ See, for example, Stratiev et al. 2010, Table 1 and Wikipedia, List of Crude Oil Products, Available at: http://en.wikipedia.org/wiki/List_of_crude_oil_products.

¹⁴ EIA, Petroleum & Other Liquids, Company Level Imports, Available at: <http://www.eia.gov/petroleum/imports/companylevel/>.

¹⁵ www.crudemonitor.ca.

A long line of Court of Appeal decisions and a California Supreme Court decision hold that impacts of a proposed project are to be compared to the actual environmental conditions existing at the time of CEQA analysis, rather than to allowable conditions defined by a plan or regulatory framework, such as the BAAQMD permit or the VIP FEIR. The California Supreme Court specifically concluded, in a case that I worked on involving the ConocoPhillips refinery in Los Angeles, that the pre-existing permits did not establish the baseline for CEQA analysis. *(2010) 48 Cal.4th 31*.

Thus, while the emission increases identified below may well fall within existing Permit limits, this does not exclude them from CEQA review for the Crude by Rail Project. The increases in emissions that will occur from importing "North American-sourced crudes" must be quantified and evaluated under CEQA as of current conditions, regardless of permit limits. The IS/MND does not do this. To the extent that these emissions were considered in the related VIP Project, these emissions and mitigations must be evaluated within the regulatory and other frameworks on the ground during the baseline period. Much has changed since the 1999 to 2001 baseline used to evaluate the VIP, which will be modified by the Crude-by-Rail project.

My analyses presented below indicate that these increases would be significant, would exceed BAAQMD CEQA significance thresholds and potentially would contribute to adverse health impacts, malodors, and major accidental releases, as well as degradation of ambient air quality. The IS/MND is silent on these potential emission increases and their environmental consequences. My analysis indicates these impacts are significant and unmitigated, requiring the preparation of an EIR.

C. What Crude Will Be Imported By Rail?

Refining generates emissions. The type and amount of emissions depend upon the chemical characteristics of the specific crudes included in the slate. The central question that must be answered to determine environmental impacts of the Crude by Rail Project is what crude(s) will be imported by rail, and what crude(s) will replace them, for the life of the Project. This is not disclosed in the IS/MND, presenting a mystery for reviewers.

In fact, the IS/MND goes to great lengths to not identify the crudes that would be imported, quoting only ranges in two parameters -- sulfur content and API gravity -- which are irrelevant to potential impacts. The IS/MND claims nothing would change except the mode of transportation, from ship to rail. It ignores all impacts related to the crude itself. Thus, the IS/MND is asserting a claim that is inconsistent with the massive refinery upgrade and expansion currently underway. The VIP heavy sour crude expansion would not be built if Valero was really planning to sweeten and lighten up its crude slate. Further, the IS/MND claims as confidential all information that one could potentially use to identify these crudes, including crude quality data, process flow diagrams, and critical support for the emission calculations. ATC, Appx. A, B.

1. The IS/MND Crude By Rail Project Is Inconsistent With The VIP Project

As explained above, the Refinery is being extensively modified to allow it to process increased amounts of heavy sour crudes, consistent with Canadian tar sands crudes. However, the IS/MND asserts the opposite. The VIP was specifically designed to allow the Refinery to increase the amount of heavy sour crudes in its slate, up to 60% of the total.¹⁶ Valero characterized the VIP as a "crude 'sour-up'" to reduce dependence on ANS.¹⁷ With the VIP fully operational, this Refinery could process approximately 100,000 BPD of heavy sour crudes.¹⁸ Thus, the full 70,000 BPD capacity of the Crude by Rail Project could be used for heavy sour crudes.

Meanwhile, as of 2010, Valero stated that it had the ability to process 35% heavy sour crude, 47% medium/light sour crude, and 18% other.¹⁹ or less than 60,000 BPD of heavy sour crude. So prior to completion of the VIP, this Refinery could process substantial amounts of heavy sour crudes, but much less than it will be able to in the near future. And once a Crude by Rail Project is in place, it could be used to deliver the heavy sour crudes that this Refinery can process.

The IS/MND does not even mention the VIP nor attempt to resolve this inconsistency.

Valero has applied to the Bay Area Air Quality Management District (BAAQMD) for a construction permit for the Crude by Rail Project. The Authority to Construct Application (ATC) is Appendix A to the IS/MND. In the BAAQMD proceeding, Valero responded to questions by the BAAQMD in an April 11, 2013 letter. In this letter, Valero repeatedly describes the crudes that would be imported as light sweet crudes that will cause the current slate to become "sweeter", "lighter in gravity and lower in sulfur than the average Padd V or average Valero crude slate," and as "ANS look-alikes or sweeter". (4/11/13 BAAQMD RTC).²⁰

¹⁶ VIP DEIR, p. 3-20.

¹⁷ Valero, Benicia Refinery Tour Slides, July 9, 2007, p. 26, provided as Appendix F to TGG Comments.

¹⁸ IS p. I-1 ("The Refinery's crude oil processing rate is limited to an annual average of 165,000 barrels per day (daily maximum of 180,000 barrels per day) by Bay Area Air Quality Management District (BAAQMD) permit."). 60% of 165,000 BPD equals 99,000 BPD. Even if some of these heavy sour crudes are delivered by pipeline, most (if not all) of the crude by Rail could be heavy, sour. In the 2007-2010 period, the refinery received 20-25% of its crude by pipeline, so in the order of 25,000-35,000 BPD (Valero, Benicia Refinery Tour Slides, July 9, 2007, p. 26, provided as Appendix F to TGG Comments; Valero, Benicia Refinery Tour Slides, August 17, 2010, p. 29, provided as Appendix G to TGG Comments).

¹⁹ Valero, Benicia Refinery Tour Slides, August 17, 2010, p. 29, provided as Appendix G to TGG Comments.

²⁰ Letter from Susan K. Gustofson, Valero to Thu Bui, BAAQMD, transmitting Crude by Rail Project, Response to BAAQMD 3/20/2013 Project Questions, April 11, 2013, Public Version, pp. 5 ("North American sourced crudes are typically characterized as "sweet" meaning they contain less than 0.5 wt% sulfur. The North American sourced crudes **currently** available to the Valero Benicia refinery are expected

This is exactly the opposite of claims in the VIP FEIR. It further is unlikely as a long-term strategy due to the physical changes that have been and are currently being made to the Refinery. Sourcing North American light sweet crudes by rail may be an interim strategy to boost profits while VIP construction is being completed, but it is not a likely or even credible long-term option. Using the Benicia Crude by Rail Project to deliver heavy, sour tar sands Dilbits is much more consistent with VIP, especially given the large capital investments that have already occurred, on-going construction of the VIP to allow more processing of heavy sour crudes, and the economic benefits of running these cheaper lower grade crudes.

Valero's response to the BAAQMD only asserts "[t]he North American sourced crudes **currently** available to the Valero Benicia refinery are expected to have sulfur below 0.5 wt%." Response to BAAQMD, p. 5. This says nothing about the future. The VIP project is currently incomplete. The Hydrogen Plant, which ties the VIP together and is essential to process increased amounts of heavy sour crude, will not be operational until the end of 2014. The Crude by Rail Project would be operational by the end of 2013 and would thus operate for about a year before the VIP would be fully operational.

Thus, it is conceivable that during this interim period, Valero would deliver increased amounts of a light sweet crude by rail, perhaps Bakken,²¹ which may continue to be available at a cost that is competitive compared to other crudes in its current slate. Interim imports of Bakken may occur while sufficient export facilities are constructed in Canada to handle the large unit trains proposed for Benicia.²² However, especially in the long term, the rail terminal could be used to import Canadian tar sands crudes planned for the VIP as the IS/MND does not propose any conditions of certification to limit rail import to only light sweet crudes. As further discussed in TGG Comments, the import of tar sands crudes is likely as the Refinery will have been upgraded to process them, and they are likely to be discounted relative to other crudes available to the Refinery. Alternatively, Valero could blend heavy sour tar sands crude with light sweet North American crudes, such as Bakken, to make a "pseudo" Alaskan North Slope (ANS)

to have sulfur below 0.5 wt% which is well below the typical crude slate average of 1.4 wt%. Therefore, these crudes directionally sweeten the crude slate and reduce the amount of refinery fuel gas sulfur treatment required."), 6 ("...the crude slate is expected to be sweeter with the introduction of North American sourced crudes."), 7 ("North American sourced crudes are expected to be sweeter than existing average crude slate", "North American sourced crudes are characterized as sweet and are expected to have sulfur content lower than current crude slate sulfur average"), 8 ("The crudes proposed to be brought in by rail are those that fall into the lower right corner of the graph, which would be lighter in gravity and lower in sulfur than the average Padd V or average Valero crude slate."), 8 ("...the proposed North American sourced crudes are expected to be ANS look-alikes or sweeter...there is not expected to be any difference in emissions...compared to existing operations."), 9 ("North American-sourced crudes proposed to be received by railcar are ANS look-alikes or sweeter..").

²¹ John R. Auers, The Prospects for Bakken Crude from a Refiners Perspective, November 16, 2010, Available at: http://turnermason.com/Publications/petroleum-publications_assets/Bakken-Crude.pdf.

²² Sandy Fielden, Crude Loves Rock'n'Rail - Heat It! Bitumen by Rail (Part 2), March 19, 2013, Available at: <http://www.rbnenergy.com/crude-loves-rocknrail-bitumen-by-rail-part-2>.

substitute,²³ thus importing some of both. Regardless, tar sands crudes cannot be eliminated as a rail terminal import.

Further, even assuming the import of light sweet crudes to lighten up the slate, the Crude by Rail project would result in changes in emissions that were not considered in either the VIP FEIR or the instant IS/MND. For example, lighter crudes would increase emissions of VOCs and volatile hazardous organic pollutants (HAPs) from tanks, pumps, compressors, valves and connectors throughout the Refinery. These increases have not been evaluated in either the VIP FEIR nor the IS/MND.

Regardless, you cannot simultaneously lighten up and heavy up the crude slate and sour up and sweeten up the crude slate. It is either one or the other. The IS/MND does not disclose which it is, claiming it is neither, just the status quo without identifying the status quo. In the long-term, given the modifications to the Refinery, the most likely option is to import increased amounts of sour heavy Canadian tar sands crudes by rail. This option cannot be eliminated as the Refinery has been upgraded to handle these crudes and they will improve profit margins. Further, the worst case must be evaluated under CEQA absent conditions of certification prohibiting it.

Heavy sour crudes were anticipated to arrive by ship in the VIP, which assumed about three additional ships per month of heavy sour crude and two less barges and ships of gas oil. VIP DEIR, p. 4.8-14. The IS/MND, however, is contingent upon a comparable decrease in ship traffic. However, as further discussed in TGG Comments, due to delays in securing pipeline capacity and port facilities to export Canadian tar sands by ship, the only current way for Valero to take advantage of tar sands crudes and cost effectively deploy the VIP capital improvements is to import Canadian tar sands crudes by rail.

2. What Crudes Are Likely To Be Refined?

The first step in determining emission increases is to identify the crudes that are involved in the proposed switch. The crudes that the Refinery imported between 2007 and 2013 are summarized in Figure 1 from data reported by Valero to the EIA.²⁴ All of these crudes arrive by ship.²⁵

Figure 1 shows that a small amount of crude currently arrives from Canada. The EIA composition data for this crude is consistent with heavy sour tar sands crudes. The puzzle that the IS/MND reviewer is left to unravel is which of these crudes will be

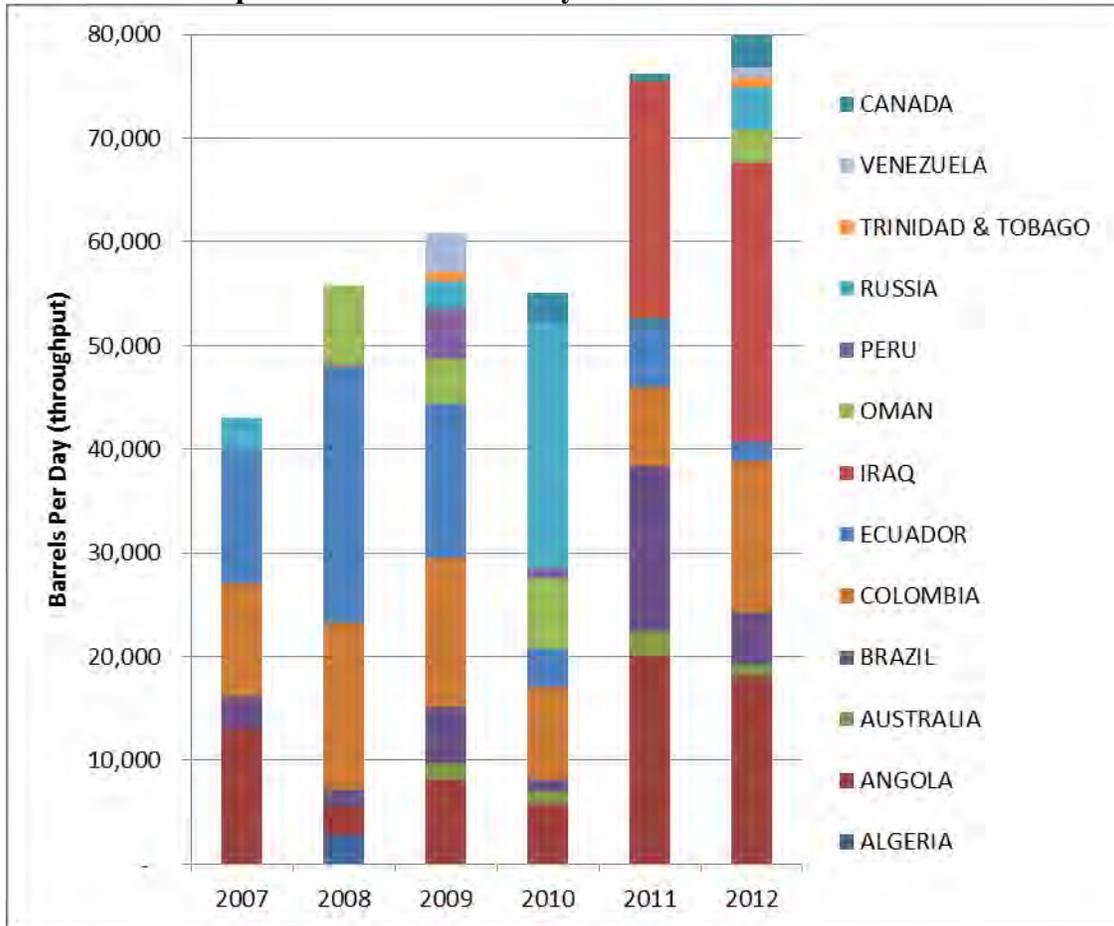
²³ John R. Auers and John Mayes, North American Production Boom Pushes Crude Blending, Oil & Gas Journal, May 6, 2013, Available at: <http://www.ogj.com/articles/print/volume-111/issue-5/processing/north-american-production-boom-pushes.html>.

²⁴ EIA, Petroleum & Other Liquids, Company Level Imports, Available at: <http://www.eia.gov/petroleum/imports/companylevel/>.

²⁵ In addition to these imports by ship, the Refinery also processes some domestic crudes, including ANS (which arrives by ship) and California crudes (which arrive by heated pipeline).

replaced by "North American-sourced crudes" and what "North American-sourced crudes" will do the replacing. The IS/MND contains none of the information needed to solve this puzzle and thus is inadequate.

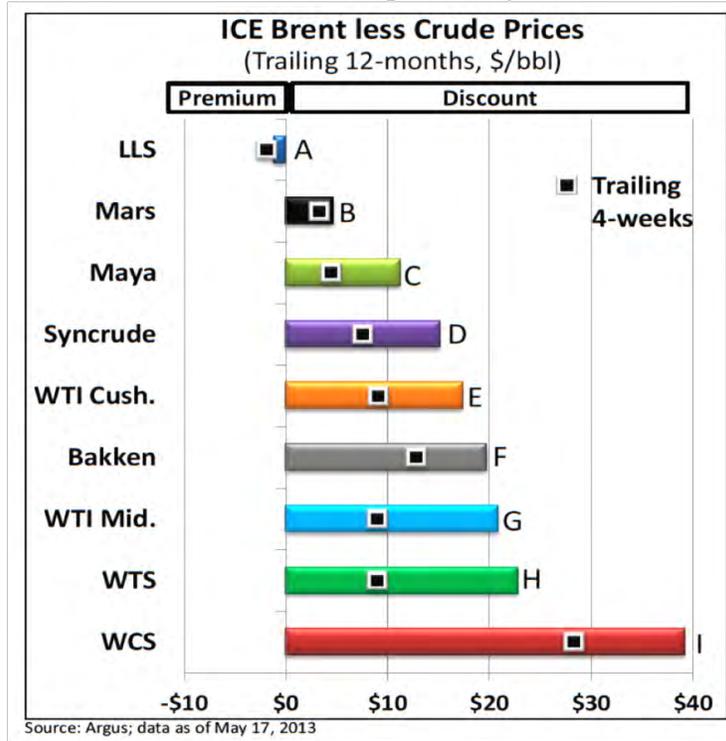
Figure 1
Imported Crudes Currently Refined at Valero Benicia



A recent presentation by Valero indicates that it plans to import "cost-advantaged crude oil" to its Benicia refinery.²⁶ This is consistent with the VIP, which is designed to allow the Refinery to process increased amounts of cheaper heavier sourer crudes. The cost-advantaged crude oils identified by Valero are shown in Figure 2.

²⁶ Valero, UBS Global Oil and Gas Conference, May 21-22, 2013, p. 10, Available at: <http://www.valero.com/InvestorRelations/Pages/EventsPresentations.aspx>. provided as Appendix D to TGG Comments.

**Figure 2
Cost-Advantaged Crudes
That Could Be Imported By Rail²⁷**



The largest growth in cost-advantaged crudes is coming from U.S. shale crudes and heavy Canadian tar sands crudes, both of which are "North American-sourced crude

²⁷ **Brent** is light sweet crude oil sourced from the North Sea, priced at export point there. It has an API gravity of 37.9° and 0.45% sulfur. **LLS** is light Louisiana sweet, priced at St. James, LA. It has an API gravity of 37.0° and 0.38% sulfur. **MARS** is a medium sour blended crude marketed into the Gulf coast and mid-continent regions, priced at Clovelly LA. It has an API gravity of 28.7° and 1.8% sulfur. **Maya** is a heavy sour crude oil from Mexico, priced at export point there. It has an API gravity of 22° and 3.3% sulfur. **WTI Cush.** is West Texas Intermediate crude priced at Cushing, OK, a major trading hub for crude oil. It is a light crude oil with an API gravity of 39.0° and 0.4% sulfur (see also http://en.wikipedia.org/wiki/West_Texas_Intermediate). **WTI Mid.** is West Texas Intermediate (API gravity of 39.0° and 0.4% sulfur) priced at Midland TX (proximate to Permian Basin production). **WTS** is west Texas Sour priced at Midland, TX and an API gravity of 33.5° and 1.9% sulfur. **Syncrude** is a light sweet synthetic Canadian tar sands crude consisting of a bottomless blend of hydrotreated naphtha, distillate, and gas oil fractions produced from a coker and hydrocracker based upgrader facility in Canada; priced at Edmonton Alberta. It typically has an API gravity of 31.0° to 33.0° and 0.1% to 0.2% sulfur (see also <http://www.crudemonitor.ca/crude.php?acr=SYN>). **WCS** is Western Canadian Select, priced at Hardesty, Alberta. This is a tar sands DilBit crude with API gravity of 20.0° to 21.0° and 3.4% to 3.7% sulfur (see also <http://www.crudemonitor.ca/crude.php?acr=WCS>).

Sources: Valero crude price data (in Figure 2) are sourced to Argus, so crude specifications in this footnote are based on Argus Methodology and Specifications: Americas Crude (Last Updated: May 2013) http://media.argusmedia.com/~media/Files/PDFs/Meth/argus_americas_crude.pdf and (for Brent) Argus Crude (Updated: June 2013) http://media.argusmedia.com/~media/Files/PDFs/Meth/argus_crude.pdf The pricing locations specified are those shown in Valero, UBS Global Oil and Gas Conference, May 21-22, 2013, p. 8, Available at: <http://www.valero.com/InvestorRelations/Pages/EventsPresentations.aspx>, provided as Appendix D to TGG Comments.

oils." The puzzle then is to figure out which of the cost-advantaged crudes in Figure 2 that Valero would import to Benicia by rail and which of the crudes currently imported by ship, shown in Figure 1, would be replaced. Due to the paucity of information, only a first order guess is possible. The IS/MND is deficient for placing the burden on the reviewer of piecing together Valero's plans.

The Canadian tar sands crudes (except the syncrudes) are heavy sour crudes while the U.S. shale crudes are light sweet crudes. The modifications to the Refinery made under the VIP set it up to process increased amounts of heavy sour crudes, not the light sweet crudes such as those from U.S. shale crudes. Thus, the light sweet shale crudes are unlikely to be the long-term choice. However, in the interim, before the VIP is implemented, it is possible that light sweet shale crudes would be imported to bridge the gap between bringing the entire VIP on line and fuller build out of unit train loading terminal capacity in Canada.²⁸ This is confirmed by the economics of the plays.

Valero's list of cost-advantaged crudes in Figure 2 indicates that the most cost-advantaged crude is Western Canadian Select (WCS),²⁹ which is Canadian tar sands bitumen diluted to pipeline specifications with 25% to 30% diluent or a "DilBit." I refer to these DilBit crudes in these comments as tar sands crudes. The diluent is typically natural gas condensate, pentanes, or naphtha.³⁰ Most of the tar sands crudes are too heavy to flow in a pipeline. Thus, they must be diluted or thinned with a lighter hydrocarbon stream to reduce viscosity and density to meet pipeline specifications. More diluent is required in the winter than summer to maintain flow rates during cold weather. The IS/MND and VIP FEIR are silent on the presence, composition and emissions from this diluent. However, the potential rail import of DilBits cannot be eliminated and is the most likely rail import due to economic considerations. The failure to disclose the potential import of tar sands crudes is a significant omission as the emissions from handling this material are large and significant.

As further discussed in TGG Comments, tar sands crudes are produced in Northern Alberta, which is landlocked and remote from the refineries that can process these crudes. Compared with other potential markets for these crudes, California is relatively proximate and has refineries configured to process heavy sour crudes. Transportation costs from Alberta to California may thus be low enough to make the delivered cost of tar sands crudes attractive for California refineries.

²⁸ Fielden, March 19, 2013.

²⁹ Cenovus Energy, Western Canadian Select (WCS) Fact Sheet, Available at <http://www.cenovus.com/operations/doing-business-with-us/marketing/western-canadian-select-fact-sheet.html>. See also CrudeMonitor.ca - Canadian Crude Quality Monitoring, Available at: <http://www.crudemonitor.ca/crude.php?acr=WCS>.

³⁰ Gary R. Brierley, Visnja A. Gembicki, and Tim M. Cowan, Changing Refinery Configurations for Heavy and Synthetic Crude Processing, Available at: <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BA07DE342-E9B1-402A-83F7-36B18DC3DD05%7D&documentTitle=5639138>.

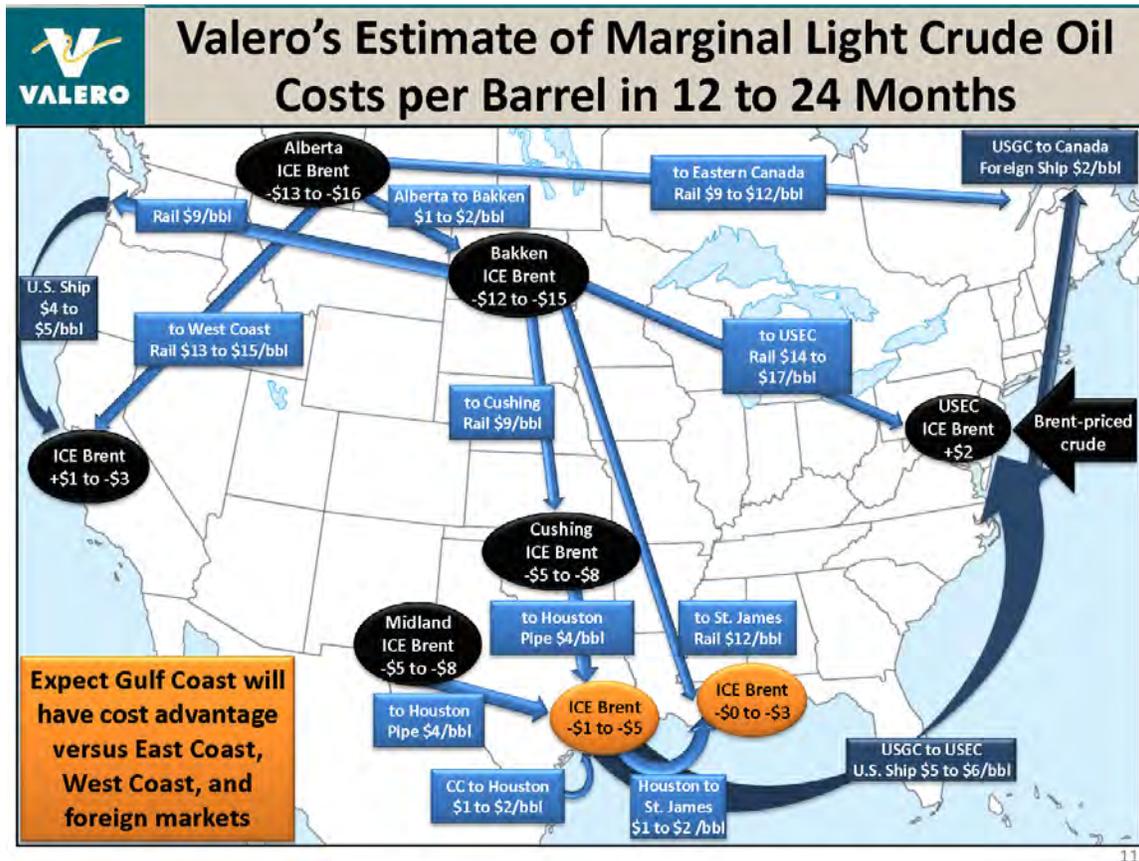
Figure 2 shows the most cost-advantaged crude is WCS, or a DilBit, which sells for a discount of nearly \$40/bbl compared to ICE Brent.³¹ Assuming Valero's reported light crude rail delivery cost of \$13/bbl to \$15/bbl,³² WCE would arrive at Benicia at a discount of \$23/bbl to \$25/bbl relative to ICE Brent. Rail delivery costs for heavy crude would be somewhat higher, and heavy, sour crudes are less valuable than Brent (the global benchmark for light, sweet crudes). Still, the price of WCS delivered to Benicia may be likely lower (and very likely competitive), compared with all the other cost-advantaged crudes (Fig. 2). Thus, the most likely crude that Valero will import by rail at Benicia after the VIP is fully implemented is one of the tar sands crudes. The API gravity and sulfur content of these crudes are consistent with those projected in the VIP FEIR and fall within the ranges reported in the IS/MND.

The cost advantage to delivering North American-sourced light sweet crudes by rail is less than for tar sands crudes. The North American light crudes are discounted less relative to conventional light sweet crudes (ICE Brent) due to North American light crudes having more desirable qualities and being less relatively proximate to Benicia. These include marginal light crude oils from Alberta, Bakken, and Texas. The cost advantage of these crudes may be small (or completely disappear) after adding the cost of transport by rail to Benicia. This is demonstrated by Valero's analysis summarized in Figure 3.

³¹ Brent crude is a major trading classification of sweet light crude oil sourced from the North Sea. Brent is the leading global price benchmark for Atlantic basin crude oils and is used to price two thirds of the world's internationally traded crude oil supplies. It contains about 0.37% sulfur and has an API gravity of 38.06°. It is traded on the electronic IntercontinentalExchange, known as ICE. See: http://en.wikipedia.org/wiki/Brent_Crude.

³² Valero, May 21-22, 2013, p. 11, provided as Appendix D to TGG Comments.

Figure 3
Valero's Estimate of Marginal Light Crude Oil Costs per Barrel



The Bakken crude, for example, the closest U.S. cost-advantaged crude, is reported by Valero at a discount of \$12/bbl to \$15/bbl relative to ICE Brent. (Fig. 3). Valero indicates it would be sent by rail (\$9/bbl) to an undisclosed port in Washington and then by ship to Benicia (\$4/bbl to \$5/bbl). The delivered cost at Benicia would be \$1/bbl to \$2/bbl **higher** than ICE Brent if the initial crude discount relative to ICE Brent were \$12/bbl. It would be -\$1/bbl to -\$2/bbl lower if the discount relative to ICE Brent were -\$15/bbl.

Even if the delivered cost of Bakken into the California market would be slightly above Brent, this might still provide some savings to refiners, relative to the delivered costs of other crudes. The competitive position of Bakken (and other crudes) will depend in part on the pricing dynamics in the crude markets,³³ and also how specific refineries are configured.³⁴

³³ Crude pricing is highly dynamic and varies in part based on crude flows. To the extent that California (and other North American coastal markets) are importing Brent and other waterborne crudes, delivered costs typically include a small premium to cover the cost of importing the crudes by tanker. In Valero's analysis in Figure 3, Brent-priced crude is assumed to be imported into East Coast US (PA/NJ), with the

The delivered cost of Alberta light Syncrude would be slightly more favorable. As reported by Valero, Syncrude is at a discount of \$15/bbl relative to ICE Brent. (Fig. 2). And as previously noted, Valero indicates it would be sent by rail (\$9/bbl) to an undisclosed port in Washington and then by ship to Benicia (\$4/bbl to \$5/bbl). The delivered cost at Benicia would be \$1/bbl to \$2/bbl below ICE Brent. However, the Benicia Refinery is not designed to process this crude and likely could accept only a small amount of it, much less than 70,000 bbl/day.³⁵

Thus, it is unlikely that Valero would import light sweet crudes by rail if it were feasible to process the cheaper WCS tar sands crude. In the short term, through at least the end of 2014, when the VIP Hydrogen Plant goes on line, it may not be feasible to refine large amount of the WCS tar sands crudes. Thus, in the short-term, some of these light sweet shale crudes may very well be sourced to improve profits. However, the long term prospects for these light sweet crudes are more uncertain, given the discount of tar sands crudes and the physical modifications to the Refinery.

My following comments on environmental impacts of the Crude by Rail Project assume up to 100% DilBit tar sands crudes would be imported, as they represent a worst case for air emissions. However, 100% tar sands bitumen, Alberta Syncrude and light sweet shale crudes cannot be eliminated as part of a future potential mix of "North American-sourced crude" for the Refinery. It is impossible to identify what that mix might be, given the inadequate Project description. As impacts will be significant, regardless of the mix, an EIR should be prepared to evaluate the impacts of the full range of likely future imports.

The Project description suggests that undiluted bitumen would not be imported but it also suggests only light sweet material would be imported. To import undiluted bitumen, the railcars would have to be insulated to prevent the bitumen from solidifying in cold weather and equipped with steam-coils to re-heat the bitumen at Benicia for

delivered price there at a \$2 premium over Brent. Market analysis typically assumes that overseas tanker delivery (e.g., from Brent to East or Gulf Coast) costs about \$2/barrel.

³⁴ Bakken and other light, sweet shale crudes are especially attractive for less complex refineries that are configured for light, sweet crudes, as opposed to more complex refineries that can process heavier, sour feedstocks.

³⁵ Ebullated Bed Hydroprocessing's Role in Bitumen Upgrading, Refinery Operations, July 20, 2011, p. 3, Available at: http://refineryoperations.com/downloads/refinery-operations_2-14_2011-07-20.pdf; Gerald W. Bruce, Bitumen to Finished Products, Canadian Heavy Oil Association Technical Luncheon, November 9, 2005, See pages captioned: Processing SCO and SCO Challenges, Available at: http://www.powershow.com/view/7004d-OGExM/Bitumen_to_Finished_Products_Presented_by_Gerald_W_Bruce_Jacobs_Canada_Inc_Canadian_Heavy_Oil_Ass_powerpoint_ppt_presentation; Chris McManaman, The Major Challenges Facing the Future of Oil Sands Development, ("While SCO commands a premium price to WTI and is in many ways comparable to light sweet crude, the high aromaticity of bitumen from which it is derived limits its penetration into refineries that are not specially equipped to handle it. A typical refinery is limited to between 10-20% of SCO in its crude slate"), January 17, 2008, Available at: <http://gembaoilsands.blogspot.com/2008/01/markets.html>.

unloading.³⁶ Further, the storage tanks would have to be heated as bitumen is too viscous to pump at ambient temperatures. The Initial Study identifies only conventional bottom-unload, closed-dome rail cars. ATC, p. 7. The Project description states the "North American crude oil would flow readily at ambient temperatures. Therefore, this Project would not increase the steam demand..." IS, p. 9. However, this does not eliminate pure bitumen as some of the storage tanks in the VIP are heated (VIP DEIR, p. 3-49) and the railcars could be replaced with heated cars in the future unless conditions of certification specifically require unheated cars without insulation and steam coils.

To import undiluted bitumen, the offloading facility would have to be equipped with steam and nitrogen injection systems to heat the rail car coils and remove the crude.³⁷ The IS/MND and ATC suggest conventional unloading racks. However, Appendix A to the ATC, which contains the drawings and specifications required to affirmatively make this determination, are claimed as confidential business information, preventing full disclosure of the Project description. The details of the loading racks are key to determining the types of crude that can be imported and hence, their impacts. Absent any design information on the loading racks, import of 100% bitumen cannot be eliminated and must be evaluated in an EIR.

In sum, the price discount of tar sands crudes relative to conventional light sweet crudes makes them an attractive crude to import by rail. The Refinery is configured to upgrade these crudes. As discussed in TGG Comments, presentations made by Valero in numerous fora indicate that it is considering importing tar sands crudes, most likely DilBit crudes. Thus, the following sections discuss the impact on emissions of switching from crudes currently imported by ship (Fig. 1) to up to 70,000 BPD of tar sands crudes.³⁸

D. Why Does The Specific Crudes Matter?

The air quality impacts of refining North American-sourced crudes such as tar sands crudes depend on the chemical and physical composition of the refinery slate with tar sands crude compared to the current slate.

The chemical composition of tar sands crudes is different in important ways from the current Refinery slate.³⁹ The current slate includes very little tar sands crudes, from

³⁶ Fielden, March 19, 2013.

³⁷ Fielden, March 19, 2013.

³⁸ As discussed above, crudes other than Dilbits may be delivered by rail to the Benicia Refinery, especially in the short-term prior to completion of the VIP (Hydrogen Plant) and pending fuller build out of unit train loading facilities in Alberta.

³⁹ Straatiev and other, 2010, Table 1; Brian Hitchon and R.H. Filby, *Geochemical Studies - 1 Trace Elements in Alberta Crude Oils*, http://www.ags.gov.ab.ca/publications/OFR/PDF/OFR_1983_02.PDF; F.S. Jacobs and R.H. Filby, *Trace Element Composition of Athabasca Tar Sands and Extracted Bitumens, Atomic and Nuclear Methods in Fossil Energy Research*, 1982, pp 49-59; James G. Speight, *The Desulfurization of Heavy Oils and Residua*, Marcel Dekker, Inc., 1981, Tables 1-1, 2-2, 2-3, 2-4 and p. 13 and James G. Speight, *Synthetic Fuels Handbook: Properties, Process, and Performance*, McGraw-Hill,

0.5% to 2% of the Refinery total crude slate over the period 2010 to 2012 (Fig. 1). The Crude by Rail Project could increase the heavy sour tar sands crude by up to 70,000 BPD, or up to 42% of the permitted Refinery throughput. This represents a significant increase in a crude that will increase emissions compared to the current Refinery slate.

The U.S. Geological Survey (“USGS”), for example, reported that “natural bitumen,” the source of all Canadian tar sands-derived oils, contains 102 times more copper, 21 times more vanadium, 11 times more sulfur, six times more nitrogen, 11 times more nickel, and 5 times more lead than conventional heavy crude oil, such as those currently refined from Ecuador, Columbia, and Brazil.⁴⁰

The environmental damage caused by these pollutants includes acid rain; bioaccumulation of toxic chemicals up the food chain; the formation of ground-level ozone and smog; visibility impairment in Class I areas, such as National Parks; odor impacts that affect residents near the Refinery; accidental releases due to corrosion of refinery equipment; and depletion of soil nutrients.

Additionally, many of these chemicals pose a direct health hazard from air emissions. These metals, for example, mostly end up in the coke. Greater amounts of coke are produced by the tar sands crudes than the current crude slate. The California Air Resources Board has classified lead as a pollutant with no safe threshold level of exposure below which there are no adverse health effects. Thus, just the increase in lead from switching up to 42% of the slate to tar sands crude is a significant impact that was not disclosed in the IS/MND. Accordingly, crude quality is critical to a thorough evaluation of the impacts of a crude switch, such as proposed here.

