



**BENICIA CITY COUNCIL  
CONTINUED REGULAR MEETING AGENDA**

**Council Chambers 250 East L Street  
April 18, 2016  
7:00 PM**

1. **CALL TO ORDER**
2. **SPECIAL NOTE**  
The times set forth for the agenda items are estimates. Items may be heard before or after the times designated.
3. **CONVENE OPEN SESSION (7:00 PM)**
4. **ROLL CALL**
5. **PLEDGE OF ALLEGIANCE**
6. **REFERENCE TO THE FUNDAMENTAL RIGHTS OF THE PUBLIC**  
A plaque stating the fundamental rights of each member of the public is posted at the entrance to this meeting room per section 4.04.030 of the City of Benicia's Open Government Ordinance.
7. **ANNOUNCEMENTS**
8. **PROCLAMATIONS**
9. **APPOINTMENTS**

10. **PRESENTATIONS**

11. **ADOPTION OF AGENDA**

12. **OPPORTUNITY FOR PUBLIC COMMENTS**

This portion of the meeting is reserved for persons wishing to address the Council on any matter not on the agenda that is within the subject matter jurisdiction of the City Council. State law prohibits the City Council from responding to or acting upon matters not listed on the agenda. Each speaker has a maximum of five minutes for public comment. If others have already expressed your position, you may simply indicate that you agree with a previous speaker. If appropriate, a spokesperson may present the views of your entire group. Speakers may not make personal attacks on council members, staff or members of the public, or make comments which are slanderous or which may invade an individual's personal privacy.

13. **WRITTEN COMMENT**

14. **PUBLIC COMMENT**

15. **CONSENT CALENDAR**

16. **BUSINESS ITEMS**

**16.A REQUEST FOR CONTINUANCE AND APPEAL OF THE PLANNING COMMISSION'S DECISION TO NOT CERTIFY THE FINAL ENVIRONMENTAL IMPACT REPORT (FEIR) AND TO DENY THE USE PERMIT FOR THE VALERO CRUDE BY RAIL PROJECT**

On March 15, 2016 the hearing for this item was opened and the Council heard presentations from the City, the Planning Commission and the applicant. The Council questioned Staff, the consultants, the Chair of the Planning Commission, and the applicant regarding the project. The applicant requested that the item be continued to allow them to request an opinion from the Surface Transportation Board (STB) regarding the issue of preemption. On April 4th and April 6th, the City Council heard public testimony and continued the item to April 18th.

**RECOMMENDATION:**

Staff recommends that the City Council continue to take public comment, consider all appropriate documents and testimony, and then consider the following actions:

1. Consider and reject the applicant's request for continuance, or approve the request for continuance and continue the hearing to a date certain.

2. Deny the appeal and uphold the Planning Commission's unanimous decision to deny certification of the EIR and to deny the Use Permit; or
3. Deny the appeal and deny certification of the EIR and deny the Use Permit using different findings.
4. Decline to certify the EIR and provide specific comments on the deficiencies of the EIR and direction on what needs to be improved in the EIR and remand back to staff with direction to return to Council with the EIR and Use Permit; or
5. Uphold the appeal and
  - i. Adopt the draft Resolution certifying the Final Environmental Impact Report, adopting CEQA findings for the Project and adopt the Statement of Overriding Considerations and the Mitigation Monitoring and Reporting Program and
  - ii. Uphold the appeal and adopt the draft Resolution approving the Use Permit for the Valero Crude by Rail Project, with the findings and conditions listed in the resolution included in the March 15, 2016 packet.

[CBR SR 4-18-2016 FINAL.pdf](#)

[Attachment 1- Memo STB Process](#)

[Attachment 3- MRS Response Letter to Fox Comments](#)

[Attachment 2 - ESA Response Memo to Fox Comments](#)

[Attachment 4 - Barkan Memo](#)

[Attachment 5- Andrew Chang Response Letter](#)

[Attachment 6- SLO References to Preemption](#)

[Attachment 7 -SEA-3, Inc. Surface Transportation Board Decision](#)

[Attachment 8 - Project Train Valero Property Diagram](#)

[Attachment 9 - October 1, 2013 Council Report for Hogin's Contract](#)

[Attachment 10- Public Comments Submitted April 7-12 2016](#)

[Attachment 11 - Speakers List for April 18](#)

**17. COUNCIL MEMBER COMMITTEE REPORTS:**

(Council Member serve on various internal and external committees on behalf of the City. Current agendas, minutes and meeting schedules, as available, from these various

committees are included in the agenda packet. Oral reports by the Council Members are made only by exception.)

18. **ADJOURNMENT (11:00 PM)**

## **Public Participation**

The Benicia City Council welcomes public participation.

Pursuant to the Brown Act, each public agency must provide the public with an opportunity to speak on any matter within the subject matter jurisdiction of the agency and which is not on the agency's agenda for that meeting. The City Council allows speakers to speak on non-agendized matters under public comment, and on agendized items at the time the agenda item is addressed at the meeting. Comments are limited to no more than five minutes per speaker. By law, no action may be taken on any item raised during the public comment period although informational answers to questions may be given and matters may be referred to staff for placement on a future agenda of the City Council.

Should you have material you wish to enter into the record, please submit it to the City Manager.

## **Disabled Access or Special Needs**

In compliance with the Americans with Disabilities Act (ADA) and to accommodate any special needs, if you need special assistance to participate in this meeting, please contact Anne Cardwell, the ADA Coordinator, at (707) 746-4200. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting.

## **Meeting Procedures**

All items listed on this agenda are for Council discussion and/or action. In accordance with the Brown Act, each item is listed and includes, where appropriate, further description of the item and/or a recommended action. The posting of a recommended action does not limit, or necessarily indicate, what action may be taken by the City Council.

Pursuant to Government Code Section 65009, if you challenge a decision of the City Council in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City Council at, or prior to, the public hearing. You may also be limited by the ninety (90) day statute of limitations in which to challenge in court certain administrative decisions and orders (Code of Civil Procedure 1094.6) to file and serve a petition for administrative writ of mandate challenging any final City decisions regarding planning or zoning.

The decision of the City Council is final as of the date of its decision unless judicial review is initiated pursuant to California Code of Civil Procedures Section 1094.5. Any such petition for judicial review is subject to the provisions of California Code of Civil Procedure Section 1094.6.

## **Public Records**

The agenda packet for this meeting is available at the City Manager's Office and the Benicia Public Library during regular working hours. To the extent feasible, the packet is also available on the City's web page at [www.ci.benicia.ca.us](http://www.ci.benicia.ca.us) under the heading "Agendas and Minutes." Public records related to an open session agenda item that are distributed after the agenda packet is prepared are available before the meeting at the City Manager's Office located at 250

East L Street, Benicia, or at the meeting held in the Council Chambers. If you wish to submit written information on an agenda item, please submit to the City Clerk as soon as possible so that it may be distributed to the City Council. A complete proceeding of each meeting is also recorded and available through the City Clerk's Office.

<b>Contact Your Council Members</b>
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If you would like to contact the Mayor or a Council Member, please call the number listed below to leave a voicemail message.

Mayor Patterson: 746-4212

Vice Mayor Hughes: 746-4213

Council Member Campbell: 746-4213

Council Member Schwartzman: 746-4213

Council Member Strawbridge: 746-4213

**AGENDA ITEM  
CITY COUNCIL MEETING DATE – APRIL 18, 2016  
BUSINESS ITEM**

**DATE** : April 12, 2016

**TO** : City Council

**FROM** : Community Development Director

**SUBJECT** : **REQUEST FOR CONTINUANCE AND APPEAL OF THE PLANNING COMMISSION'S DECISION TO NOT CERTIFY THE FINAL ENVIRONMENTAL IMPACT REPORT (FEIR) AND TO DENY THE USE PERMIT FOR THE VALERO CRUDE BY RAIL PROJECT**

**RECOMMENDATION:**

Staff recommends that the City Council continue to take public comment, consider all appropriate documents and testimony, and then consider the following actions:

1. Consider and reject the applicant's request for continuance, or approve the request for continuance and continue the hearing to a date certain.
2. Deny the appeal and uphold the Planning Commission's unanimous decision to deny certification of the EIR and to deny the Use Permit; or
3. Deny the appeal and deny certification of the EIR and deny the Use Permit using different findings.
4. Decline to certify the EIR and provide specific comments on the deficiencies of the EIR and direction on what needs to be improved in the EIR and remand back to staff with direction to return to Council with the EIR and Use Permit; or
5. Uphold the appeal and
  - i. Adopt the draft Resolution certifying the Final Environmental Impact Report, adopting CEQA findings for the Project and adopt the Statement of Overriding Considerations and the Mitigation Monitoring and Reporting Program and
  - ii. Uphold the appeal and adopt the draft Resolution approving the Use Permit for the Valero Crude by Rail Project, with the findings and conditions listed in the resolution included in the March 15, 2016 packet.

**EXECUTIVE SUMMARY:**

On March 15, 2016 the hearing for this item was opened and the Council heard presentations from the City, the Planning Commission and the applicant. The Council questioned Staff, the consultants, the Chair of the Planning Commission, and the applicant regarding the project. The applicant requested that the item be continued to allow them to request an opinion from the Surface Transportation Board (STB) regarding the issue of preemption. On April 4<sup>th</sup> and April 6<sup>th</sup>, the City Council heard public testimony and continued the item to April 18<sup>th</sup>.

**BUDGET INFORMATION:**

There is no budgetary impact if the request for continuance is denied. If the Council approves the request for continuance, there may be additional costs associated with potential re-noticing of the project, as well as additional staff time in reviewing any STB opinion, as well as additional staff time should updates or revisions to the EIR be necessary.

**ENVIRONMENTAL ANALYSIS:**

See the March 15, 2016 City Council staff report regarding the environmental analysis for the project. In regards to the applicant's request for continuance, it does not affect the existing FEIR document. Should the project be continued for a substantial length of time, it is possible that new information could arise and the FEIR would possibly need additional studies and/or to be re-circulated.

**DISCUSSION:**

During the City Council meetings on March 15<sup>th</sup>, April 4<sup>th</sup> and April 6<sup>th</sup>, the Council asked various questions related to the project. In general, questions that were asked of the applicant and the public were provided at the meeting. City Council directed staff to take note of additional questions and responses were to be provided at a later meeting. Below are the Council's questions followed by Staff's responses. The councilperson that asked the question is indicated by their initials in parenthesis after each question. The questions include those asked of the applicant, the public and staff and are grouped into the following topics:

- Air Quality
- Consistency with the General Plan and Zoning Ordinance
- Crude Storage
- Economic Benefits
- Emergency Response
- Mitigation Measures
- Onsite Impacts
- Preemption
- Railroad Operations, Track Rights and Rail Safety

Tank Car Standards  
Traffic Impacts  
Valero's Current Operations  
Valero's Proposed Operations

**Air Quality**

Question 1. Why is there a difference between San Luis Obispo and the City of Benicia in regard to the EIR evaluation of toxic air contaminants in addition to oxides and nitrogens that cause smog? (EP)

Response: The two jurisdictions and their respective consultants selected different, equally valid approaches to the analysis. For the Valero project, the EIR analyzed the health risks of the Project's toxic air contaminant (TACs) emissions. The analysis focused on risks to residents, workers, and children that live or work near the refinery and people living uprailand of the refinery. The health risk analysis focused on diesel emissions from locomotive exhaust and evaporative emissions from railcars. The evaporative emissions analysis examined the health risks from exposure to benzene, ethylbenzene, toluene, xylene, hexane, and hydrogen sulfide. The health risk analysis concluded that the Project would not increase health risks above significance thresholds established by the Bay Area Air Quality Management District or thresholds established by air districts uprailand of the refinery. Health risk results also are found in Revised DEIR Tables 4.1-9, 4.1-10, and 4.1-17, and the related discussion.

Question 2. As part of the public testimony, it was stated that the comment letter from Dr. Phyllis Fox, Ph.D., PE dated April 4, 2016 presented new information regarding the EIR's analysis of air quality impacts.

Response: The analysis in the EIR is thorough, complete, and satisfies the requirements of CEQA. Dr. Fox raises no new or more severe impacts than have already been considered in the environmental review process. A response to the comments from Dr. Fox regarding air quality impacts are provided in the attached memo from ESA dated April 11, 2016.

**Consistency with General Plan and Zoning Ordinance:**

Question 1. As part of the public testimony, it was stated that the proposed project was inconsistent with the General Plan and Zoning

Ordinance based on onsite impacts that are not federally preempted.

Response: In the February 8, 2016 Planning Commission staff report, staff identified and analyzed 19 General Plan goals and policies which are relevant to the proposed project (pp. 13-20) and found the proposed project to be overall consistent with the General Plan.

In addition to these 19 goals and policies, the public identified 3 additional goals that were stated to be inconsistent with the proposed project (Goals 4.10, 4.15 and 4.20). A brief analysis of those goals is provided below.

*GOAL 4.15: Reduce fire hazards (pp 165-166).* Policies associated with this goal relate to the maintenance of fire breaks between open space and development, weed abatement and the use of fire-resistant landscaping in public and private developments. The project is proposed within a developed area of the refinery. As part of the design of the unloading rack, multiple fire suppression systems are installed in case of an incident including a 12" cement mortar lined firewater pipe with monitor and hydrants located along the containment wall.

*GOAL 4.20 (p. 168): Reduce health and safety hazards associated with hazardous materials users, hazardous waste generators, and hazardous waste disposal sites and toxic air contaminants.* The one policy associated with this goal pertains to the establishment of buffer zones between sensitive land uses and those land uses which involve the significant use, storage, or disposal of hazardous materials, hazardous waste, or toxic air contaminants. As stated on p. 15 of the Planning Commission February 8, 2016 staff report, "[t]he closest residential areas are more than 2,000 feet from the proposed unloading rack and new rail infrastructure. Valero owns about 400 acres of land west and south of their facility which has served as a buffer between the Benicia Industrial Park, the Refinery and the City's residential neighborhoods. The Project does not alter or impact this existing land buffer between the Refinery and the residential uses."