A good crude assay is essential for comprehensive crude oil evaluation.⁴¹ The type of data required to evaluate emissions would require, at a minimum, the following information for both the current slate, the future slate, the displaced crudes, and the unidentified "North American-sourced crudes":

- Trace elements (As, B, Cd, Cl, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, U, V, Zn)
- Nitrogen (total & basic)
- Sulfur (total, mercaptans, H₂S)
- Residue properties (saturates, aromatics, resins)
- Acidity

2008, Tables A.2, A.3, and A.4; Pat Swafford, Evaluating Canadian Crudes in US Gulf Coast Refineries, Crude Oil Quality Association Meeting, February 11, 2010, Available at: http://www.coqa-inc.org/20100211_Swafford_Crude_Evaluations.pdf.

⁴⁰ R.F. Meyer, E.D. Attanasi, and P.A. Freeman, Heavy Oil and Natural Bitumen Resources in Geological Basins of the World, U.S. Geological Survey Open-File Report 2007-1084, 2007, p. 14, Table 1, Available at <http://pubs.usgs.gov/of/2007/1084/OF2007-1084v1.pdf>.

⁴¹ CCQTA February 7, 2012, p. 10.

- Aromatics content
- Asphaltenes (pentane, hexane and heptane insolubles)
- Hydrogen content
- Carbon residue (Ramsbottom, Conradson)
- Distillation yields
- Properties by cut
- Hydrocarbon analysis by gas chromatography

This type of information is reported in a crude assay or "fingerprint" of the oil, which are available to the applicant and was apparently supplied to the BAAQMD as confidential business information, but not the public, foreclosing any meaningful public review. The IS/MND does not identify any specific "North American-sourced crudes" that would be imported, does not contain any crude assays for the current refinery slate, the crude that would be imported by rail, or the crude that is currently imported by ship but would be replaced. The IS/MND also does not contain an analysis of the impact of changes in crude quality on air emissions, arguing instead there would be no change. Thus, the public is left to guess what the impacts might be. The Initial Study should have evaluated the impacts of refining tar sands crudes on air emissions and other residuals or included conditions of certification specifically prohibiting their import as publicly available information indicates that Valero is considering tar sands crudes as they would likely arrive at the Refinery with pricing that is competitive relative to other crudes.

As none of the basic information required to assess air quality impacts is provided in the record, I will discuss in general some of the impacts that can reasonably be expected from including tar sands crudes in the crude slate. Incorporating these "North American-sourced crudes" into the Refinery crude slate could be accomplished, for example, by meeting the API and sulfur range reported in the Initial Study, but with shifts in the means and/or major shifts in other properties, increasing emissions.

The IS/MND is based on the assumption that the composition of the crude slate will not change and thus will not impact air emissions. However, this is based only on two gross or lumpner crude quality parameters and ignores the actual chemical composition of the crudes, which is not disclosed in the record.

The specific chemicals, for example, determine which ones will be volatile and lost through equipment leaks and outgassed from tanks, which ones will be difficult to remove in hydrotreaters and other refining processes (thus determining how much hydrogen and energy must be expended to remove them), which ones will cause malodors, and which ones might aggravate corrosion, leading to accidental releases. The Initial Study fails to grasp this distinction and looked only at the range of two gross lumpner parameters. Thus, it has failed to satisfy the disclosure requirements of CEQA and failed to analyze relevant impacts.

For example, sulfur is not simply sulfur, but is made up of a complex collection of individual chemical compounds such as hydrogen sulfide, mercaptans, thiophene, benzothiophene, methyl sulfonic acid, dimethyl sulfone, thiacyclohexane, etc. Each crude has a different suite of individual sulfur chemicals. The impacts of "sulfur" depend upon the specific sulfur chemicals and their relative concentrations, not on the range of the "gross" amount of total sulfur expressed as weight percent sulfur, as reported in the Initial Study. The fact that the range in the total sulfur content of rail-imported crude and the current crude slate is the same is irrelevant.

The role of the specific sulfur compounds was clearly and tragically demonstrated in the recent (August 2012) catastrophic accident at the nearby Chevron Richmond Refinery. This accident was caused by the erroneous assumption that sulfur is sulfur, which led to significant corrosion. See discussion elsewhere in these comments. Similarly, while the lighter sulfur compounds such as mercaptans and disulfides found in light sweet crudes may not significantly increase the overall weight percent sulfur in the crude slate, as claimed in the IS/MND, they do lead to impacts, such as aggressive sulfidation corrosion, which can lead to accidental releases. These compounds concentrate in the lower boiling naphtha fraction and contribute to aggressive sulfidation corrosion in the convection section of naphtha hydrotreating furnaces.⁴² As another example, the specific sulfur compounds will determine which compounds will be emitted from storage tanks and fugitive component, some of which could result in significant odor impacts, e.g., mercaptans. Thus, regardless of what crude might be brought in by rail, there are potential significant environmental impacts that are due to characteristics of that oil besides total sulfur and API gravity.

There are two significant differences between tar sands crudes that could be imported by rail (but not by ship due to lack of pipelines and ports) and other crudes they may displace: (1) the presence of large amounts of diluent and (2) the chemical composition of the heavy ends or residuum, which must be broken down into lighter products in a refinery.

1. Emissions From Diluent

The majority of the crudes that will be transported by rail will likely be a blend of bitumen and diluent due to their discounted price compared to conventional light sweet crudes. Pure undiluted bitumen is unlikely as the Project description does not disclose any equipment that would be necessary to handle pure bitumen but cannot be excluded as discussed elsewhere. Undiluted bitumen would eliminate the impacts discussed in this section from diluent, but would significantly increase the impacts from refining the heavy ends, namely increased use of utilities that increase combustion emissions. Setting aside undiluted bitumen, this leaves the question of the amount of diluent that would be mixed with the crude, which ultimately determines impacts.

⁴² See, for example, Jim McLaughlin, Changing Your Crude Slate, Becht New, May 24, 2013, Available at: <http://becht.com/news/becht-news/>.

When heavy crude is shipped by pipeline, it needs to be diluted so that it will flow in the pipe. Bitumen blended to pipeline specifications can be loaded on and off conventional rail tank cars like other light crudes. However, bitumen can also be transported by rail as "RailBit," using 15% to 20% diluent. The amount of diluent depends on the type of rail tank car and design details of the offloading facilities. These have been excluded from the IS/MND, which suggests conventional rail cars and a conventional unloading terminal. Further, the number of rail cars, 100 per day, or 700 barrels per car, suggests a lighter material, with more diluent. Thus, I assume that one of the materials that will be transported by rail is conventional pipeline-quality DilBits with 20% to 30% diluent.

However, it is possible that the Project description is inadequate to distinguish between the various possible diluent mixes. There would be, for example, incentive to import RailBit rather than DilBit as it would save on the cost of diluent and transportation. Further, heavy crude refineries such as Valero generally do not want the diluent as it creates a "dumbbell" crude curve that contains light components that are not useful to refineries configured to process conventional heavy crudes. Further, transport of undiluted bitumen may be safer as spills do not travel as far from the spill site.

Regardless, the mixture of diluent and bitumen does not behave the same as a conventional crude, as the distribution of hydrocarbons is very different. The blended lighter diluent generally evaporates readily when exposed to ambient conditions, leaving behind the heavy ends, the vacuum gas oil (VGO) and residuum.⁴³ Thus, when a DilBit is released accidentally, it will generally create a difficult to cleanup spill as the heavier bitumen will be left behind.⁴⁴ Further, in a storage tank, the diluent also can be rapidly evaporated and emitted through tank openings.

These conventional DilBits, which are the most likely "North American-sourced crude" to be imported by rail over the long term, given the current economic outlook, are sometimes referred to as "dumbbell" or "barbell" crudes as the majority of the diluent is C₅ to C₁₂ and the majority of the bitumen is C₃₀₊ boiling range material, with very little in between.⁴⁵ This means these crudes have a lot of material boiling at each end of the boiling point curve, but little in the middle. Thus, they yield very little middle distillate fuels, such as diesel, heating oil, kerosene, and jet fuel and more coke, than other heavy crudes. A typical DilBit, for example, will have 15% to 20% by weight light material,

⁴³ The residuum is the residue obtained from the oil after nondestructive distillation has removed all of the volatile materials. Residua are black, viscous materials. They may be liquid at room temperature (from the atmospheric distillation tower) or almost solid (generally vacuum residua), depending upon the nature of the crude oil.

⁴⁴ A Dilbit Primer: How It's Different from Conventional Oil, Inside Climate News. Available at: <http://insideclimatenews.org/news/20120626/dilbit-primer-diluted-bitumen-conventional-oil-tar-sands-Alberta-Kalamazoo-Keystone-XL-Enbridge?page=show>.

⁴⁵ Gary R. Brierley and others, Changing Refinery Configuration for Heavy and Synthetic Crude Processing, 2006, Available at: <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BA07DE342-E9B1-402A-83F7-36B18DC3DD05%7D&documentTitle=5639138>.

basically the added diluent, 10% to 15% middle distillate, and the balance, >75% is heavy residual material (vacuum gas oil and residue) exiting the distillation column. These characteristics distinguish DilBits from crudes currently refined at Benicia.⁴⁶

The large amount of light material that distills below 149 C is very volatile and can be emitted to the atmosphere from storage tanks and equipment leaks of fugitive components (pumps, compressors, valves, fittings) in much larger amounts than other heavy crudes that it would replace. The IS/MND does not indicate whether other heavy crudes processed at the Refinery currently arrive with diluent. However, EIA crude import data, summarized in Figure 1, do not identify any crudes that are blended with diluent. Thus, the use of diluent to transport tar sands crudes is likely an important difference between the current heavy crude slates processed at the Refinery and the tar sands crudes that could replace them. This diluent will have impacts during railcar unloading as well as at many processing units within the Refinery.

The diluent is a low molecular weight organic material with a high vapor pressure that contains high levels of VOCs, sulfur compounds, and HAPs. These would be emitted during unloading and present in emissions from the crude tank(s) and fugitive components from its entry into the Refinery with the crude until it is recovered and marketed, or at least between the desalter and downstream units where some of it is recovered. The presence of diluent would increase the vapor pressure of the crude, substantially increasing VOC and HAP emissions from tanks and fugitive component leaks compared to those from displaced heavy crudes not blended with diluent. The IS/MND and the VIP FEIR did not disclose the potential presence of diluent and made no attempt to estimate these diluent-derived emissions.

The composition of some typical diluents/condensates is reported on the website, www.crudemonitor.ca.⁴⁷ The specific diluents that would be used by the Project are unknown. The CrudeMonitor information indicates that diluent contains very high concentrations (based on 5-year averages, v/v basis) of the hazardous air pollutants (HAPs) benzene (7,200 ppm to 9,800 ppm); toluene (10,300 ppm to 25,300 ppm); ethyl benzene (900 ppm to 2,900 ppm); and xylenes (4,600 ppm to 23,900 ppm).

The sum of these four compounds is known as "BTEX" or benzene-toluene-ethylbenzene-xylene. The BTEX in diluent ranges from 27,000 ppm to 60,900 ppm. The BTEX in DilBits, blended from these materials, ranges from 8,000 ppm to 12,300 ppm.⁴⁸

⁴⁶ Stratiev and others, 2010, Table 1, compared to DilBit crude data on www.crudemonitor.ca.

⁴⁷ Condensate Blend (CRW) - <http://www.crudemonitor.ca/condensate.php?acr=CRW>; Fort Saskatchewan Condensate (CFT) - <http://www.crudemonitor.ca/condensate.php?acr=CFT>; Peace Condensate (CPR) - <http://www.crudemonitor.ca/condensate.php?acr=CPR>; Pembina Condensate (CPM) - <http://www.crudemonitor.ca/condensate.php?acr=CPM>; Rangeland Condensate (CRL) - <http://www.crudemonitor.ca/condensate.php?acr=CRL>; Southern Lights Diluent (SLD) - <http://www.crudemonitor.ca/condensate.php?acr=SLD>.

⁴⁸ DilBits: Access Western Blend (AWB) - <http://www.crudemonitor.ca/crude.php?acr=AWB>; Borealis Heavy Blend (BHB) - <http://www.crudemonitor.ca/crude.php?acr=BHB>; Christina Dilbit Blend (CDB) - <http://www.crudemonitor.ca/crude.php?acr=CDB>; Cold Lake (CL) -

Similarly, the BTEX in synthetic crude oils (SCOs) ranges from 6,100 ppm to 14,100 ppm.⁴⁹ These are very high concentrations that were not considered in the emission calculations in the IS/MND and underlying ATC nor in the VIP FEIR. These high levels could result in significant worker and public health impacts.

The ATC estimated emissions of these compounds (ATC, Table 3-3) from Tank 1776 and fugitive components using the "default speciation profile" for crude oil from the EPA program, TANKS4.09d, for all constituents except benzene. For benzene, the IS/MND variously claims it substituted either 0.06wt.% or 0.6wt.% for the default value.⁵⁰ Thus, the IS/MND's claims as to benzene in fugitive emissions are internally inconsistent. My research indicates the TANKS default value for benzene in crude oil is 0.6wt.%.⁵¹ The IS/MND lowered this to 0.06wt.% in its HAP emission calculations. IS/MND, Appx. A. The IS/MND contains no support for lowering EPA's crude oil default benzene level by a factor of ten. This value substantially underestimates the amount of benzene that would be present in tank and fugitive component emissions when processing either DilBits or Bakken crudes.

The value of 0.06wt.% benzene used to calculate tank and fugitive benzene emissions contradicts published crude composition for the range of North American-sourced crudes that could be imported by the Project. Table 1 compares the concentration of BTEX used to estimate BTEX emissions in the IS/MND with the BTEX concentrations in various diluents, two widely traded DilBits, including the DilBit that Valero used in its cost analysis (Fig. 2), Western Canadian Select and Bakken crude oils. This table shows that regardless of which material is imported by the Crude by Rail

<http://www.crudemonitor.ca/crude.php?acr=CL>; Peace River Heavy (PH) -
<http://www.crudemonitor.ca/crude.php?acr=PH>; Seal Heavy (SH) -
<http://www.crudemonitor.ca/crude.php?acr=SH>; Statoil Cheecham Blend (SCB) -
<http://www.crudemonitor.ca/crude.php?acr=SCB>; Wabasca Heavy (WH) -
<http://www.crudemonitor.ca/crude.php?acr=WH>; Western Canadian Select (WCS) -
<http://www.crudemonitor.ca/crude.php?acr=WCS>; Albion Heavy Synthetic (AHS) (DilSynBit) -
<http://www.crudemonitor.ca/crude.php?acr=AHS>.

⁴⁹ SCOs: CNRL Light Sweet Synthetic (CNS) -<http://www.crudemonitor.ca/crude.php?acr=CNS>; Husky Synthetic Blend (HSB) -<http://www.crudemonitor.ca/crude.php?acr=HSB>; Long Lake Light Synthetic (PSC) -<http://www.crudemonitor.ca/crude.php?acr=PSC>; Premium Albion Synthetic (PAS) -
<http://www.crudemonitor.ca/crude.php?acr=PAS>; Shell Synthetic Light (SSX) -
<http://www.crudemonitor.ca/crude.php?acr=SSX>; Suncor Synthetic A (OSA) -
<http://www.crudemonitor.ca/crude.php?acr=OSA>; Syncrude Synthetic (SYN) -
<http://www.crudemonitor.ca/crude.php?acr=SYN>.

⁵⁰ The text in the ATC, p. 11, pdf 17, in the note following Table 3-3, states that benzene in crude oil was assumed to be 0.6%. However, in Table 3-5, p. 12, pdf 18, it is stated that benzene in the crude oil was assumed to be 0.06%. Similarly, the supporting appendices indicate that 0.06% benzene was actually used in the fugitive emissions calculations. ATC, Attach. B-3, Fugitive Component Emissions, pdf 33. Similar data for tank emission calculations cannot be checked as it is claimed to be confidential. ATC, Attach. B-2.

⁵¹ Crude oil component speciation data was obtained by using the TANKS409d model available at <http://www.epa.gov/ttnchie1/software/tanks/> using the database interface to export the speciation profile for the TANKS default crude oil, viz., "Data --> Speciation Profiles --> Export" menu selection and choosing crude oil. This spreadsheet confirms that the default benzene level for crude oils is 0.6wt.%.

Project, benzene emissions would be much higher than estimated in the IS/MND. Further, benzene emissions are higher in the most recently collected samples than in the five-year averages in Table 1. These benzene emissions would result in significant health impacts.

**Table 1
Comparison of BTEX Levels Assumed in IS/MND
with Levels in Diluents and DilBits**

	Default Crude ATC Attach. B-3 (wt.%)	Diluents (5-yr Avg) ⁵² (wt.%)	Christina DilBit ⁵³ (5-yr Avg) (wt.%)	Western Canadian Select ⁵⁴ (5-yr Avg) (wt.%)	Bakken ⁵⁵ Crude (wt.%)
Benzene	0.06	0.83-1.27	0.27	0.15	0.1-1.0
Ethylbenzene	0.4	0.11-0.33	0.06	0.06	0.33
Toluene	1.00	1.32-2.89	0.44	0.27	0.92
Xylenes	1.4	0.59-2.71	0.34	0.27	1.4

The ATC discloses that annual emissions of benzene from Tank 1776 exceed the BAAQMD chronic trigger level (6.4 lb/yr trigger level compared to a net increase of 28.3 lb/yr). ATC, p. 17-18 & Table 4-3. Further, the IS/MND and underlying ATC fail to disclose that benzene emissions from fugitive components, when calculated using the correct benzene level (> or = 0.6%, rather than 0.06%), also exceed the BAAQMD screening level (6.4 lb/hr screening level compared to 20 lb/hr emitted, adjusted to 0.6% benzene).

The Initial Study conducted a screening health risk assessment. It found no significant health impact. IS, p. II-15. However, the benzene emissions used in this analysis apparently (no support is provided in the record) were underestimated by factors of 2.5 (0.15/0.06 = 2.5) to 4.5 (0.27/0.06 = 4.5) assuming DilBits and up to a factor of 17

⁵² The reported range includes the following diluents: Condensate Blend, Saskatchewan Condensate, Peace Condensate, Pembina Condensate, Rangeland Condensate, and Southern Lights Diluent. The composition data for all of these diluents is found at <http://www.crudemonitor.ca>. Concentrations reported in volume % (v/v) in this source were converted to weight % by dividing by the ratio of compound density in kg/m³ at 25 C (benzene = 876.5 kg/m³, toluene = 866.9 kg/m³, ethylbenzene 866.5 kg/m³, and the xylenes 863 kg/m³) to crude oil density in kg/m³, as reported at www.crudemonitor.ca, 5-year average. See also Cenovus Energy Inc. Material Safety Data Sheet, Condensate (Sour) and Condensate (Sweet), Available at: <http://www.cenovus.com/contractor/msds.html>.

⁵³ Christina DilBit Blend (CDB) - <http://www.crudemonitor.ca/crude.php?acr=CDB>. Concentrations reported in volume % (v/v) converted to weight % as explained in footnote 52.

⁵⁴ Western Canadian Select (WCS) - <http://www.crudemonitor.ca/crude.php?acr=WCS>. Concentrations reported in volume % (v/v) converted to weight % as explained in footnote 52.

⁵⁵ Cenovus Energy, Material Safety Data Sheet for Light Crude Oil, Bakken (benzene), Available at: http://www.cenovus.com/contractor/docs/CenovusMSDS_BakkenOil.pdf. Other components of BTEX from Keystone DEIS, Tables 3.13-1 (density) and 3.13-2 (BTEX). Concentrations reported in volume % (v/v) converted to weight % as explained in footnote 52.

($1.0/0.06=17$) for Bakken crudes. There is one DilBit with a benzene concentration of 0.06wt.%, Borealis Heavy Blend. However, this represents the lower end of the range for DilBits. There is no evidence that this is the only DilBit that would be imported by rail.

Benzene is a carcinogen, the principal one included in the HAP emission calculations.⁵⁶ IS/MND, Appx. A. The only sources of benzene disclosed in the IS/MND is Tank 1776 and fugitives, which were underestimated due to the use of an anomalously low crude concentration. Thus, the cancer risk reported in the IS/MND in Table 3-3 can be adjusted for this error by multiplying the IS/MND Table 3-3 cancer risks by the benzene ratios reported above (benzene in crude of interest from Table 1 \div benzene assumed in the IS/MND (0.06wt.%). This assumes the contribution, if any, to cancer risk from ethylbenzene is negligible.

Thus, the reported cancer risk to the maximum exposed worker increases from 4.46 in a million (IS, Table 3-3) up to 11 ($4.46 \times 2.5=11.2$) to 20 ($4.46 \times 4.5=20.1$) in a million for DilBits and up to 76 ($4.46 \times 17=76$) in a million for Bakken crudes. For the maximum exposed residential receptor, the reported cancer risk increases from 2.27 (IS, Table 3-3) up to 5.7 ($2.27 \times 2.5=5.7$) to 10 ($2.27 \times 4.5=10.2$) in a million for DilBits and to 39 ($2.27 \times 17=39$) in a million for Bakken crudes. These cancer risk levels equal or exceed the assumed cancer significance threshold of 10 in a million. IS, p. II-15. These are significant unmitigated impacts (to workers and nearby residents) that were not disclosed in the IS/MND and are directly caused by the IS/MND's failure to consider the composition of the crude that is being imported.

The CrudeMontior information also indicates that these diluents contain elevated concentrations of volatile mercaptans (9.9 to 103.5 ppm), which are highly odiferous and toxic compounds that will create odor and nuisance problems at the Refinery in the vicinity of the unloading area, crude storage tanks and supporting fugitive components. Mercaptans can be detected at concentrations substantially lower than will be present in emissions from the crude tanks and fugitive emissions from the unloading rack and related components, including pumps, valves, flanges, and connectors.⁵⁷ In fact, mercaptans are added to natural gas in very tiny amounts so that the gas can be smelled to facilitate detecting leaks.

Thus, unloading, storing, handling and refining bitumens mixed with diluent and shale crudes such as Bakken would emit VOCs, HAPs, and malodorous sulfur compounds, not found in comparable levels in conventional crudes, depending upon the DilBit or shale crude source. There are no restrictions on the crudes, diluent source or their compositions nor any requirements to monitor emissions from tanks and leaking equipment where DilBit-blended and other light crudes would be handled. As the market

⁵⁶ Ethylbenzene was classified by OEHHA as a weak carcinogen in 2007. See: <http://oehha.ca.gov/tcdb/index.asp>. As the IS/MND risk calculations were not available, it is uncertain whether the IS/MND's risk assessment included ethylbenzene as a carcinogen.

⁵⁷ American Industrial Hygiene Association, Odor Thresholds for Chemicals with Established Occupational Health Standards, 1989; American Petroleum Institute, Manual on Disposal of Refinery Wastes, Volume on Atmospheric Emissions, Chapter 16 - Odors, May 1976, Table 16-1.

has experienced shortages of diluents, any material with a suitable thinning ability could be used, which could contain currently unanticipated hazardous components.

2. Composition of Tar Sands Bitumen

The composition of tar sands crudes is chemically different from other heavy crudes currently processed at the Refinery as they are tar sands bitumen mixed with diluent. They are unique for two major reasons: (1) presence of large quantities of volatile diluent full of VOCs and toxic chemicals and (2) unique chemical composition of the bitumen. The previous comment discussed diluent. This comment discusses the unique composition of tar sands bitumens that require more intense processing and thus higher emissions.

Tar sands bitumens are composed of higher molecular weight chemicals and are deficient in hydrogen compared to conventional heavy crudes. This means more energy will be required to convert them into the same slate of refined products. Thus, most fired sources in the refinery—heaters, boilers, etc.—will have to work harder to generate the same quantity and quality of refined products. This will increase all utilities required to run the refinery - electricity, natural gas, hydrogen, water, and steam. This section discusses these bitumens and their impact on refining emissions.

Refining converts crude oils into transportation fuels. This is done by removing contaminants (sulfur, nitrogen, metals) and breaking down and reassembling chemicals present in the crude oil charge by adding hydrogen, removing carbon as coke, and applying heat, pressure, and steam in the presence of various catalysts. More intensive refining is required to convert tar sands crudes into useful products than other heavy crudes. This means a greater amount of energy must be expended to yield the same product slate. Thus, all of the combustion sources in a refinery, such as heaters and boilers, must work harder and thus emit more pollutants, than when refining conventional heavy and other crudes. The IS/MND fails completely to analyze the impact of crude composition on the resulting emissions from generating increased amount of these utilities.

Canadian tar sands bitumen is distinguished from conventional petroleum by the small concentration of low molecular weight hydrocarbons and the abundance of high molecular weight polymeric material.⁵⁸ Crudes derived from Canadian tar sands bitumen—DilBits, SCOs and SynBits—are heavier, i.e., have larger, more complex molecules such as asphaltenes,⁵⁹ some with molecular weights above 15,000.⁶⁰ They

⁵⁸ O.P. Strausz, *The Chemistry of the Alberta Oil Sand Bitumen*, Available at: http://web.anl.gov/PCS/acsfuel/preprint%20archive/Files/22_3_MONTREAL_06-77_0171.pdf.

⁵⁹ Asphaltenes are nonvolatile fractions of petroleum that contain the highest proportions of heteroatoms, i.e., sulfur, nitrogen, oxygen. The asphaltene fraction is that portion of material that is precipitated when a large excess of a low-boiling liquid hydrocarbon such as pentane is added. They are dark brown to black amorphous solids that do not melt prior to decomposition and are soluble in benzene and aromatic naphthas.

generally have higher amounts of coke-forming precursors; larger amounts of contaminants (sulfur, nitrogen nickel, vanadium) that require more intense processing to remove; and are deficient in hydrogen, compared to other heavy crudes.

Thus, to convert them into the same refined products requires more utilities -- electricity, water, heat, and hydrogen. This requires that more fuel be burned in most every fired source at the refinery and that more water be circulated in heat exchangers and cooling towers. Further, this requires more fuel to be burned in any supporting off-site facilities, such as power plants that may supply electricity or Steam-Methane Reforming Plants that may supply hydrogen. Under CEQA, these indirect increases in emissions caused by a project must be included in the impact analysis. These increases in fuel consumption release increased amounts of NO_x, SO_x, VOCs, CO, PM10, PM2.5, and HAPs as well as greenhouse gas emissions (GHG). Some of the principle differences are identified below, followed by a discussion of the impacts these differences have on emissions.

a. Higher Concentrations of Asphaltenes and Resins

The severity (e.g., temperature, amount of catalyst, hydrogen) of hydrotreating depends on the type of compound a contaminant is bound up in. Lower molecular weight compounds are easier to remove. The difficulty of removal increases in this order: paraffins, naphthenes, and aromatics.⁶¹ Most of the contaminants of concern in tar sands crudes are bound up in high molecular weight aromatic compounds such as asphaltenes that are difficult to remove, meaning more heat, hydrogen, and catalyst are required to convert them to lower molecular weight blend stocks. Some tar sands-derived vacuum gas oils (VGOs), for example, contain no paraffins of any kind. All of the molecules are aromatics, naphthenes, or sulfur species that require large amounts of hydrogen to hydrotreat, compared to other heavy crudes.⁶²

Asphaltenes and resins generally occur in tar sands bitumens in much higher amounts than in other heavy crudes. They are the nonvolatile fractions of petroleum and contain the highest proportions of sulfur, nitrogen, and oxygen.⁶³ They have a marked effect on refining and result in the deposition of high amounts of coke during thermal processing in the coker. They also form layers of coke in hydrotreating reactors, requiring increased heat input, leading to localized or even general overheating and thus even more coke deposition. This seriously affects catalyst activity resulting in a marked decrease in the rate of desulfurization. They also require more intense processing in the

⁶⁰ O.P. Strausz, *The Chemistry of the Alberta Oil Sand Bitumen*, Available at: http://web.anl.gov/PCS/acsfuel/preprint%20archive/Files/22_3_MONTREAL_06-77_0171.pdf.

⁶¹ Gary et al., 2007, p. 200.

⁶² See, for example, the discussion of hydrotreating and hydrocracking of Athabasca tar sands cuts in Brierley et al. 2006, pp. 11-17.

⁶³ James G. Speight, *The Desulfurization of Heavy Oils and Residua*, Marcel Dekker, Inc., 1981, Tables 1-1, 2-2, 2-3, 2-4 and p. 13 and James G. Speight, *Synthetic Fuels Handbook: Properties, Process, and Performance*, McGraw-Hill, 2008, Tables A.2, A.3, and A.4.

coker required to break them down into lighter products. These factors require increases in steam and heat input, both of which generate combustion emissions -- NO_x, SO_x, CO, VOCs, PM10, and PM2.5.

Further, if the crude includes a synthetic crude, SCO, for example, the material has been previously hydrotreated. Thus, the remaining contaminants (e.g., sulfur, nitrogen), while present in small amounts, are much more difficult to remove (due to their chemical form, buried in complex aromatics), requiring higher temperatures, more catalyst, and more hydrogen.⁶⁴

The higher amounts of asphaltenes and resins generate more heavy feedstocks that require more severe processing than lighter feedstocks. The coker, for example, makes more coker distillate and gas oil that must be hydrotreated, compared to conventional heavy crudes. Similarly, the Crude Unit makes more atmospheric and vacuum gas oils that must be hydrotreated.⁶⁵ This increases emissions from these units, including fugitive VOC emissions from equipment leaks and combustion emissions from burning more fuel.

b. Hydrogen Deficient

Tar sands crudes are hydrogen deficient compared to heavy and conventional crude oils and thus require substantial hydrogen addition during refining, beyond that required to remove contaminants (sulfur, nitrogen, metals). This again means more combustion emissions from burning more fuel.

c. Higher Concentrations of Catalyst Contaminants

Tar sands bitumens contain about 1.5 times more sulfur, nitrogen, oxygen, nickel and vanadium than typical heavy crudes.⁶⁶ Thus, much more hydrogen per barrel of feed and higher temperatures would be required to remove the larger amounts of these poisons. These impurities are removed by reacting hydrogen with the crude fractions over a fixed catalyst bed at elevated temperature. The oil feed is mixed with substantial quantities of hydrogen either before or after it is preheated, generally to 500 F to 800 F. The amount of hydrogen required for a particular application depends on the hydrogen content of the feed and products and the amount of the contaminants to be removed. Hydrogen consumption is typically about 70 scf/bbl of feed per percent sulfur, about 320 scf/bbl feed per percent nitrogen, and 180 scf/bbl per percent oxygen removed.⁶⁷

⁶⁴ See, for example, Brierley et al. 2006, p. 8 ("The sulfur and nitrogen species left in the kerosene and diesel cuts are the most refractory, difficult-to-treat species that could not be removed in the upgrader's relatively high-pressure hydrotreaters."); Turini et al. 2011 p. 4.

⁶⁵ See, for example, Turini et al. 2011, p. 9.

⁶⁶ See, for example, USGS, 2007, Table 1.

⁶⁷ James H. Gary, Glenn E. Handwerk, and Mark J. Kaiser, Petroleum Refining: Technology and Economics, 5th Ed., CRC Press, 2007, p. 200 and A.M. Aitani, Processes to Enhance Refinery-Hydrogen Production, Int. J. Hydrogen Energy, v. 21, no. 4, pp. 267-271, 1996.

Canadian tar sands crudes generally have higher nitrogen content, 3,000 to >6,000 ppm⁶⁸ and specifically higher organic nitrogen content, particularly in the naphtha range, than other heavy crudes.⁶⁹ This nitrogen is mostly bound up in complex aromatic compounds that require a lot of hydrogen to remove. This affects emissions in five ways.

First, additional hydrotreating is required to remove them, which increases hydrogen and energy input. Second, they deactivate the cracking catalysts, which requires more energy and hence more emissions to achieve the same end result. Third, they increase the nitrogen content of the fuel gas fired in combustion sources, which increases NO_x emissions from all fired sources that use refinery fuel gas. Fourth, nitrogen in tar sands crudes is present in higher molecular weight compounds than in other heavy crudes and thus requires more hydrogen and energy to remove. Fifth, some of this nitrogen will be converted to ammonia and other chemically bound nitrogen compounds, such as pyridines and pyrroles. These become part of the fuel gas and could increase NO_x from fired sources. They further may be routed to the flares, where they would increase NO_x.

These types of chemical differences between the current crude slate and the new crude slate facilitated by the Crude by Rail Project were not addressed at all in the IS/MND. While the Refinery may currently be operating with its BAAQMD permits, and the subject increase would not exceed any existing permit limits, the existing permit limits is the wrong baseline for CEQA impact analyses.

However, some of these increased utility impacts were addressed in the VIP FEIR as of 2002. The VIP FEIR admitted that then-proposed changes in the crude slate would cause: (1) an increase in electricity demand of 23 MW; (2) an increase in natural gas consumption of 9.6 MMscf/day (VIP DEIR, pp. 2-3); (3) an increase in the firing rate of heaters and boilers of 400 MMBtu/hr (VIP DEIR, p. 3-47); (4) an increase in the hydrogen capacity of 30 MMscf/day (VIP DEIR, p. 3-39); and an increase in coker capacity of 5,000 BPD (VIP DEIR, p. 3-30). Mitigations were proposed in the VIP FEIR for these significant increases in utility demands. However, this decades old analysis has not been re-evaluated to determine if the current proposed change in crude slate would result in increased impacts within the framework of the VIP or if the changed regulatory framework requires more aggressive mitigation.

E. Does the VIP FEIR Mitigate The Impacts Of Refining Tar Sands Crudes?

The Valero Improvement Project is designed to process increased amounts of heavy sour crudes such as Canadian tar sands crudes. It identified some of the impacts of this proposed switch in crudes, including an increase in the amount of electricity that

⁶⁸ Murray R. Gray, Tutorial on Upgrading of Oil Sands Bitumen, University of Alberta, Available at: <http://www.ualberta.ca/~gray/Links%20&%20Docs/Web%20Upgrading%20Tutorial.pdf>.

⁶⁹ See, for example, James G. Speight, Synthetic Fuels Handbook: Properties, Process, and Performance, McGraw-Hill, 2008, Appendix A.

would be used (23 MW), an increase in the amount of natural gas that would be burned, and an increase in the amount of hydrogen that would be required. All of these increases in utilities also increase emissions and were mitigated to various degrees in the VIP FEIR as of a 1999 to 2001 baseline. However, this is not the correct baseline to evaluate the Crude by Rail Project. These increases in utilities, concomitant emission increases, and proposed VIP mitigations must be evaluated relative to the physical baseline at the time of the Crude by Rail Project environmental review, or 2009 to 2011.

1. The Impacts from VIP and Crude by Rail Project Must Be Considered Together

The VIP environmental analysis was performed over 10 years ago. Much has changed in the last 10 years, from the suite of tar sands products available in the market, to the transportation options (ship was considered feasible 10 years ago, today, rail is required), to the timing of implementation of the VIP, to the regulatory framework. Thus, a new, full, thorough analysis is required in conjunction to the proposed Crude by Rail Project. The impacts of importing unidentified crudes by rail cannot be reasonably evaluated without keying off of this prior analysis. Some examples follow.

The VIP FEIR, for example, assumes that the use of a higher percentage of sour crudes would mitigate increases in VOC emissions from increasing crude throughput. VIP RTC, p. IV-61. The reported increase in fugitive VOC emissions over the 3-year baseline 1999-2001 was only 3 ton/yr, which at the time was less than the CEQA significance threshold. VIP DEIR, Table 4.2; VIP Addendum, Table 2. However, this assumed heavier crudes would be refined under the VIP than were refined in the 1999-2001 baseline, which offset most of the increase in fugitive VOC emissions from a 25% increase in crude throughput under the VIP. These VOC emissions include large amounts of hazardous air pollutants, such as benzene, toluene and xylenes, that result in significant health impacts, including cancer.

However, the proposed Crude by Rail project asserts that the imported crudes could include up to 70,000 BPD of light, low density crudes. These crudes have a much higher vapor pressure than the crude slate contemplated in the VIP FEIR and would significantly increase VOC emissions from tanks, pumps, compressors, valves, and connectors throughout the Refinery compared to the scenario analyzed in the VIP FEIR. Further, the FEIR explicitly assumes that the imported heavy sour crudes would mitigate increases in VOC emissions. This assumption did not consider the fact that diluents are now widely used to blend with the crudes. Or that light shale crudes may be imported, which would not offset VOC increases. These diluents or shale crudes consist of light hydrocarbons, including large amounts of benzene, toluene and xylene, which would increase VOC emissions from tanks, pumps, compressors, valves, and connectors throughout the Refinery.