*GOAL 4.10 (p. 163): Support improved regional air quality.* The policies associated with this goal relate to implementation of the Bay Area Clean Air Plan and designs and land use strategies that reduce automobile use and promote mixed use, jobs/housing balance, telecommuting, bicycle, and pedestrian facilities, and

transit. "The proposed Project would support the primary goals of the [Bay Area 2010 Clean Air Plan], the 2010 CAP and it would not disrupt or hinder implementation of any 2010 CAP control measures. Therefore, there would be no impact associated with conflicting or obstructing implementation of the applicable air quality plan" (DEIR p. II-11, Appendix A, Environmental Checklist).

On p. 36 of the same Planning Commission staff report (February 8, 2016), the project was analyzed for its consistency with the Zoning Ordinance and more specifically BMC Section 17.104.060. "As discussed... preemption again limits consideration of the rail related aspects of the Project. The City may only consider aspects of the Project which are within its purview and found that the project in which the City had jurisdiction would not be "detrimental to the public health, safety, or welfare of persons residing or working in or adjacent to the neighborhood of such use, nor detrimental to properties or improvements in the vicinity or to the general welfare of the city."

**Crude Storage:**

- Question 1. Clarification on the 11 PSI standard for storage tanks. (AS)
- Question 2. Does higher PSI relate to volatility? (AS)
- Question 3. Could the temperature increase the PSI in the storage tank? (AS)
- Question 4. Is Bakkan more volatile and gaseous than other crudes? (AS)
- Question 5. Could an increase in the temperature raise the volatility of the crude? (AS)

Response: Responses to Questions 1-5 were provided by Don Cuffel of Valero. No new information regarding the Project was given. Refer to the written transcript of the City Council March 15, 2016 meeting (pp.259-268).

In addition to above, implementation of the proposed project does not modify the refinery operations. "The Project would not include, nor would it require, any changes to existing Refinery operations or process equipment, other than installation and operation of the Project unloading rack and other Project components. The Project would not change the Refinery's crude oil processing rate or increase the Refinery's air emissions, except for emissions from the unloading of crude" (DEIR p. 1-2). "The Project does not propose changes to the emissions limits in the current BAAQMD permits, although the Project does require approval of an Authority to Construct from the BAAQMD." (DEIR p. ES-4)

“The refinery’s crude oil processing rate, which is limited by District permit to an annual average of 165,000 bbl per day (daily maximum of 180,000 bbl per day), would remain unchanged. No modifications would be made to refinery process equipment.”  
(Appendix A1 of the DEIR Air Permit Application states on p. 1)

**Economic Benefits:**

The following questions were based on the economic report submitted by Valero and prepared by Andrew Chang & Co. dated May 2014.

- Question 1. Provide an explanation of the multiplier for the stated 1,000 indirect jobs referred to in Andrew Chang report. (TC)
- Question 2. Provide an explanation of the foundation for the \$2 million in one-time sales tax. (TC)
- Question 3. Explain what the \$55 million valuation for the project actually means to the City in terms of sales tax, property tax, etc. (EP)
- Question 4. Of the \$55 million project valuation, how much is considered real property for the purpose of valuation? (AS)
- Question 5. Which figure was used in the economic and sales tax report: Solano County sales tax of 7.625% of the City of Benicia sales tax of 8.625 %?(AS)
- Question 6. Does the project result in ongoing sales tax? (AS)
- Question 7. Is the estimated \$200,000 sales tax figure an indirect sales tax resulting in secondary economic impact? (CS)

Response: Responses to Questions 1-7 were provided by Valero and prepared by Andrew Chang & Co. Please see the attached letter from Andrew Chang & Co. dated April 12, 2016.

**Emergency Response:**

Question 1. Provide a response to the concern regarding the proposed project restricting access to the area of the unloading racks and the unloading rack’s proximity of the storage tanks.

Response: The DEIR evaluated emergency access and determined that the project would not result in inadequate emergency access. The impact would be less than significant with mitigation (DEIR p. 4.11-12).

In response to concerns expressed at the Planning Commission hearing(s), Benicia Fire Chief Jim Lydon provided a response at the February 11, 2016 Planning Commission meeting. Please refer to the

written transcript for February 11, 2016 for the complete response (pp. 68-73). An excerpt of that transcript is provided below:

“Within the refinery our procedure is actually to respond to the main gate. The reason we go to the main gate is so that we can be escorted by their security staff or other staff through the refinery to the actual incident. The purpose for this is we don't necessarily know on a given day what's occurring in a refinery. There may be certain areas of their operation that are closed off, roads that are not open, etcetera. We would go to the main gate, tie in with them, and proceed down wherever in the refinery we are going. It's not common for us to come to Gate 4 off of Park Road for emergency access. That's for clarification on how we get into the plant. As far as the area in question...Avenue A, where the offloading rack is... [The new service road is] just going to be moved over because of the offloading rack. There are numerous access points as we come down from up above in the main entrance in the main building. Ninth Street is one access, and 14th Street. So there are several different routes of travel that would take us to that new section of service road A, still providing us with adequate emergency access....”

**Mitigation Measures:**

- Question 1. In consideration of the Phillips SMR project in San Luis Obispo County (SLO), what are some of the potential mitigation measures the City of Benicia could impose to lessen the impact of the rail? (EP)
- Question 2. Mitigation measures that cannot be imposed due to preemption may provide an outline of what is possible to address an identified issue and use as a good business practice by Valero. Can these be crafted and forwarded to the Surface Transportation Board? (EP)
- Response: Staff has compiled SLO's references to preemption and the recommended mitigation measures for the Phillips SMR Project in the DEIR for Phillips SMR Rail Project October 2014; San Luis Obispo County Planning Commission February 4, 2016 Staff Report and Exhibit C - Findings for Denial. Due to the length of the complete documents, only those portions of the documents that reference preemption are attached and references to preemption have been underlined. If the Council wishes to forward these to the STB, staff will do so.

**Onsite impacts:**

Question 1. Per BMC Section 17.70.340 *all development shall be set back a minimum of 25 feet from the top of the bank of streams (both seasonal and perennial) and ravines. No development shall be permitted within the setback.* Is the proposed project able to comply with the 25-foot setback requirement? (TC)

Response: The figure presented in the EIR was excerpted from a discussion level plan submitted with application materials. According to the stamp on the drawing, it clearly was not intended to provide construction level detail. Under normal practice, detailed construction drawings would be prepared if and only if a project is approved because they must reflect all conditions of approval, including any mitigation measures and all other requirements required by the lead agency and other permitting agencies.

BMC Section 17.70.340 would govern construction of the Project regardless of whether the City took the “belt and suspenders” approach of requiring compliance with the provision as a condition of permit approval. The construction plans submitted for building permit will provide the necessary level of detail to confirm the 25-foot setback is met and will be reviewed for compliance with this requirement. In addition, the setback would be verified in the field by a licensed surveyor. Valero is aware of this requirement.

Question 2. As part of the public testimony, it was stated that the proposed Project resulted in unmitigated impacts from the project’s onsite construction and operation that are not federally preempted.

Response: The EIR evaluated the Project’s onsite construction and operations impacts related to air quality, GHG construction emissions, wildlife, Sulphur Springs Creek, and hazards. All impacts identified were determined to be less than significant or less than significant with the implementation of mitigation measures. Refer to the Summary of Impacts DEIR pp.2-1 – 2-9 and RDEIR pp. 2-14 – 2-19. Construction-related emissions are evaluated in DEIR Appendix A2 Construction Emissions.

For Example: Air Quality Impacts 4.1-1 and 4.1-2 state that the proposed Project would contribute to an existing or projected air quality violation, criteria pollutant and ozone precursor emissions. These onsite impacts in the Bay Air Basin would be reduced to a less than significant level with implementation of Mitigation Measure 4.1-1. (DEIR pp. 4.1-14 -16 and 4.1-23)

Biological Resources Impacts 4.2-1, 4.2-2, 4.2-3 state that the proposed Project could have a substantial adverse effect on the Sulphur Springs Creek riparian corridor, nesting birds in the Sulphur Springs Creek riparian corridor, and on federally protected wetlands. These impacts would be reduced to a less than significant level with implementation of Mitigation Measures 4.2-1 and 4.8-1. (DEIR pp. 4.2-28 – 30)

As provided above and stated in the EIR, project-related impacts onsite were evaluated in the EIR and were determined to be less than significant with mitigation.

Question 3. As part of the public testimony, it was stated that the comment letter from Dr. Phyllis Fox, dated April 4, 2016 presented new information regarding the EIR's analysis of flooding impacts.

Response: Dr. Fox raises no new or more severe impacts than have already been considered in the environmental review process. A response to the comments from Dr. Fox regarding flooding impacts are provided in the attached memo from ESA dated April 11, 2016.

**Preemption:**

Question 1. Why did the City publish a Revised DEIR knowing that the focus of the document was rail issues, when the City is preempted from imposing conditions on rail-related impacts? (MH)

Response: The application of CEQA as a disclosure document is not preempted. Due to the public interest, the City wanted to maximize the potential to address these issues, even if it was limited to disclosure. "Because CEQA was designed to apprise the public and decision makers, like the Planning Commission, about the potential significant environmental effects of proposed projects, the City ultimately chose to evaluate the Project beyond the boundaries of the Project site. This has resulted in the EIR identifying some potential environmental damage beyond what the City may legally mitigate or avoid because of preemption." (Planning Commission February 8, 2016 Staff Report p. 21)

Question 2. Has the State Attorney General weighed in on preemption? (MH)

Response: The California Attorney General Kamala Harris submitted a letter on the Draft EIR on October 2, 2014. The letter states that "We do not

express an opinion regarding whether Benicia's legal analysis is correct. The extent that federal law, including the Interstate Commerce Termination Act (ICCTA), preempts a state or local jurisdiction's ability to minimize impacts associated with rail transportation projects has not been definitely determined by the courts. "The circuits appear generally, for example, to find preemption of environmental regulations, or similar exercises of police powers relating to public health and safety, only when the state regulations are either discriminatory or unduly burdensome...." (FEIR p. 2.4-106; p. 6 of letter, footnote 16)

Question 3. Provide an outline of the STB petition process for a declaratory order including timing for submittal, timeframe for a decision, process for public participation and the scope of what will be submitted (City Council).

Response: Refer to the memorandum (attached) from the City's Contract Attorney, Brad Hogin of Woodruff, Spradlin & Smart dated April 8, 2016.

Question 4. Which case is related to the Liquid Petroleum Gas? (Response: SEA-3 decision). Clarify the SEA-3 decision by the STB. (TC)

Response: The SEA-3 decision of the Surface Transportation Board (STB) involves a propane facility in Newington, New Hampshire. SEA-3 is not a rail carrier but the owner of the propane facility which was planned to be improved. The nearby City of Portsmouth objected to the approval of the facility and appealed the town of Newington's decision to court. SEA-3 sought an order from the STB that the claims of the city of Portsmouth were preempted because of the rail aspects of the project. The STB declined to issue the order on the basis that the law is clear. See p. 4 of the decision (attached). 'The Interstate Commerce Act (Act) is "among the most pervasive and comprehensive of federal regulatory schemes." Chi. & N.W. Transp. Co. v. Kalo Brick & Tile Co., 450 U.S. 311, 318 (1981). The federal preemption provision contained in § 10501(b) bars the application of most state and local laws to railroad operations that are subject to the Board's jurisdiction.'

**Railroad Operations, Track Rights and Rail Safety:**

In the last 5 years, nationally:

Question 1. How many total derailments of freight trains? (AS)

Question 2. How many involved trains carrying crude? (AS)

Question 3. Of those carrying crude how many involved just spills and how many fires/explosions? (AS) Data available from the US DOT

Question 4. What approximate number annually of total freight train trips? (AS)

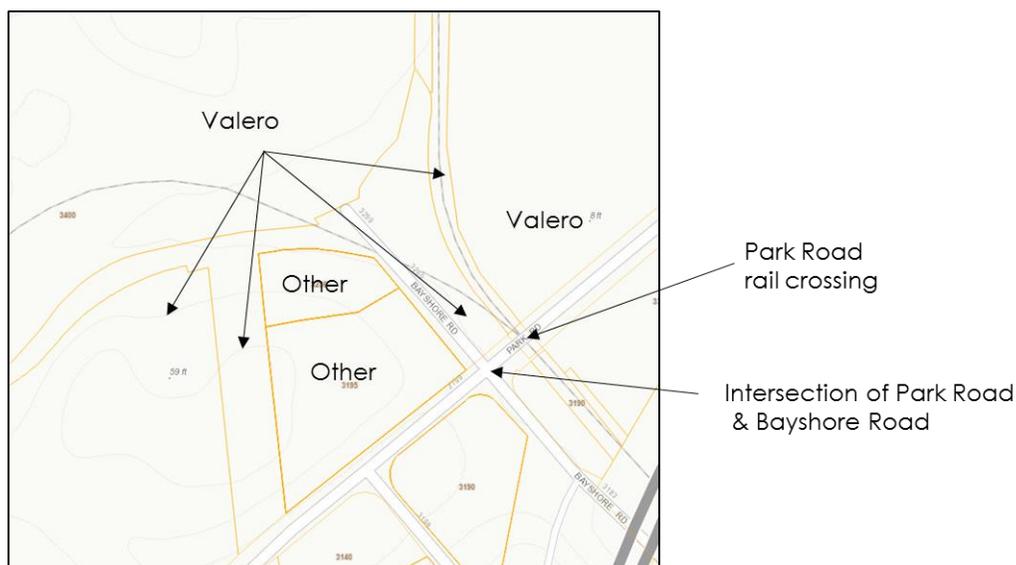
Response: Responses to Questions 1-4 are in the attached letter from Christopher P.L. Barkan dated April 12, 2016.

Question 5. As part of the public testimony, it was stated that the comment letter from Phyllis Fox, Ph.D., PE dated April 4, 2016 presented new information on the analysis in the EIR regarding public safety and rail impacts.

Response: Response to the comments from Dr. Fox are provided in the attached letter from MRS dated April 12, 2016

Question 6. Is the Park Road crossing close enough to the Valero property line that a train on Valero property would trigger the crossing arms to move? If so, where? (TC)

Response: A response to this question was requested of Valero. Valero has indicated that they are working to provide an answer before the April 18<sup>th</sup> City Council meeting. The diagram below provides property ownership information for reference.