The BAAQMD CEQA significance threshold for VOCs is 15 ton/yr. Assuming 70,000 BPD of the crude throughput or 42% of the total, is light sweet crude, as now asserted in the Crude by Rail project, the VOC emissions would increase to more than 104 ton/yr ($73 \times 1.42 = 104$) or by 31 ton/yr ($104 - 73 = 31$). This exceeds the BAAQMD

CEQA significance threshold by a factor of two and is a very significant unmitigated impact, triggering an EIR.

Actual increases could be much higher under any of the currently understood plausible scenarios, importing light sweet crude under the Crude by Rail Project, or importing diluent-blended DilBit under the VIP project. These increases in VOCs from importing a light sweet crude or a diluent blended tar sands crude would greatly exceed the 15 ton/yr VOC threshold as demonstrated above. Alternatively, assuming just the 25% increase in throughput under the VIP, based on light sweet crudes, the fugitive VOC emissions would increase from 73 ton/yr in the 1999 to 2001 baseline to 91.25 ton/yr ($73 \times 1.25 = 91.25$), or by 18.25 ton/yr ($91.25 - 73 = 18.25$). Thus, fugitive VOC emissions are a significant undisclosed impact of the Crude by Rail Project, requiring an EIR. These increases were not considered in either the VIP FEIR or the IS/MND and are a significant unmitigated impact of the Project.

2. The Impacts from the VIP Project and the Crude By Rail Project Are Cumulatively Considerable

The VIP Project is still being constructed. The last portion of this project, the new Hydrogen Plant, will be under construction at the same time that the new rail terminal is being constructed. The Initial Study estimated that the daily average construction exhaust emissions from building the rail terminal would be 51.9 lb/day. IS, Table 3-1. The CEQA significance threshold is 54 lb/day.⁷⁰ The VIP FEIR did not calculate construction emissions, as this was not required at the time, an example of the change in regulatory framework. However, based on my experience calculating construction emissions for many projects, the NOx emissions from constructing the Hydrogen Plant would exceed 2.1 lb/day and thus NOx emissions from simultaneously constructing the Hydrogen Plant and the Crude by Rail project would be cumulatively significant.

3. The Regulatory Framework Has Changed

Ten years have passed since the environmental analysis was done for the VIP and the FEIR was certified. As the VIP FEIR was certified in 2003, and amended in 2007, the regulatory and informational framework within which the Project would be developed today has changed dramatically, rendering the 2002 analysis obsolete.

Since the VIP FEIR was certified in 2003, new scientific evidence about the potential adverse impacts of air pollutants has become available, and in response, new guidance has been published and several federal and state ambient air quality standards have been revised. These include:

⁷⁰ Staff-Recommended CEQA Threshold of Significance, Available at: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/Staff-Recommended%20and%20Existing%20CEQA%20Thresholds%20Table%2010-07-09.ashx?la=en>.

- The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
- The EPA lowered the 24-hour PM_{2.5} standard from 65 µg/m³ to 35 µg/m³ in 2006. EPA designated the Bay Area as nonattainment of the PM_{2.5} standard on October 8, 2009.
- On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010.
- The EPA promulgated a new 1-hour NO₂ standard of 0.1 ppm, effective January 22, 2010.
- The EPA issued the greenhouse gas tailoring rule in May 2010, which requires controls of GHG emissions not contemplated in the VIP FEIR.
- The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
- The EPA issued a final rule for a national lead standard, rolling 3-month average, on October 15, 2008.

Emissions must be reduced to assure that these new regulatory levels are not exceeded. Lead, for example, can be present in very high concentrations in fugitive dusts from coke storage, handling, and export, especially when heavy sour crudes are being processed. There is a long history of nuisance coke dust issues at this Refinery that impact residents. See, e.g., VIP DEIR, p. 4.2-14. The VIP would increase coke production and thus fugitive coke dust emissions with elevated lead levels. The proposed Crude by Rail Project also could increase coke production, depending upon the specific "North American-sourced crude" that it imports.⁷¹ This possibility cannot be eliminated based on the record. The California Air Resources Board has concluded there is no safe threshold level of exposure for lead. Any amount poses significant health risks. Thus, the increase in coke fugitive emissions admitted in the VIP EIR and facilitated by the Crude by Rail Project are a significant public health impact under today's regulatory framework.

The VIP DEIR assumed health impacts from coke dust exposure would be mitigated by complying with the then-current PM₁₀ and PM_{2.5} regulations. VIP DEIR, p. 4.8-14. However, these have been significantly lowered and an ambient air quality standard for lead has been promulgated. There has been no demonstration that the increase in lead-laden coke dust, that could reasonably be expected to result from the Crude to Rail Project, could comply with these new standards or that such compliance would mitigate lead health impacts, given the CARB's zero threshold finding.

⁷¹ The VIP DEIR did not disclose the actual coke increase, but did acknowledge that it would increase coke exports over the dock by 12 ships per year and by rail of 5 rail cars per day. VIP DEIR, p. 3-52. The capacity of a coke ship and coke rail cars was not disclosed.

Similarly, very high concentrations of NO₂ are present in the exhaust emissions from diesel train engines that would be used at the newly proposed rail terminal. Based on my work at other rail loading terminals, these NO₂ emissions are routinely high enough to exceed the new 1-hour NO₂ standard. While annual NO₂ emissions may be offset of reducing ship imports, the ambient impacts would occur at different locations and times, exceeding the new 1-hour NO₂ standard. This was not considered in the IS/MND and is a significant impact that requires that an EIR be prepared. These emissions can and must be mitigated, for example by using an electronic positioning system,⁷² rather than the locomotive engine, to move the cars through the unloading facility.

III. ACCIDENTAL RELEASES WILL INCREASE

The Benicia Refinery was built before current American Petroleum Institute (API) standards were developed to control corrosion and before piping manufacturers began producing carbon steel in compliance with current metallurgical codes. While some of Benicia's metallurgy was updated as part of the VIP, metallurgy used throughout much of the Refinery is likely not adequate to handle the unique chemical composition of tar sands crudes without significant upgrades. There is no assurance that required metallurgical upgrades would occur as they are very expensive and not required by any regulatory framework. Experience with changes in crude slate at the nearby Chevron Refinery in Richmond suggest required metallurgical upgrades are ignored, leading to catastrophic accidents.⁷³ The IS/MND is silent on corrosion issues and metallurgical conditions of the Refinery.

Both DilBit and SynBit crudes have high Total Acid Numbers (TAN), which indicates high organic acid content, typically naphthenic acids. These acids are known to cause corrosion at high temperatures, such as occur in many refining units, e.g., in the feed to cokers. As a rule-of-thumb, crude oils with a TAN number greater than 0.5 mgKOH/g⁷⁴ are considered to be potentially corrosive and indicates a level of concern. A TAN number greater than 1.0 mgKOH/g is considered to be very high. Canadian tar sands crudes are high TAN crudes. The DilBits, for example, range from 0.98 to 2.42 mgKOH/g.⁷⁵

Sulfidation corrosion from elevated concentrations of sulfur compounds in some of the heavier distillation cuts is also a major concern, especially in the vacuum

⁷² See, for example, Oregon Department of Environmental Quality, Standard Air Contaminant Discharge Permit, Coyote Island Terminal, LLC, July 24, 20120, p. 3, Condition 1.1.a (an electric powered positioning system for maneuvering railcars through the Railcar Unloading Building).

⁷³ U.S. Chemical Safety and Hazard Investigation Board, Interim Investigation Report, Chevron Richmond Refinery Fire, Chevron Richmond Refinery, Richmond, California, August 6, 2012, Draft for Public Release, April 15, 2013, Available at; <http://www.csb.gov/chevron-refinery-fire/>.

⁷⁴ The Total Acid Number measures the composition of acids in a crude. The TAN value is measured as the number of milligrams (mg) of potassium hydroxide (KOH) needed to neutralize the acids in one gram of oil.

⁷⁵ www.crudemonitor.ca.

distillation column, coker, and hydrotreater units. The specific suite of sulfur compounds may lead to increased corrosion. The IS/MND did not disclose either the specific suite of sulfur compounds or the TAN for the proposed crude imports.

A crude slate change could result in corrosion from, for example, the particular suite of sulfur compounds or naphthenic acid content, that leads to significant accidental releases, even if the crude slate is within the current design slate basis, due to compositional differences.

This recently occurred at the nearby Chevron Richmond Refinery. This refinery gradually changed crude slates, while staying within its established crude unit design basis for total weight percent sulfur of the blended feed to the crude unit. This is the scenario the IS/MND and VIP FEIR assume will mitigate all crude slate issues. However, the sulfur composition at Chevron Richmond significantly changed over time.⁷⁶ This change increased corrosion rates in the 4-sidecut line, which led to a catastrophic pipe failure in the #4 Crude Unit on August 6, 2012. This release sent 15,000 people from the surrounding area for medical treatment due to the release and created huge black clouds of pollution billowing across the Bay.

These types of accidents can be reasonably expected to result from incorporating tar sands crudes into the Benicia slate, even if the range of sulfur and gravity of the crudes remains the same, unless significant upgrades in metallurgy occur, as these crudes have a significant concentration of sulfur in the heavy components of the crude coupled with high TAN and high solids, which aggravate corrosion. The gas oil and vacuum resid piping, for example, may not be able to withstand naphthenic acid or sulfidation corrosion from tar sands crudes, leading to catastrophic releases.⁷⁷ Catastrophic releases of air pollution from these types of accidents were not considered in the IS/MND.

Refinery emissions released in upsets and malfunctions can, in some cases, be greater than total operational emissions recorded in formal inventories. For example, a recent investigation of 18 Texas oil refineries between 2003 and 2008 found that “upset events” were frequent, with some single upset events producing more toxic air pollution than what was reported to the federal Toxics Release Inventory database for the entire year.⁷⁸

⁷⁶ US Chemical Safety and Hazard Investigation Board, 2013, p.34 (“While Chevron stayed under its established crude unit design basis for total wt. % sulfur of the blended feed to the crude unit, the sulfur composition significantly increased over time. This increase in sulfur composition likely increased corrosion rates in the 4-sidecut line.”).

⁷⁷ See, for example, Turini and others, 2011.

⁷⁸ J. Ozymy and M.L. Jarrell, Upset over Air Pollution: Analyzing Upset Event Emissions at Petroleum Refineries, Review of Policy Research, v. 28, no. 4, 2011.

July 1, 2013

Via Fax to
City of Benicia Community Development Department
Attn: Amy Million
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637



Re: Notice of Intent to Adopt a Mitigated Negative Declaration for the Valero Crude by Rail Project

Dear Ms. Million:

We, the undersigned, are writing to you on behalf of our organizations and our many thousands of members to express concern over the potential for grave environmental and public health impacts of the proposed Valero Crude by Rail Project, for which a proposed Mitigated Negative Declaration (MND) was issued on May 31st, 2013. The MND for this project is seriously deficient in its environmental analysis in many regards, including adverse impacts to air quality, public health, public safety, noise, general hazards and ecological risks, not only to residents of Benicia but also to the entire San Francisco Bay Area. At a minimum, a full Environmental Impact Review must be performed before this project can move forward.

The MND fails to address potentially significant air pollution and other impacts caused by refining additional amounts of lower quality crude oil—including from the Canadian tar sands—that could be facilitated by the project. Valero has been clear about its intentions to increase Western Canadian crude oil imports into its California refineries in remarks to investors, and independent market research confirms that the proposed Benicia facility is likely to facilitate imports of significant volumes of tar sands crude blends. The probability of the project facilitating additional, lower quality crude supplies and the resulting impacts on air quality and public health are not discussed or evaluated in the MND.

Refining increased volumes of the Western Canadian diluted bitumen products, which the proposed facility would make feasible, presents unique and significant air quality, public health, safety and ecological and water quality impacts. The following impacts would far exceed the impacts of conventional crude oil feedstocks:

1. The “diluent” used to make heavy “bitumen” or tar sands flow into and out of railcars contains highly volatile organic chemicals, including extremely toxic ones like benzene, at much higher concentrations than conventional crude oil; and is likely to be released during transport and refining.
2. The heavy bitumen component of the tar sands oil contains many toxic constituents including heavy metals such as lead at much higher concentrations than conventional crude oil and which are likely to be released during the refining process.
3. The heavy bitumen is also much more energy intensive to refine than conventional crude. Due to the composition of heavier, longer chain hydrocarbons, these denser crude oils require greater use of heaters, boilers, hydro-treating and cracking and greater hydrogen use, all of which creates greater emissions of smog- and soot-forming pollutants and toxic chemicals.
4. Dilbits are associated with greater levels of strong odors due to their composition including a variety of sulfur containing compounds, such as mercaptans, at higher levels.

5. Refining of heavy bitumen or tar sands leads to increased coke production, which in itself is a hazardous compound leading to storage and disposal issues including the potential for coke dust from storage piles to impact nearby residents, as has been documented near the Marathon refinery in Detroit, Michigan.
6. Dilbits are more corrosive than conventional crude oil, increasing the risk of refinery accidents similar to the August 6, 2012 fire at Chevron Richmond, for which lower quality crude oil was found to be a contributing factor.
7. Rail car spills of dilbit would be catastrophic to the fragile San Francisco Bay Delta. This is because the diluent – typically natural gas condensates acting as a solvent - helps the oil spread on surface waters. The diluent typically evaporates leaving the very heavy bitumen to sink, creating an exceptionally difficult and expensive clean-up. This was found to be the case in Kalamazoo, Michigan after a 2010 pipeline ruptured, releasing bitumen and causing well documented and widespread public health impacts and lasting contamination to this day (three years later).

The MND also fails to fully consider the noise impacts of this project, which will bring four 50-car trains to the refinery each day, with operations predominantly at night but potentially at all hours (“24 hours per day/7 days per week/365 days per year”). In addition to noise impacts, the additional half hour each day of blocked access due to trains crossing the Park Road intersection would be a nuisance and potentially a safety issue to the nearby community. A grade separation should be evaluated as potential mitigation. The analysis fails to consider the horns and noise of the four additional trains going through at-grade crossings, particularly at night when most of the activity is expected. Noise has been associated with many health impacts such as heart disease and stroke, as well as worsening children’s mental health, concentration, and classroom behavior at school. An Environmental Impact Review must gauge existing levels of refinery noise and related communication interference, sleep interference or physiological responses; and predict future levels associated with the Project. Finally, we note that with respect to the level of rail service proposed here (4 50-car trains per day), the City of Benicia needs to demonstrate that it has the authority to impose and fully enforce such a limit consistently with federal law.

Due to all of the serious potential impacts from the Valero Crude by Rail project listed here, the lack of sufficient information to properly evaluate the project and the potential for serious and irreversible harm to the greater San Francisco Bay Area caused by the import of exceptionally toxic substances through this Project, we urge the City of Benicia to perform a thorough Environmental Impact Review evaluating these impacts and all appropriate mitigation options, before proceeding. The significant environmental impacts of this proposed project must be fully mitigated before it can be approved. We hereby reference the detailed and expert comments submitted by the Natural Resources Defense Council on July 1, 2013; and strongly urge your consideration of our concerns.

Sincerely,

Greg Karras, Senior Scientist
Communities for a Better Environment

Denny Larson, Executive Director
Global Community Monitor

Michael Marx, Director, Beyond Oil Campaign
Sierra Club

Edward A. Mainland, Co-Chair, Energy-Climate Committee
Sierra Club California

Michelle Myers, Director
Sierra Club San Francisco Bay Chapter

Victoria Brandon, Chair
Sierra Club Redwood Chapter

David W. Campbell, Secretary-Treasurer
United Steelworkers Local 675

David Schonbrunn, President
Transportation Solutions Defense and Education Fund (TRANSDEF)

Azibuike Akaba, Policy Analyst
Regional Asthma Management & Prevention (RAMP)

Jill Ratner, President
Rose Foundation for Communities and the Environment

Jess Dervin-Ackerman, Chair
350 Bay Area



LOCAL UNION 180

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

SERVING NAPA AND SOLANO COUNTIES SINCE 1901

STAN NELSON
PRESIDENT



DAN BROADWATER
BUSINESS MANAGER

Brad Kilger
Benicia City Manager
250 East L Street
Benicia, Ca. 94510

July 1, 2013

Dear Mr. Kilger,

My name is Dan Broadwater, Business Manager of IBEW Local 180. I represent over 600 Electricians in Napa and Solano Counties, many of which have worked off and on at the Benicia Valero Refinery. The projects associated with the VIP (Valero Improvement Projects) have benefited us all, workers as well as residents of Solano and Napa Counties. Fair wages, money spent by local construction workers, a safe work site and a community partner such as Valero makes it a win-win proposition. The Flue Gas Scrubber was an excellent example of the partnership between Valero Refinery Benicia and the construction workers of the Napa Solano Building and Construction Trades. It offered over a million hours at a safe worksite along with benefiting the environment. The Oil by Rail project, in my opinion will support our joint partnership with Valero and offer environmental benefits.

I urge your support and respectfully request my letter be forwarded this to the Planning Commission and City Council for approval of the Oil by Rail project.

Sincerely,

Dan Broadwater
Business Manager IBEW Local 180

Amy Million - Fwd: Re: Expansion of Valero Rail Delivery of Oil

From: Brad Kilger
To: Amy Million
Date: 6/12/2013 12:21 PM
Subject: Fwd: Re: Expansion of Valero Rail Delivery of Oil



FYI

>>> "Sabina Yates" <redfoxred@earthlink.net> 6/12/2013 12:20 PM >>>

Dear Mr. Kilger. I sent the following letter to the Benicia Herald today. I would like a copy to be submitted in the Project's Mitigated Declarations Declaration, as the concerns of Benicia residents.

To the Editor:

I am writing in opposition to the expansion of rail delivery for oil to Valero Refinery from any source.

I'm writing as a frequent Amtrak passenger. So many times my husband and I have sat on a railroad siding on an Amtrak train because freight traffic has priority and preference over passenger trains. Sometimes the waiting and subsequent delay have been over two hours long. Our train arrivals in either

Portland, Oregon or Martinez, California have rarely been on time.

The impact on Amtrak passenger travel schedules should be considered in allowing an increase in Valero rail activity.

Refinery jobs and increased City revenue should not be the only considerations in non-questioning of this project.

Sincerely,
Sabina Yates (707) 746-6428
302 Bridgeview Ct.
Benicia, CA 94510
redfoxred@earthlink.net

Amy Million - Fwd: Valero Rail Project

From: Brad Kilger
To: Amy Million
Date: 6/19/2013 11:22 AM
Subject: Fwd: Valero Rail Project



>>> Harry Newhall <hbn@speedwayprinting.com> 6/19/2013 9:36 AM >>>

Mr. Kilger:

It was suggested by Rodger Straw's article in the Benicia Herald that I contact you with my opinion on the Valero project. I support it whole heartedly. Any project that continues to help and make local business more successful should be supported. Obviously Mr. Straw and the Mayor do not like this proposal, but please do not be bullied by them. This is a good project for Benicia.

Harry Newhall
275 E L St.
Benicia CA, 94510

David R. Lockwood
495 Gray Court
Benicia, CA
94510

June 21, 2013



TO: Benicia City Council

RE: Valero Rail Project

A big thumbs-up for this project. I believe:

It will bring AMERICAN oil to the Valero Refinery; replacing foreign oil. Oil independence is crucial to our country's prosperity.

Less pollution generated by the delivery vehicles. Trains will generate far less pollution than ships tied up at our piers for extended periods.

American dollars will be used to pay American workers to deliver the crude oil to the refinery, not foreign shipping interests and their workers.

I believe Valero to be a very responsible entity to accomplish this project with the necessary safety factors considered to assure a safe and viable outcome for the company and that it will have a positive public impact.

I do hope the City of Benicia and the State of California will play the role of assisting Valero by quick permitting, etc. to allow this project to be completed as expeditiously as possible.

Respectfully

Handwritten signature of David R. Lockwood in cursive script.

David R. Lockwood

PS: I further hope that the Union Pacific Railroad company will see this increased traffic as an opportunity to expand and improve its main line service performance (both passenger and freight) between Benicia and Sacramento. Maybe a little encouragement from you would help.

From: Susan Hutchinson <hutchss@comcast.net>
To: Brad Kilger <Brad.Kilger@ci.benicia.ca.us>
CC: <Amy.Million@ci.benicia.ca.us>
Date: 6/27/2013 10:46 AM
Subject: support of Valero Crude by Rail project



Dear Mr. Kilger,

As a retired administrator in Benicia Unified and a 30+ year resident of Benicia, I want to advise you of my support of the Valero Crude by Rail project. Valero is a huge supporter of our lovely town, our schools, and so many of the activities that make Benicia such a special place to live and work.

I hope that the Benicia Planning Commission will consider my voice and the voices of its constituency.

Thank you in advance.

Susan Hutchinson
354 W Seaview Dr
Benicia, CA 94510



Amy Million - Valero Crude by Rail Project

From: Tom Cepernich <tomc@beniciafab.com>
To: "Brad.Kilger@ci.benicia.ca.us" <Brad.Kilger@ci.benicia.ca.us>, "Amy.Mill...
Date: 6/28/2013 2:20 PM
Subject: Valero Crude by Rail Project
CC: Carmelo Santiago <carmelos@beniciafab.com>

Dear Brad Kilger and Amy Million

I am writing in support of the Valero Crude by Rail project that has been proposed to the City of Benicia for approval. Based on the project, as far as the information I have been able to gather, it seems it would be a win-win situation for the City of Benicia and Valero. Not only will it reduce emissions and reduce our reliance on foreign crude, it will create 30 full time jobs at the refinery for operation of the Crude by Rail system. Also, it will bring 120 skilled jobs to the project for the projected 6 month construction time. The ability to process lower cost crude will also make Valero more competitive in the marketplace.

As I'm sure you are aware, Benicia Fabrication and Machine has been located in the Industrial Park on East Channel Rd for 30 years and has enjoyed a great relationship with them and also with Exxon before them. Our company sees no problems with traffic or commute issues, even though our business operates from 6:00 AM to 1:00 AM on a normal basis to 24 hours a day when we are working around the clock to provide service to our customers during maintenance shutdowns or emergencies.

Benicia Fabrication and Machine urges the City of Benicia to approve this project, which will benefit the City and also its major business partner.

Thank you for your time,

Tom Cepernich
President
Benicia Fabrication and Machine Inc.
707-745-8111
tomc@beniciafab.com

Confidentiality Note: This e-mail, and any attachment to it, contains privileged and confidential information intended only for the use of the individual(s) or entity named on the e-mail. If the reader of this e-mail is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that reading it is strictly prohibited. If you have received this e-mail in error, please immediately return it to the sender and delete it from your system. Thank you.

WRITTEN COMMENT #

Brad Kilger, City Manager
250 E. "L" St.
Benicia City Hall
Benicia, CA 94510



Dear Mr. Kilger,

Valero is one of the biggest taxpayers in Benicia, as well as one of the most philanthropic businesses. I support Valero's request for a permit to build its rail car facility. We must do all we can to support our longstanding business who have seen this city through hard times.

I've said it many times to many people, but I'll say it again: "God Bless Valero!"

Very sincerely yours,

Ralph Aguirre

City Manager, Brad Kilger
 Planning Commission Members
 City Staff
 Mayor and Council Members



June 30, 2013

Subject: Valero Crude by Rail Project Initial Study/Mitigated Negative Declaration

I am writing both as a citizen of Benicia, a Benicia Emergency Response Team member and as a sitting Commissioner on the Community Sustainability Commission.

I learned from the June 19th, 2013 Valero presentation to the Economic Development Board that this project would be a \$50m investment that would eliminate 32 deliveries of oil per year by ship. Daily rail deliveries would replace an every five day scheduled ship delivery. A ship, I learned carries 500,000 barrels vs. 700 barrels per rail car. The mitigated effect on Greenhouse Gas Emissions would be a reduction of 3,905 metric tonnes per annum.

Subsequently I heard, but have not verified, that preliminary work has already begun on this project in the Industrial Park.

Risk Assessment:

What most concerns me from community sustainability and emergency response views is the lack of information on the calculated risk from moving so much crude oil by rail through critical natural habitat and our community. There are studies, probably more current than the University of Illinois at Urbana-Champaign “Environmental Risk Analysis of Chemicals Transported in Railroad Tank Cars,*” that indicate the probability of rail accidents based on rail miles traveled, type of tank car class and environmental characteristics. What are the calculated risks? What type of rail tanker car is being used? What is that car’s probability for accident or derailment?

Table 2 Conditional Release Probabilities, given Derailment for Tank Cars used for Products of Interest

Car Class	Release Probability of a Derailed Tank Car	Car Class	Release Probability of a Derailed Tank Car
105A100W	11.44	111A100W6 - NI	10.45
105J100W -1/2 HS	9.17	111J100W3 -1/2 HS	26.67
105A300W	9.80	111A100ALW2 - NI	51.26
105J300W- 1/2 HS	8.26	111A60W7	10.05
105A500W	3.82	111A60ALW1 - NI	53.08
105J500W - 1/2 HS	3.16	111A60ALW2 - NI	51.26
111A100W1 - NI	34.07	111S60ALW1 - NI	53.08
111A100W2 - NI	32.32	111S60ALW2 - NI	51.26
111A100W3	28.99	114A340W - NI	14.24
111A100W5 - NI	32.32	211A100W1 - NI	34.07

Tar Sands

While it was stated that the crude oil being sent to Benicia would be from North America, predominantly the U.S. Midwest, I am most concern that the blended crude that is imported could have output from the highly controversial tar sand projects in Canada. This process is highly energy and water costly producing extremely high rates of GHG emissions in our fragile Earth atmospheric envelope. What verifiable guarantee will Valero provide to assure us that output from tar sands will not be processed in Benicia?

Emergency Response

Another concern is community safety. As rail cars will be transported and unloaded between the hours of 8PM and 5AM, how well equipped is Valero and Benicia to provide immediate alert/notification and protection of residents on the Valero side of Benicia?

Environmental Degradation

What is the environmental effect of 100 or more daily rail tank cars in stirring particulate matter into the air?

Environmental Impact

What Environmental Impact Reports have been prepared with the agencies responsible for Air, Land and Water quality?

Thank you,

Constance M. Beutel, EdD
1501 Shannon Ct
Benicia, CA 94510

References:

*Environmental Risk Analysis of Chemicals Transported

in Railroad Tank Cars

<http://ict.uiuc.edu/railroad/cee/pdf/Anand%20et%20al%202005%20IHHAI37.pdf>

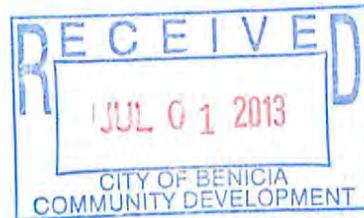
June 29, 2013

To Whom it may concern:

Please approve Valero's request for a permit to build an unloading rack at the refinery. This project will allow the refinery to bring in crude by rail and reduce emissions. This is a win-win project for business and the environment.

Thank You,


Sylvia J. Francisco



Amy Million - Fwd: Trainloads of potential pollution, and more climate killing energy

From: Brad Kilger
To: Amy Million
Date: 6/28/2013 8:48 PM
Subject: Fwd: Trainloads of potential pollution, and more climate killing energy

>>> <nancyfcarey@earthlink.net> 06/28/13 2:53 PM >>>

Dear Mr. Kilger,

This is an email from a concerned Benician weighing in on the very negative idea of Valero bringing to Benicia trainloads of poor quality crude oil, especially if it could come from the nasty tar-sands of Canada. For all the same reasons Obama should put the kabosh on the proposed XL pipeline across our heartland, we in Benicia should reject train cars full of the same hazardous stuff.

Aside from the environmental risks of transportation, we in Benicia have been promoting a "green, alternative, and sustainable" philosophy in this community for years. When evaluating this proposal, let's keep that in mind instead of permitting or promoting more polluting sources of fuel.

The NRDC has compelling information about this idea as you will hear on July 1st, if you have not already read their info on this topic.

Thank you for your attention to this.

Sincerely,

Nancy Carey

nancyfcarey@earthlink.net



Amy Million - Fwd: Oil Shipments by Rail

From: Brad Kilger
To: Amy Million
Date: 6/29/2013 8:48 PM
Subject: Fwd: Oil Shipments by Rail

>>> Lawrence Fullington Jr <lfullingto@sbcglobal.net> 6/29/2013 6:15 PM >>>

I think the oil shipments to Benicia by rail are an excellent idea! This is by far the most efficient way to move product, and one of the safest. It would also help Benicia's major oil company and outstanding corporate citizen, to help ultimately supply gasoline to market at a more reasonable price.

With most of our supply of crude coming from outside our shores, we are "cost vulnerable" at the mercy of other countries--some that hate us. It is important that we become as self sufficient as we can. This is a way to help do this! Larry Fullington



June 28, 2013

Amy Million, Planning Dept.
City of Benicia
250 East L St.
Benicia, CA 94510



Re: Valero Crude By Rail Project
Initial Study/Mitigated Negative Declaration
Use Permit Application 12PLN-00063

Dear Ms. Million:

Valero's Crude By Rail Project is a new method of crude delivery to the Benicia Refinery. After reviewing the documentation in the Initial Study/Mitigated Negative Declaration, I was pleased to see that the City and its consultant, ESA, did an exemplary job of the CEQA analysis.

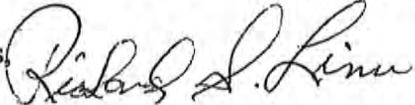
The actual facility is inside the refinery's existing footprint, so this project seems to be "more of the same" in terms of what one expects inside an area zoned for commercial/industrial use.

What I garnered from the study was the crudes brought in by rail are similar to what the refinery has run since it opened in 1969. In addition, I see that the refinery cannot process more crude than its permit allows. So, I am satisfied that all environmental concerns have been addressed.

It is more difficult to extrapolate the "good news" value from the study – those things that benefit all Benicians. As I see it, the good news is:

- Fewer emissions to the atmosphere with delivery by rail
- Construction jobs for laborers
- New jobs (30) to operate the facility
- Continued economic benefit to the City of Benicia, Benicia Unified School District, Solano County, and the State of California.

I encourage others to read the full study, as I believe they will come to the same conclusions that led me to fully endorse the Crude By Rail project.

Very truly yours, 

June 27, 2013

Mr. Rod Sherry, Chair
City of Benicia Planning Commission
250 E. L. Street
Benicia, CA 94510

Dear Mr. Sherry:

I was pleased to read in the Benicia Herald that Valero is proposing a project called "Crude By Rail" that will add new jobs in Benicia. According to the article, Valero is responsible for over 20% of the city's general fund budget. Adding new jobs and building a new project at the refinery can only benefit Benicia.

I urge you and your fellow Planning Commission members to vote in favor of Valero's request for a land use permit.

Regards,



Amy Million - Fwd: no on oil sands crude

From: Brad Kilger
To: Amy Million
Date: 7/1/2013 9:14 AM
Subject: Fwd: no on oil sands crude



>>> "Bea Reynolds" <breycas@comcast.net> 7/1/2013 7:01 AM >>>

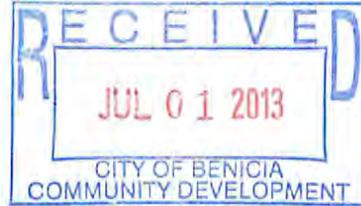
PLEASE! The proposal for Valero shipping crude into Benicia by rail would set up the probability of a disaster by immense proportions.

Benicia Suisun Marsh has all ready been highly impacted by the oil leaks from the various pipelines - (Kinder Morgan being one).and it has just barely begun to heal.

By building this rail spur.opening our beautiful and sensitive environment to the (potential) damage an oil spill is not good sense.and has no redeeming factors to Benicia and its residents.

Please! Stop the madness of big oil and corporations' proposal that will undoubtedly endanger our community; we don't need the liability. Valero has other refineries elsewhere.not here, please!

Sincerely,
Bea Reynolds
Safety Engineer/Consultant
PG&E Contractor Safety Management
[707-372-3591](tel:707-372-3591) cell
breycas@comcast.net



June 29, 2013

Mr. Brad Kilger, City Manager
City of Benicia
250 East L St.
Benicia ,CA 94510

Dear Mr. Kilger,

In this time of economic uncertainty, it is important for the City of Benicia to support businesses that bring new jobs and a strong tax base to the City of Benicia and other local government entities, like BUSD and the County. Therefore, I am writing in support Valero's crude by rail project.

Since 2000, Valero has been a good neighbor, supporting schools, libraries, parks, special events and more. In particular, I am keenly aware of Valero's support of the Benicia Education Foundation (hundreds of thousands of dollars).

If the City is serious about economic development, it must support our existing businesses. Economic development is not just about recruiting new companies to come to Benicia; it is about retaining our existing businesses, like the refinery.

Sincerely yours,

Tim Rose

Tim Rose - President
CFM-SF, Inc.

Amy Million - Fwd: Valero refinery and Canadian tar sands crude

From: Brad Kilger
To: Amy Million
Date: 6/29/2013 9:51 AM
Subject: Fwd: Valero refinery and Canadian tar sands crude

>>> Plewis <pjlewis363@gmail.com> 6/27/2013 8:24 PM >>>

Dear Mr.Kilger:

Please do not approve the project to bring tar sands crude here by rail. A spill of this type of crude would be a disaster as it is virtually impossible to clean up. Do not trust any study paid for by Valero that says we have nothing to worry about.

The project would also have a very negative impact on climate change. Looking at what emissions will be produced only locally is the wrong perspective as climate change is a global issue. No one questions that producing gasoline from tar sands instead of regular crude creates more CO2 emissions. We in Benicia should not not allow any local businesses to participate in that process if we can prevent it.

I recommend you read Bill McKibben's "Eaarth" to bring home how serious the climate change problem truly is. The website 350.org also has links to some very good articles. If we do not act now the problem will soon become unsolvable.

Rick Slizeski
363 Seaview Drive

Sent from my iPad



Amy Million - Fwd: new crude-by rail project

From: Brad Kilger
To: Amy Million
Date: 6/29/2013 9:11 AM
Subject: Fwd: new crude-by rail project

>>> Andy Smith & Pat Toth-Smith <pattothsmith@aol.com> 6/28/2013 10:55 PM >>>

Dear Brad Kilger, We are long time Benician residents who own a home on west K. We are against the crude by rail project and worry about the safety of our marshes and bay with the potential for derailment. We are also concerned that it would increase contamination of our water supply when unloading the crude. (The potential for spills that leak into our streams then to the reservoir is of great concern to us) We drink Benician water. Also the waiting on Park ave as the trains block the roadways will also be a big nuisance. Sincerely, Pat Toth-Smith and Andy Smith



Amy Million - Valero Crude Rail Project

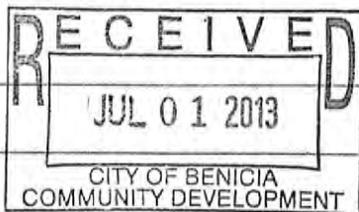
From: Don Stock <dons@overaa.com>
To: "Amy.Million@ci.benicia.ca.us" <Amy.Million@ci.benicia.ca.us>
Date: 6/29/2013 10:18 PM
Subject: Valero Crude Rail Project

To the City of Benicia,

As a Benicia resident for 24 years I fully support the Valero Crude Rail project. It will be safer for our environment, bring more jobs to our community, and increase the taxes to the city from Valero. We understand it will also reduce our dependence on foreign crudes. We believe this project is good for our community and us as residents. Valero has always been a good neighbor and we believe they should be supported in this project.

Respectfully, Don and Gail Stock
145 Chelsea Hills Dr
Benicia, Ca 94510
707 747-6354





Janeen Thomas
P.O. Box 2225
Benicia CA

94510

707
746-6758

July 1 2013

Rail Project.

I have every confidence
that Valero Refinery will run
a safe operation.

We've had problems in the
Suisun marsh but I don't believe
it has anything to do with the
Refinery.

In their Waste Water Treatment
Plant they run above the
standards set by California

It is getting more and more
difficult to operate in
California.

If this project fails
I am afraid Valero will leave
Benicia

There is a safe way to do this.

James Thomas

MARILYN J. BARDET
333 East K Street, Benicia CA 94510
707-745-9094 mjbardet@comcast.net

June 30, 2013

City Manager Brad Kilger,
Planning Commissioners: Chair Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell & Councilmembers Hughs, Schwartzman & Strawbridge
City of Benicia, 250 East L Street, Benicia CA 94510

SUBJECT: Valero Crude-By-Rail Project Initial Study/Mitigated Negative Declaration

Dear Mr. Kilger, Planning Commission Chairman Sherry, Planning Commissioners, Community Development staff, and Mayor Patterson and Councilmembers:

My comments overall reject the City's determination that a Mitigated Negative Declaration {MND} is a sufficient level of environmental review of Valero's Crude-by-Rail Project as described and discussed in ESA's Initial Study and Environmental Checklist. With regard to determining whether a more thorough environmental review is necessary, CEQA Guidelines §15064 describe the conditions under which an Initial Study is called for, and when an EIR is determined to be required:

"Must A Lead Agency Prepare an Initial Study?

- *If the need for an EIR is unclear, the lead agency must prepare an initial study.*
- *If the lead agency can determine an EIR will be required, an initial study is not required."*

It follows from the fact that an Initial Study was prepared that the City-as-lead-agent was *at the very least unclear, if not confused*, about whether a full EIR was necessary to review the proposed rail project.

We need clarity. There are too many missing discussions in the Initial Study and too many unanswered questions. My hope, and the hope of many, is that you will agree that sufficient, thus, more specific description, evidence and evaluation of potentially significant negative impacts are needed to enable the public to understand *"the whole of the project,"* as required under CEQA. Mitigation measures that would reduce or eliminate the severity of those environmental effects must be designed and submitted *at the time of the environmental review*. The mitigation measures must address the proposed Project's operations *over the course of the Project's lifetime*.

My comments give examples of the regrettable limitations of the Initial Study's Project Description and reject the conclusions of the Checklist. The Initial Study's limited findings suggest that there would be no further concerns than those already exposed by its review, and that the burden of a comprehensive investigation of any other foreseeable and potentially significant adverse impacts should not be necessary. I disagree.

The City's sign-off on an MND on May 31, 2013, by the former Community Development Director, is perhaps owing to the many constraints on staff's time in reviewing the Study. This is understandable, but not acceptable: the MND basically echoes the Initial Study's findings without evidence of independent questioning and further scrutiny. A reader should not have to read between the lines of the Initial Study to

discover the extent of the environmental ramifications of the Project, nor what further discussion is necessary.

Valero's Project would replace equivalent deliveries of crude by ship, and would be the second refinery rail project in the Bay Area. According to online news reports, Phillips 66 (formerly Conoco-Phillips) in Rodeo currently imports crude by rail. This fact was not discussed anywhere in the Initial Study or Environmental Checklist; yet learning this fact from other sources only underscores that we are not yet sufficiently informed by Valero, ESA or the City about the extent of the Project and its contributions to cumulative impacts: for example, the number of foreseeable crude-loaded trains that would be moving through Benicia and the Bay Area on Union Pacific's tracks. Other refineries in Contra Costa may be considering similar rail projects in the future (Tesoro's Golden Eagle, in Martinez). We therefore have no real idea, based on accurate estimates, of the potentially significant and even catastrophic impacts that could occur, given the foreseeably intensified use of Union Pacific's tracks for transporting crude and other hazardous materials. It is required under CEQA to identify and address potential cumulative negative impacts of other similar large-scale projects that would be concurrent or that are planned for the future in the region.

The importation of new "North-American-sourced crudes" – the vague, unqualified term used throughout the Initial Study – is not discussed with regard to the Phillips 66 crude-by-rail operation or other Bay Area refineries' future plans for crude-by-rail projects; nor, for that matter, the cumulative adverse impacts that are foreseeable wherein other CC County refineries, which are now already processing a variety of sour crude types, might also be planning to import by rail, in the near future, and/or by whatever *indirect* means, more heavy "North-American-sourced crudes," especially from Alberta Canada's tar sands. (Chevron Refinery, Richmond).

Valero has declared publicly (at CAP meeting and recent Economic Development Board meeting) that they will not be importing "tar sand crude" and their explanation has been that bitumen has to be transported in heated railcars and would have special off-loading conditions. If this is truly the case, why is there no discussion in the Study that would reflect Valero's commitment and explanation? And if they have made a "spoken" commitment to Benicia residents, why is this not committed in writing? Perhaps because they would not be importing "pure bitumen," which they assume, to their advantage, that members of the public mean when they refer to "tar sands" crude. Neither Valero nor the Initial Study have discussed a "diluted bitumen" blend or "dilbit" such as "Western Canada Select." (see my Comments).

Importing crude by rail using existing RR routes is a relatively recent phenomena now pushed by the oil industry to access various sources of heavy crude types that are being mined from shale formations in North Dakota and elsewhere in the Midwest, in California's Central Valley, and also from the vast network of open pit mining operations in Alberta's tar sands. If we're to grasp and assess "the whole" of the Valero rail project, we must not only ask Valero to be forthcoming about local and regional environmental ramifications of switching to rail as the method of importing crude, but also about the heavy crude types that would be imported under the proposed Project to be processed in Benicia. Getting access to "North American-sourced crudes" explains Valero's switch from ship to rail, and their desire to have had the Crude-by-Rail Project on time and on track for operation by late 2013 or early 2014, (from the Project construction timeline outlined in the Study. See comments).

Over the last 15 years, I've reviewed project applications, initial studies and draft EIR's, and have always tried my best to inquire into the details and facts of a proposed project and to imagine their

foreseeable effects for Benicia: the Koch Industries' "Coke Dome" project for the Port; the Tourtelot military cleanup for Southampton's residential build-out; the Valero Improvement Project [VIP]; Valero's EIR Addendum for VIP; several Seeno project draft EIRs; and also the draft EIR for the Arsenal Specific Plan. These projects envisioned land-use changes and/or long-range consequences for the community over project life-spans of 25 years and beyond. Of those mentioned, only the Tourtelot Restoration Project and Valero's VIP have gone forward successfully, much to everyone's credit.

As a member of the Good Neighbor Steering Committee [GNSC] for 13 years, and as a continuing member and former chair of Valero's Community Advisory Panel, I've worked hard with others to learn about the refinery, its VIP upgrades and local impacts. Representing the GNSC, I also currently serve as a non-voting member on the Community Sustainability Commission. I recognize the global effects of burning fossil fuels – the increasing, higher levels of atmospheric CO₂ pumped into our atmosphere by human activities that contribute to global warming and climate changes. There is a growing local, regional and national consensus that we must conserve non-renewable resources, conserve energy and water, and transform our economy into a more sustainable one by working toward creation of reliable, alternative energy systems that do not put global climate further at risk for even more rapid, unprecedented changes.

Challenges made to Valero with regard potential impacts of their VIP and its later additional upgrades were aimed to ensure that their technical improvements would reduce water and energy use, reduce significant "criteria" emissions, and comply with the intent and spirit of AB32, the California Global Warming Solutions Act. The Project also must conform to the Benicia General Plan whose overarching goal is "sustainable development" [General Plan, page 22]. This governing goal explicitly declares the widening and rippling effects of whatever we do here in Benicia – how we conduct business and live our lives. The Benicia Climate Action Plan sets local strategies for modifying and changing our habits to create a more sustainable community.

As part of the VIP's permitting requirements, Valero was required to install a scrubber that ultimately replaced its main stack and has proven to greatly reduce ozone precursor gases – a benefit to our local community and the regional air basin. But now we must look forward and exercise our critical faculties to assess Valero's new Crude-by-Rail Project with its deep and wide ramifications that are local, regional and global.

Thank you for your consideration of my comments. I am glad to join you in the Project's review.

Marilyn Bardet

COMMENTS:

1. General observations regarding the limited scope of review of the Initial Study and Environmental Checklist's Evaluation of Environmental Impacts:

The MND, signed off on May 31, 2013, by the former Community Development Director, summarizes the findings of the City-as-lead-agent:

“The City of Benicia finds that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because mitigation measures have been added to the project that avoid or reduce all impacts to a less than significant level.”

The introduction to the Checklist, “Evaluation of Projects” [p II-1] outlines a number of CEQA criteria for evaluating impacts of a project. Criteria #2 states: **“All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.”**

In reviewing ESA's Initial Study [“Study”], the City apparently found no foreseeable problems or impacts that were not addressed in the Study and the Environmental Checklist [“Checklist”]. The City's review apparently concurred *to the letter* with ESA's narrow Project Description and their assessments of impacts. The Checklist mainly focuses on impacts that would occur *during the Project's construction phases*. The Study does not describe the life-span of the Project, nor, thus, the foreseeable *and cumulative* potential significant negative impacts *over time* to Air Quality, Biological Resources; Geology/Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use Planning; Noise; and Transportation and Traffic. (See further comments for examples). It would be the job of an EIR to fully explore each of the CEQA areas of concern. There is minimal discussion, (seemingly meant to reassure the reader), about the actual operations of the Project.

According to the limited Project Description, Project operations would occur almost exclusively at the rail rack off-loading facility, located on Valero property east of the storage tanks. Scant, cursory description is provided about Union Pacific's role and involvement – running Valero-bound, Valero-owned, crude oil loaded railcars. Which corporation will be managing the crude-loaded trains with regard to scheduling, and considering *all trains* running on Union Pacific tracks? There is little or no evidence given to substantiate claims that there would be no significant off-site impacts that could not be mitigated. Mitigation Measure TRAN-1 is an example of an extremely limited view of possible impacts from trains traveling in and out of Valero property and beyond. There is no discussion of potentially *catastrophic* impacts – the potential “off site” impacts – that could foreseeably occur given where the Project's trains would be traveling, conveying “North American-sourced crudes” through miles of sensitive ecological areas.

The Project Description, therefore, seems to piece-meal the Project, as if the Project operations were limited to Valero property, and as if, somehow, they were not extended to the “off-site property” owned by Union Pacific – the RR tracks extending for miles to be used in the transport of crude to Valero's off-loading racks. Further, there is no adequate account of the potential effects over the lifetime of the Project of processing the various “North American-sourced crudes” projected to be imported by rail and processed in Benicia over years or decades.

The Project's construction phase was slated to begin in early 2013 and be completed in late 2013, thus operational by late 2013 or early 2014 [Appendix A1. "Air Permit Application. BAAQMD Overview 1.2, p. 1.]. From Valero's time-table for construction and operations' startup, the reader might assume that Valero had counted on the City to recommend its MND, and that therefore, the company, in planning its Project timetable, was not expecting that further environmental review would be required, or, that any other delay would hold up construction.

The Planning Commission hearing is scheduled for July 11; thus, the Project's construction startup date has long passed. Is the delay in reviewing the Project owing to the City's scheduling of the environmental review? Or, is there any *technical* reason for the delay on Valero's part? Although the BAAQMD Air Permit Application [Overview 1.2, p. 1.] reiterates Valero's assertion that no modifications to the refinery processing equipment would need to be made for the Project to proceed, is there any planned VIP technical upgrade that hasn't been completed that would be required to be completed and operational in order for the Project to be permitted? Has the Coker Unit expansion project that was scheduled to be completed in March 2013, indeed been completed? [VIP EIR Addendum, Table 2.5.1.1 "Project Schedule: Expand CKR, Light Ends, Silos..."]. I could find no mention in the Study of whether there would be increased production of residual coke from the processing of any of the "North American-sourced crudes" that might be imported – the bitumen-based crude (a diluted bitumen or "dilbit") produced from Alberta Canada's tar sands. (See related comments under #9, "Mandatory Findings of Significance.")

Regarding the Initial Study and Environmental Checklist on global warming effects: The Bay Conservation and Development Commission [BCDC] must be involved in evaluating potential impacts to the Suisun Marsh of the Crude-by-Rail Project. BCDC has issued public reports that present evidence-based modeling of the projected sea level rise that would inevitably affect San Francisco Bay and the Carquinez Strait. BCDC's publicly available map of shoreline areas that would be affected by sea level rise show the effects on Benicia's marsh and floodplain environs over the next 25 - 50 years through the end of the century. The Study and Checklist should reference and discuss the implications of the BCDC map as related to the Union Pacific rail routes through the Suisun Marsh, which is projected to be more prone to greater seasonal flooding over the next decades – the probable lifespan of the Project? – increasing the intensity and number of winter rain storms, whose effects may be made more severe by high tides in the Strait and earlier snow melt. The Union Pacific tracks are visible along a long stretch of



Goodyear Rd., within Benicia's city limit. The gravel railbed appears to be elevated approx. 18" - 24" above the marsh. The railbed itself was not flooded during the February, 2011 storm event that occurred along the length of Benicia's marsh surrounding the tracks. In the storm's immediate aftermath, I took pictures capturing the train tracks leading from the Industrial Park through the marsh, and specifically where flooding and pooling of the marsh around the tracks had most severely occurred. One of the only small service roads that crosses the tracks (not far from Organic Solutions, a company along Goodyear Rd.) was completely submerged except where it briefly crossed the tracks; therefore it was impassable to

vehicular traffic, including emergency vehicles. A sign was posted at the dirt road's junction with Goodyear Rd that said "Flooded.") Trains carrying crude could conceivably be threatened if there was any erosion or disturbance of the gravel rail bed and tracks. Trains



could be held up, (where? side-lined?), potentially stalled or derailed, with spills of crude oil. Description and analysis of potential significant impacts that might flow from such a *credible* worst case scenario are missing from the Study.

How would crude-loaded railcars be accessed in the case of a flood in Suisun Marsh if there were a train accident and spill of crude? What would be the emergency response plan? What would be the cleanup method? For diluted bitumen? The Initial Study doesn't provide answers.



3. AIR QUALITY IMPACTS:

[Initial Study; Environmental Checklist: 3. Air Quality p. II-10]

Mitigation Measure Air-1, “added to the project:” Air-1 references existing Bay Area Air Quality Management District’s [BAAQMD] protocols and policies that are meant to protect against dust and diesel emissions during construction phases of development projects. It also refers to “2010 CAP” which is a recent Air District plan. It bears quoting from the Study’s *minimal description* of the 2010 CAP. The thresholds for judging significance of air impacts are said by the Study not to be exceeded by the Project. It is not stated whether the air impacts evaluated are ones owing *only* to construction phases.

[From the Environmental Checklist – p. II-10]

“The 2010 CAP serves as a multi-pollutant air quality plan to protect public health and the climate.” . . . “The 2010 CAP’s control strategy includes revised and updated, and new measures in the three traditional control measure categories, including stationary source measures, mobile source measures, and transportation control measures. In addition, the 2010 CAP identifies two new categories of control measures, including land use and local impact measures, and energy and climate measures.” . . . “BAAQMD recommends that the agency approving a project where an air quality plan consistency determination is required analyze the project with respect to the following

questions: 1) does the project support the primary goals of the air quality plan?; 2) does the project include applicable control measures from the air quality plan?; and 3) does the project disrupt or hinder implementation of any 2010 CAP control measures? If all the questions are included in the affirmative, BAAQMD considers the project consistent with air quality plans prepared for the Bay Area (BAAQMD,2012).”

Apparently, ESA expected the public to know what BAAQMD’s “control strategies” and “new measures” are, but this is an *unfair* expectation. The Appendix does not include a pdf of the actual CAP 2010 document, or any other explanatory material to help our understanding of the Air District’s regulatory guidelines for judging “thresholds” for emissions impacts, etc. The reader should not have to hunt for documentation on the BAAQMD’s (nearly inscrutable) website. The reader reviewing the above quoted text can therefore have no idea whether the ESA in drafting the Initial Study, or the City in recommending the MND, accurately analyzed the Project *with respect to the questions the Air District recommended be raised*, as stated in the above quote. Accordingly, the adequacy of Mitigation Measure AIR-1 is highly suspect in this case. For example: there is no description or analysis of local air quality impacts to sensitive receptors who are employees in the industrial park, thus of persons who might be affected by cumulative emissions from *increased daily emissions* from all sources within the refinery, including the Rail Project.

Regarding emissions expected during operation of the Project:

[Environmental Checklist p.II-13]

Under item 3c, the proposed Project’s emissions are evaluated relative to BAAQMD’s thresholds for “attainment” for the Bay Area air basin that are protective of human health. Project emissions (including diesel, VOC’s and Particulate Matter - PM10 and PM2.5) are contributors to smog production. “Net emissions reductions” that are accounted for in the Study, *if they are reliable*, are calculated using statistical averaging to arrive at a figure that would represent a finding of “attainment” or “non-attainment” of federal and state standards for general smog conditions *within the region as a whole*. Accordingly, it is not explained by the Study that *local* emissions impacts *cannot* be assumed to be reduced by evaluations made using BAAQMD calculations that assess emissions impacts to the *whole air basin*.

“ . . . New stationary sources at the Refinery would include unloading rack and pipeline, which would result in fugitive emissions of ROG. The project would also include a change in service to existing Tank 1776 to allow it to store crude oil; however, because there would be no change in the amount of crude oil stored at the Refinery, there would be no net increase in tank-related storage mass emissions relative to baseline conditions. Overall, the proposed Project would result in reduced air emissions compared to the existing operations because delivering crude oil by rail car results in less emissions with the BAAQMD compared to delivering crude oil by marine vessel. See Table 3-2 for a summary of net emissions reductions that would be associated with the Project.”

“ . . . Regardless, long-term operations of the proposed Project would result in a beneficial impact to air quality in the BAAQMD.”

The final sentence in the evaluation reads like a statement of religious belief in the “*beneficial impact to air quality to the BAAQMD* [the Bay Area Air Basin]” that would be brought about by the advantages of the Project, mainly, replacing ship transport by train transport. There is no account of *local* air quality impacts from long-term Project operations, including cumulative impacts of exposure risks to

the Benicia community from existing and future-anticipated refinery toxic emissions (including from accidental releases with “spiking” of emissions, leaks, fires, etc.) in addition to Project-related emissions.

Under item 3d, the Study recommends that the lead agent (City of Benicia) evaluate the “*incremental toxic air contaminant (TAC) exposure risk to all sensitive receptors within a 1,000-foot radius of a project’s fenceline.*” The summary sentences in the discussion are as follows:

[Checklist: Air Quality, 3d, p. II-14].

“Long-term operations associated with the Project would generate TAC emissions from locomotive idling, locomotive transit, locomotive switching and from fugitive equipment and routine Tank 1776 leaks. The Applicant provided a screening level health risk assessment, as summarized in Table 3-3 which modeled the following sources using the ISCST3 air dispersion model: . . . [Table 3-3: Maximum Cancer and Noncancer Risk].” . . .

“The closest sensitive receptors to the proposed Project would be residences off Lansing Circle, approximately 2,700 feet northwest of the proposed Project site. There are no sensitive receptors within 1,000 feet of the proposed Project components.”

Lansing Circle is a residential cul-du-sac located in the northeastern corner of the Water’s End development that overlooks the refinery processing block, which is just south and east of the cited street, alleged to be the nearest location of “sensitive receptors” to the proposed Project railcar off-loading racks. There is no analysis in the Study or Checklist of emissions from the Project that would affect, for example, sensitive receptors – employees – working in businesses near the Union Pacific tracks and/or near the refinery’s off-loading racks.

The air emissions dispersal modeling referred to in the quote cited above is inadequate to address how toxic, volatile emissions can travel given different wind conditions, winds’ seasonal patterns and the topography of the area. The “wind rose” pictured in Figure 4.2-2 and Figure 4.2-3, on pages 44 and 45, in the Valero VIP EIR’s “Response to Comments” document should be included in the Appendix. Cumulative exposures to refinery emissions over time may present “non-cancer risks” to sensitive receptors – for example, *Benicia residents who are also employees of the industrial park*. It is well known that chronic bronchitis and asthma are aggravated and/or triggered by diesel exhaust emissions and other refinery/industrial processing operations (particulate matter - PM10 and PM2.5; VOCs, black carbon, and other Toxic Air Contaminants). Cumulative and chronic health impacts should be discussed and analyzed for receptors within residential areas nearest the refinery fencelines and also for those employees in the industrial park. Other contributing sources of air pollution must be considered in evaluating health effects that are related to potential significant *cumulative emissions* – air pollution conditions that can be chronic over time or “spiked” (acute) during releases, fires, etc – that would impact sensitive receptors in the community. (Contributors to cumulative air impacts from sources of PM 10 and PM 2.5 include freeway emissions, diesel emissions from ships and Valero’s coke trains, soot from fireplaces, pollen, and TAC emissions from other existing industrial polluters in the area.) To evaluate cumulative air emissions, other similar large-scale development projects that are proposed and planned for the area must be included in the calculations of air emission impacts in addition to Project-associated air emissions over time.

Further, cumulative air emissions from additional trains coming from CC County refineries (Phillips 66 and very possibly other refineries in the future) should be calculated as contributing to total cumulative Air Quality impacts, since Benicia, for most of the year, is downwind of Phillips 66, and Union Pacific’s rails run through CC County and into Benicia and continue north and eastward.

Regarding odors, Item 3e [Checklist, Air Quality, p. II-15]. This item discusses whether there would be “objectionable odors” that might affect “a substantial number of people.” The limited discussion of both potential impacts from construction phase and operations is as follows:

“Diesel equipment used to construct the project may emit objectionable odors associated with combustion of diesel fuel. However, these emissions would be temporary and intermittent in nature, thus odor impacts associated with diesel combustion during construction activities would be less than significant. There would be no change expected in the existing operational odors resulting from implementation of the proposed Project. This impact would be less than significant.”

Diesel fumes are considered by most people as highly noxious and offensive to smell, let alone that diesel exhaust fumes are toxic and can cause respiratory distress in sensitive receptors, *especially if the air is still and emissions are not dispersed*, as during weeks in winter when a cold damp fog sits on the ground and there is no wind. The Study’s discussion shows little concern about four train trips daily entering and leaving the industrial park, 365 days a year, that would create “unpleasant odors.” Locomotive exhaust would add cumulatively to the daily odors emanating from the refinery’s processing block, tank lids, and other sources (asphalt plant) that can be noticed and smelled “off site” in the industrial park southeast and east of the refinery. The Checklist’s assumptions do not take into account the numbers of people working in the vicinity of the Project.

Further missing from the Study’s discussion of odors and emissions impacts: westerly winds carry toxic gases and their odors eastward from the refinery processing block and would similarly waft emissions from the Project. According to calculations derived from the wind rose published in the VIP EIR “Response to Comments,” [cited above; Figures 4.2-2 and 4.2-3] approximately twenty percent (20%) of the of the year, mostly during late fall and winter months, the winds change direction and often die down, causing negative “off site” odors and air quality impacts to Benicia’s residential neighborhoods west and south of the refinery but also in the surrounding industrial park northeast, east and south of the refinery fencelines.

Cumulative adverse impacts from odors emanating from the Project should be calculated as potential *additional effects from toxic emissions from all sources, under favorable and unfavorable wind conditions, and, should be discussed as related to health risks to sensitive receptors in both the industrial park and residential neighborhoods.*

The following comments are intended to lend contextual breadth and depth from a local perspective to the Study’s evaluation of Air Quality impacts and are pertinent to my rejection of the Initial Study’s Environmental Checklist of Air Quality impacts and the alleged sufficiency of Mitigation Measure Air-1, the Study’s lack of analysis of cumulative emissions impacts and concern for health of local sensitive receptors. The comments also discuss the problem of analysis of local ambient air quality. These observations regard BAAQMD’s role and public mandate under the federal Clean Air Act.

BAAQMD’s mandate under the federal Clean Air Act is, as the Air District repeatedly advises, to ensure the general safety of the Bay Area’s air basin *as a whole* for human health. Accordingly, as a department of CAL-EPA, the Air District monitors the Bay Area air basin to ensure that the region meets “attainment” standards – safe thresholds set by federal and state regulation for smog-producing gases – e.g. ozone precursor gases including nitrogen oxides, sulfur dioxides, volatile organic compounds [VOC’s <http://>

iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do], greenhouse gases and particulate matter (PM10 and PM2.5). The Air District monitors polluting industries' emissions and quantifies them, using statistical averaging, to calculate the cumulative negative impacts to the air basin *as a whole*, thus to report to state (and federal) EPA regarding non-compliance with "attainment" goals for the region. However, it is little understood that The Air District has generally not seen it as their particular responsibility to be concerned or involved with monitoring ambient air quality with respect to human health in local neighborhoods and communities living in close proximity to a major polluting industry, such as a refinery or chemical plant. Local communities' desires to have monitoring stations installed within neighborhoods affected by refinery or other polluting industrial operations (with the purpose to better understand exposure risks, to accurately monitor for emission "spikes" in real time during accidental releases, etc.), have been mostly dismissed over the years as *not part of the general mission of BAAQMD*, and this is an ongoing frustration and active dispute with the Air District by the concerned communities of Richmond and Rodeo/Crockett, and also by concerned Benicians. A spectacular failure of the Air District to track "off site" emissions in real time during the Chevron Refinery fire in August 2012 is a prime example of the District's lack of preparedness or interest (or mandate as public servants?) to address *local emissions impacts* that may affect ambient air quality and thus human health in the vicinity of a major polluting industry, especially during time of accidental releases, fires or explosions.

Right now, in Benicia, various air-monitors that were purchased *for the benefit of the community* under specific terms of a Settlement Agreement negotiated in 2008 between Valero and the Good Neighbor Steering Committee have been unplugged and the trailer housing them closed up and stored on Valero's property, thus remaining inactive until further notice. Since the equipment's initial installation above Tennys Drive, a public access website has yet to be fully completed. (Participants in its development are Argos Scientific, the Good Neighbor Steering Committee and Valero.) The question hanging over the intended independent program is one of ownership. The City has refused to take ownership of the equipment on the community's behalf for what was intended to be a permanent, independent, educational Benicia Community Air Monitoring Program ["BCAMP"] to sample and analyze ambient air quality in real time and make data available to the public via a public access website. This equipment was meant to be flexibly used, including for mobile monitoring during accidents, monitoring air at school sites, and for such purposeful uses by Benicia High School's Green Academy science students.

It is a fact that the Air District has also shown little interest in the Benicia community's attempt to establish the local air-monitoring program as discussed here. It is unfortunate that the City of Benicia has not wanted to take responsibility for the monitors – equipment purchased for \$200,000 by the 2008 Settlement Agreement, which also provided support (\$50,000) for two years of maintenance and data analysis by an independent contractor (Argos Scientific). *Funding for an on-going program is not the point here.* It is disturbing that the City would reject ownership of the very tools to be useful for local ambient air monitoring on any given day, yet sign off on an MND for the Project, expecting the public to believe that the City has given the Initial Study its foremost attention with care to Air Quality impacts, with due consideration to protecting the public's health from potential negative "off-site" cumulative emissions effects of the Project, thus the refinery's total cumulative emissions impacts on the local community.

4. Biological Resources, [Checklist, p. II-19]. Mitigation Measure BIO-1: concerns Project construction activities during "*nesting season, Feb. 15 through Aug 31.*" If construction occurs during the nesting season, the Study states: "*a biologist experienced in conducting nesting bird surveys shall survey*

the Project area and all accessible areas within 500 feet.” The account goes on to briefly describe how nests would be protected during construction. Has the Department of Fish and Wildlife been contacted to review the Project?

The problem is, the Project is so narrowly defined that it appears to be limited to the immediate area surrounding the off-loading racks on Valero property.

For example, in item 4c, the following CEQA question is posed: “*Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?*”

The answer given presumes that “the Project” would only materially exist on Valero property, when logically, by extension, and common sense, it also exists along Union Pacific’s tracks, upon which trains would be carrying crude through significant stretches of protected marsh areas with seasonal pools and wetlands and through river flood plains. The Delta Plan envisions Suisun Marsh as an area for restoration, where certain endangered fish species and plants could be at risk from spills. And although the Project would only add a small amount of new track on Valero property, it is not clear in the Study or Checklist whether potentially significant impacts owing to Valero’s crude-loaded railcars traveling through sensitive ecologic areas on existing Union Pacific tracks would actually “count” as being potentially generated *as a result of the Project*, albeit such impacts are foreseeable, and *should* be discussed as a “credible worst case scenario” associated to Project operations. This begs a question about the limited Project Description and what it leaves out: there is no discussion of Union Pacific’s rail routes by which crude-loaded railcars would travel, and whether those RR routes are to be considered part of the Project as a whole.

5. Mitigation measure GEO-1 [Checklist. Geology & Soils, p. II-29]:

Mitigation GEO-1 is *promised* to be provided, presumably at a later date, which violates CEQA’s requirement that mitigation measures be planned and submitted at the time of a project’s review.

GEO-1 raises the question of seismic risks to the area of the Project including possible liquefaction. GEO-1 does not discuss what would possibly happen if a severe earthquake occurs when a train is traveling within Benicia along the marsh where subsidence of rails could occur or rail misalignment, or in the case when railcars are off-loading crude at the racks. Given the active seismic area of the Project, this is a “credible worst case scenario” that is not envisioned in the Checklist’s discussion of potentially significant seismic impacts that could indirectly affect the safety of Project operations and increase hazard risks, and also, potentially affect sensitive marsh and wetlands near Union Pacific’s tracks.

6. Greenhouse Gas Emissions [Checklist: Greenhouse Gas Emissions. p. II -34,35]

The Study’s discussion and Checklist is short on the subject of GHG emissions: according to the Checklist, construction GHG would not have a significant impact, “*directly or indirectly.*” The Checklist states that BAAQMD does not identify a “*construction threshold of significance*” for GHG; however, the Air District does “*identify a quantitative threshold for annual operations of 1,100 metric tons of carbon dioxide equivalent (CO₂e).*” The Checklist states that this is a conservative estimate, since “*for stationary source projects, the quantitative threshold is 10,000 metric tons of CO₂e per year.*” BAAQMD’s threshold of 1,100 metric tons of CO₂e per year for non-stationary sources is applied in analysis of the construction-related Project emissions.

Thus, for operational contributions to GHG, the Project is given a “pass:”

“Project operations would result in a net reduction of GHG emissions over existing conditions (see Table 8-2) as the overall capacity of the Refinery would be unchanged, but there would be less crude

oil deliveries by marine vessels that have higher emissions compared to deliveries of crude oil by rail transit. The proposed Project would reduce GHG emissions by up to approximately 3,543 metric tons of CO₂e per year compared to existing conditions. Therefore, implementation of the Project would represent a beneficial impact.”

The problem in evaluating GHG contributions is that, again, the Project appears to be so narrowly defined as if it were to exist materially only within Valero’s property, and not extended through its train movements over miles. Are GHG emissions to be accounted for as Valero railcars, both loaded with crude or “emptied”, are moving within Benicia limits? What about leakage of gases from railcars? What about trains moving through other cities and unincorporated areas – e.g., out and beyond Benicia’s city limits? Where does the Project begin and end? Under CEQA, the Crude-by-Rail Project must be understood and evaluated in its entirety, “as a whole.” (Please see my further comments on the need to identify, describe and evaluate “the whole of the Project.”) There can be no doubt that total GHG emissions from crude oil processing and including the proposed rail Project operations would be even greater if assessments took in GHG emissions from hydraulic fracking and tars sands mining operations as well as long-distance rail transport of crudes – operations that, *by logical extension*, are the essential *raison d’etre* of the Project.

Ultimately, we must know about the extent to which Valero seeks to meet AB32 GHG reduction targets, and how they will achieve those state and federal goals for 2020.

7. Regarding Hazards and Hazardous Materials: [Checklist 8; p. II-37];

Valero’s rail project is slated to be completed in 2014. The Study is without benefit of any reporting of crude-by-rail local/regional/national experiences; thus there is no documentation of the kinds of impacts we might expect over the life-time of the project. Yet, there are growing numbers of articles, (see Google news, click on email alerts, and type in “railroad, crude oil”) about crude-by-rail transport happening across the country. Available information about other experiences with crude-by-rail transport into refineries, or the transport by rail of other hazardous materials, in the Bay Area and beyond, should be cited and discussed in order that the public be aided to recognize and meaningfully anticipate problems and potentially significant negative impacts. The highly relevant topic of foreseeable, unpredictable necessary adjustments or changes in train schedules by Union Pacific, considering the number of trains of all kinds including passenger trains that would be passing through CC County and Benicia, is not discussed.

Risks of Union Pacific RR transport of crude oil: What kinds of accidents could happen while trains are traveling? Would there be switching of tracks and change of locomotive engines at any place enroute from the loaded trains point of origin that may be occasion for accidents? What is the safety record of Union Pacific generally as a hauler of hazardous materials in California and elsewhere? Has Union Pacific been a carrier of crude for Phillips 66 or Tesoro (in Washington)? If so, what has been their experience and safety record transporting crude oil? What, if any, are federal policies and regulations that specifically govern transport of crude oil by rail? What would be Union Pacific’s plans be in the case of stalled trains, derailment and/or failed railcar or uncoupling, etc.? What are “credible worst case scenarios” that are foreseeable hauling crude by rail? What about the *unexpected*, therefore *unanticipated* “black swans” – accidents that could be catastrophic in impact? What are the City’s emergency measures in the case of catastrophic releases (or fires, explosions) that could require evacuation of parts of the industrial park near Union Pacific tracks? What would the effect of adding Valero’s crude-loaded trains to the over-all number of passenger and commercial train trips traveled daily on Union Pacific routes

passing through Benicia and cities “up county” and beyond? What kinds of equipment failures could occur at the off-loading racks on Valero property? What about any potential for side-lining of crude-loaded rail cars? Or problems that could occur with scheduling of crude train arrivals and departures that could interfere with schedule for coke trains that travel to and from the refinery to the coke silos and ships at the Port of Benicia?

What are Valero’s risk management plans associated to the Project?

[Study: Project Description, p. I-9]

“The new rail car unloading facilities would include liquid spill containment. The rack would be sloped inward toward the centerline of the rack. A roadside curb would be provided east of the tracks near the fenceline to further contain any minor spills and leaks.” . . .

“Part of the existing containment berm for the tank field would be removed and a new concrete berm would be constructed approximately 12 feet west of the existing earthen berm. The resulting containment capacity would continue to meet or exceed minimum regulatory containment requirements.”

Is the containment berm, which is described as “*exceeding **minimum** [my emphasis] regulatory containment requirements*” capable to control a major spill involving more crude released than “*minor spills and leaks?*” What would routine daily risk management involve? What emergency response would be involved in the case of an overflow of the berm, (which, if seen in a larger context, would seem the size of a kid’s swimming pool)?

Discussion of “off-site” potential hazards are not considered except as portrayed in Mitigation Measure TRAN-2 of the Checklist, (see comments below on Transportation and Traffic), wherein an accident is envisioned that could occur at the intersection of the RR tracks and Park Road. TRAN-2 is thus narrowly limited in scope. The lack of any descriptive analysis of potential off-site hazards represents to this reader an extreme, obfuscatory oversight of the Project Description, especially given that there is no evidence given of the performance record of Union Pacific, and the national record to date of accidents involving crude-loaded trains.

8. Transportation and Traffic [Checklist; p. II-62 - 69]

With regard to performance and operational risks: under CEQA, a discussion of credible worst-case scenarios posed by a project must be considered. There will likely be a number of businesses in the industrial park that will want to comment on this issue considering that trains will be passing four times daily to and from Valero through the industrial park and crossing Park Road. Estimates are given with regard the likelihood of accidents at Park Rd. The Checklist’s answer to the question “Would the project result in inadequate emergency access?” acknowledges that

“According to the 2012 emergency response data provided by the fire department, an average of about two emergency incidents a month occurred along the industrial areas of Park Road and Bayshore Road. The probability of an emergency incident occurring at the same time as a proposed Project train crossing is low. It is unlikely that the Project would cause the average emergency vehicle response time to increase to over 7 minutes for the Park Road and Bayshore Road industrial areas.”

The Mitigation Measure TRAN-2 is designed to ensure that the City of Benicia Fire Department coordinates with Valero, and (presumably) other emergency services or county agencies

“ . . . to prepare an action plan in the event that an emergency occurs during a Project train crossing. The action plan would provide methods of adequately informing the Fire Department of the expected train crossing schedule and alternate routes to access the Park road and Bayshore Rd. industrial areas during the event that a train crosses Park Road.”

CEQA requires that a mitigation measure must actually have a plan prepared and delivered to the lead agency at the time of the environmental review. The public must be able to review the mitigation plan. Thus, a mitigation plan cannot be promised and submitted at a later date, as suggested by the strange wording of TRAN-2, which makes it sound like an emergency response plan would be designed (only) *“in the event that an emergency occurs.”* This notion of casual response planning is how the the Kalamazoo River spill in 2010 of “diluted bitumen” was horrendously mismanaged. (See Comment #10)

[Study: Project Description, p. I-11]

“A train with 200 feet of locomotive and 50 railcars in length would take about 7.3 minutes to cross Park Road at a speed of 5 mph. The at-grade crossing traffic controls provide a 30-second buffer time before and after each train crossing on Park Road. Each 50-railcar train movement is estimated to block traffic on Park Road for approximately 8.3 minutes. Operations would occur 24 hours per day/ 7 days per week/365 days per year.”

Would there be need for signaling at Park Road to warn cars and trucks routinely traveling in the Industrial Park of a slow-moving approaching train? Which businesses would be most affected by the Project’s use of the Union Pacific tracks through the area? (Traffic, Noise). What is the City’s responsibility for traffic risk management in the Industrial Park? What recourse would businesses in the area have that use Park Rd. in the case where trains may be delayed, stalled or stopped on tracks? What “alternate route” plan for vehicles and trucks has been designed?