Question 7. Identify the private rail spurs, the union pacific track. Provide a clear understanding of the existing tracks "right of trackage". (TC/EP)

Response: A response to this question was requested of Valero. Please also refer to the attached diagram which shows the length of a 50-car project train on the Valero refinery property. The property allows for the entire length of the train.

### **Tank Car Standards:**

Question 1. Confirmation of Valero's commitment to 1232 tank cars. (AS)

Response: Valero's commitment to use 1232 tank cars is included in the FEIR (page 2.4-12) and in the Operational Aid Agreement (FEIR Appendix B, paragraph 6), "Valero has committed to use tank cars that meet or exceed the standard as defined by the American Association of Railroads as a CPC-1232 Tank Car Specification."

Question 2. How do we know when it is feasible for Valero to upgrade to the better tank cars? When and how is that commitment done? (EP)

Question 3. Would Valero commit to better tanks cars (117R and/or 117J) if they are available before they are required to? (MH)

Question 4. Do we know when those cars will be available? (MH/EP)

Response: Responses to Questions 2-4 have been requested of Valero. Valero has indicated that they are working to provide answers before the April 18<sup>th</sup> City Council meeting.

Question 5. How much crude does a tank car hold? (AS)

Response: Valero stated that a tank car holds about 700 barrels of crude.

### **Traffic Impacts:**

Question 1. Explain how project trains, which result in an 8.3 minute delay, maintain a rating of LOS D? (TC) Provide the variables that change the LOS levels. (TC/EP)

Response: The operation of a local roadway network is commonly measured and described using a grading system called Level of Service (LOS), which is a characterization, in the form of a six-level scale, of the relationship between the capacity of an intersection and the volume of traffic moving through it in one hour. Each LOS rating

represents a relative level of congestion and resulting average delay per vehicle. The six LOS ratings range from LOS A (the best conditions, with little or no delay) to LOS F (the worst conditions, with very long delays). Traffic operations at the intersection of Park Road and the Union Pacific Railroad (UPRR) tracks is analogous to a signalized intersection, with Park Road traffic having “a green light” (no stopping, hence no delay) except when the crossing gates are down to accommodate a train. The variables that affect LOS at signalized intersections include the hourly traffic volumes, the number of lanes to accommodate those traffic volumes, and how long the light stays green for the traffic volumes.

It is important to understand that the analysis of traffic impacts associated with Valero's proposed Crude by Rail project (Project) is not a standard traffic analysis, and that LOS is not the best basis for determining Project impacts. The Draft EIR (Pp. 4.11-4 and 4.11-5) describes how the consequences of the Project's actions differ from that of a typical project. In almost every instance, traffic analyses prepared by the City of Benicia (and in fact by all jurisdictions) consist of projects that would add new vehicle trips to the existing roadway system (and through the study of intersections). However, the Project would add new freight train crossings rather than any significant number of new vehicle trips to the system. Therefore, the more-relevant basis for determining Project traffic impacts is two-fold; i.e., the duration and frequency of Project train crossings compared to baseline conditions.

In addition, for a standard traffic analysis, the daily project-caused traffic increase would occur regularly, and would peak at the same time or times each day – usually during the “rush hours” in the morning and/or late afternoon/early evening when commuters travel to and from work. In contrast, freight train crossings at Park Road are sporadic, in the number of trains each day, the time of day, and the duration. During seven days of videotaping conducted by Fehr & Peers as part of its Valero Benicia Refinery Crude by Rail Project Transportation Impact Analysis (TIA), the number of daily train crossings varied widely (from 4 to 18), and these crossings occurred at various times during a ten-hour period from 9:30 AM to 7:15 PM. (Fehr & Peers' TIA report was included as Appendix I of the Draft EIR). The baseline crossing duration was

established (see page 21 of the Fehr & Peers TIA report) as 11 minutes and 50 seconds (11.8 minutes); the duration of Project-related crossings was determined (see p. 24 of the Fehr & Peers TIA report) to be 8 minutes and 18 seconds (8.3 minutes).

Even though the above explanations indicate why LOS is not the appropriate basis for determining Project impacts, the Draft EIR included an LOS analysis to evaluate consistency with General Plan Policy 2.20.1, which is to “[m]aintain at least Level of Service D on all city roads, street segments, and intersections.” Of the above-described variables that affect LOS, the only Project-caused change to those variables would be “how long the light stays green” for Park Road traffic. That is, during the 8.3-minute train crossing for Project trains, the “light” would be red for Park Road traffic, and the “light” would be green for the other 51.7 minutes of the analysis hour. Neither the volume of traffic, nor the number of lanes on Park Road would change because of the Project.

As described on p. 4.11-8 of the Draft EIR, traffic conditions are at an excellent LOS A when no train crossing occurs at Park Road, and degrade to a poor LOS F when there is a train crossing, except during nighttime hours when traffic volumes are low enough to avoid unacceptable LOS conditions if a train crossing occurs.

Regarding the bases for the Draft EIR’s less-than-significant traffic impacts caused by the Project (i.e., changes to the duration and frequency of train crossings), each 50-railcar train would block traffic on Park Road for 8.3 minutes (shorter than the baseline duration), and there would be up to 4 crossings per day (at the low end of the current [baseline] range of crossings per day). In addition, the 8.3-minute Project train crossing would increase the average vehicle delay in an hour by about 0.8 second, which is less than the one-second threshold of significance when the train crossing currently operates at LOS F.

Question 2. If the intersection of the I-680 Northbound Off-Ramp is blocked due to a train crossing at Park Road, is it possible to create an outlet, i.e., right turn only lane? (AS)

Response: The off-ramp is more than 1,000 feet long (1,000 feet from Bayshore

Road to the paired "Exit 58B" and "Exit 45 MPH" signs), and there is a rather steep side slope on the right side of the ramp and a trestle extending over Bayshore Road from the top of the slope; there also is a steep side slope that develops on the left side of the ramp as you approach Bayshore Road. While theoretically possible to widen the ramp to accommodate a second lane, the design would be complex given the existing physical constraints. Regardless of the physical constraints and the resulting design complexities, a backup on the off-ramp is an existing condition and was considered in the analysis as part of the baseline scenario.

This ongoing impact of past projects was also considered in the cumulative effects analysis. See, e.g., Revised DEIR p. 2-166:

"Project train crossings occurring during the 9:00 AM – 7:00 PM period would generate queues on the west side of the tracks that would extend back onto Bayshore Road and affect the operations of the I-680 ramp-terminal intersections, but would not extend back onto the I-680 mainline. Queues on the east side of the tracks would generally be contained within the Park Road segment between the tracks and Industrial Way, affecting access to and from Refinery driveways and the U-Store-It driveway...."

"The change in average vehicle delay at the Park Road crossing associated with the 8.3-minute duration when the Project's trains could block traffic at that crossing would increase the average vehicle delay in an hour by about 0.8 second, which is less than the one-second threshold of significance when the train crossing currently operates at LOS F. The Project impacts would be less than cumulatively significant".

Because the impacts of the project would be less than significant and because the project's contribution to existing adverse cumulative conditions would not be cumulatively considerable, there is no nexus to require the construction of a right-turn-only lane or other solution to the existing condition as mitigation measure for the proposed project.