9. Mandatory Findings of Significance: [Checklist 18; p.11 - 74]

Item 18a

addresses whether the Project would degrade the quality of the environment, substantially reduce habitat of wildlife species, fish, biota etc. No significant impact is imagined. The Checklist of mandatory Findings of Significance apparently does not attempt to envision “off site” toxic spills or releases that could potentially degrade a sensitive ecologic area in the case of a severe, unexpected accident involving a crude-loaded train. Again, the Project is defined in such a way as seeming *not* to include the twice daily crude-loaded trains, each with 50 railcars destined for the Benicia refinery and traveling on Union Pacific tracks “off-site” through ecologically sensitive areas, nor account for potential significant impacts involving hazardous, toxic crude oil spilled into the Suisun Marsh or other such biologically diverse areas (wetlands, vernal pools, etc) in the Delta floodplain through which Union Pacific tracks extend.

A credible worst case scenario would be a train derailment, with leak or spill into the Suisun Marsh during the winter months when seasonal flooding occurs and vernal pools are created, and/or, during nesting season for birds, the Suisun Marsh being part of the Pacific Flyway. Since no accident or spill is discussed as a potential impact scenario, the Checklist doesn’t provide any mitigation measure or

emergency plan for cleanup and recovery of a spill-site that would have to be sensitive to biota and wildlife.

It has been claimed by Valero publicly that the railcars that would be used are built with double walls, such that punctures to the cars would be next-to-impossible in the case of a derailment. That is a statement of *ideal conditions*. What about the foreseeable possibility of a crude-loaded train colliding with another Union Pacific train traveling at high speed – a “black swan” event? In any case, there is no visual representation in the Initial Study that shows the design features of a railcar built to carry crude oil safely. Are there special valves for off-loading that are safeguarded against accidental releases? Any special connectors for pipes used in loading and off-loading crude? What safety features are there to ensure that spills cannot occur in the case of train collision at usual traveling speeds off-site in the marsh area?

Emergency planning for a potential accident involving crude-loaded railcars cannot be routine. For example: Mitigation Measure TRAN-2 alludes to an *existing* emergency response plan in the limited case of an accident the Study does discuss– an accident envisioned at Park Road, where a crude-loaded train is crossing the road traveling at 5 mph toward the proposed off-loading rail rack on Valero property. The *existing* response plan referred to, (the “plan” is not described in full nor provided in the Appendix) is said to involve Benicia’s and Valero’s fire departments, and county officials involved with hazmat and public health risks – accordingly, the usual protocol in the case of any accident at the refinery with potential off-site consequences.

However, in the case of an off-site possible spill in Suisun Marsh of a sour crude blend that contains a diluted bitumen called “dilbit” – (bitumen being the actual product/substance extracted from mining Alberta, Canada’s tar sands) – there is currently no known method, practiced by EPA, to safely recover bitumen that doesn’t cause further damage and destruction to the environment. A case in point: the tragic, still unresolved Enbridge Energy pipeline spill in Michigan, July 2010, involving an Alberta tar sands “dilbit,” which poured into a stream that flowed into the Kalamazoo River. [Kalamazoo River oil spill - Wikipedia](#). The Initial Study does not describe bitumen, nor identify it as a particular “problem” constituent of a “North American-sourced crude” type. Bitumen must be described. It is a heavy, thick, viscous, gooey, tacky, highly acidic, corrosive tar-like substance that cannot move through pipelines or be transported in railcars without having other lighter petroleum based products added to it. When spilled on the ground or in a stream or riverbed, the bitumen has been found to separate from the other lighter, more liquid petroleum-based additives and sink down into whatever material it is spilled into. The volatile compounds themselves become a toxic gas. So, while those “dilutants” disperse in air, (releasing toxic air contaminants and GHG) the heavy sulfur and lead-laden toxic bitumen sinks into the biologically alive and stoney matrix of a riverbed, streambed, pool, marsh, wetland or floodplain, remaining stuck to gravel and rocks and embedded in soil structures. The only cleanup strategy for removing dilute bitumen that had been considered in the Kalamazoo spill was dredging the river bottom – an obviously highly destructive procedure that would further degrade, strip and ruin the 25 - 35 mile-long affected spill area in the river and floodplain. To date, the river and its river bank, its biota, rocks, soils and fish spawning areas remain impacted, subject of a \$765 million dollar cleanup effort (as of summer 2012) that still has not been resolved. Reporting on the spill’s cause, “[NPR](#) reported that “NTSB investigators determined that the six-foot gash in the pipe was caused by a flaw in the outside lining which allowed the pipe to crack and corrode.”

Item 18b

addresses the question of whether the Project would have impacts “*that are individually limited, but cumulatively considerable.*” The meaning of “*cumulatively considerable*” is given as

“ . . . incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

With respect to calculating cumulative air impacts and potential effects to the local environment and our Bay Area region with its many special ecologic areas: There is no mention in the Initial Study of the fact that Phillips 66 is now importing crude by rail, and that other Bay Area refineries may be jumping on board to build rail facilities for importing “North American-sourced crudes.” It would be most interesting to know whether Phillips 66’s rail project was permitted with an MND signed off by Contra Costa County or if an EIR was required. [Rodeo and Crocket are unincorporated communities]. Was the City of Benicia alerted to the Phillips 66 project at the time of its environmental review for its rail project? And concomitantly, has the City of Benicia, as lead agent, notified surrounding cities and unincorporated areas to let them know about the review of the Valero’s Crude-by-Rail Project and to invite their comments?

CEQA requires that cumulative effects of a Project be evaluated that would potentially cause significant adverse impacts to air quality, water, biota and sensitive habitat. The number of trains carrying crude oil into Bay Area refineries is likely to increase because of the new movement in the industry to access “North American-sourced crudes,” for which Union Pacific rails and the refineries’ rail off-loading facilities would serve. If this is the case, and there is projected to be more crude-loaded train traffic on Union Pacific routes through the Bay Area, the Initial Study lacks any discussion of current and future similar crude-by-rail projects in Contra Costa County that would increase the level of risk of accidents and damage to sensitive ecologic areas through which increased numbers of crude-loaded trains would inevitably pass.

The question of responsibility for “off site” environmental impacts is not dealt with in the Initial Study but deserves to be considered. The crude-loaded trains would be traveling many miles to get to Benicia. Would Union Pacific, as a corporation, account for the “vehicle miles traveled” of Valero’s trains? Which corporate entity would be ultimately responsible to report VMT with respect to AB32, the California Global Warming Solutions Act? Calculations of VMT for Valero’s train travel in miles would provide quantified evidence of a crucial transportation cost to the environment of transporting crude by rail; but this subject is not part of the Study’s evaluation of GHG contributions of the Project. Nowhere is any mention of AB32 in the Initial Study or Environmental Checklist. Accordingly, there is no respect demonstrated in the environmental review of the intent and spirit of AB32. Where are the origin(s) of the loaded trains? What are the train routes that will be traveled by Union Pacific trains carrying crude to Benicia? How many highly sensitive ecologic areas would Valero’s and other refineries’ crude-loaded trains pass through? What would the operational risks at the trains’ *loading* ends that could impact Air Quality and Biological Resources at that location? Whatever facts exist are hidden from the public by the Initial Study.

10. There is much deserved concern in Benicia, and beyond in the Bay Area, about the issue of what crude types would be imported by railcars to Benicia. There is growing public concern that tar sands “diluted bitumen” is planned to be among those “North American-sourced crudes” transported to Benicia and other Bay Area refineries by rail.

The primary reason for Valero's rail project in the first place is to be able to access certain crude types "that have recently become available" in North America. [Overview - I-1]. The 100 railcars per day that would contain sour crude blends with specific chemical properties and densities. These crude types, destined to be refined as part of Valero's daily processing "mix", are *specific* products being transported for processing, so must indeed be considered intrinsic to the Project. Certainly, the essential reason for proposing and implementing the Project is to be able to import the various "North American-sourced crudes" that heretofore have been *inaccessible* to Valero by other means of transport (pipeline and marine vessel). Without this reason, the Project could not be characterized as needing to exist.

Among the heavy "North American-sourced crudes," some, if not all, have presumably been "off limits" for Valero's Benicia refinery because of lack of feasible access; for even if the Keystone XL Pipeline were to be approved, Valero Benicia would not be accessing the particular tar sands "dilbits" (diluted bitumen) at the end of the Keystone pipeline's route. Rail transport from the midwest and Canada would serve to provide that access. In other words, without rail transport, there would be little opportunity, economically speaking, for Valero to import certain North American crude blends into Benicia, including tar sands blends from Alberta Canada. This issue was not discussed in the Initial Study. The general descriptive term "North American-sourced crude" implicitly suggests "proprietary information" that is not, *by corporate insistence*, to be disclosed. Regulatory agencies participate in protecting company "trade secrets." The Project Description basically tells the reader, "trust Valero's word:" that it will make little or no difference where the "North American-sourced crudes" actually come from or what their chemical composition consists of.

[Study; Project Description, p. I-2]

"The Refinery does not anticipate a need to change the existing Refinery operations or process equipment, nor would emissions from Refinery operations change (with the exception of the storage tank service and rail unloading emissions) as a result of accepting and refining the proposed North American-sourced crudes."

AND,

[Study, Project Description, I-6]

"The North American-sourced crude oil gravity is expected to range from 20 to 43.5° API, so it would be similar or somewhat lighter than some of the current constituent crude oils used in blending. The North American-sourced crude oil sulfur content would range from 0.06 to 3.1 by weight percent, but on average [my emphasis] would be similar to that of the current constituent crude oil used in blending. The North American-sourced crude oils are expected to replace crude oils of similar gravity and sulfur content that are currently brought in by ship. The Refinery's crude oil feedstock is currently blended to achieve Refinery feedstock specifications, and the North American-sourced crude oils would be blended in the same manner. Since the North-American sourced crude oils would replace crude oils with similar properties, it is anticipated that the Refinery would continue to operate within its existing specifications for crude oil gravity and sulfur content range."

The public has a right to know more about higher levels of sulfur and other constituents such as lead that the Study studiously avoids being clear about, especially alluding to "on average" comparisons with currently processed sour crude types. The obfuscation is dramatic. Obviously, the Study hits a sensitive nerve: there is no account of the corporation's reasons for non-disclosure, nor acknowledgement of "trade secrets." The most extensive reference in the Study to the types of crude to be imported is given as

“North American-sourced crudes that have recently become available” [Study: Overview, p I-1]. This is hardly informational. On the contrary, what it doesn't say represents the Initial Study's enormous data gap. The *only mention* in the MND of the crude to be imported by rail into Benicia is entombed in the following sentence in the MND's introduction:

“The crude oil to be transported by rail cars is expected to be of similar quality compared to existing crude oil imported by marine vessel.”

The Study does not say what specific types of “North American-sourced crudes” are intended to be imported to Benicia and where they would be coming from. This omission is purposeful and morally wrong, especially given the context of global warming and climate change caused by human activities and the increased GHG emissions represented by “the whole of the Project.” The Project Description gives no account of those actual sources, e.g., *actual locations where trains would be loaded with types of crude oil* (shale oil, “tight oil”, tar sands bitumen/dilbit). The Description gives only generalities about crude mixtures in feedstocks and similarities of “North American-sourced crudes” to currently imported and processed sour crude types; thus, basic information required to evaluate potential negative effects of the “Project as a whole” is wholly lacking!

The Study's Overview [p.I-1.2] asks the public to accept generalities and comparisons about the range of qualities of acidity and density of “blended crude oil slate” regularly processed. The description wants to assure the reader that nothing possibly could be different, nor needs changing as a result of adding a percentage of the newly accessible “North American-sourced crudes” to the feedstock mix of crudes processed daily. Where is the actual evidence and data to support the Initial Study's conclusions and assumptions about “benefits” to Air Quality, or that contribution to Greenhouse Gases will be minimal during the Project's operations over time? Again, the Project Description doesn't account for the intended lifespan of the Crude-by-Rail Project, nor its extensions, reaching out by rail far and wide.

[Initial Study, Overview, p I-1,2] :

“The quality of crude oil varies by oil well locations and reservoir formations; therefore, the quality of crude oil received from the same source may vary over time. Refineries are designed and equipped to process crude oil of a specific quality that is broadly defined by a range of gravity and sulfur content.”

“A blended crude slate is comprised of multiple individual crudes that when combined provide a crude mix that refinery hardware is designed to process. The proposed North American-source crudes will be a constituent in the Refinery's blended crude oil slate.””The Refinery's various crude oil feedstocks are currently blended to achieve Refinery feedstock specifications, and the North American-sourced crude oils would be blended in the same manner. Since the North American-sourced crude oils would be replacing crude oils [that have been imported by marine vessel] with similar properties, it is anticipated that the Refinery would continue to operate within its existing specifications for crude oil gravity and sulfur content range.

The Refinery does not anticipate a need to change the existing Refinery operations or process equipment, nor would emissions from Refinery operations change (with the exception of the storage tank service and rail unloading emissions) as a result of accepting and refine the proposed North American-sourced crudes.”

Why be concerned? The MND seems to say, “don’t be.”

We have known since the Valero Improvement Project was introduced to the community in 2002-03 that Valero would be retooling/upgrading the refinery to be able to accommodate a greater variety of heavy sour crudes. These were explained to be more corrosive (because of higher sulfur content) and also more productive of certain emissions; but the Valero Improvement Project would make technical improvements to account for the requirement to reduce increased sulfur emissions and other toxic air contaminants associated to processing more types of sour crudes and sour crude feedstock blends. It is my understanding, from conversations over the years with Valero regarding VIP, that early on after purchase of the refinery from Exxon, Valero foresaw that the corporation – the largest independent refiner in the U.S. – would be more dependent on purchasing sour crudes on the open market, after their initial 10-year contract with Exxon expired that had allowed Valero to continue to process a great percentage of Alaskan sweet, light crude (that had been extracted from Exxon’s own fields near Prudhoe Bay). And since the Benicia refinery had originally been designed to process Alaskan sweet crude, the VIP Project was essential to Valero’s intention to import more types of sour crudes.

The higher levels of sulfur in sour crudes also contributes to a growing risk of corrosion, which was the presenting cause of what became a catastrophic leak and fire at Chevron’s Richmond Refinery in August, 2012. The refining industries’ increased processing of more sour and heavier crude types represents a potential cumulative risk to safety of local communities, local air quality and public health.

“The North American-sourced crude oils are expected to replace crude oils of similar gravity and sulfur content currently brought in by ship.” [Study: Overview, p. I-2]

“Thus, the proposed Project could reduce marine vessel deliveries by up to 25,550,000 bbl per year. Based on a 3-year baseline period from December 10, 2009 through December 9, 2012, annual marine vessel deliveries could be reduced by up to 81 percent. Crude delivered by rail would not displace crude delivered to the Refinery by pipeline.” (Study: Overview, p. I-6)

The first sentence quoted does not claim *absolutely* that “North American-sourced crude oils” would replace crude oils of similar gravity and sulfur content as those crudes imported by ship; it simply says that Valero has the *expectation* that the crude oil types imported by rail will be *comparatively similar* to those sour crudes now being imported by marine vessels. The meaning of the second sentence, about advantages of replacing ships with trains, which would cause a reduction in total annual diesel emissions, may be taken at face value as a “good.” However, such value statements should be contextualized in the larger frame of total emissions calculated for the Project; thus, such a “good” must be factored as part of the the refinery’s *total emissions over time* that are owing to the processing of more sour crudes with greater sulfur content, metals such as lead, and other toxic air contaminants present, for example, in highly corrosive, acidic diluted bitumen, to make the point clear.

Cumulative potentially significant negative impacts to air quality and an account of *cumulative* GHG emissions that are related to the specific “North American-sourced crudes” planned to be imported must be described and discussed in sufficient detail with data to support claims in the context of the projected life-span of the Valero Project and other existing and planned Bay Area rail projects as well as other existing and planned large-scale industrial developments: therefore, to evaluate the cumulative impacts from all existing emissions sources within the vicinity of the Project, so that emissions contributed by specific “North American-sourced crudes” can be understood in full context of cumulative risk.

Accordingly, if Valero's crude feedstock may, by virtue of permitting the Crude-by-Rail Project, regularly have as part of its mix a percentage of those tar sand dibits, this must raise the potential for significant and catastrophic foreseeable environmental effects of diluted bitumen (dilbit) if and when spilled. Without details of the chemical makeup of tar sands blends as well as other crude types imported by rail, the public cannot judge the toxicity and extent of potential environmentally significant impacts, and the difficulty, *if not impossibility* of cleaning up after a spill, say, in the Suisun Marsh or Sacramento River floodplain or Carquinez Strait or other such sensitive interior landscape through which Union Pacific tracks pass.

So I ask: if Alberta's tar sands bitumen blends are intended to be transported by rail to Benicia, then, with as little information as provided by ESA's Initial Study, how can the public accept a finding of *no potential significant impact to the environment anticipated that cannot be mitigated?*

[Enbridge Resisting Final Clean-Up of Its Michigan Oil Spill | InsideClimate News](#). See also [The Exxon Oil Spill in Mayflower, Ark.: Slide Show of Annotated Photographs and Maps | InsideClimate News](#)

One only has to "think Kalamazoo."

11. Under the rubric of the full intent of AB32, the Project should be discussed and evaluated with regard to the vision for a sustainable economy that AB32 upholds – an economy and way of life that doesn't continue to destroy the environment and the atmospheric conditions that make life on earth livable. I am talking about how I believe this Project represents the status quo and a level of desperation in the industry to continue to pursue the mining for crudes of every type, in every possible place of "reserves" in North America, to reap the benefits near term, in the case we are reviewing here, of what the industry would like to consider an "inexhaustible supply of crude" that would be consumed indefinitely into the future.

Twenty-five percent (25%) of America's "oil" is now coming from Alberta's vast network of tar sands mining operations, [Alberta Energy: Facts and Statistics](#), by means of a highly energy intensive and water-demanding open pit mining operation to extract bitumen – a tar-like substance which is not an oil, but which is naturally occurring in deep sand formations. It is heavy, highly acidic and so thick it must be washed out of the sand deposits by extraordinary amounts of hot water under pressure, using tons of natural gas to supply the energy to heat the water, and thus contributing to massive GHG emissions. The bitumen itself is too dense and heavy to be pumped through a pipeline without being made "lighter." To get the consistency required for pipelines or unheated railcars, the raw bitumen must be diluted with other lighter more liquid petroleum products.

To my knowledge, BAAQMD has not described the heavy crude "blended" types that have been created from the bitumen extracted from Alberta tar sands. Although the Initial Study doesn't give it a name, or any specifics, easy research online tells that the Canadian government is price-supporting Alberta tar sands' "crude blend," which is called "Western Canada Select," to compete against "West Texas Intermediate", the light sweet crude used historically as the pricing benchmark in the industry. Bitumen may contain metals –high lead levels – besides its high concentration of sulfur. Has the Air District made public whatever it knows about the processing of "Western Canada Select?" We need to know from the Air District or other experts if this particular blend would be imported to Benicia and whether it would cause emissions that might meet or exceed "thresholds of significance."

[Wikipedia entry on WCS](#)

[Cenovus Marketing page for WCS](#)

In the absence of more information from Valero, the public has the burden of trying to imagine the consequences of a 10 - 50 year life-span of the project. Again, there's no indication in the Initial Study of the Project lifespan.

12. [Initial Study: Overview p I-5]

“The Refinery is limited by its BAAQMD permit (condition 20820, part 50) to processing crude oil at a feed rate of 180,000 barrels per day on a maximum daily basis and 165,000 barrels per day on an annual average basis.”

Thus, we must try to understand how the community might be impacted on any given day when the processing “feed rate” is at its maximum capacity permitted, of 180,000 barrels per day, as compared to how those impacts might be seen in the context of an annual average permitted feed rate of 165,000 barrels per day. To add to the complexity of estimating and evaluating emissions impacts, we have to consider the possible increased health risks from processing diluted bitumen blends if and when they are added to the feedstock to be processed at its maximum capacity on any given day.

13. There are no facts mentioned in the Study about other Bay Area importers of tar sands crude blends, yet getting the facts is essential to assessing the claims in the MND with regard to potential cumulative air quality impacts of the project and the possibility especially of dilbit-loaded trains involved in accidents.

“The crude-by-rail spike has also led to more U.S. railway oil spills -- 14 from 2007-09 to 158 between 2010-12, according to the Pipeline and Hazardous Materials Safety Administration. In a recent International Energy Agency report based on U.S. Department of Transportation data, the risk of a train spill was six times greater than a pipeline incident between 2004 and 2012. . . . On March 27, a train derailed in Minnesota, spilling 15,000 gallons of Canadian tar sands crude.”

[Canadian tar sands crude heads to refineries, Benicia's Valero may be on list - Vallejo Times Herald](#)

14. FINALLY, IN CONCLUSION:

Under CEQA, a thorough environmental review, a full EIR, should enable the public and stakeholders to understand the “whole of Valero’s Crude-by-Rail Project” and its ramifications and thereby to fairly judge, based on sufficient evidence and scientific information, the long-term, potentially significant and cumulative environmental impacts that would affect our local community, our local and regional lands and waters. CEQA would also require, in a full EIR, a thorough discussion of “Alternatives” to the Project, including the option of “No Project”, in order to more fully capture the contexts in which the proposed Project should be judged.

There is considerable concern across the region and nation for the ultimate impact of increasing GHG emissions from the processing of more varieties of dirty crudes for which the Valero Crude-By-Rail project is designed to enable. Although the Initial Study is 190 pages, and contains statistics and charts about GHG emissions *during construction phases*, there are very important concerns and questions regarding the long-term consequences for global warming and climate change if we as a nation continue to support the kind of environmentally destructive mining processes which could allow “business as usual” to be pursued for years to come, for the economic benefit in the short-run, since ultimately – in not

so many years ahead – fifty? – we can mine ourselves out of crude oil, wherever reserves are located in North America that are technically made “easy to get at” now.

But what about the ethics, considering the future of our children and their children? Extracting, refining and indefinitely burning Alberta’s tar sands “dilute bitumen” is not sustainable, if we want to maintain civilization and the semblance of a temperate climate for humans and other living members of our “more-than-human-world.” This is the conclusion reached by the preeminent earth scientist and former director of NASA’s Goddard Institute, Dr. James Hansen.

There is no reference anywhere in the Initial Study to *any* literature on the subject of global warming and the impacts of continuing extraction and burning of fossil fuels. This is a significant omission. I hereby reference Dr. Hansen’s trenchant book “Storms of My Grandchildren,” and Canadian author, Andrew Mikiforuk’s widely acclaimed and quoted “Tar Sands: Dirty Oil and the Future of a Continent.”

The dangers represented by the total, extreme environmental costs of importing diluted bitumen from Alberta tar sands should be factored into evaluation of Valero’s proposed Project with respect for state and national goals for reducing GHG: the destruction and disappearance of thousands of square miles of pristine northern boreal forest, which serves as a carbon sink for the world; the excessive daily demand for fresh water and energy (natural gas) to extract bitumen from the sand; the miles of toxic lakes formed from the waste water after extraction; the degradation of regional and local air quality at the locations of the vast network of tar sands open pit mines (and hydraulic fracturing mining operations) and in communities with refineries processing the heavy crudes in their midst; degradation of rivers’ sensitive ecologies where spills and accidents leave their permanent imprint; the accelerating rate of the melt of permafrost, ice sheets and glaciers around the globe; the continuing, dangerously accelerating rise, in a short time of recent decades, of CO₂ in the atmosphere to 400 ppm, which is beyond what atmospheric scientists consider the “safe” threshold, at 350 ppm for human civilization. We thus continue to contribute to climate change in the quest to burn more and more fossil fuels, and THIS should be raised as a moral imperative, an ethical, environmental issue of the Valero Crude-by-Rail venture, since the Project would materially support “business as usual”, (as evidently railroaded by the MND). This is a cruel fact that looms over the “whole of the Project” under review. Gross environmental costs are still considered “externalities” when evaluating projects, so they are not accounted for in the review of Valero’s proposed rail project. The brief discussion in the Initial Study regarding reductions of GHG during construction phases minimizes the whole larger question.

So, where does the “chain of custody” stop? From oil fields, tar sand mines, and fracking sites in shale oil country, to refinery to consumers – we’re all in this, allegedly trying to see our way to a sustainable economy and way of life that would depend for basic energy and transport on alternatives to fossil fuels. Pipe dream? We the people, burning fossil fuels, are part of the “chain of responsibility.” We can no longer say that what any one person does, or any one company or industry does, doesn’t matter. To protect communities at risk, we who have an industrial giant in our midst, need to raise our questions and be reasonably considered sane and responsible for doing so.

The long-range, dangerous environmental effects of encouraging further mining operations in Alberta’s tar sands, or at fracking sites in shale formations around the country; the encouragement for continuing “business as usual” by use of rail transport that makes “North American-sourced crudes” readily accessible and available to refiners, thus, bringing these sour crudes for processing here in the Bay Area: for all of these reasons and more, the Initial Study and MND for the Valero Crude-by-Rail Project represents a failure of responsibility to address the extent and reasonable concern of the public, for protection of the environment generally, and the health and safety of our community and the planet our children will inherit.

In my view, for all of my questions and reasons stated, the MND that would permit the proposed Valero Crude-by-Rail Project must be rejected by the Planning Commission, and a full Environmental Impact Report be required.

* * *

APPENDIX:

CEQA GUIDELINES §15064.4. Determining the Significance of Impacts from Greenhouse Gas Emissions.

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Note: Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Sections 21001, 21002, 21003, 21065, 21068, 21080, 21082, 21082.1, 21082.2, 21083.05, 21100, Pub. Resources Code; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099; *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98; *Berkeley Keep Jets Over the Bay Com. v. Board of Port Comm.* (2001) 91 Cal.App.4th 1344; and *City of Irvine v. Irvine Citizens Against Overdevelopment* (1994) 25 Cal.App.4th 868.

Brad Kilger, City Manager
250 E. "L" St.
Benicia City Hall
Benicia, CA 94510



6-28-13

Dear Mr. Kilger,

Valero is one of the biggest taxpayers in Benicia, as well as one of the most philanthropic businesses. I support Valero's request for permit to build its rail car facility. We must do all we can to support our longstanding business who have seen this city through hard times.

I've said it many times to many people, but I'll say it again: "God Bless Valero!"

Very sincerely yours,

Handwritten signature of Roger Green in black ink.

[Roger Green]
F & P Engraving
Benicia, CA 94510

Amy Million - Fwd: Valero crude oil transport and processing project

From: Brad Kilger
To: Amy Million
Date: 7/1/2013 9:36 AM
Subject: Fwd: Valero crude oil transport and processing project

>>> jkjerome <jkjerome@aol.com> 7/1/2013 2:00 AM >>>

To: Brad Kilger, City Manager, Benicia

From: Jerome Page, 1250 West L St Benicia



I write about the proposal to transmit to and process tar sands crude at the Valero refinery. I have spent a considerable period studying and writing about the perils and dangers of global warming. Clearly one of the most perilous avenues to this danger is represented by tar sands mining and processing. I am shocked and find it appalling that Benicia could possibly become a conduit and facilitator for this environmental disaster. Anyone with the faintest acquaintance with the research on CO2 buildup, on tar sands crude and on the history of human environmental error when profit is at issue should similarly be in shock at this prospect. It is absolutely crucial that there be a full and complete environmental study of this disastrous rail transport and processing project with adequate opportunity for both the public and relevant environmental research experts to comment. Anything less would represent an absolute failure of public responsibility.



Dear City of Benicia Planning Commission Members:

I am writing in support of the Valero Crude by Rail project that has been proposed to the City of Benicia for approval. Based on the project, as far as the information I have been able to gather, it seems it would be a win-win situation for the City of Benicia and Valero. Not only will it reduce emissions and reduce our reliance on foreign crude, it will create 30 full time jobs at the refinery for operation of the Crude by Rail system. Also, it will bring 120 skilled jobs to the project for the projected 6 month construction time. The ability to process lower cost crude will also make Valero more competitive in the marketplace.

Ponder Environmental Services, Inc. (PES), is a leader in vacuum truck services, waste transportation, storage tank cleaning, tank degassing, vapor control, roll off services, hazardous waste cleanup, steam cleaning / pressure washing and confined space rescue. We recently moved into the old Dolan's Lumber Yard location at 4563 East Second Street. As a neighbor to Valero and a member of the Benicia Industrial Park Association PES urges the City of Benicia to approve this project, which will benefit the City, the Benicia Industrial Park, and also its major business partners.

Thank you,

A handwritten signature in black ink, appearing to read "JP", written in a cursive style.

Jim Ponder, President
Ponder Environmental Services, Inc.

Roger D. Straw

766 West J Street • Benicia, CA 94510
(707) 373-6826 • rogrmail@gmail.com



June 30, 2013

City Manager Brad Kilger
Planning Commissioners Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell, Councilmembers Hughes, Schwartzman, Strawbridge
c/o City of Benicia
250 East L Street
Benicia, CA 94510

RE: Valero Crude-By-Rail Project and Benicia's Notice of Intent to Adopt a Mitigated Negative Declaration

Dear Mr. Kilger, Commissioners, Mayor Patterson and Councilmembers:

I have taken time to study our former Community Development Director's Notice of Intent to Adopt a Negative Mitigated Declaration, Valero's Application and ESA's Initial Study. I write today to oppose Valero's project and to encourage the Planning Commission and Council to reject the Mitigated Negative Declaration. The MND and Initial Study are clearly inadequate preparation for a project such as this, leaving many serious issues unexplored. In addition, this process has given the public little opportunity for study and input in review of this project.

Although I have spent considerable time studying the documents and placing them in a wider context, my comments here are meant only as a brief – yet heartfelt and thoughtful – summary. Please see my two-page Comments following this letter.

In short: I urge the Planning Commission at its meeting on July 11 to deny the Use Permit and to reject the Mitigated Negative Declaration. There are so many unresolved, unexplored and highly significant environmental effects, that Valero's Crude-By-Rail Project should go forward only after a full EIR study.

Thank you.

Roger D. Straw

COMMENTS – FOR BENICIA PLANNING COMMISSION CONSIDERATION ON JULY 11, 2013

Valero Proposed Crude-By-Rail Project

Roger D. Straw, 766 West J, Benicia

June 30, 2013, p. 2

Overview – Planning in a Wider Context

Vision - Planning is a future-oriented thing. Our best planning is *visionary*, and aimed toward a future that improves our overall condition. The Planning Commission must always be asking, “What kind of Benicia do we want to see in a decade, or fifty or a hundred years from now?” and, “How does this application move us toward the future envisioned in Benicia’s General Plan?”

Context - Context is critical. Benicia and Valero do not exist in isolation. At this time in history, the world is transitioning from fossil fuel driven economies to economies powered by alternative technologies. The decisions we make together (Benicia and Valero) cannot be short-term decisions, focusing on investments that will pay off in the short run, but long-term decisions, investments that will prepare for a different kind of world – and that will lead the way for other communities to prepare for that unfolding reality.

Need for a Public Process

CEQA / EIR - Valero’s Application, Mitigated Negative Declaration and Initial Study must undergo a thorough CEQA review, calling for a full EIR. It was premature of the City’s former Community Development Director to recommend approval of a Use Permit and adoption of a Mitigated Negative Declaration based unquestioningly on the accompanying ESA Initial Study prepared for the City and paid for by Valero.

A Public Hearing - The hearing before the Planning Commission on July 11, 2013 is the first – and perhaps the ONLY chance the public will have to question and raise public concerns about this project. An EIR would greatly increase the City’s chances for avoiding huge and costly mistakes, mistakes that could be huge and costly for not only Benicia, but for Valero, the region and indeed the world.

Specific Questions and Concerns

- **Rail spills and accidents** – Many Benicia residents have deep concerns about public health and safety and environmental impacts associated with potential crude oil spills and accidents along rail routes, including the protected waters of the Suisun Marsh and areas beyond Valero’s rather shallow protective berm. The Initial Study does not weigh the *wider context* of a possible oil spill, contaminating the protected waters of our Suisun Marsh or the places of business in Benicia’s Industrial Park. Rail spills have increased dramatically in the U.S. as crude-by-rail shipping has grown in recent years. A pipeline spill of diluted bitumen near Kalamazoo, Michigan caused an unimagined, unprepared-for nightmare, with chemical separation of the blended crude that led to evaporation of harmful chemicals and, even worse, the sinking of heavy tar-like globs of crude that have been near-impossible – even at great expense (reportedly over \$750 million so far) – to clean up in a watery environment. Unique and unparalleled emergency planning for a new kind of spill should be included as a mitigation after

COMMENTS – FOR BENICIA PLANNING COMMISSION CONSIDERATION ON JULY 11, 2013

Valero Proposed Crude-By-Rail Project

Roger D. Straw, 766 West J, Benicia

June 30, 2013, p. 3

a thorough EIR investigation. The emergency plan should extend beyond Benicia through the Suisun Marsh and including rail lines throughout Solano County. Costs for such an expensive clean-up should also be predicted, and funding sources identified.

- **Refinery accidents** - Valero, the scientific community and the public know a lot more about refining of “sour” crude than we did when Valero was approved in 2002-03 for upgrades that allow for its current processing of such heavy crudes. The massive explosion at Chevron in Richmond in 2012 has alerted Benicia citizens to the damaging corrosive effects of heavy crude on refinery pipes and equipment. These corrosion concerns will now expand to include rail cars and equipment. This unfolding knowledge should be explored in a full EIR, with careful plans and appropriate mitigations.
- **Potential for increase in crude processing** - Although Valero states that it *currently* does not plan to increase its supply of crude oil, the project creates a *potential* for substantial increase in the supply of heavy, dirty diluted bitumen from North American locations over time. How can the public know what the effects will be 10 or 50 years from now?
- **An open door to tar-sands crude** - This project would *position* Valero, should it choose to do so, to import diluted bitumen from the tar-sands pit mines in Alberta. The Initial Study designates “crude blends,” but does not spell out the types of blends or the commercial suppliers or their sources. Questions put to refinery personnel are inconclusive, if not evasive. The City and its partner corporation have a moral obligation and global responsibility to assure Benicia citizens and the world that opening this door will NOT at some future date result in support for a Canadian-government-supported industry that is stripping the Alberta boreal forests, endangering wildlife and human health there, and contributing at an alarming rate to global warming.
- **Air quality** - There is great potential for an increase in air pollutants despite Valero's claim that emissions will remain at current levels. Benicia needs a full EIR to fully investigate this issue. A full EIR will examine the project in light of AB32, which governs industrial pollutants, sets goals for reductions in greenhouse gases, and lays out a vision for a sustainable economy. (*Note that nowhere in the Initial Study is California's AB32 even mentioned.*) An EIR would also much more strenuously measure the project against Benicia's General Plan, and a full EIR would carefully study how and whether this project contributes to and undercuts Benicia's goals for reduction of greenhouse gases. (*Benicia's Climate Action Plan is mentioned on p. 60 of the Initial Study.*)
- **Traffic** - There will be increased traffic delays due to increased rail traffic (two 100-car trains per day). The public needs to hear from Industrial Park owners and workers whose business could be inconvenienced and profits diminished. Also, EMS and emergency vehicle access to the Industrial Park could be affected, causing very real safety concerns. These factors need greater study and additional mitigation strategies.

Thank you for this opportunity to work with you on planning for Benicia's future and a prosperous, safe and sustainable Valero.

Roger Straw

766 West J Street, Benicia

(707) 373-6826

rogrmail@gmail.com

347 Goldenslopes Court
Benicia, CA 94510
707-745-4675



Community Development Director
City of Benicia
250 East L Street
Benicia, CA 94510

June 30, 2013

Re: Mitigated Negative Declaration proposed for the Valero Crude by Rail project.

Dear Sir/Madam:

The following are comments on the subject document, organized by topic.

Assumptions for Air Pollutant and Greenhouse Gas Emissions

Air pollutant and greenhouse gas emissions (GHG) emissions were estimated by ERM, a consultant to Valero, the Applicant. A review of these estimates suggests that ERM assumes the crude transported by rail originates at the Union Pacific Railroad yard in Roseville, and the crude transported by tanker originates two miles west of the Golden Gate Bridge. These assumptions may not be appropriate for an adequate analysis of potential impacts from air pollutant and GHG emissions.

- What is the justification for these assumed origins?
- Why didn't the comparison analysis assume the actual origin in North America of the crude transported by rail with the actual origin in North America of the crude transported by rail?
- If the origin of the crude varies, then shouldn't origins that support a worse-case analysis be considered?

Greenhouse gas emissions indirectly generated by the Proposed Project

The Environmental Checklist includes the question – *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?* The analysis only evaluates GHG emissions generated by the equipment used during the construction phase and by the vehicles used for transport of crude oil. Indirect GHG emissions are not evaluated in the Mitigated Negative Declaration. One potential indirect source of GHG emissions are those generated by extracting the crude oil that will be transported to the refinery. The proposed Project will provide infrastructure to enable the refinery to receive tar sands crude from Alberta Canada, which requires methods of extraction that generate GHG emissions far in excess of the extraction methods used for other crude oil available to the refinery.