Question 3. Is there something we can do to address backups that impact traffic at the Park Road / Industrial Way intersection? (AS)

Response: Without knowing the details of what caused the delay/backup described by Councilmember Schwartzman, it is assumed that the cause/reason was a train crossing of Park Road. The delay of about 12 minutes in that instance is consistent with (i.e., falls within the range of) delays captured during the week-long videotaping of the Park Road crossing described in the DEIR. As shown in Figure 3-1 of the traffic study (DEIR Appendix I), the backup of vehicles on Park Road between the UPRR track crossing and Industrial Way would be shorter with Project train crossings than with existing/baseline train crossings. This would be the case because the crossing duration would be shorter under project conditions (8.3 minutes versus 11.8 minutes) because queuing distance within the Refinery would be increased by the Project; thus avoiding the switching-related crossings that can block Park Road under existing conditions.

CEQA does not require projects to mitigate conditions they do not cause or contribute to in a potentially significant way. As explained in response to Question 2 above, the Project would result in a less-than-significant impact relating to train-crossing-caused delays at Park Road; further, because the Project's contribution to existing adverse cumulative conditions would not be cumulatively considerable; there is no basis to require the project to mitigate the condition described by Councilmember Schwartzman. It is not the responsibility of the project to fix existing conditions, just make sure that the impact is not exacerbated to a significant level.

Question 4. Is the Park Road rail crossing close enough to the Valero property line that a train on Valero property would trigger the crossing arms to move? (TC)

Response: A response to this question was requested from Valero. Valero has indicated that they are working to provide an answer before the April 18<sup>th</sup> City Council meeting.

Question 5. Is the analysis of traffic impacts from a Project train crossing of 8 minutes based on a theoretical flat straight line? (TC)

Response: The straightforward answer to the question is “Yes,” and the reason why that is appropriate is as follows: The analysis of traffic impacts from a project train crossing was predicated, as is standard practice for traffic analyses, on anticipated average (prevailing) project conditions. While it is recognized that there could be variations to those prevailing conditions, the exceptions would not happen on a regular basis, and therefore do not serve to define “the Project” for purposes of determining impacts.

For example, for a traditional traffic impact analysis of a development project (e.g., a subdivision or office building), the vehicle trip generation is estimated based on average trip generation rates for the proposed land use derived from surveys of existing sites. By definition, “average” means that individual surveyed sites exhibited trip generation somewhat higher or lower than the average. In the case of Valero’s proposed Crude by Rail project, the crossing time for the project trains was calculated based on the length of the train, and speed at which the train would be traveling as it crossed Park Road. As stated in page 4.11-9 of the Draft EIR, it would take 7.3 minutes for a 50-car train traveling at 5 miles per hour (MPH) to cross Park Road. The 30-second buffer time before and after each train crossing, provided by the at-grade crossing traffic controls, means that the duration for which Park Road would be blocked would be 8.3 minutes. Exceptions to that precise time could occur, but there is no reason to believe that those potential exceptions would be the norm (i.e., the prevailing condition). Therefore, the use of the 8.3-minute crossing time as the basis for determining traffic impacts is appropriate.

**Valero’s Current Operations:**

Question 1. Are we already seeing crude on the rail? (CS)

Question 2. Where does the petroleum coke export? (CS)

Question 3. How do the locomotives get their fuel? From Valero? (CS)

Question 4. How does Valero export its product? (CS)

Response: Responses to questions 1-4 were provided by Don Cuffel. Refer to the written transcript of the City Council March 15, 2016 meeting (pp.318-324).

Question 5. If the project were to be approved would the refinery need to substitute marine shipments of crude with shipments by rail? (TC)

Response: Response was provided by Don Cuffel of Valero. Refer to the written transcript of the City Council March 15, 2016 meeting (pp.311-316).

Question 6. Does Valero get crude from Texas, New Mexico and Oklahoma? (AS)

Response: Response was provided by Don Cuffel and Don Wilson of Valero. Refer to the written transcript of the City Council March 15, 2016 meeting (pp. 269-270).

**Valero's Proposed Operations:**

Question 1. How long does it take to offload the trains? (TC)

Response: It would take Valero approximately 12 hours to unload each train and prepare the empty train for the return trip to Roseville. Thus, two trains would cross Park Road during the evening hours, and two would cross Park Road during the daytime hours other than the hours of 6:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. (DEIR p. 3-22)

**Valero CBR Project Consultant Procurement Procedures:**

*Environmental Science Associates (ESA)*

Over the course of the CBR project, the selection of Environmental Science Associates (ESA) and their role has been a source of confusion. ESA is a consultant to the City of Benicia, not Valero. ESA was hired to work for the City in 2002 in anticipation of upcoming refinery projects (i.e. the Valero Improvement Project). Since purchasing the refinery in 2000, Valero has undertaken a number of projects to respond to regulatory requirements and improve refinery operations. In 2002, the City requested proposals from consulting firms for technical and permit processing assistance including environmental review. After reviewing proposals, the City selected ESA.

Valero is responsible for the costs for technical and environmental review of refinery projects (as well as the City's required administrative fee which is fifteen percent of the ESA not-to-exceed amount). Costs for technical and environmental review of various refinery projects by ESA are determined on a project-by-project basis as each project is brought forward by the refinery. The scope of work and cost for review of each project are specified in a work order pursuant to the terms of the contracts between the City and ESA and between the City and Valero. The CBR project is a work order under the original 2002 contract.

*Brad Hogin, Contract Attorney (Woodruff, Spradlin & Smart)*

The City contracted with Brad Hogin after a request for proposals resulted in 20 responses. Mr. Hogin was selected after an interview process. The Council, by a 3-2 vote, approved the continuation of Mr. Hogin's agreement in October of 2013. The staff report is attached. Mr. Hogin's costs are being reimbursed by Valero.

**Conclusion:**

Staff's recommendation for the Valero Crude by Rail Project FEIR and Use permit has not altered. See the March 15, 2016 staff report, with attachments for a full discussion of the project. Staff recommends that the request for continuance be denied for the reasons stated in the March 15<sup>th</sup> report.

Procedurally, staff recommends that the Council hear the remaining public comment on the EIR, the Use Permit and the request for continuance, close the public hearing, render a decision on the continuance, and begin deliberation on the project.

Attachments:

1. Memorandum regarding the STB process from the City's Contract Attorney, Brad Hogin of Woodruff, Spradlin & Smart dated April 8, 2016
2. Memorandum from ESA dated April 11, 2015 in response to Dr. Phyllis Fox's April 4, 2016 letter
3. Letter from MRS dated April 12, 2016 in response to Dr. Phyllis Fox's April 4, 2016 letter
4. Letter from Dr. Christopher Barkan dated April 12, 2016
5. Letter from Andrew Chang & Co. dated April 12, 2016
6. San Luis Obispo County References to Preemption for Phillips SMR Project (*partial documents*)
  - o DEIR for Phillips SMR Rail Project October 2014
  - o San Luis Obispo County Planning Commission Staff Report 2/4/16
  - o Exhibit C - Findings for Denial
7. Surface Transportation Board Decision SEA-3, Inc. March 2015
8. Diagram: 50-Car Project Train on Valero Property
9. City Council staff report for Brad Hogin October 1 2013?
10. Public comments received April 7 – 12, 2016
11. Speakers List for April 18, 2016
12. Link to March 15, 2016 Council Report:  
[https://docs.google.com/gview?url=https%3A%2F%2Fs3.amazonaws.com%2Fgranicus\\_production\\_attachments%2Fbenicia%2F90fd64a30dbec1e5bb2b94e7c97.pdf&embedded=true](https://docs.google.com/gview?url=https%3A%2F%2Fs3.amazonaws.com%2Fgranicus_production_attachments%2Fbenicia%2F90fd64a30dbec1e5bb2b94e7c97.pdf&embedded=true)

## MEMORANDUM

### VIA ELECTRONIC MAIL

TO: Heather McLaughlin, Esq.

FROM: Bradley R. Hogin, Esq.

DATE: April 8, 2016

RE: Surface Transportation Board Proceedings on Petitions for Declaratory Orders

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You have asked me to briefly summarize the process that the Surface Transportation Board (“STB”) follows in considering petitions for declaratory orders.

What is a Declaratory Order? A declaratory order is a form of declaratory relief provided by a federal administrative agency in response to a petition. Under the Administrative Procedure Act (“APA”), federal agencies like the STB may institute declaratory order proceedings in order to “terminate a controversy or remove uncertainty.”<sup>1</sup>

How Are Proceedings Initiated? Any interested party may file a petition for declaratory order. The STB, however, has “significant discretion” in deciding whether to institute a declaratory order proceeding.<sup>2</sup> Upon deciding to institute a proceeding, the STB will publish a notice in the federal register. If the STB declines to institute a proceeding, it may nonetheless provide informal guidance to the petitioner.

Who Can File a Petition? Many petitions for declaratory orders are filed by rail carriers. The STB, however, regularly institutes declaratory order proceedings based on petitions filed by parties that are not rail carriers. The STB, for example, has held proceedings on petitions filed by shippers,<sup>3</sup> property owners,<sup>4</sup> cities,<sup>5</sup> environmental groups,<sup>6</sup> transload facility operators,<sup>7</sup> and city residents.<sup>8</sup>

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<sup>1</sup> 5 U.S.C. § 554(e).

<sup>2</sup> *Intercity Transp. Co. v. United States*, 737 F.2d 103, 106-07 (D.C. Cir. 1984).

<sup>3</sup> See, e.g., *Am. Chemistry Council, the Chlorine Inst., & the Fertilizer Institute Petition for Declaratory Order Positive Train Control*, FD 35964, 2015 WL 5845419, at \*1 (Oct. 6, 2015) [shipper] *Sherwin Alumina Co., LLC*, R 42143, 2015 WL 5711004, at \*1 (Sept. 28, 2015).

<sup>4</sup> See, e.g., *Allied Indus. Dev. Corporation Petition for Declaratory Order*, FD 35477, 2015 WL 5459098, at \*1 (Sept. 15, 2015) *Pinelawn Cemetery Petition for Declaratory Order*, FD 35468, 2015 WL 1813674, at \*1 (Apr. 20, 2015).

<sup>5</sup> See, e.g., *City of Milwaukie Petition for Declaratory Order*, FD 35625, 2013 WL 1221975, at \*1 (Mar. 20, 2013).

Is There an Opportunity for Public Participation? After instituting a declaratory order proceeding, the STB will allow interested parties an opportunity to respond to the petition. The STB will typically set forth a schedule for replies and rebuttal by the petitioner in the initial federal register notice.<sup>9</sup> The STB has not adopted any procedures that apply to declaratory order proceedings, and instead sets the schedule on a case-by-case basis.

How Long Does the Process Take? Based on my review of various STB decisions, after a petition is filed it typically takes the STB three to six months to issue a decision. I did find a few cases where the STB process took less than three months or more than six months. The substantial majority of cases that I reviewed, however, were resolved in three to six months.

Can an STB Decision be Challenged in Court? As a general rule, an STB declaratory order is considered a final action and is subject to judicial review as set forth in the APA.<sup>10</sup> And, in many cases, courts have reviewed STB declaratory orders regarding the scope of ICCTA preemption on specific facts.<sup>11</sup> It is true that, in some cases, courts have declined to review declaratory orders because there was no actual controversy presented – the matter, in other words, was not “ripe” for review.<sup>12</sup> Here, however, a court would likely consider the controversy over Valero’s facility to be ripe for review because it involves an actual controversy between Valero and project opponents over a specific planned facility.

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<sup>6</sup> See, e.g., *Friends of the Aquifer, City of Hauser, Id, Hauser Lake Water Dist., Cheryl L. Rodgers, Clay Larkin, Kootenai Env'tl. All., R.R. & Clearcuts Campaign*, 33966, 2001 WL 928949, at \*1 (Aug. 10, 2001).

<sup>7</sup> See, e.g., *Sea-3, Inc. Petition for Declaratory Order*, FD 35853, 2015 WL 1215490, at \*1 (Mar. 16, 2015).

<sup>8</sup> See, e.g., *Diana Del Grosso, Ray Smith, Joseph Hatch, Cheryl Hatch, Kathleen Kelley, Andrew Wilklund, & Richard Kosiba* petition for Declaratory Order, FD 35652, 2014 WL 6852990, at \*1 (Dec. 4, 2014).

<sup>9</sup> See, e.g., *Canadian Pacific Railway Limited—Petition for Expedited Declaratory Order*, 81 FR 14172-02.

<sup>10</sup> 5 U.S.C. § 702.

<sup>11</sup> See, e.g., *Padgett v. Surface Transp. Bd.*, 804 F.3d 103 (1st Cir. 2015); *Grosso v. Surface Transp. Bd.*, 804 F.3d 110 (1st Cir. 2015), reh'g denied sub nom. *Del Grosso v. Surface Transp. Bd.*, 811 F.3d 83 (1st Cir. 2016); *City of Lincoln v. Surface Transp. Bd.*, 414 F.3d 858 (8th Cir. 2005).

<sup>12</sup> *Miller v. F.C.C.*, 66 F.3d 1140, 1141 (11th Cir. 1995).

April 12, 2016

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

Re: Response to Comments on Valero Crude-by-Rail Project

Dear Amy:

Marine Research Specialists (MRS) has received the Comments on Valero's Appeal of Planning Commission's Denial of Valero Crude-by-Rail Project that was prepared by Phyllis Fox, Ph.D., PE. Our responses to the comments are summarized below:

#### **INTRODUCTION**

MRS does not agree with the Fox comment letter as it misrepresents, the factual basis for the quantitative risk analysis that was presented in the EIR, and selectively postulates worst-case scenarios that are in most cases physically impossible, or have such a low probability that they are rendered meaningless. In addition, the Fox comment letter does not raise any new issues related to the preparation of the quantitative risk analysis or potential hazards associated with the proposed project. As noted in the EIR, mainline rail hazards are considered significant, while the risks associated with railcar unloading are considered less than significant.