- Should the Mitigated Negative Declaration compare the GHG emissions produced by extraction methods for the crude oil currently transported by marine vessels with the

emissions produced by extraction methods for tar sands crude from Alberta, Canada, and a likely worse-case scenario enabled by the proposed Project?

Assumptions for Queue Storage on Park Road

Table 16-1 of the Mitigated Negative Declaration describes existing at-grade rail operations. Average crossing duration on weekdays at the Park Road crossing is listed as 2 minutes 50 seconds. Each train delivery of the proposed Project would block traffic on Park Road for 8.3 minutes.

The Mitigated Negative Declaration finds the queues on the east side of the track at Park Road would generally be contained within the Park Road segment between the tracks and industrial Way. This document speculates that the segment of Park Road between the at-grade railroad crossing and Industrial Way provides a two-way left-turn lane which could be utilized as a queue storage lane by some drivers waiting on westbound Park Road for the train to clear.

- Does this analysis rely on drivers queuing in the two-way left-turn lane?
- Would the City or the *California Manual of Uniform Traffic Control Devices* support this use of the two-way left-turn lane?

The above comments are offered to support a complete and adequate environmental review of the proposed Project.

Sincerely,



Steven L. Goetz



July 1, 2013

Mary Frances Kelly Poh

643 Windsor Drive
Benicia, CA 94510
Phone: 707-745-5461
Mfpoh@pacbell.net

**City Manager Brad Kilger
Planning Commissioners Sherry, Oakes,
Smith, Grossman, Sprague, Dean and
Young
Mayor Patterson, Vice Mayor Campbell,
Councilmembers Hughes, Schwartzman
and Strawbridge**

**C/O City of Benicia, 250 East L Street
Benicia, CA 94510**

Dear Mr. Kilger, Commissioners, Mayor Patterson and Councilmembers,

I would like to raise questions and concerns regarding Valero's Application and ESA's Initial Study and to oppose the adoption of a Mitigated Negative Declaration because I simply don't think this is a sufficient review of this project.

For twenty years I represented the citizens of District Two on the Solano County Emergency Medical Care Committee. I am by profession a Registered Nurse but I sat in a public seat. I participated in developing the EMS Manual and the agreements which lead to the Countywide EMS system. I am also a member of the California Native Plant Society and Vice President of the Willis L Jepson Chapter of CNPS. This chapter is based here in Benicia and covers all of Solano County but I am not speaking for CNPS.

There are others in the community who are much more knowledgeable about EIR's and CEQA than I am. Due to my experience working with the County Agencies, such as the Office of Emergency Services and Emergency Medical Services, I know there are County requirements that are not referenced in this document. There is a discussion about the Benicia Fire Departments response times but there is nothing about notifying the County if there is a spill or an untoward event and the requirements for this notification. Additionally how does Valero interact with the Union Pacific Rail Road and the County if problems occur? What agreements does Valero have with these other entities? Don't these need to be spelled out before a project is approved? When does the specific emergency response plan need to be attached to the approval document? It is my understanding that the documents would need to be provided if an EIR is prepared. Have these County Agencies been contacted and are they in agreement with and support whatever procedures that have been developed? Once again a full EIR would carefully delineate what other County Agencies and Regional Agencies would need to be notified and respond to untoward events and the necessary agreements between Valero and the agencies would be attached.

In the section entitled Biological Resources there is reference to the impact construction would have on nesting birds. But what happens to the endangered plants such as Soft Bird's Beak (*Cordylanthus mollis* ssp. *mollis*)? Soft

Bird's Beak is a federally listed endangered species and listed as a 1B.2 in the CNPS Inventory of Rare and Endangered Plants. In 2004 90% of the existing sites of this plant were located in Solano County. It is an annual herb that is limited to California alone. It lives in Coastal Salt Marsh, and wetland-riparian communities. Seeds found in its fruiting bodies are food for birds. It usually blooms in April and May. This makes it harder to find later in the year when a plant survey is done. Has the Suisun Resource Conservation District been contacted regarding marsh plants and animals and their habitat needs, which will be disrupted by construction and the ongoing train traffic, not counting what would happen to them if there was a fuel spill? The document is lacking, like so many others, by only considering animals and not the things that the animals eat or need for their habitat. There is no discussion of the effects of an oil spill on the endangered plants and animals. Could they even survive a small spill? A Full EIR would list all species impacted and suggest mitigations.

This project will impact the Suisun Delta and the marsh. I don't feel that it is appropriate for Valero to shift all its responsibility for protecting the marsh to Union Pacific which will be pulling and delivering rail cars that are owned by Valero. It is for these reasons that I feel that a complete Environmental Impact Report needs to be required.

Sincerely,

Mary Frances Kelly Poh

Mary Frances Kelly Poh

City of Benicia,
Community Development Dept.



7-1-2013

Valero Crude By Rail Project.

Comments on the Mitigated Negative Declaration.

I believe this document has inaccurate and or incomplete data and needs revision and/or additional mitigation measures.

I am concerned about several aspects of the proposed project. Attached are comments on an item-by-item presentation. Several of the items are of a less than significant nature, such as under Biological Resources and Hydrology and Water Quality, but should be revised.

The major concern with the MND is with the traffic impact. The Refinery was designed and permitted to receive the majority of it's crude from ships and barges. Valero has pipelines from Two (2) locations on the waterfront to its tank farm, and uses rail to ship finished products only.

The applicant did not indicate any alternative proposals that would allow access to this "New" source of crude, such as Barges from the PNW, or locating the train car unloading racks along the waterfront adjacent to their existing pipelines.

The industrial park grew around the refinery and has adapted to the local surface traffic as pipelines within the park move most of the refineries material. The proposed project will allow Valero to bring in almost half of its daily crude by a new source, rail.

The addition of 2 50-car trains per day thru the Industrial Park will cause major traffic delays, mainly along Bayshore Rd, at the 680 Bayshore off ramp and at Park Rd. The greatest issue is the fact that the applicant can accommodate 50 crude cars in their facility at one time and the second 50-car train will be moved at the convenience of UPRR.

The MND does not have a "Switching Plan", from UPRR, that outlines the first and subsequent crude trains. The applicant is not restricted to moving these trains during daytime hour, except during the noon hour. There already is significant and regular train traffic at this time so it's an empty promise.

The mitigations for traffic impact, TRAN-1 will not improve or negate the additional rail traffic.

Measure TRAN-2 is inaccurate, as it does not discuss emergency services to businesses that could be completely blocked by rail traffic along Bayshore Rd.

Valero crude by rail project.

Comments in regards to the MND of May 2013

The Initial Study/ Mitigated Negative Declaration is inadequate and or inaccurate in the following areas.

1 In Part 11. Environmental Checklist,

1. Aesthetics and 10. Land use and Land Use Planning.

The proposed project will cause increased visual barriers and divide a community by requiring greatly increased Rail Road traffic in the adjacent neighborhood, outside the Valero property.

3. Air Quality.

The discussion on Air Quality is incomplete and or inaccurate. It used emission numbers based on one locomotive per train when the operation plan states that two or more engines will be used. The engines are assumed to be running for two hour per train although the unloading process will take 8 to 10 hours.

There is no restriction on locomotive engine idle time, and it assumes that there will not be any switching of trains into rail sidings in the Park.

The report also discusses diesel emissions from construction activities, noting that they may be objectionable but fails to give the same review to train sources.

4. Biological Resources,

The initial study incorrectly states that certain species are not considered to be in Sulfur Spring Creek due to a Tidal Gate at its mouth. This is incorrect, there is no tidal gate at that location and the structure that was constructed By the US Army in the early '40s has been removed.

9. Hydrology and Water Quality.

Assumption of the Sulfur Springs flood plane, see #4 above.

There is no description of spill containment at the unloading rack and the facility is less than 60' from Sulfur Springs Creek.

16. Transportation and Traffic.

Lack of "Switching Plan" from UPRR for the second 50 car train.

No discussion of train movement across Park Rd, thru Valero to the Industrial Way rail sidings/yard. This is the only place in the park, (and surrounding area), that could accommodate a 50 car unit train.

Additional Park Rd closures would be required to move these trains into the Valero facilities.

The applicant has simplified/change the plans by eliminating the "Y Connector" and the western end of line track connectors that facilitate engine movement.

The "Y" could have been utilized to move trains from the Industrial way yard into the refinery without crossing Park Rd.

Additional suggested minimum mitigations

Limit the crude trains to 50 cars per day until an acceptable switching plan is prepared.

Signs warning of stopped traffic on the N680 Bayshore Rd off ramp.

Change the off ramp to 2 lanes with a right hand turn lane.

Add traffic delayed signage at Park and Industrial.

Sincerely

A handwritten signature in blue ink that reads "Ed Ruszel". The signature is written in a cursive style with a large, prominent "E" and "R".

Ed Ruszel
2980 Bayshore Rd



July 1, 2013

TO: City of Benicia
Community Development Department

FROM: Jack Ruszel

RE: Mitigated Negative Declaration - Valero Crude By Rail Project

I have several issues concerning the stated project that have been either ignored or dismissively minimized.

#1 - I take objection to the statement in the initial study p. II-62
"Generally, people who drive through industrial areas served by at-grade railroad crossings have a higher tolerance of delay associated with daily at-grade rail activity that is not on a set schedule compared to delays that are not in the vicinity of an at-grade crossing."

I believe acceptance of this non-objective statement sets the tone of this Declaration. Rather than "higher tolerance, you should use the words, "no other choice." It appears that the city has issued a mitigated Negative Declaration based on a less than objective study. There appears to be an attitude of "quick - get this done, before anyone asks too many questions." I may be wrong, but that's what it looks like to me.

#2 - The at-grade crossing on park road is already a serious traffic issue. The City of Benicia and Caltrans should be taking this up as an urgent issue before the separate discussion of doubling the current rail crossings. In the past 2 years I have gotten stuck on the Bayshore Rd. exit numerous times. On a couple occasions traffic was already at a dead stop at the top of the exit. This is a deadly situation. I sat in my car praying that a truck coming off I-680 would not smash me under the trucks in front of me.

The Initial study states on p. II-66 "Project train crossings...could back (traffic) onto Bayshore rd. and affect the operations of the I-680 ramp-terminal intersections, but would not extend on to the I-680 mainline."

This statement is based on a 1 week study of rail operations.

From my 30 years of daily observations of the railroad operations along Bayshore Rd, I know that there is an ebb and flow of rail volume and timing that causes me to seriously question the validity of a declaration that uses such a short time window to extrapolate numbers that are used to make decisions of a potentially life-threatening nature.

To accept such a quick snapshot of rail traffic in this study has me wondering if the city could be putting itself in danger of being criminally negligent.

#3 - There are at least 7 Businesses on the east side of Bayshore Rd. south of Park rd. There are over 200 people who work here on "the wrong side of the tracks." Our Businesses are already affected by numerous at-grade crossings. The impact of rail traffic blocking access to these businesses has a real and monetary effect on these businesses. Doubling the amount of traffic blocking access is not even brought up as an issue in this study.

Although Valero is a big business here in Benicia, they are not the only business. I expect the City of Benicia to protect the interests of all. To accept a study that excludes some of their most affected neighbors is incredibly short-sighted of the city.

#4 - Mitigation Measure TRAN-2 addresses the issue of emergency response teams access around the Park Rd. crossing. There is not even an acknowledgement of the 200 plus people who could be trapped behind a very long train crossing or sitting, blocking our driveways. Again, this issue has serious safety repercussions, yet the city is accepting this Mitigated Negative Declaration, without even addressing the issue.

If the citizens of this city are to be able to support our civic leaders in accepting a plan of this scale, we need to know that all the impacts and potential impacts have been studied well. I feel at this time that has not happened.

I look forward to reviewing a serious study which addresses these issues, and helps to keep Benicia the kind of city we want to do business in.

Respectfully,

Jack Ruszel

Amy Million - Fwd: Valero Rail Update proposal

From: Brad Kilger
To: Amy Million
Date: 7/1/2013 5:55 PM
Subject: Fwd: Valero Rail Update proposal



>>> Jon Van Landschoot <jonvanland@yahoo.com> 7/1/2013 3:28 PM >>>

Hi Brad,

My big concern is the environmental danger of a spill involving the Tar Sands that might be brought into our town.

As a Sustainability Community , with a significant environmental focus, the Tar Sands option doesn't fit !

I recently heard that Valero does not have plans to bring in the Tar Sands , just more of the same crude it currently refines.

If you will , is that Valero's current position ?

your chum,
jon van

Kathy Kerridge
771 West I Street
Benicia, CA 94510



July 1, 2013

Dear Planning Commissioners, Mayor Patterson, City Council and Brad Kilger,

I am writing to urge you to reject the MND on the Valero Crude- by –Rail Project and to require a full Environmental Impact Report

CEQA requires that there be an evaluation of all foreseeable cumulative contributions to negative impacts including air quality, public health, local and regional sensitive ecology (land and water), traffic/transportation, and global warming. The initial study and negative declaration does none of that. As the study explains “all environmental evaluation must take into account the whole action involved including offsite as well as onsite, cumulative as well as project level, indirect as well as direct, and construction as well as operational impacts.” The possible impacts of an oil spill in the Suisun Marsh, or any other waterway in California is not mentioned. The cumulative effect of not just increased rail for Valero but for all the other refineries in the area is not mentioned. Yet this is foreseeable. Maybe 25 cars will have little impact, 100 more, but what if we start having 500 rail cars a day coming through a sensitive wetland that flows to the Bay?

The biological mitigation only looked at on site mitigations that would be implemented at the project site. There was no discussion of offsite mitigations, despite the fact that these rail cars will be going through sensitive habitats off site as well. Have other agencies been notified about this such as the Suisun Resource Conservation District and the Department of Fish and Wildlife?

The derailment of a train carrying the herbicide, metam sodium, in Dunsmuir in 1991 shows what an environmental disaster can happen when a rail car derails. This derailment killed everything for 38 miles of the Upper Sacramento River. This same area was the site of a derailment on 6-13-2013. The Dunsmuir spill can provide valuable lessons. In Dunsmuir the train operators had no idea what they were dealing with and raised no warning that there was a toxic spill. The same thing happened in the Kalamazoo, Michigan pipeline burst where not only did the local people have no idea what was in the pipeline, but the company ignored their own warning signals, increased the pumping of oil and never gave a thought to contacting the local authorities. This pipeline was carrying diluted bitumen from the Canadian Tar Sands. This cleanup is in its third year and is still incomplete. It has cost \$809 million dollars so far. Are our safety plans adequate? Has an emergency response plan been prepared for a crude oil spill being imported by rail in sensitive areas? Do we even know what will be in these rail cars? These are off site concerns that must be responded to. The initial study acknowledges that there are hazards of shipping by rail, but concludes that those are offset by the hazards of shipping by boat. That is not an adequate analysis. The analysis should be what are the hazards of shipping by rail and how can they be mitigated.

Will this expansion lead to bringing in crude oil from the tar sands of Canada? Valero has stated and the initial study says that the crude brought in will be similar to what they are already processing. Will that always be so? Are they bringing in oil that is from the tar sands that has been blended prior to being shipped? Oil from the tar sands are a toxic stew when transported. They don't react in a spill in the way

that traditional crude does. If Valero is not importing tar sands diluted bitumen blend now, will it do so in the future?

The initial project claims that there will be no need to modify the refinery to be able to process the new North American crude variety since VIP upgrades have been accomplished. Would Valero have to modify the refinery to accept dilute bitumen crude blends? Would the processing of diluted bitumen increase certain kinds of emissions and what would they be? The community would want additional notification if this happened.

The Alberta Tar Sands is an environmental disaster. Not only is it extremely energy intensive in the way the oil is produced; it is also destroying vast tracts of forest and using immense quantities of fresh water. The oil that is produced has to be heated and mixed with some very toxic chemicals in order to be shipped. When it spills these chemicals evaporate and a toxic cloud is released. The resultant heavy tar does not float to the top of water to be scooped up, but rather sinks to the bottom. It is more corrosive than lighter crude. This corrosive crude is so dangerous that British Columbia will not allow a pipeline to be built through their province to the ocean. The greenhouse gas emissions from the production of these oils are much greater than normal oil production. Will this project lead to this being brought in? What would the greenhouse gas emissions be like if that were considered? These are potential cumulative, off site impacts that must be considered.

Under section 18 "Mandatory Finding of Significance" of the initial report all findings were less than significant either with or without mitigation. The only reason for this is the failure of the initial report to look beyond the narrow scope of the project, which was treated only as a construction project. There is no analysis of offsite problems with rail transport of hazardous materials, no in depth analysis of what would happen with an offsite derailment or spill in sensitive environments and no analysis of the broader impact of increased GGH emissions that would happen if there was the importation of diluted bitumen from the Canadian Tar Sands.

For all of these reasons a complete Environmental Impact Report should be required.

Sincerely,


Kathy Kerridge

PUBLIC UTILITIES COMMISSION

320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013
(213) 576-7083



July 2, 2013

Charlie Knox
City of Benicia
250 E. L Street
Benicia, California 94510

Dear Mr. Knox:

Re: SCH# 2013052074; Valero Crude Oil by Rail Project, Valero Benicia Refinery DMND

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires the Commission approval for construction or alteration of crossings and grants the Commission exclusive power on design, alteration, and/or closure of crossings in California. The Commission's Rail Crossings Engineering Section (RCES) has received a copy of the *draft Mitigated Negative Declaration (Land Use Permit Application)* from the State Clearinghouse for the proposed Valero Crude by Rail Project. The City of Benicia (City) is the lead agency.

According to the Land Use Permit Application, Valero Benicia Refinery proposes to construct two (2) offloading rail spurs, a parallel engine runaround track and a "wye connector" track on the refinery property to allow receipt of rail cars at the offloading racks. The traffic associated with the project would be two freight trains per day. These proposed tracks will be connected to the existing Union Pacific Railroad (UPRR) tracks.

The proposed project would affect the existing at-grade highway-rail crossing at Park Road (CPUC # 001-37.32-C) and near Bayshore Road. The potential project impacts on the existing and proposed at-grade crossings along the tracks which serve or are near the Valero Benicia Refinery should be identified, discussed and evaluated for necessary safety improvements and mitigations. This includes considering traffic queuing, weaving, emergency service response, pedestrian circulation patterns or destinations with respect to railroad right-of-way, and compliance with the Americans with Disabilities Act. Mitigation measures to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and continuous vandal resistant fencing or other appropriate barriers to limit the access of trespassers onto the railroad right-of-way. All identified crossings shall also comply with the requirements of California Manual on Uniform Traffic Control Devices.

The new tracks shall be constructed in accordance with the Commission General Order (GO) Nos. 26-D (Clearance on railroads and street railroads as to side and overhead structures, parallel tracks and crossings), 72-B (Construction and maintenance – standard

Charlie Knox
Page 2 of 2
July 2, 2013

types of pavement construction at railroad grade crossings) and 75-D (Warning devices for at-grade railroad crossings).

Construction of a new public crossing or modification of an existing public crossing requires authorization from the Commission, through the formal application or the General Order (GO) 88-B request processes, respectively. Prior to submission of a formal application or GO 88-B request, the City should arrange a diagnostic meeting with RCES and UPRR to discuss relevant safety issues and requirements for the Commission's authorization. While construction of private crossings may not need the Commission's authorization, compliance with the Commission's GO 26-D (Clearances on Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks and Crossings) and GO 75-B (Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossing) standards are still required. RCES representatives are available for consultation on crossing safety matters. See the link for more information:
<http://www.cpuc.ca.gov/PUC/safety/Rail/Crossings/index.htm>.

If you have any questions in this matter, please contact Ken Chiang at (213) 576-7076, yen.chiang@cpuc.ca.gov, or Daniellia Fristoe at (916) 928-2108, dvm@cpuc.ca.gov.

Sincerely,



Ken Chiang, P.E.
Utilities Engineer
Rail Crossings Engineering Section
Safety and Enforcement Division

C: State Clearinghouse
Daniellia Fristoe



SAN JOSE, CA 95125
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818 WALL STREET
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(530) 342-7872

CEMENT MASONS LOCAL 400

810 W. STADIUM
SACRAMENTO, CA 95834

July 2, 2013



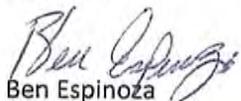
City of Benicia Community Development Department
Ms. Amy Million
250 East L Street
Benicia, ca 94510

Dear Ms. Million,

The Cement Masons Local 400 is an active member of the Napa-Solano Building and Construction Trades Council. Our Council recently met with Valero to review the proposed Crude by Rail project at the Benicia Refinery. We believe this is a good project for our community and can provide continuing work opportunities for our members. We encourage your approval of the project.

Finally, we appreciate the effort Valero has taken to engage all the members of the Napa-Solano Building and Construction Trades Council on this job and we look forward to continuing our positive working relationship with Valero.

Respectfully,


Ben Espinoza

Senior Business Agent
Cement Masons Local 400



Amy Million - Fwd: letter re Valero proposal

From: Brad Kilger
To: Amy Million
Date: 7/2/2013 11:44 AM
Subject: Fwd: letter re Valero proposal



>>> SmithFamily <smithdandy@aol.com> 7/2/2013 9:56 AM >>>

Dear Brad,

I am writing out of concern for the Benicia Valero proposal for a rail terminal to bring crude to the refinery. I would like to know all we can about the possible environmental impacts of such a plan. Therefore, I do not believe a negative declaration is sufficient environmental review and strongly encourage that the city require an EIR for the project. One look at Valero's corporate bottom line tells you they can afford that much protection for Benicia residents.

Thanks for your time,

Dan Smith
365 Military East

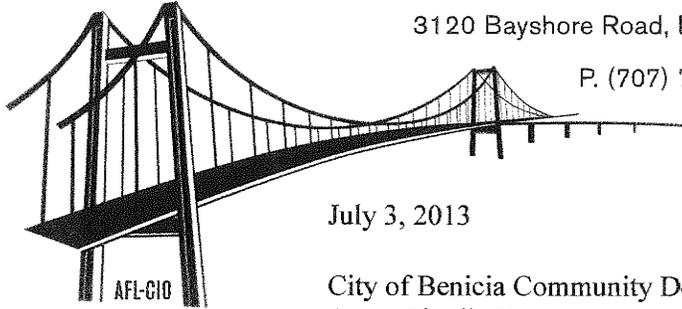
SmithFamily
smithdandy@aol.com

IRON WORKERS LOCAL 378

UNION OFFICE OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING

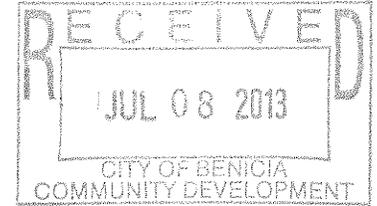
3120 Bayshore Road, Benicia CA 94510 | www.ironworkers378.org

P. (707) 746-6100 | F. (707) 746-0979



July 3, 2013

City of Benicia Community Development Department
Attn: Charlie Knox
250 East L Street
Benicia, CA 94510



Robert J. Lux
President
Business Agent

Jeff McEuen
Business Manager
Financial Secretary-
Treasurer

Jason Gallia
Business Agent

Re: Valero Crude by Rail

Dear Mr. Knox:

I am writing on behalf of the Iron Workers Union Local No. 378 located at 3120 Bayshore Road in Benicia. Our Iron Workers Local 378 dispatches skilled craftworkers to projects throughout the Bay Area. Some of the area's most high-profile buildings, bridges, monuments, stadiums and sports arenas were built by Local 378 members of the International Association of Structural, Ornamental and Reinforcing Iron Workers.

As a Benicia Industrial Park business and one that may be directly impacted by Valero's proposed Crude by Rail project, we reviewed the Initial Study/Mitigated Negative Declaration Section 16, Transportation and Traffic with interest. We operate our 10,000 square foot Bayshore Road facility weekdays during daytime business hours. Apprentices attending their four year training program and most all Local 378 staff arrive between 6:00 a.m. and 8:00 a.m.

To date, we have had no concerns with railcar movements in front of our business. Since the Valero railcar movements will be outside commute hours, and initially only at night, the incremental impact on the Iron Workers Local 378 is expected to be insignificant. We recommend the City of Benicia Planning Commission approve the Use Permit for the Valero project.

Further, as an active member of the Napa-Solano Building and Construction Trades Council, we understand the benefits of projects like this to our working brothers and sisters and their families. Valero's commitment to resource their project with union craftworkers is commendable. These local construction jobs benefit us all.

Respectfully,

Jeff McEuen
Business Manager
Financial Secretary/Treasurer

JM:ym
Opeiu-29/afl-cio

Heat and Frost Insulators and Allied Workers Local Union No. 16

AFFILIATED WITH THE AFL-CIO AND BUILDING AND CONSTRUCTION TRADES DEPARTMENT

3801 PARK ROAD
BENICIA, CA 94510



(707) 748-1616
FAX (707) 748-1620
www.insulators16-wica.com

City of Benicia
Attn: Brad Kilger, City Manager
250 East L Street
Benicia, CA 94510



July 3, 2013

RE: Valero Crude By Rail

Dear Mr. Kilger:

I am writing as a Benicia Industrial Park business and a strong supporter of the proposed project at Valero to bring in crude by railcar.

Our office staff, members and apprentice trainees commute to and from our facility daily and do not encounter excessive delays from railcar crossings in and around the industrial park.

We are excited to see both the city and local businesses investing in these types of infrastructure projects that will ultimately bring more growth and business opportunities to our area. The newly repaved area on Park road has given this area a badly needed facelift and we believe the Crude by Rail is another step forward in revitalizing the Industrial Park area which will bring prosperity to the city.

Should you have any questions, or would like to discuss the issue further, please contact me at the number listed above. You are also welcome to stop by our office and training facilities.

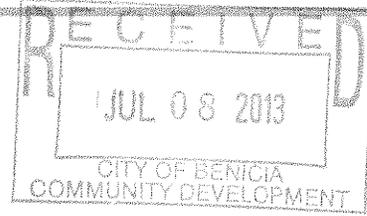
Thank you for your time and consideration in this matter.

Respectfully,

Melvin L. Breshears
Business Manager

Amy Million - Fw: Refinery

From: Brad Kilger <bkilger@ci.benicia.ca.us>
To: Amy.Million@ci.benicia.ca.us
Date: 7/5/2013 3:10 PM
Subject: Fw: Refinery



Brad
Sent from my phone please excuse any typos

-----Original message-----

From: "sandra kozak <sandra_kozak@yahoo.com>" <sandra_kozak@yahoo.com>
To: Brad Kilger <Brad.Kilger@ci.benicia.ca.us>, sandra kozak <sandra_kozak@yahoo.com>
Sent: Fri, Jul 5, 2013 09:27:22 PDT
Subject: Refinery

Please do not allow the refinery to add more noise and pollution to our neighborhoods. We already put up with too much noise from the jet engine and too much pollution.

Please vote NO on any Valero expansion of any kind.

A group of concerned citizens.

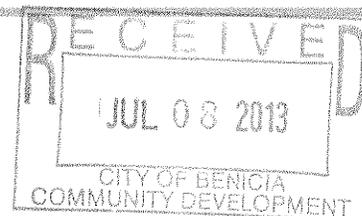
Sandra Summerfield Kozak, M.S., ERYT-500
International Yoga Studies, Founding Director
Light Transitions Educational Materials, President

"May the best life has to offer be yours within this day"

www.internationalyogastudies.com
www.sandrakozak.com

Amy Million - Tesoro

From: Amy Million
To: Amy Million
Date: 7/8/2013 7:43 AM
Subject: Tesoro



From: "Dnsjrs <dnsjrs@gmail.com>" <dnsjrs@gmail.com>
To: Brad Kilger <Brad.Kilger@ci.benicia.ca.us>
Sent: Sat, Jul 6, 2013 12:07:37 PDT
Subject: Tesoro

Brad,

I live in Vallejo, over the hill from Tesoro, but own several properties in Benicia. Since I am not sure I would have standing to talk at the planning meeting, I will express my concerns here.

Based on the comments in the Vallejo paper today, Your environmental review is flawed, there is no way to process heavy crude without more impact. Here are a few points.

- A. Crude by rail is common, but not without risk. The accident in Quebec, evacuating a thousand people after a crude derailment and fire is a grim reminder that you will be approving an XL Pipeline on wheels. Note, once rail is allowed, a far more likely scenario is Central Valley high sulphur crudes being imported as they are for Shell in Martinez
- B. Ask Tesoro for crude assays for their current crude slate, the Canadian crude and any other crude they might bring in by rail. The heavy metals and sulphur have to be disposed of, stored on site or released as pollutants
- C. Without a system wide upgrade of pollution equipment, air quality has to be impacted. The crude is not just processed in a new cracker / hydrotreater.
- D. With a system wide upgrade, you should expect no less than a sulphur smell encompassing Benicia and Vallejo housing developments along Rose drive and Somerset. A drive by the Martinez Shell refinery will prove the point to anyone willing to make the drive.

This is the reality of a larger refinery footprint on our neighborhoods. It is naive to the point of questioning inappropriate collusion to have issued an environmental report not detailing the impacts known by anyone in the industry. There are days when I smell the refinery now and I do not want to see that get worse. Changing from light, sweet crude to heavy crude will affect my air quality and property value. I will be reviewing options for environmental monitoring prior to the upgrade to establish baseline and air quality changes for any future litigation.

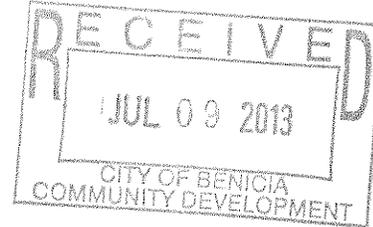
Please do an environmental review that will at least free the city from sharing liability as what is being reported would appear to fail that test.

Thanks,
 Dave Shipley

NATURAL RESOURCES DEFENSE COUNCIL

July 9, 2013

Via Fax to
City of Benicia Community Development Department
Attn: Amy Million
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637



Re: Notice of Intent to Adopt a Mitigated Negative Declaration for the Valero Crude
by Rail Project

Dear Ms. Million:

Please find the attached supplement to NRDC's comments on the Notice of Intent to Adopt a Mitigated Negative Declaration for the Valero Crude by Rail Project. On July 7, 2013, a rail car carrying oil derailed and exploded in Quebec, Canada, killing at least thirteen people. This tragic event underscores the need for an evaluation of rail car accidents and spills in conjunction with the City of Benicia's approval of this project. At present, the Initial Study/Mitigated Negative Declaration completely fails to consider or mitigate the potential for these types of accidents. The potential for rail accidents and spills must be evaluated and mitigated before this project may lawfully proceed.

Sincerely,

Diane Bailey, Senior Scientist
dbailey@nrdc.org
415-875-6127

Elizabeth Forsyth, Attorney
eforsyth@nrdc.org
415-875-6162

The New York Times

July 8, 2013

Dangerous Conditions Impede Inquiry Into Quebec Crash

By IAN AUSTEN

OTTAWA — The Quebec town where runaway railroad tank cars filled with oil derailed and exploded over the weekend still did not know the full extent of the devastation on Monday as dangerous conditions limited the movements of investigators.

The provincial police said they had found eight more bodies in the town, Lac-Mégantic, on Monday, raising the death toll to 13 from the “ghost train” accident, as it has become known, which occurred early Saturday morning. The police also increased the estimate of the missing people, who are presumed to be dead, to 50.

While fires that raged for much of the weekend were largely under control by Monday, Sgt. Benoît Richard of the provincial police, known as Sûreté du Québec, said much of the site remained so dangerous that officers were able to enter only when accompanied by firefighters.

The accident’s destructiveness also impeded efforts to recover bodies and investigate the cause of the crash. Aerial photos of the popular vacation town showed that much of its downtown had been reduced to little more than ash. Le Musi-Café, a bar near the rail line that was filled with patrons at the time of the derailment, had vanished under a pile of burned and crushed tank cars.

Forensic anthropologists were traveling to the town to assist with the recovery of remains, and the police were asking relatives for razors, hairbrushes and other items belonging to the missing that might provide DNA for identification.

Further delaying the recovery was a declaration of the accident site as a crime scene. Sergeant Richard said that factor had delayed the removal of the remains of the train as the police must document them and gather evidence.

News reports in Quebec indicated that the missing included parents who had been listening to a concert at Musi-Café but never returned to their young children. At least one musician who had been performing at the time of the wreck also was among those missing.

About 1,500 of the town's 6,000 residents were still unable to return to their homes on Monday, although officials said some might be allowed to return on Tuesday. At least 30 buildings were destroyed.

Police officers and politicians in Lac-Mégantic declined to answer questions about the cause of the derailment. The information void has been filled with sometimes-contradictory accounts.

Denis Lebel, the federal transport minister, said on Monday that the train's locomotive had passed a safety inspection in the Montreal area early on Friday, but he offered no further details.

The Montreal, Maine & Atlantic Railway, which owns the train line, said its engineer had parked the 72-car train late Friday near Nantes, a village about 7.5 miles from Lac-Mégantic, and had left it unattended. About 11:30 p.m., the volunteer Fire Department in Nantes put out a fire in the locomotive.

Patrick Lambert, the chief of the Nantes Fire Department, told reporters that his crew had shut down the locomotive after fighting the fire and had informed the railway about its action.

"The people from M.M.A. told us: 'That's great — the train is secure, there's no more fire, there's nothing anymore, there's no more danger,' " Mr. Lambert said. "We were given our leave, and we left."

But in interviews on Monday with the Canadian Broadcasting Corporation and Reuters, Edward Burkhardt, the chairman and chief executive of the railway's parent company, Rail World, appeared to blame the firefighters for causing the accident by shutting down the train.

Mr. Burkhardt said their action had meant that the train's brake system gradually lost air pressure, "and an hour or so after the locomotive was shut down, the train rolled away." He also faulted the Fire Department for not waking up the engineer, who was staying overnight at a hotel in Lac-Mégantic, and taking him to the scene.

Earlier, Mr. Burkhardt, who did not respond to several requests for comment, said the train had been properly secured. Further confusing his account is the fact that since the 19th century, railways in North America have used an air-braking system that applies, rather than releases, freight car brakes as a safety measure when it loses pressure.

The New York Times

July 7, 2013

Deadly Derailment in Quebec Underlines Oil Debate

By **IAN AUSTEN**

OTTAWA — The police said on Sunday that at least five people had died and 40 were missing after runaway railroad tank cars filled with oil derailed and exploded in a small Quebec town.

“We know there will be more deaths,” Lt. Michel Brunet of Quebec’s provincial police told reporters in Lac-Mégantic, where the fires continued to burn on Sunday.

The derailment and explosions, which took place around 1:15 a.m. on Saturday, underscored a debate in the effort to transport North America’s oil across long distances: is it safer and less environmentally destructive to move huge quantities of crude oil by train or by pipeline?

Visiting the town on Sunday, Prime Minister Stephen Harper compared it to a “war zone.”

The fires, which incinerated at least 30 buildings in the core of Lac-Mégantic, a tourist town of 6,000 people about 150 miles east of Montreal, limited the work of accident investigators, as well as attempts to search for survivors and the remains of victims.

In a statement, the Montreal, Maine and Atlantic Railway said the train had been parked outside Lac-Mégantic for the night with no crew members on board. Its locomotive had been shut down, “which may have resulted in the release of air brakes on the locomotive that was holding the train in place,” the statement said.

The railway did not respond to further questions, but Reuters, quoting officials from the company, said the oil aboard the train had come from the Bakken oil fields of the Western United States.

The Bakken oil deposits, which are often drilled through hydrofracking, have become a major source of oil for the railroads to move because the deposits lack direct pipeline links. Canada's oil sands producers, frustrated by a lack of pipeline capacity, are also turning to trains to ship their products.

Their move to rail comes as the Obama administration continues to weigh an application for the Keystone XL pipeline, which would deliver synthetic crude oil and bitumen, an oil-containing substance, from Alberta to refineries on the Gulf Coast. An analysis of the pipeline plan for the State Department concluded that if the pipeline was rejected, oil sands producers would instead turn to railways for shipments to the United States.

Both the Canadian National Railway and the Canadian Pacific Railway have extensive rail networks into the United States and have been promoting what the industry often calls a "pipeline on rails" to serve the oil sands. Mark Hallman, a spokesman for Canadian National, said the railway moved 5,000 carloads of crude oil to the United States from Canada in 2011, increased that amount to 30,000 carloads in 2012 and "believes it has the scope to double this business in 2013."

Unlike pipeline proposals, however, the escalation of rail movements of oil, including light oil shipments from the Bakken fields as well as from similar unconventional, or tight, oil deposits in Canada, is not covered by any regular government or regulatory review.

"We have an explosion of tight oil production in Canada and the United States, and most of it is moving by train," said Anthony Swift, a lawyer with the Natural Resources Defense Council in Washington. "But this process has happened without due diligence."

Keith Stewart, a climate and energy campaigner with Greenpeace Canada who has examined the increased use of oil trains, criticized railways in Canada and the United States for continuing to use older oil tank cars that he said were found to be unsafe more than 20 years ago.

A 2009 report by the National Transportation Safety Board about a Canadian National derailment in Illinois called the design of those tank cars "inadequate" and found that it "made the cars subject to damage and catastrophic loss of hazardous materials." Television images suggested that the surviving tank cars on the Lac-Mégantic train were of the older design.

Mr. Hallman, the spokesman for Canadian National, did not respond to questions about the safety of tank cars or the consequences of the Lac-Mégantic derailment for rail oil shipments in general. However, he said, "this tragedy notwithstanding, movement of hazardous material by rail not only can be, but is being, handled safely in the vast majority of instances." Ed Greenberg, a spokesman for Canadian Pacific, declined to comment.

The comparative safety of railways over pipelines has been the subject of much debate. Speaking in New York in May, Mr. Harper emphasized that the rejection of the Keystone XL pipeline would lead to an increase in oil sands shipments by rail, which he called "more environmentally challenging" than pipelines.

"We have seen some major safety risks associated with the crude-by-rail regime," Mr. Swift, the lawyer, said.

But Edward Whittingham, the executive director of the Pembina Institute, an environmental group based in Calgary, Alberta, said there was not conclusive research weighing the safety of the two shipment methods.

"The best data I've seen indicates," he said, "depending on your perspective, both are pretty much as safe as each other, or both are equally unsafe. There's safety and environmental risks inherent in either approach."

Accidents involving pipelines, Mr. Whittingham said, can be more difficult to detect and can release greater amounts of oil. Rail accidents are more frequent but generally release less oil. The intensity of the explosions and fires at Lac-Mégantic, he said, came as a "big surprise" to him and other researchers, given that the tank cars had been carrying crude oil, rather than a more volatile form like gasoline.

While Mr. Whittingham hopes that it will not be the case, he anticipates that proponents of the Keystone XL pipeline will use the rail accident to push their case with the Obama administration.

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THE WALL STREET JOURNAL

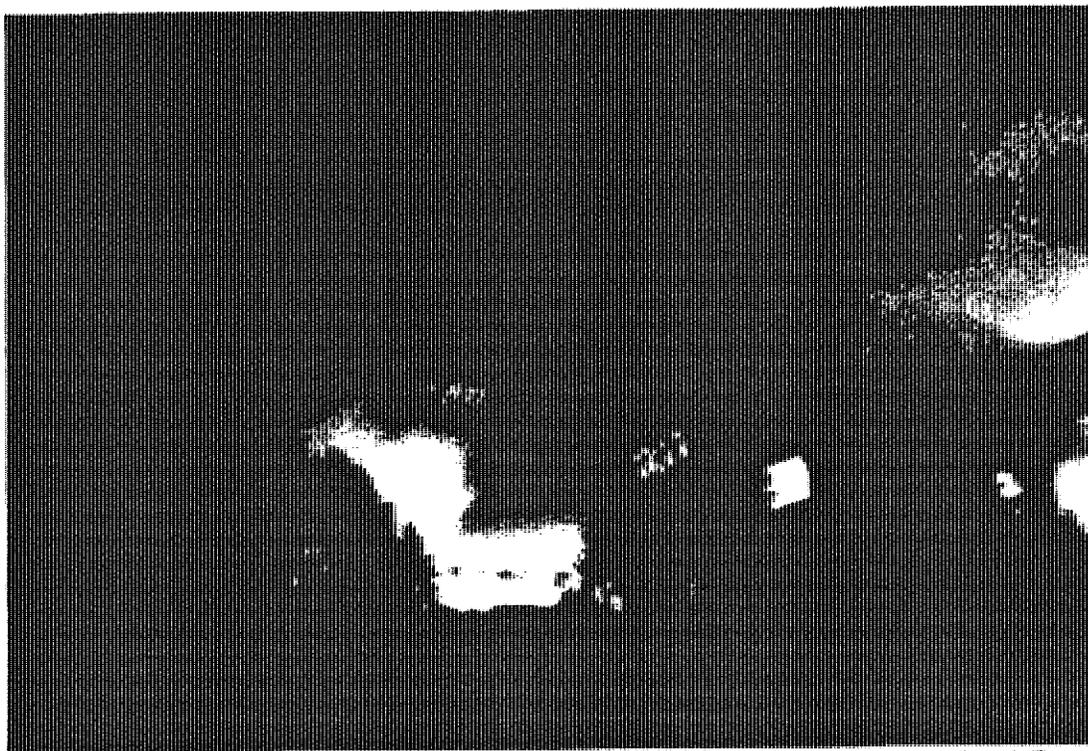
WSJ.com

CANADA NEWS | Updated July 7, 2013, 9:18 p.m. ET

Deadly Train Derailment Fuels Crude-by-Rail Concerns

Explosion of Runaway Train in Quebec Threatens to Ratchet Up Scrutiny of Shipments Amid Increased Oil Production

By CHESTER DAWSON and TOM FOWLER



Canada/Reuters

Fire rages shortly after a runaway train carrying crude exploded this weekend in Lac Megantic, Quebec, in this photo snapped Saturday by a resident. The accident follows a sharp jump in crude shipments by rail.

The deadly weekend explosion of a runaway crude-carrying train in Quebec threatens to ratchet up scrutiny of rising crude-by-rail shipments on both sides of the U.S.-Canada border, amid a boom in North American oil production.

Fire, Destruction in Derailment

In both countries, shipments of crude by rail have shot up sharply, as producers race to get all their new oil to market and as pipeline companies scramble to build new lines or

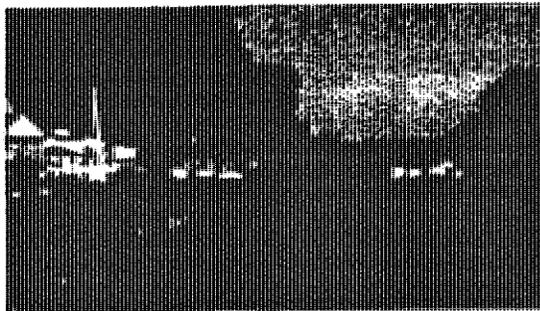
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Deadly Train Derailment Fuels Crude-by-Rail Concerns - WSJ.com



Christinna Muschi/Reuters

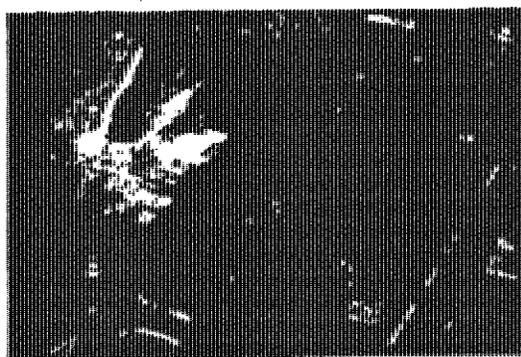
A firefighter worked Sunday where a train derailed and exploded a day earlier in Lac Megantic, Quebec, killing at least five people. Dozens are still missing.



WSJ's Carolyn King reports from the scene of the train derailment that caused a massive explosion in Lac Megantic, Quebec. Video: David George-Cosh via #WorldStream.

Railroads. A carload is typically about 740 barrels.

About 16.6 million barrels of Canadian crude were shipped by rail to the U.S. in 2012, accounting for about 2% of Canadian crude exports, according to data from Canada's National Energy Board. But industry estimates say that could grow to as much as 73 million barrels in 2013 and nearly 110 million barrels by 2014.



Associated Press

Along with five deaths and an estimated 40 missing, authorities say this weekend's Quebec rail explosion incinerated as many as 30 buildings.

reconfigure old ones to handle the growing volumes. Meanwhile, uncertainty over several big pipeline projects—including approval delays for TransCanada Corp.'s Keystone XL, which would connect Western Canada's booming oil sands development to the Gulf Coast—have sent some oil companies looking to rail as a longer-term solution.

Canadian authorities have confirmed five deaths and estimate some 40 people are still missing after a runaway train carrying crude derailed early Saturday and exploded, demolishing a large swath of Lac Megantic, Quebec, including as many as 30 incinerated buildings. Investigators, citing the high death toll, have opened a criminal investigation. Canadian regulators have said they are concentrating their probe initially on the train, its braking system and the track.

In the U.S., shipments of crude by rail have gone from 9,500 carloads in 2008, the year widely seen as the beginning of the current oil boom, to 233,811 carloads in 2012, according to the Association of American

Canada, in particular, has been hit by a recent spate of high-profile accidents involving trains—several, but not all, of which have been carrying petroleum. Last month, a Canadian Pacific Railway Ltd. freight train carrying petroleum diluent derailed on a failing rail bridge amid record flooding in Calgary, Alberta.

That accident was the fifth derailment of a CP train in three months. The city's mayor publicly questioned whether the company, which is responsible for its own track and

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Deadly Train Derailment Fuels Crude-by-Rail Concerns - WSJ.com

bridge inspections, put profits ahead of safety. CP officials denied cutting corners on inspections and said the derailments aren't connected to any underlying trend.

But the accident early Saturday is on a whole different scale. The train's operator, Montreal Maine & Atlantic Railway Inc., a unit of privately held U.S. railroad operator Rail World Inc., said the runaway train was loaded with 72 carloads of crude bound from North Dakota to a refinery in New Brunswick.

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Authorities Can't Rule Out Foul Play in
Quebec Town Train Blast 7/6/2013

It had been stopped during a crew rest outside town. The company said it inexplicably started to roll, unmanned, about 7 miles until derailling in Lac Megantic. The town has a population of about 6,000 and is some 22 miles from the U.S. border with Maine.

In a statement late Sunday, MM&A said an engineer inspected the train and ensured one of its locomotives was running and that its air brake was engaged. It said subsequent to that inspection, the locomotive was shut down, which may have released the brake. It didn't provide details but said it was cooperating with investigators.

Rail accidents, particular large derailments involving fatalities and spills, are relatively rare. The North American rail industry's safety record has improved in recent decades.

But the number of incidents involving crude shipments has surged along with growth in North American oil production. Industry executives say the number of spills is still tiny compared with the amount of crude shipped.

"In the past decade, 95% of rail incidents involving crude oil were...nonaccident releases, and 70% of those incidents involved spills of less than 5 gallons," said Holly Arthur, a spokeswoman for the Association of American Railroads. The Railway Association of Canada said 99.9977% of all products shipped on the country's railroads arrive safely.

Most recent rail accidents involving crude have been small—such as the three gallons of oil that spilled from three derailed tanker cars in central Maine on their way to the same refinery in New Brunswick in March. But others, like the latest accident and a 357-barrel spill in Minnesota involving another CP train on its way to Chicago, have been more significant.

Crude shipments first started to make a noticeable difference to BNSF Railway Co., one big crude shipper, in 2008. At the time, it moved about 1.3 million barrels. In 2012 BNSF moved about 90 million barrels.

NATURAL RESOURCES DEFENSE COUNCIL

July 9, 2013

Via Fax to
City of Benicia Community Development Department
Attn: Amy Million
250 East L Street
Benicia, CA 94510
Fax: (707) 747-1637

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Sincerely,

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dbailey@nrdc.org
415-875-6127

Elizabeth Forsyth, Attorney
eforsyth@nrdc.org
415-875-6162

The New York Times

July 8, 2013

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The accident’s destructiveness also impeded efforts to recover bodies and investigate the cause of the crash. Aerial photos of the popular vacation town showed that much of its downtown had been reduced to little more than ash. Le Musi-Café, a bar near the rail line that was filled with patrons at the time of the derailment, had vanished under a pile of burned and crushed tank cars.

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The New York Times

July 7, 2013

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“We know there will be more deaths,” Lt. Michel Brunet of Quebec’s provincial police told reporters in Lac-Mégantic, where the fires continued to burn on Sunday.

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Visiting the town on Sunday, Prime Minister Stephen Harper compared it to a “war zone.”

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The comparative safety of railways over pipelines has been the subject of much debate. Speaking in New York in May, Mr. Harper emphasized that the rejection of the Keystone XL pipeline would lead to an increase in oil sands shipments by rail, which he called “more environmentally challenging” than pipelines.

“We have seen some major safety risks associated with the crude-by-rail regime,” Mr. Swift, the lawyer, said.

But Edward Whittingham, the executive director of the Pembina Institute, an environmental group based in Calgary, Alberta, said there was not conclusive research weighing the safety of the two shipment methods.

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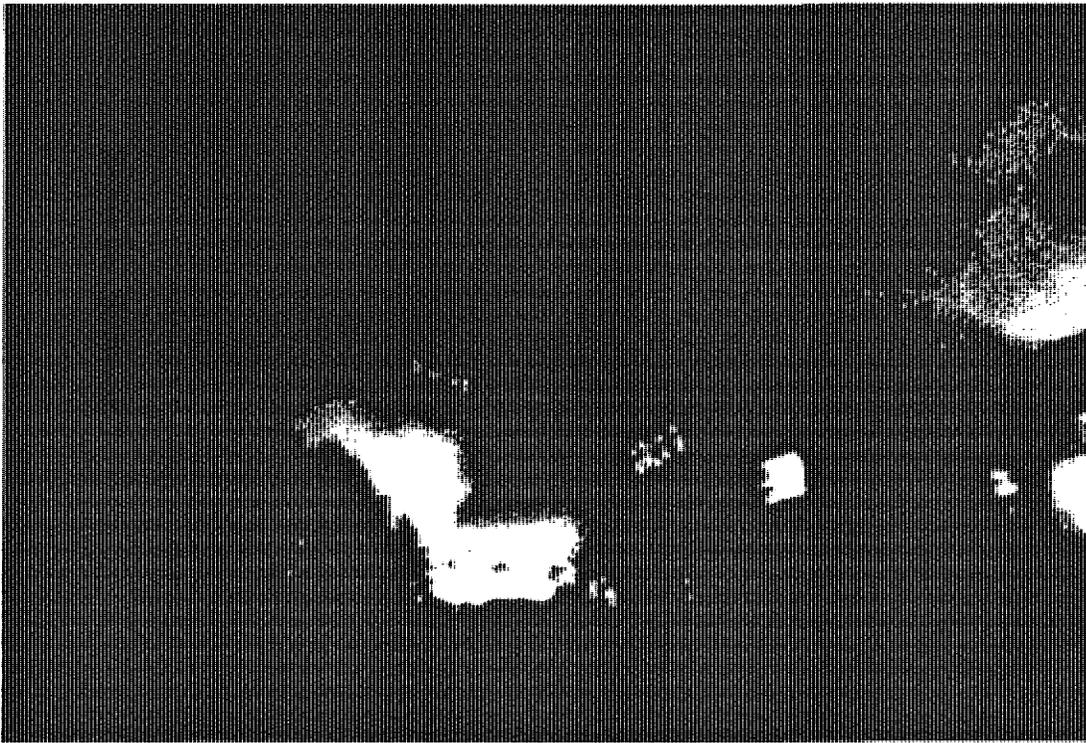
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CANADA NEWS | Updated July 7, 2013, 9:18 p.m. ET

Deadly Train Derailment Fuels Crude-by-Rail Concerns

Explosion of Runaway Train in Quebec Threatens to Ratchet Up Scrutiny of Shipments Amid Increased Oil Production

By CHESTER DAWSON and TOM FOWLER



Canada/Reuters

Fire rages shortly after a runaway train carrying crude exploded this weekend in Lac Mégantic, Quebec, in this photo snapped Saturday by a resident. The accident follows a sharp jump in crude shipments by rail.

The deadly weekend explosion of a runaway crude-carrying train in Quebec threatens to ratchet up scrutiny of rising crude-by-rail shipments on both sides of the U.S.-Canada border, amid a boom in North American oil production.

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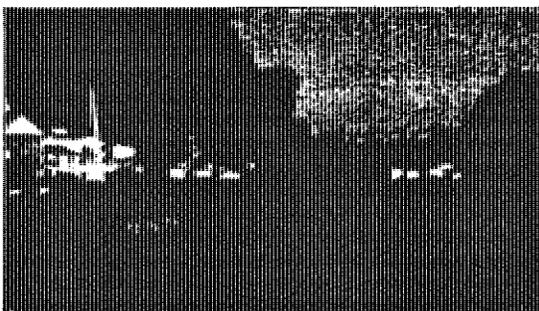
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Christinna Muschl/Reuters

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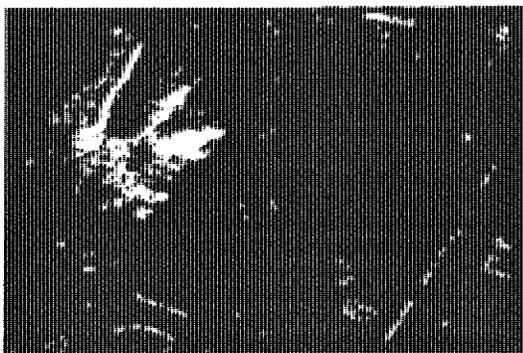
reconfigure old ones to handle the growing volumes. Meanwhile, uncertainty over several big pipeline projects—including approval delays for TransCanada Corp.'s Keystone XL, which would connect Western Canada's booming oil sands development to the Gulf Coast—have sent some oil companies looking to rail as a longer-term solution.

Canadian authorities have confirmed five deaths and estimate some 40 people are still missing after a runaway train carrying crude derailed early Saturday and exploded, demolishing a large swath of Lac Megantic, Quebec, including as many as 30 incinerated buildings. Investigators, citing the high death toll, have opened a criminal investigation. Canadian regulators have said they are concentrating their probe initially on the train, its braking system and the track.

In the U.S., shipments of crude by rail have gone from 9,500 carloads in 2008, the year widely seen as the beginning of the current oil boom, to 233,811 carloads in 2012, according to the Association of American

Railroads. A carload is typically about 740 barrels.

About 16.6 million barrels of Canadian crude were shipped by rail to the U.S. in 2012, accounting for about 2% of Canadian crude exports, according to data from Canada's National Energy Board. But industry estimates say that could grow to as much as 73 million barrels in 2013 and nearly 110 million barrels by 2014.



Associated Press

Along with five deaths and an estimated 40 missing, authorities say this weekend's Quebec rail explosion incinerated as many as 30 buildings.

Canada, in particular, has been hit by a recent spate of high-profile accidents involving trains—several, but not all, of which have been carrying petroleum. Last month, a Canadian Pacific Railway Ltd. freight train carrying petroleum diluent derailed on a failing rail bridge amid record flooding in Calgary, Alberta.

That accident was the fifth derailment of a CP train in three months. The city's mayor publicly questioned whether the company, which is responsible for its own track and

7/9/13

Deadly Train Derailment Fuels Crude-by-Rail Concerns - WSJ.com

bridge inspections, put profits ahead of safety. CP officials denied cutting corners on inspections and said the derailments aren't connected to any underlying trend.

But the accident early Saturday is on a whole different scale. The train's operator, Montreal Maine & Atlantic Railway Inc., a unit of privately held U.S. railroad operator Rail World Inc., said the runaway train was loaded with 72 carloads of crude bound from North Dakota to a refinery in New Brunswick.

Related Articles

40 Still Missing at Blast Site
Investigators Probe Quebec Rail Disaster
In Quebec, a Night Out Turns Into Nightmare
Authorities Can't Rule Out Foul Play in
Quebec Town Train Blast 7/6/2013

It had been stopped during a crew rest outside town. The company said it inexplicably started to roll, unmanned, about 7 miles until derailing in Lac Megantic. The town has a population of about 6,000 and is some 22 miles from the U.S. border with Maine.

In a statement late Sunday, MM&A said an engineer inspected the train and ensured one of its locomotives was running and that its air brake was engaged. It said subsequent to that inspection, the locomotive was shut down, which may have released the brake. It didn't provide details but said it was cooperating with investigators.

Rail accidents, particular large derailments involving fatalities and spills, are relatively rare. The North American rail industry's safety record has improved in recent decades.

But the number of incidents involving crude shipments has surged along with growth in North American oil production. Industry executives say the number of spills is still tiny compared with the amount of crude shipped.

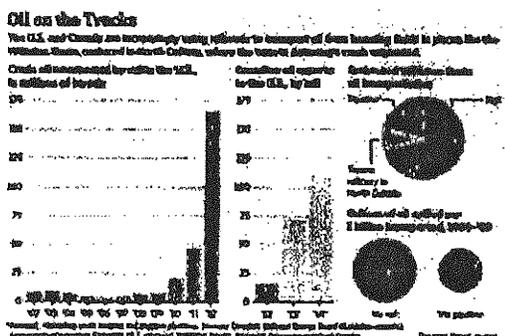
"In the past decade, 95% of rail incidents involving crude oil were...nonaccident releases, and 70% of those incidents involved spills of less than 5 gallons," said Holly Arthur, a spokeswoman for the Association of American Railroads. The Railway Association of Canada said 99.9977% of all products shipped on the country's railroads arrive safely.

Most recent rail accidents involving crude have been small—such as the three gallons of oil that spilled from three derailed tanker cars in central Maine on their way to the same refinery in New Brunswick in March. But others, like the latest accident and a 357-barrel spill in Minnesota involving another CP train on its way to Chicago, have been more significant.

Crude shipments first started to make a noticeable difference to BNSF Railway Co., one big crude shipper, in 2008. At the time, it moved about 1.3 million barrels. In 2012 BNSF moved about 90 million barrels.

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Deadly Train Derailment Fuels Crude-by-Rail Concerns - WSJ.com



In Canada, CP hauled 53,500 carloads of crude last year, up from 13,000 in 2012 and just 500 in 2009. Meanwhile, Montreal-based Canadian National Railway Co. expects to double last year's 30,000 crude oil carloads this year.

Traditionally, railroads are less attractive to oil companies because of higher shipping costs compared with pipelines. But the rapid development of new oil fields, from West

Canada through North Dakota and into West Texas in the past five years, has production outpacing pipeline construction, leading many producers and refiners to turn to rail, initially as a temporary fix.

But once seen as a temporary solution until new, permanent pipelines could be built, rail usage has proved to be so effective that many refiners have come to prefer the railroad.

Even though pipelines are generally less expensive and less prone to leaks and spills, rail offers refiners the ability to bring in crude from different locations at different prices, instead of being stuck with a single source of oil.

In fact, at least two pipeline projects—one to transport crude from North Dakota's Bakken shale to a storage hub in Oklahoma, and one to move West Texas oil to California—have been interrupted due to lack of interest from refiners already accessing rail shipments.

In Maine, crude has increasingly been shipped from Canada and the U.S. Midwest to an Irving Oil Ltd. refinery in Saint John, New Brunswick, raising worry there. Maine has seen crude by rail shipments soar in the past two years from 14,300 barrels in January 2012 to 1.1 million barrels in December, most of it from Canada.

The crude involved in this weekend's derailment and explosion in Lac Megantic was scheduled to traverse Maine on its way to the Irving Oil refinery.

The increased Canadian crude traffic has Maine spill-response officials working with railroads to find locations to stage spill cleanup equipment, and has led environmental groups to organize protests and lobby state lawmakers for restrictions.

Last month, six people were arrested in Fairfield, Maine, when they tried to block a train carrying crude bound from Canada to Saint John.

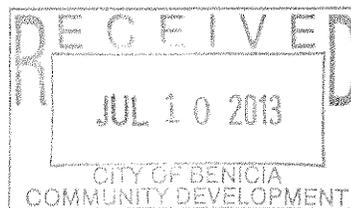
—Caroline Van Hasselt, Angel González and Benjamin Lefebvre contributed to this article.

Write to Chester Dawson at chester.dawson@wsj.com and Tom Fowler at tom.fowler@wsj.com

A version of this article appeared July 7, 2013, on page A1 in the U.S. edition of The

July 10 , 2013

To:



Planning Commission: George Oakes, Sr.; Belinda Smith; Susan Cohen Grossman; Rod Sherry; Suzanne Sprague; Don Dean; Steve Young

Principal Planner, City of Benicia: Amy Million

In light of recent events, the Valero project to receive crude oil by rail through Benicia deserves close attention. The Mitigated Negative Declaration being considered is not rigorous nor detailed enough to allow this project to proceed without further scrutiny.

I have read the project application and the Mitigated Negative Declaration on the city's website. Valero states that there will be no substantive change in the type of oil brought to the Benicia refinery by rail compared to what is delivered by marine tanker, and therefore no change in emissions or environmental impacts. Despite these reassurances, questions have arisen in the community and beyond about whether this is actually the case.

Valero's Project Description states (section 1.3, Objectives and Benefits, and repeated in the city's Valero Crude by Rail Project Initial Study Project Description Overview): "The primary purpose of the Project is to allow Valero access to more North American sourced crudes that have recently become available." (emphasis mine)

There is no information given about exactly what kind of crude or specifically where it will come from, but this statement implies that it must refer to tar sands or shale crude. This brings a host of questions about increased emissions and dangers connected with this type of crude oil, the solvents used with it, and the way it is transported. Recent disasters have shown that these concerns are not at all far-fetched.

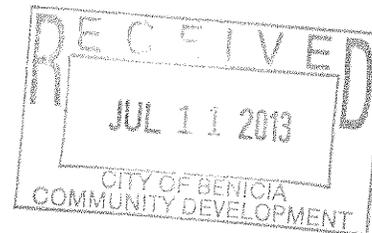
Please require a full Environmental Impact Review so that these potential effects can be addressed and mitigated if possible. The current Mitigated Negative Declaration is not sufficient.

Nancy Steele

41 Buena Vista

Benicia

From: Plewis <pjlewis363@gmail.com>
Date: July 10, 2013, 7:54:22 PM PDT
To: "bkilger@ci.benicia.ca.us" <bkilger@ci.benicia.ca.us>
Subject: Opposition to Valero Crude by Rail Project



Dear Mr. Kilger

Having read the IS/MND and a number of the comments regarding the Valero Crude by Rail project, I write to you again to request you not approve the project. Dr. Phyllis Fox's analysis identified the major flaw in the IS/MND, specifically its failure to address in detail the chemical composition of the crude oil that will be imported by rail as compared to what is currently being brought in by ship. Without knowing both the specific source of the crude oil and its composition, it is impossible to properly assess the health and environmental risks to the community.

Disclosure of this information by Valero would allow the following issues to be thoroughly considered:

Would the community be at risk for increased rates of cancer?

Would the risk of respiratory ailments such as asthma increase?

Would an oil spill be harder (or impossible) to clean up?

Would there be a heightened risk of a refinery fire?

Would there be a risk of a disastrous fire similar to what recently occurred in Quebec?

Would the refinery emit more noxious fumes?

What GHG emissions will result when considering the full implications of the project?

What mitigation measures might be possible to address these issues?

The current IS/MND is a masterpiece of ambiguity and misdirection in avoiding identifying what type of crude will be processed by the refinery if rail shipments are allowed.

Please disapprove the IS/MND and require a full EIR. The health and safety of the community demand it.

Rick Slizeski

Sent from my iPad

PUBLIC COMMENT, FOR THE RECORD



Date:

City Manager Brad Kilger
Planning Commissioners Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell, Councilmembers Hughes, Schwartzman, Strawbridge
c/o City of Benicia
250 East L Street
Benicia, CA 94510

RE: Valero Crude-By-Rail, Benicia's Notice of Intent to Adopt a Mitigated Negative Declaration

Dear Commissioners, Council Members and Staff:

There is little if any room for consideration of the moral component(s) of this issue.

Is Valero (or any refiner) to be trusted to place on equal par, the health and safety of Benicia residents? Or does Valero's right to ~~profit~~ profit trump everything?

My Name: Richard Freeman

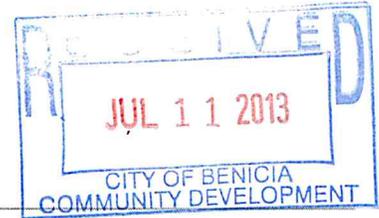
My Address:

Phone: 925-323-6857

Email: rfreem@sonic.net

Amy Million - Fw: Crude Oil Rail Terminal to Valero in Benicia

From: Brad Kilger <bkilger@ci.benicia.ca.us>
To: Amy.Million@ci.benicia.ca.us
Date: 7/11/2013 1:05 PM
Subject: Fw: Crude Oil Rail Terminal to Valero in Benicia



Brad
Sent from my phone please excuse any typos

-----Original message-----

From: Sabina Yates <redfoxred@earthlink.net>
To: Brad Kilger <Brad.Kilger@ci.benicia.ca.us>
Cc: Rod Sherry <rsherry@csa-engineers.com>, Belinda Smith <bsmitgo@hotmail.com>, Susan Cohen Grossman <susancg@pacbell.net>, Don Dean <donaaldjjean@sbcglobal.net>
Sent: Thu, Jul 11, 2013 12:57:12 MST
Subject: Re: Crude Oil Rail Terminal to Valero in Benicia

Dear Mr. Kilger and Members of the Planning Commission:

I am very concerned about the neglect of many factors which are not addressed in the current "Initial Study" and "Mitigated Negative Declaration" which will affect and impact the citizens of Benicia.

Will the tanker cars carrying the heavy sour crude be regulated to prevent release of highly volatile and corrosive DilBits? According to recent news reports, the Canadian public has long been bothered about the older rail tank cars carrying the Canadian tar sands – which might have been a factor in the Lac-Megantic disaster.

Will Valero be required to monitor the affects of corrosion as they switch to refining more sour crude? Chevron in Richmond was negligent in their diligence of pipeline oversight (as was PG&E in San Bruno) for cost-cutting.

I would urge the Planning Commission to deny the Use Permit and to reject the Mitigated Negative Declaration. Benicia deserves a full CEQA/IRA study.

Sincerely,

Sabina Yates
302 Bridgeview Ct.
Benicia, CA 94510-2683
(707) 746-6428
redfoxred@earthlink.net



Dear Brad Kilger and Members of the Planning Commission:

I'm writing to ask for a full Environmental Impact Report on Valero's proposed Crude by Rail Project. The California Environmental Quality Act requires that "An EIR shall be prepared if there is substantial evidence that the project may have a significant effect on the environment." I'm convinced by my talk with an Industrial Park business owner, and the evidence being presented the Natural Resources Defense Council, the Sierra Club and others, that this is clearly the case.

As a resident, homeowner and husband, I think the stakes are too high to gamble that there will be no significant impacts on property values, and more importantly, the health of our community.

Let's get all the facts before the public before any decision is made on this project.

Thanks for your work on this.

Sincerely,

Larnie Fox

Amy Million - Fwd: Re: Vallero's plans to transport crude oil by train

From: Brad Kilger
To: Amy Million
Date: 7/11/2013 4:50 PM
Subject: Fwd: Re: Vallero's plans to transport crude oil by train



>>> nikki davis <nikkibdavis@sbcglobal.net> 7/11/2013 4:50 PM >>>
Hello,

My concern regarding this project is that the current review process is inadequate, and that the Planning Commission should require a full Environmental Impact Report (EIR).

If Valero goes ahead with it's plans, there might be a good chance you and I will experience greater health hazards, increased pollution of air, land and water, and potentially catastrophic emergencies.

Thank you for your consideration

Nikki Basch-Davis

Amy Million - Fwd: Re: Vallero's plans to transport crude oil by train

From: Brad Kilger
To: Amy Million
Date: 7/11/2013 4:50 PM
Subject: Fwd: Re: Vallero's plans to transport crude oil by train



>>> nikki davis <nikkibdavis@sbcglobal.net> 7/11/2013 4:50 PM >>>
Hello,

My concern regarding this project is that the current review process is inadequate, and that the Planning Commission should require a full Environmental Impact Report (EIR).

If Valero goes ahead with it's plans, there might be a good chance you and I will experience greater health hazards, increased pollution of air, land and water, and potentially catastrophic emergencies.

Thank you for your consideration

Nikki Basch-Davis



Questions Posed at the Community Forum Regarding Valero Crude By Rail Project

Community Forum was sponsored by the Good Neighbor Steering
Committee (GNSC)

Forum was attended by more than 70 community members. Forum was held at the Community Center on July 9, 2013. When people registered they were given an index card to write down their question(s) and then their questions were read to the assembled group and answered by Marilyn Bardet from the GNSC, Brant Olson and Diane Bailey from the National Resource Defense Council (NRDC) and Mary Frances Kelly-Poh from the GNSC. The questions were transcribed by Mary Frances Kelly-Poh.

1. How does dilbit compare to Kern and Monterey Shale crudes? North Slope Crude?
2. How much hydro-treating will be added to Valero current capabilities to a fleet HDS/HDN/HDM of dilbit?
3. What is the source of gas liquid diluents? Will these be recycled to tar-sands (*words illegible*) source necessitating return shipping to fields?
4. How does this project fit with proposed Monterey Shale hydro-fracking? How much additional capacity will CA have to build?
5. How much capacity does Valero expect to have to add to be able to do this and EIRs for this project include impacts expected by expansion?
6. How are risks to the Suisun Marsh (one of the country's largest estuaries) being addressed and what organization will be the lead in this concern?
7. Will not the Bay Area Air Resources Control Board hold Valero's emissions to at least no increase regardless of what type of crude they refine?
8. What security measures may be in place against vandals and terrorists all the rail lines?
9. How was Exxon-Mobil able to do a "No Fly Zone" in Arkansas after the oil spill? How is this possible?
10. Does this rail have anything to do with the Pacific Trade Pact with East Asia?
11. Does the port reconstruction occurring in Vallejo have any connection to Valero brining crude by rail to Benicia?
12. Can you please give us an idea of what influence the Benicia Commission will have? Can they completely reject this plan?
13. Is this just a softball solution? In other words are we really in danger of this plan going thru? Are we going to accept Valero at their word that all safety questions will be answered?
14. RE: ESA Are they an independent and reliable CEQA reporting group or are they a gas and oil mouthpiece?
15. UP says they have spent billions to improve tracks, etc. How much in California and West Coast?
16. If and when fracking happens in a significant way in the Monterey Shale, will this crude oil be refined at Valero and Chevron?

17. A story in Sunday's Wall Street Journal indicated crude by rail is more dangerous than marine or pipelines. Why would the planning staff recommend a Neg Dec?
18. What will happen to neighboring cities like Martinez and will these effects be addressed prior to decision making?
19. If there is a spill, what would happen to our property values?
20. Can you say more about the projected jobs created by this project, including temporary/permanent and types of occupations?
21. What about Murphy's Law—if it can happen, it will? IE Fire 15 dead Bracken spill in Quebec-now ETC?
22. What is the status of the GNSC Air Monitoring Station?
23. Where are the coke storage piles?
24. What is hazardous about petroleum coke?
25. Will the total allowable emissions of the refinery be increased in local or state or fed law because of this project?
26. Is the \$40 discount on WCS crude before or after dilution?
27. What is the environmental risk of ship transport versus rail of crude oil?
28. What happened to property values in Mayflower Kansas after spill?
29. "Higher Risk of Accidents" please quantify emergency plans for dealing with spills. What are they?
30. Dust can be trapped. Can contracts enforce the use of appropriate traps?
31. Are there means to trap the lighter-lightest fraction that can be written into the permit contracts for Valero?.....speaking of limits here, of course.
32. I know that there are some very corrosion- resistant alloys developed for the more difficult crudes, can the use and maintenance of these alloys in equipment for heavy crudes (high S, etc) in all portions of and mixes of T.S. crudes processed?
33. Some of the population has a Ni specific allergy, just as 1 in 50 has a Be specific allergy and the reactions are serious.
34. It is unclear to me how far this has progressed? Wherever they are with- I am hearing you want to provoke and EIR-to what end? To slow it down? Prevent it? Force mitigations?
35. Have the citizens of Benicia considered reaching out to other similar communities and building a network of mutual aid and solidarity to address potential threats like this one? It seems that there is strength in numbers?
36. How does the NRDC become involved in particular environmental issues (in particular Benicia)?

Gina Eleccion - Dirty Crude by Train to Solano County



From: Kim White <kelpietriton@gmail.com>
To: <bkilger@ci.benicia.ca.us>, <comdev@ci.benicia.ca.us>
Date: 7/11/2013 9:46 AM
Subject: Dirty Crude by Train to Solano County
Attachments: images.jpeg; Quebec-Canada-Oil-Train-Derailment.jpg

Dear Mr. Kilger, et al.,

Thousands of Vallejoans protected the region by fighting against the threat of a Liquefied Natural Gas Plant some years ago. We request that you do the same against this threat of tars sands heavy crude being brought into Benicia by rail. We do not want the increased danger or pollution so a few people at the top of the pyramid can make huge amounts of money.

We either get off fossil fuels or face mass extinction. Our task is to transform the carbon economy into something livable.

Attached are pictures of the recent crude oil train derailment in Canada.

Thank you for your assistance in this matter.

Kim White
57 Ventura St.
Vallejo, CA

JUL 1 1 2013
CITY OF BENICIA
COMMUNITY DEVELOPMENT



RECEIVED
JUL 11 2013
CITY OF BENICIA
COMMUNITY DEVELOPMENT



Kathy Kerridge
771 West I Street
Benicia, CA 94510

July 11, 2013



Dear Planning Commissioners:

I would like to add additional comments and questions to my last comment.

1. In light of the recent train disaster in Canada I want much more information about how these trains will be staffed, what kind of rail cars are they, are they the safest possible? What kind of failsafe plans will be in effect to prevent a runaway train? What are the safety plans in effect now, not ones to be developed in the future? What would happen if there was a derailment in the industrial park near an oil tank?
2. Our general plan puts sustainability first. It specifically states on p. 22 "what is done at the project or local level can affect all levels of the environment, including the local community, neighboring regions, the country, and the world." This means to me that we must take a large view of this project. If tar sands are imported doesn't that directly go against providing for a more sustainable future? There are tremendous greenhouse gas emissions from the tar sands. We live in a community susceptible to sea level rise. Are we slitting our own throats if these are brought in? Can a mitigation of this project be no diluted bitumen, no tar sands allowed?
3. The general plan takes a long term economic view. If Valero refines tar sands oil with its higher pollution, its stronger odors, its greater risk of accident, with the increased production of coke and its increased and dangerous particulate matter will other businesses want to locate in our industrial park? I know that if I was a business I would not want to be near a refinery that smells and pollutes the air. The current refinery operations are pretty good about smells. I seldom am aware of smells from the refinery, but one of the consequences of tar sands refining is increased odor. Will we lose businesses in the industrial park if this happens? What will be the consequences over the next 10 years, 30 years, and 50 years?
4. How does the potential importation of tar sands crude impact AB 32 and the low carbon fuel standards? How can we strive for lower emissions if we encourage the development of the dirtiest fuels? Will these meet the AB 32 standards that need to be met in 2020? We are an impacted community and how will be able to meet our greenhouse gas reduction standards if the refinery doesn't? What mitigation measures could help Benicia with meeting the standards?
5. Once tar sands oil is being refined will it be too late to worry about the increased air pollution and the release of toxic substances?
6. If tar sands are imported how will we know? What will happen when the VIP is fully implemented? Will the crude mix change? Will Valero tell us if it changes its sources after the project is approved? Would we have any say in it at that time? Would an EIR have to be then or does it need to be done now to address this threat?

7. What kind of air monitoring will tell us if there is a change in emissions? There is no fence line monitoring in place now. If there is an accident how will we know what we are being exposed to? How will we know if we need to shelter in place or evacuate?

These questions all need to be addressed. The appropriate place is in an EIR. An EIR needs to be done on this project.

Sincerely,

Kathy Kerridge

Amy Million - Additional info request

From: escazuyoungs <escazuyoungs@gmail.com>
To: <Amy.Million@ci.benicia.ca.us>
Date: 7/11/2013 11:33 PM
Subject: Additional info request



Please ask Mr. Morgan to have fehr and peers send a copy of study they did on train crossings at affected intersection, (Park and bayshore?) including number, time of day, length of time for each crossing, and average for all train crossings

Thanks

Steve young

Sent from Samsung tablet

Amy Million - Another question

From: escazuyoungs <escazuyoungs@gmail.com>
To: <Amy.Million@ci.benicia.ca.us>
Date: 7/12/2013 9:07 PM
Subject: Another question



I did not include as one of my questions the following

Can you have someone from the city look at the question of what exactly UP is doing on their current project at Valero?

One of the speakers said they were installing new rail lines, while Mario said they were doing maintenance.

And are they exempt under the interstate commerce law referenced at the meeting that the city is not informed or has no permitting authority over their activities?

I know you will copy the rest of the commission, but would you like me to copy them on my request also?

I would be happy to work through the city manager on this or other questions if you prefer.

I know you have had an inordinate amount of work dumped on you with this project.

Thanks

Steve young

Sent from Samsung tablet

Amy Million - Valero Project and CEQA law

From: "Steve & Marty Young" <escazuyoungs@gmail.com>
To: <katwellman@gmail.com>, Amy Million <Amy.Million@ci.benicia.ca.us>
Date: 7/22/2013 11:18 AM
Subject: Valero Project and CEQA law

I have been reviewing lots of information on this project including CEQA law and guidelines and have a question

I assume it is OK to transmit this email to the rest of the commission?

and that you would be responding to all of us as well?



Among the critical points the Commission must determine in this project is :

- 1) whether or not the project will have a significant effect on the environment;
- 2) whether the EIS/Mitigated Negative Declaration adequately analyzed the environmental impacts of the project; and
- 3) whether proposed mitigating factors are sufficient to reduce potentially significant impacts to less than significant impacts.

My question below is based on my review of the CEQA guidelines issued by the State of California and copied below, but I am not a lawyer and would appreciate your response

http://ceres.ca.gov/ceqa/docs/Adopted_and_Transmitted_Text_of_SB97_CEQA_Guidelines_Amendments.pdf

The relevant section is:

"section 15064(f) The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record of the lead agency.

(1) If the lead agency determines there is substantial evidence in the record that the project may have a significant effect on the environment, the lead agency shall prepare an EIR (Friends of B Street v. City of Hayward (1980) 106 Cal. App. 3d 988). Said another way, if a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect (No Oil, Inc. v. City of Los Angeles (1974) 13 Cal. 3d 68).

(2) If the lead agency determines there is substantial evidence in the record that the project may have a significant effect on the environment but the lead agency determines that revisions in the project plans or proposals made by, or agreed to by, the applicant would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur and there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment then a mitigated negative declaration shall be prepared.

(3) If the lead agency determines there is no substantial evidence that the project may have a significant effect on the environment, the lead agency shall prepare a negative declaration (Friends of B Street v. City of Hayward (1980) 106 Cal. App. 3d 988).

(4) The existence of public controversy over the environment effects of a project will not require preparation of an EIR if there is no substantial evidence before the agency that the project may have a significant effect on the environment.

(5) Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

(6) Evidence of economic and social impacts that do not contribute to or are not caused by physical changes in the environment is not substantial evidence that the project may have a significant effect on the environment.

3

page3image20496.png

(7) The provisions of sections 15162, 15163, and 15164 apply when the project being analyzed is a change to, or further approval for, a project for which an EIR or negative declaration was previously certified or adopted (e.g. a tentative subdivision, conditional use permit). Under case law, the fair argument standard does not apply to determinations of significance pursuant to sections 15162, 15163, and 15164."

According to CEQA law (S.21068.2 (a)) that determination (of potential significant impact) must be based on "substantial evidence in light of the whole record." Subsection c of the same chapter defines substantial evidence as "facts, reasonable assumptions predicated on facts, and expert opinion supported by facts."

SubSection D of that section says that "if there is substantial evidence, in light of the whole record before the lead agency, that a project may have a significant effect on the environment, an environmental impact report shall be prepared."

Appendix G to the CEQA guidelines (Environmental Checklist Form) http://ceres.ca.gov/ceqa/guidelines/pdf/appendix_g-3.pdf outlines the conditions under which the Agency must review projects

There are two sections of the guidelines under "Evaluation of Environmental Impacts" that may be instructive.

"2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project level, indirect as well as direct, and construction as well as operational impacts.

3). Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant . Potentially significant impact is appropriate if there is substantial evidence an effect may be significant. If there is one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required."

Question

if the Commission finds that the mitigation measures proposed for any potentially significant impact (e.g. transportation and traffic, air quality) are not adequate, based on substantial evidence, must we find that an EIR is required?

MARILYN J. BARDET
333 East K Street, Benicia CA 94510
707-745-9094 mjbardet@comcast.net

July 11th, 2013

City Manager Brad Kilger, and staff, Amy Million,
Planning Commissioners: Chair Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell & Councilmembers Hughs, Schwartzman & Strawbridge
City of Benicia, 250 East L Street, Benicia CA 94510

SUBJECT: Additional comments: Valero Crude-By-Rail Project Initial Study/Mitigated Negative Declaration [IS/MND]

Dear Mr. Kilger, Planning Commission Chairman Sherry, Planning Commissioners, and Mayor Patterson, Councilmembers and Amy Million and staff of the Community Development Department.

Please add the following comments to those I officially submitted on July 1, to be included as part of the public record on the review of the IS/MND for the Valero Crude-by-Rail Project ["Project"].

The massive numbers of comments, reports, questions and documents that have been submitted on the Project to date express the level of concern of our citizenry that the City would consider adopting the Valero rail project with an incomplete Project Description, false and unsubstantiated claims, obfuscations, and therefore *fatally flawed and failed* Initial Study and Environmental Check List, and with the incredibly deficient account of potentially significant impacts with only a few mitigation measures called for. What has been presented to you to review would constitute a virtual "scoping session's worth" of comments for preparation of an EIR.

First, I want to incorporate by reference all comments provided by the Natural Resources Defense Council, both oral testimony given at the planning commission hearing tonight and the written reports submitted July 1st, including the expert reports by Phyllis Fox and The Goodman Group.

I also want it to be understood that 70 people attended the open public community meeting, held on July 9th at the Benicia Community Center, hosted by the Good Neighbor Steering Committee. Valero was personally invited by the GNCS to attend and answer questions, but they cordially declined. The community meeting offered Benicia residents a chance to hear from NRDC's Brant Olson and Diane Bailey, one of NRDC's staff scientists assigned to review the Project. NRDC is a highly respected national environmental organization with 1.4 million members. Their team of researchers learned of Valero's initial application and recognized it as the first crude-by-rail project proposed for a Bay Area refinery.

NRDC's comments, and those of Phyllis Fox and the Goodman Group regard the Initial Study and findings of the MND to be wholly flawed and inadequate, and that therefore, the Initial Study should be immediately withdrawn and a full EIR be drafted.

Some of the most important reasons cited by NRDC for rejecting the Initial Study and MND:

- there are no specifics given about the intended crudes to be imported and where they would come from. The importance of this information goes to the heart of the fatal flaw of the Initial Study and Environmental Checklist;
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- the complex specifics about the chemical constituents of the types of crudes that will be imported are not revealed or discussed with regard their characteristics during processing, thus emissions cannot be evaluated – generalities and assumptions substitute for evidence;
- There is no *current* emissions baseline to make comparisons with projected emissions increases from the Project plus refinery operational emissions;
- In the Initial Study, baseline emissions stats borrowed from VIP FEIR are considered by NRDC to be obsolete since they are up to 10 years old and were produced before new regulations were promulgated by BAAQMD, such as for PM 2.5 emissions;
- there is no discussion of increased cumulative emissions for entire refinery operations plus Project emissions, including also analysis of other contributors to those cumulative impacts from other industrial large-scale projects current or planned in the area, including the still-to-be-constructed new hydrogen unit which is intrinsic to processing dirty sour crudes;
- The Goodman Group reviewed the market trends in the industry and specifically what Valero Corp reports to its investors regarding the economic advantages of importing heavily discounted tar sands crude types that are diluted bitumen blends, or “dilbits” and light sweet crude from North Dakota’s Bakkan shale formation, neither of which would be accessible to Valero Benicia refinery without rail transport;
- Phyllis Fox’s report points out tar sands crude dilbits are the most dangerous to process from a public health and safety perspective, because of the constituents of bitumen including highly corrosive sulfur, lead, cadmium, nickel and other metals, as well as VOC’s from the lighter diluents that are mixed with the bitumen to make it flow, thus causing highly volatile gases to potentially leak more frequently from valves, compressors, stacks, and piping;
- potential for increasing numbers of accidental releases, fires and explosions from processing highly acidic dilbits, as described above, owing to more tendency to metal corrosion in pipes and pipe failure, such as the resulting huge catastrophic fire at the Chevron refinery fire in Richmond, August 2012;
- there is currently no BAAQMD regulatory framework or enforcement to ensure maintenance and strict performance testing for corrosion of piping, nor standards for upgrading piping, considering the age of metals, metal types used for pipes;
- potential increases in corrosion problems is especially troubling given that refineries are modifying their units to allow for greater processing of sour crude types, and without special consideration that Valero Corp has stated to its investors that it intends to import heaviest dirtiest crude, the tar sands dilbits;
- there will be a higher rate of petroleum coke production, thus more particulate matter (petcoke PM2.5 enters lung tissue, carrying VOC’s and other toxic emissions that attach to the particulate coke dust – more coke ships and coke trains are planned for under VIP.
- Health risks for cancer and non-cancer risks are inaccurately portrayed and underestimated, considering the highly possible crude slate that is likely to be processed on any given day, if up to 42% of crude imported by rail are “dilbits” would be coming from Alberta tar sands with the consequences of increased toxic emissions overall.

ADDITIONAL COMMENTS:

Concerning Project Operations: regarding rail car safety, accidents, schedules and Project Operations:

- 1) Estimates are that Valero purchased 5,000+ tank cars. What is the DOT class to be used? What types of rail cars has Valero purchased? Please compare to the typical DOT-111A – the standard, cylindrical tank car that currently makes up 69% of the US tank car fleet and 80% of Canada’s fleet? (according to Transport Canada).

- 2) Will the tank cars recently purchased by Valero for importing crude oil be modified and enhanced for security and safety? If so, how? Would thick (how thick?) doubled walls provide maximum strength in the case of collision or derailment?
- 3) Please cite any and all federal requirements regulating tank car construction for transporting crudes. If there are none that are specific to transporting crude, what kind of modification to the tank cars can be made that would especially address the problem of possible puncture that would cause dilbits to leak out (and catch fire) to prevent the kind of disaster that occurred in Lac-Megantic, Quebec?
- 4) Please describe the failure rate of DOT-111A tank cars from punctures to tank car walls during accidents (derailments, collisions, etc), according to *current and historic* Department of Transportation or other agency statistics, and factoring the increase daily train trips, accounting cumulative potential impacts, considering all clients' hazmat and other trains traveling on Union Pacific tracks that will also be carrying Valero crude trains.
- 5) Please describe Valero's, Union Pacific's and the City of Benicia's clean up strategy for removing bitumen in the case of a train accident with leaking tank cars enroute through wetlands, flood plains and marshes. Please consider the fact that EPA to date has not found any ecologically safe method to restore 35 miles of the Kalamazoo River, its riverbed and shoreline, following the Embridge Energy crude pipeline spill in 2010 that put 877,000 gallons of a tar sands dilbit into the river-- the largest on land oil spill in US history? Please address the indirect economic impact of the Kalamazoo disaster spill, considering that by 2012 more than \$765 million dollars had been spent trying to clean the river *without destructive dredging*, and the spill hasn't been resolved after 3 years?
- 6) Does the Federal Department of Transportation or other agency overseeing hazmat freight transport by rail have any special enforceable requirements or regulatory framework for RR operations involving shipments of crude oil in large "single unit" trains? Is there any federal limit on the number of railroad tank cars that can be part of one single train carrying crude oil?
- 7) On a daily schedule, how many *total number of trains*, managed and run by Union Pacific for Valero will be "on the tracks," and how far do Union Pacific's rail routes run that would be carrying crude in Valero's trains? Does Union Pacific have to switch operators for trains at any point enroute, that is, use another RR company and its tracks to reach Alberta and North Dakota?
- 8) How many trains of all sorts run daily by Union Pacific pass through Benicia? How many hazmat-loaded freight trains?
- 8) Who is financially responsible for spill cleanups "off-site" of the Project? On site? Who manages the coke trains now and who would manage crude trains if the Project is permitted?
- 9) How would the City of Benicia, Union Pacific and Cal Trans be involved if a train were backed up at Park Road and vehicles exiting I-680 were backed up trying to get into Benicia via Industrial Way and/or other access roads? Please consider this scenario in the case of a train derailment or collision, whether large or small accident?
- 10) How would Union Pacific handle a delay or change in crude train schedule on any particular day or night? Will crude trains take priority over passenger (AMTRAK) or other freight trains, including Valero coke trains?
- 11) Would there always be an engineer "on board" the crude trains? How will the trains be managed on site if "side-lined"?

- 12) What improvements and physical, mechanical upgrades have been made to date on Union Pacific tracks in Benicia and Solano County? Is Union Pacific prepared for the addition of two 50 car crude-loaded trains per day? What still needs to be done to ensure the safety of the rail bed and tracks themselves for handling crude-by-rail safely?
- 13) Please describe the hoses and valve connectors on the tank cars that would allow the off-loading of crude oil into the pipes leading to the #1776 Storage Tank. How long would it take to fix the hoses onto the connectors on a 50 car train? How many workers would be involved in this operation? What types of fugitive emissions from this operation are anticipated and what is the emission threshold for fugitive emissions during this operation? How would the emissions be measured in real time? Would vapors escape at the top of the crude tank cars? Will any valve or “top” be open to the atmosphere? Would the tank cars be pressurized? What reduces the volatile gases under pressure?
- 14) From a reliable source of information, it has been emphatically stated that it can be expected routinely that there would be a “liquid mess” underneath the rail cars, especially given the length of time of off-loading operation, the two 50 car trains off-loading daily, etc. How will the emissions from spilt crude be measured and mitigated?

Concerning AB32, the Benicia General Plan and Climate Action Plan:

- 1) Please describe Valero’s plan to meet AB32 requirements for GHG reductions by 2020, considering that Valero is the largest industrial producer of GHG emissions in the city. The Initial Study addresses GHG emissions during construction phases, but does not reference AB32 as a regulatory framework for the Project and refinery operations nor AB32’s targets for GHG reductions by 2020.
- 2) Please reference and supply hot links to all regulatory statutes, frameworks and guidelines that would govern the Project and refinery as related to potential and cumulative negative impacts on site and “off site,” for all areas of concern: Air Quality; Public Health; Biologic REsources; Transportation; Hazards; Odors; Seismic; Soils; Noise; etc, thus all CEQA areas of concern and public concern of the local community.
- 3) In the absence of enforceable regulations, (state or federal) please list issues of concern that depend on the refinery’s “voluntary compliance” to mitigate such concerns and impacts, such as potential, foreseeable problems with corrosion in pipes, valves, etc. wherein replacement of damaged parts could be warranted and whereas structural integrity can no longer be guaranteed.
- 4) Please specifically describe conditions and criteria for the City of Benicia to judge the sustainability of a project, as it contributes to the city’s well-being and economic health as a whole. “Sustainable development” is the integrating, overarching goal of Benicia’s 1999 General Plan. [General Plan, page 22]. The goal outlines the rippling effect of what we do here in our city. Please provide specific criteria and performance measures that would ensure that industrial polluters and newly planned developments, such as Valero’s Crude-by-Rail Project, would be obliged to adhere to and be evaluated by to meet the General Plan’s essential goal, which would be consistent also with AB32 and Benicia’s Climate Action Plan.
- 5) Please reference Benicia’s Climate Action Plan and the efforts that have been made by the Benicia Community Sustainability Commission to address the strategies pertinent to energy and water conservation and how the Crude-by-Rail project fits into the model for conserving energy and resources generally. Please do not use obsolete emission baseline stats for data comparisons. [See Phyllis Fox Report]

Thank you for your attention to my comments.

Marilyn Bardet, member of the Good Neighbor Steering Committee

MARILYN J. BARDET
333 East K Street, Benicia CA 94510
707-745-9094 mjbardet@comcast.net



July 17, 2013

City Manager Brad Kilger and Amy Million, Community Development Department;
Planning Commissioners: Chair Sherry, Oakes, Smith, Grossman, Sprague, Dean and Young
Mayor Patterson, Vice Mayor Campbell & Councilmembers Hughs, Schwartzman & Strawbridge
City of Benicia, 250 East L Street, Benicia CA 94510

SUBJECT: Valero Crude-By-Rail Project Initial Study/Mitigated Negative Declaration

Dear Mr. Kilger, Amy Million, Planning Commissioners, Mayor and City Councilmembers;

In my original comments submitted on July 1st, I had made a statement that I now would like to correct based on information I've received from a reliable source, a community member involved with Phillips 66 refinery (formerly ConocoPhillips) in Rodeo. Jay Gunkelman is a neuroscientist who over many years has participated as a community member in discussions with the Air District and with Conoco over operations, emissions, and the refinery's community air monitoring system operating along the refinery fenceline.

I had said (quote from original statement, page 2 of my introductory letter) "Valero's Project would replace equivalent deliveries of crude by ship, and would be the second refinery rail project in the Bay Area. According to online news reports, Phillips 66 (formerly Conoco-Phillips) in Rodeo currently imports crude by rail."

According to Jay Gunkelman, the Phillips 66 refinery (formerly ConocoPhillips) has a rail facility that to date only *exports* refinery products. He said that to change the facility for *importing* crude would require a new use permit from Contra Costa County. At this writing, I do not have information as to Phillips 66 intentions. I do know, however, from my own reading on the subject of the tar sands mining operations [*Tar Sands: Dirty Oil and the Future of a Continent*, by Andrew Nikiforuk, renown Canadian journalist and author] that Conoco has investments in tar sands mining operations in Alberta (as does Shell and Tesoro). Thus, it is highly plausible and foreseeable that other Bay Area refineries, including Phillips 66, Shell, Tesoro, Chevron and Valero may be intending to import tar sands diluted bitumen or "dilbits." NRDC's research states that Valero already imports a small percentage of tar sands-sourced "crude." Although I don't have statistics, it's likely that other Bay Area refineries are doing the same. The question is, to what extent the importation of tar sands crude is to be expanded by Valero through their proposed rail project, and also, to what extent are other refineries in the area also planning to expand importation of bitumen or diluted bitumen by rail or other means.

Thus, despite my misstatement re current rail use at Phillips 66, calculations for potential and *cumulative* impacts of large-scale rail projects that could be constructed during the lifetime of the Valero crude-by-rail project and would contribute significantly to total toxic emissions for the Bay Area air basin should be factored into analysis of Valero crude-by-rail project emissions with respect to processing heavier crudes and especially tar sands bitumen and/or diluted bitumen. Total cumulative GHG emissions would also have to be calculated for same.

Thank you for consideration of my additional comments,

Marilyn Bardet

MARILYN J. BARDET
333 East K Street, Benicia CA 94510
707-745-9094 mjbardet@comcast.net



July 29, 2013

City Manager Brad Kilger, and Amy Million,
Planning Commissioners: Dean, Oakes, Smith, Grossman, Sprague, and Young
cc: Mayor Patterson, Vice Mayor Campbell & Councilmembers Hughs, Schwartzman & Strawbridge
City of Benicia, 250 East L Street, Benicia CA 94510

SUBJECT: Additional comments on cumulative impacts of transporting crude-by-rail in the Bay Area: Valero Crude-By-Rail Project Initial Study/Mitigated Negative Declaration [IS/MND]

Dear Brad, Amy, and Planning Commissioners,

My initial comments (July 1st) cited the absence of any reference or analysis in the IS/MND of cumulative impacts that could be foreseeable during the construction and lifetime of the proposed Valero Project of other potential industrial developments (including Valero's planned new hydrogen unit) in the area that would contribute to cumulative emissions impacts to local air quality as well as to the whole Bay Area air basin monitored by BAAQMD.

A point in fact is that the oil industries represented by refineries in the Bay Area, besides Valero — Royal Dutch Shell, ConocoPhillips, Tesoro and Chevron—all have heavily invested in tar sands extraction mines in Alberta. All of these corporations benefit from the very low, almost negligible royalties charged by Alberta's provincial government, as well as that of Canada's federal gov't. That discount rate has been trumpeted in Texas since at least 2005 by the Canadian government that heavily subsidizes tar sands development and keeps few records of the costs of the environmental destruction wrought by the operations. Therefore, the tar sands appear to be a "gold mine" at least in the near-term for the industry giants generally.

This being the case, it is highly likely that other Bay Area refineries, within the next 2 - 5 years, *while the high discount rate is maintained by the Canadian and Alberta governments, thus making importing tar sands "dilbits" a potential financial windfall for US refiners in the near term*, that at least one, if not ALL Bay Area refineries may seek to import by Union Pacific as much tar sands dilbits, as well as Bakkan tight oils from the Dakotas, (and other fracking sources, including Monterrey Shale) as Valero proposes to import by rail at the rate of 70,000 barrels per day.

Under CEQA, the possibility of development of other such large-scale industrial projects that are either "on the books" as plans or are envisioned within the time-frame of the proposed project must be described based on planning evidence and information available, whether through industry investor reports, or independent reliable news sources. Cumulative emissions impacts, as well as cumulative transportation impacts must be analyzed.

The IS/MND fails to account for the potential impacts to Benicia, its community and sensitive environs, considering the likely probability in a “near future” scenario, when more crude-loaded “50-car unit trains” are running through our city on their way to other refineries in our area that today, could possibly be in the planning stages of developing crude-by-rail off-loading terminals. The fact that UP tracks access all of the CC County refineries already is a case in point. The research shouldn’t be a guessing game but based on available fact. If this info can’t be found or determined, the benefit of doubt should reside with communities with regard to future scenarios that could impact local and regional community health.

Cumulative diesel emissions from all locomotives that pass through Benicia on a daily basis should be factored in to cumulative GHG calculations as well as public health impacts. Cumulative emissions of PM10 and PM2.5 from increased pet coke production, storage, transport and terminal/shipping operations must also be calculated from a public health perspective.

Thank you again for addressing my comments.

— Marilyn Bardet

Amy Million - Valreo Crude by Rail Project

From: "George Oakes Sr." <george@twinoaksre.com>
To: Amy Million <Amy.Million@ci.benicia.ca.us>
Date: 7/19/2013 9:38 AM
Subject: Valreo Crude by Rail Project



Amy,

The Valero Crude By Rail Project has raised many questions and uncovered areas where it seems we have no control over the rail lines. One thing is that tank cars are not normally owned by the rail lines, but leased to them. My question is who hold responsibility for a problem with a tank car while in our (or anyone's jurisdiction), the owner, the carriers, or the property on which it rests when the problem occurs? Can we specify the type and construction of tank cars coming into and out of Valero?

I am very concerned that any approval will increase the likelihood of a problem for Benicia and its citizens. To off set that risk I would like to explore options to insulate or insure our town from costs associated with such a problem, including lost of revenue, clean up, and the development and implementation of alternatives for work/business' etc.

To that end I am contacting the State Attorney General to seek answers to how that may be accomplished. While I do not know if that is overstepping our authority, the answers received thus far at meetings and in the documentation are vague and/or do not address this issue. Would appreciate any feedback on this so I can be sure not to exceed our scope or authority.

Regards,

George Oakes Sr.
Twin Oaks Real Estate, Inc.
707-746-8700 Office
707-319-1734 mobile

From: Amy Million [Amy.Million@ci.benicia.ca.us]
Sent: Thursday, July 11, 2013 7:57 AM
To: Adam Petersen; Amy Million; Gina Eleccion; Rod Sherry; George Oakes, Sr.; Stephen

Amy Million - Environmental Impact Report on Valero's Proposal to bring Crude Oil in by Rail

From: Priscilla Whitehead <priswhite@aol.com>
To: <amy.million@ci.benicia.ca.us>
Date: 7/20/2013 12:27 PM
Subject: Environmental Impact Report on Valero's Proposal to bring Crude Oil in by Rail

Dear Amy Million

I am writing in support of the NRDC's request for a full EIR on Valero's proposal to import crude oil by rail. I did not know there was a deadline for public comment so I am sending one anyway. I am a member of the NRDC and have great respect for what they do.

Having read the NRDC blog on Diane Bailey's report and her fax to you I think Valero owes the City of Benicia residents full disclosure. I could not attend the last meeting but will be there August 8. I know you are very responsible and care about Benicia.

With due respect for the people who work for Valero and their claims that safety comes first, I am reminded of the BP offshore rig explosion and the Chevron refinery fire. I am sure the people who were killed or injured also were sure their oil companies put safety first.

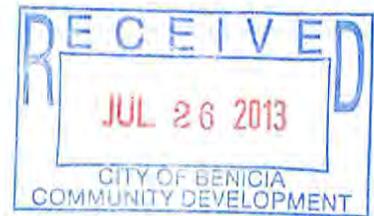
Thank you for reading my letter

Sincerely, Priscilla Whitehead
288 W J St
748-0877



Roger D. Straw

766 West J Street • Benicia, CA 94510
(707) 373-6826 • rogrmail@gmail.com



July 26, 2013

Planning Commissioners Sherry, Dean, Sprague, Oakes, Smith, Cohen Grossman, and Young
c/o City of Benicia
250 East L Street
Benicia, CA 94510

ADDITIONAL COMMENTS: Valero Crude-By-Rail Project

Planning Commissioners:

Thank you for hearing (and offering) so many good questions and concerns at the July 11, 2013 Planning Commission meeting regarding Valero's proposed crude-by-rail project. Your dedication and efforts in studying the huge volume of materials was evident, and I know there is more to come. I want to raise a few more points, so I will do my best to be brief, as follows:

1. I was very much impressed at the comments made in the public hearing on July 11 by Benicia resident Bob Berman. Bob knows CEQA very well, and made the point that **under the law, there is a very low bar for requiring a full EIR**. Please be sure to explore this point in your questioning on August 8. I understood Bob to suggest that if any *expert* disagrees that a mitigated negative declaration is sufficient, then the City is *compelled* to require the project to undergo a full EIR. I have asked around as to the **definition of an "expert,"** and again the bar is set extremely low. For instance, Mary Frances Kelly Poh entered information into the record regarding a native plant, Bird's Beak, extant in marshland adjacent to Valero. As a member of the California Native Plant Society, she would qualify as an "expert," (even though she very clearly spoke as a resident rather than in any official capacity). Benicia resident Marilyn Bardet has in the past qualified under CEQA as a "local expert" as a founding member of the Good Neighbor Steering Committee and her history of participation in several EIR reviews. The NRDC and experts Fox and Goodman (obviously), but also common residents living within "smelling distance" of the refinery qualify as experts on air quality; Industrial Park owners and workers qualify as expert on traffic. I understand that the courts have been extremely generous in qualifying experts under CEQA. **Commissioners might want to ask our City Attorney something like the following: "Under CEQA, what does the 'Fair Argument Standard' say regarding the determination of whether a Negative Declaration is appropriate or an EIR is required?"** Please review Bob Berman's July 11 comments, attached, and explore this further on August 8.

ADDITIONAL COMMENTS – FOR BENICIA PLANNING COMMISSION CONSIDERATION AUGUST 8, 2013

Valero Proposed Crude-By-Rail Project

Roger D. Straw, 766 West J, Benicia

July 23, 2013, p. 2

2. I was astounded when the author of Valero's Initial Study (ESA) could not or would not answer Commissioner Smith's request for examples of **indirect impacts** that may be considered under CEQA. Commissioner Smith's question arose in the context of the need to review "the whole of the project" and "cumulative impacts." [*Initial Study, Ch. II, Environmental Checklist, p. 1, item 2. "All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts."*] I note here that in the Initial Study, some indirect impacts beyond the very narrowly defined footprint of the refinery are already discussed with suggested mitigations: traffic congestion, nearby air quality, and potential spills on the railroad tracks that would require cooperative agency efforts if/when an emergency cleanup is needed. Commissioners might join me in wanting to know more:
 - a. **Does "the whole of the project" and "cumulative impacts" extend out along the tracks here within Solano County**, through the protected Suisun Marshlands, Suisun City, Fairfield, Travis Air Force Base, Vacaville and Dixon? If so, was Solano County and other local and State agencies with jurisdiction notified and given opportunity to comment? Should they be?
 - b. **Does "the whole of the project" and "cumulative impacts" extend to other communities farther up the tracks, i.e., beyond Solano County?** Surely all those communities will see a significant increase in shipping by rail, including incredibly heavy and dangerous crude oil tankers. Will those tankers pass close by schools, residential complexes or busy commercial centers? Will Davis or Roseville (for instance) also be required to accommodate crude oil tankers at rest on side rails for periods of time? If our "little" decision here in Benicia affects communities and open spaces from here to North Dakota, why shouldn't those communities and agencies with jurisdiction in those places be noticed and given opportunity to comment?
 - c. **Does "the whole of the project" extend to communities who breathe air downwind of Valero, i.e., Concord, Antioch, Pittsburg, etc.?** Shouldn't the BAAQMD have been noticed? I believe residents and City electeds and staff in those cities should also have been given notice. Commissioners might want to explore this on August 8.

3. I was very interested in Kathy Kerridge's point about the overarching goal of sustainability in Benicia's General Plan. If I understood her question, it could be that the Initial Study and any subsequent EIR should not only address whether the project satisfies a land use checklist in the General Plan or some other point or two in the Plan,

ADDITIONAL COMMENTS – FOR BENICIA PLANNING COMMISSION CONSIDERATION AUGUST 8, 2013

Valero Proposed Crude-By-Rail Project

Roger D. Straw, 766 West J, Benicia

July 23, 2013, p. 3

but rather, the overall goal of making Benicia a more sustainable City. If so, it might cause Benicia to look unfavorably on a project that makes use of Canadian tar-sands crude, which experts agree is the least environmentally sensitive and most highly carbon-intensive process for mining and refining. The same, to a lesser degree perhaps, could be said of Bakken shale formation crude extracted by fracking. **Does a General Plan “sustainable city” have a responsibility to encourage usage that promotes an alternative, more sustainable future – or at least one that doesn’t go further down the path to environmental ruin for short-term economic gain?**

Again, thanks for all your work. Your conscientious efforts are an immense gift to our City, present and future.

Roger Straw

766 West J Street, Benicia

(707) 373-6826

rogmail@gmail.com

Cc: Mayor Patterson, Vice Mayor Campbell, and Councilmembers Hughes, Schwartzman, Strawbridge, City Manager Brad Kilger, City Attorney Heather McLaughlin

TRANSCRIPT - BOB BERMAN SPOKEN COMMENT

Benicia Planning Commission, July 11, 2013

Valero Use Permit – Crude by Rail Project

Good evening. I'm Bob Berman. I live on West K Street. In response to the Initial Study that's been presented by the City, you've received now a wealth of both written, and now oral, testimony in terms of the quality of that environmental impact report. And, of course, the first decision you all have to make is whether or not to proceed with the adoption of a Mitigated Negative Declaration or require the preparation of an EIR, an Environmental Impact Report. The City's consultant briefly mentioned at the beginning of his presentation tonight, that once the Initial Study is made, there's kind of a standard, a standard that's set out in the California Environmental Quality Act, is what's referred to as **the "fair argument" standard**. The guidelines state clearly that an Environmental Impact Report must be prepared when the lead agency, in this case the City of Benicia, determines that it can be fairly argued, based on substantial evidence, that a project may have a significant environmental effect. What this means, simply, is that if project proponents have substantial evidence that a project may have a significant environmental effect, an EIR *must be prepared*, even if the lead agency, in this case the City of Benicia's evidence indicates lack of significant environmental effect. In other words, there's a very low threshold that exists for the requirement of an Environmental Impact Report. And I would maintain, based on what I've read and what I've heard tonight, both from NRDC, and now just recently from CBE and the other testimony, that there clearly is evidence on the record that an argument can be made that the project *may* result in a significant environmental impact, and therefore, **the City is compelled to prepare an Environmental Impact Report**. Thank you.



BENICIA CHAMBER OF COMMERCE & VISITORS CENTER

"Promoting Business For A Better Benicia"

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July 29, 2013

Planning Commission
CITY OF BENICIA
250 East L Street
Benicia, California 94510



Dear City of Benicia Planning Commissioners:

Following our attendance at your last Planning Commission meeting, listening to both the advantages and concerns from both sides of the issue, and participating in ongoing discussions, we ask that you accept this letter on behalf of the Benicia Chamber of Commerce requesting your approval of the Use Permit for the Valero Crude By Rail Project.

As you are aware, Valero Benicia Refinery currently brings product in and out of its facility by marine vessel and rail. Together with Union Pacific, Valero is working to ensure they stay competitive in this commodity market while at the same time creating as little impact to Benicia residents and businesses as possible. Valero's Benicia Refinery is constantly monitored by multiple government agencies including Bay Area Air Quality Management and are required to meet or exceed criteria set forth by these numerous agencies. With the Valero Benicia Refinery being one of the newest and most advanced refineries in the nation, and having a commendable safety record, they ask to continue doing what the refinery was designed to do, refine crude oil.

In keeping with the City's ongoing support of Economic Development, the refinery's significant contributions to Benicia's economic viability for more than 45 years, and the Benicia Chamber of Commerce Mission Statement "Promoting Business For A Better Benicia", we respectfully request your approval of the Use Permit as submitted for the Valero Crude By Rail Project at your August 8, 2013 meeting.

Please accept our appreciation for your efforts and the important role you have as a Planning Commissioner for the City of Benicia.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric Hoglund".

Eric Hoglund
Chairman of the Board
Benicia Chamber of Commerce

c: Brad Kilger, City Manager
Amy Million, Community Development Department