The accident history at rail crude oil unloading facilities is almost the polar opposite of the scenarios that have been postulated in the comment letter. A review of unloading facility spills that have been published by the PHMSA for the years 2000 to 2015 reveal that unloading facility oil spills are quite rare. During this period there have been a total of 27 reported oil spills, only two of which have been larger than one gallon. Almost all of the reported spills consisted of oil residue on the manway cover of the tank car and are estimated at between one and two ounces. The two spills that exceeded one gallon were still significantly smaller than the volume of the rail car (30,000 gallons) as follows:

- 1,680 gallons due to operator error, and
- 3,570 gallons due to faulty valve.

At the Valero facility, both of these spills would easily be confined within the unloading facility spill containment system.

April 12, 2016

Ms. Amy Million  
Principal Planner  
City of Benicia  
Page 2 of 8

During the period 2011 to 2015, there were 1,689,242 crude oil tank cars unloaded at facilities around the country. Based on only two spills that exceeded one gallon in size, the spill probability can be calculated as 1.18 spills per million tank cars unloaded. In addition to this low spill probability, there have been no reported fires, explosions, fatalities or injuries associated with the unloading of crude oil tank cars during the 2000-2015 time period.

The remainder of this response addresses the broad issues raised in the Fox comment letter.

**A. THE EIR'S QUANTITATIVE SIGNIFICANCE RISK ASSESSMENT IS CORRECT AND WELL-SUPPORTED**

The Quantitative Risk Analysis (QRA) that was prepared for the proposed project followed the specific methodologies and guidance outlined in numerous books that were published by the American Institute of Chemical Engineers, Center for Chemical Process Safety:

- Guidelines for Chemical Process Quantitative Risk Analysis.
- Guidelines for Chemical Transportation Risk Analysis.
- Guidelines for Evaluating the Characteristics of Vapor Cloud Explosions, Flash Fires and BLEVES.
- Guidelines for Process Equipment Reliability Data with Data Tables.
- Evaluating Process Plant buildings for External Explosions and Fires.
- Guidelines for Postrelease Mitigation Technology in the Chemical Process Industry.

The Hazardous Materials Cooperative Research Program (HMCRP) that is sponsored by the Pipeline and Hazardous Materials Safety Administration (PHMSA) recommends the use of Quantitative Risk Analysis for high hazard scenarios as the state-of-the-art methodology for evaluating risk. The HMCRP specifically endorses the methodologies that were developed by the American Institute of Chemical Engineers. The QRA that is in the EIR followed the recommended PHMSA methodology and is the appropriate methodology for evaluating potential risks to the public under CEQA.

The comment letter also asserts that the use of a QRA and the significance criteria that was developed by Santa Barbara County is somehow not a valid CEQA approach. First, it should be noted that the Santa Barbara County significance criteria is included in the County's adopted CEQA significance criteria and is routinely used in their CEQA documents. Second, the Santa Barbara CEQA QRA criteria has been used in CEQA documents, or CEQA equivalent documents for many other local, state and federal agencies, including the California State Lands Commission, California Coastal Commission, California Energy Commission, Bureau of Ocean Energy Management, and many local jurisdictions such as San Luis Obispo County, Los Angeles County, City of Los Angeles, City of Hermosa Beach, etc.

## **B. OFF-SITE RISKS FROM ON-SITE ACCIDENTS ARE INSIGNIFICANT**

We disagree with the assumptions that Dr. Fox used to come to the conclusion that offsite risks from onsite accidents are significant. Dr. Fox postulated numerous scenarios that could possibly result in a greater number of potential injuries and/or fatalities, but fails to make any adjustments for the probability of such an event. The comments also ignore much of the information that was presented in the EIR and appendices, as well as our response to their Public Records Act request.

Dr. Fox's comments ignore the basic premise of risk analysis of the relationship between probability and consequences. In preparing a QRA, all assumptions that related to potential consequences are associated with a probability of occurrence. As more and more worst-case assumptions are made, the probability of such an event becomes less likely. In the case of the QRA that was prepared for the proposed project, there is a possibility for a larger number of injuries and fatalities, but the probability is so low that the scenario does not contribute to the overall societal risk.

The comment also ignores the basic accident history of crude oil rail unloading facilities. As noted above, the accident history at rail crude oil unloading facilities is almost the polar opposite of the scenarios that have been postulated in the comment letter. A review of unloading facility spills that have been published by the PHMSA for the years 2000 to 2015 reveal that unloading facility oil spills are quite rare. During this period there have been a total of 27 reported oil spills, only two of which have been larger than one gallon. Almost all of the reported spills consisted of oil residue on the manway cover of the tank car and are estimated at between one and two ounces. The two spills that exceeded one gallon were still significantly smaller than the volume of the rail car (30,000 gallons) as follows:

- 1,680 gallons due to operator error, and
- 3,570 gallons due to faulty valve.

At the Valero facility, both of these spills would easily be contained within the unloading facility spill containment system.

During the period 2011 to 2015, there were 1,689,242 crude oil tank cars unloaded at facilities around the country. Based on only two spills that exceeded one gallon in size, the spill probability can be calculated as 1.18 spills per million tank cars unloaded. In addition to this low spill probability, there have been no reported fires, explosions, fatalities or injuries associated with the unloading of crude oil tank cars during the 2000-2015 time period. Clearly, operational experience is quite different than the disastrous scenario postulated by Dr. Fox, were approximately 1.7 million tank cars have been unloaded without any adverse offsite risk.

## **C. THE EIR EVALUATES ALL FEASIBLE TYPES OF ACCIDENTS**

The comments in this section are entirely inaccurate and misleading. The QRA that was prepared for the EIR considered a wide range of accident types and evaluated the potential risk for each

scenario. The QRA included scenarios for a Boiling Liquid Vapor Explosion (BLEVE), a variety of crude oil pool fires, vapor cloud fires and explosions. The QRA and PRA response also detailed how ignition sources were used in the QRA to initiate a vapor cloud explosion. The comments fail to acknowledge that many of these scenarios were evaluated, and that the probability of these scenarios is considerably lower than for the mainline rail QRA since the refinery unloading facility will have safety systems, such as a sump to control crude oil spills and a dedicated foam firefighting system, to minimize flammable vapor emissions from crude oil spills and thermal radiation hazards associated with fires.

#### **D. THE EIR EVALUATES ALL FEASIBLE ON-SITE ACCIDENT SCENARIOS**

The QRA that was prepared for the proposed project evaluated a wide range of credible accidents, as well as accidents that would be considered very unlikely. The comment contends that accidents during maneuvering of the train at the unloading facility were not considered. First, train movements outside of the refinery on Union Pacific tracks were considered in the QRA that was prepared for transportation hazards. Train maneuvering at the unloading facility would occur at very low speeds. A derailment at approximately 3 mph within the unloading facility would not result in a breach of the tank car, and the probability of a spill is extremely low. The QRA considered the adverse consequences of a derailment and tank car failure, but given the low probability of this scenario, it was not a significant contributor to societal risk.

Contrary to the comment letter, accidents during rail car hookup and unloading were considered in the QRA. However, the comments fail to acknowledge that many of these scenarios were evaluated, and that the probability of these scenarios is considerably lower than for the mainline rail QRA since the refinery unloading facility will have safety systems, such as a sump to control crude oil spills and a dedicated foam firefighting system, to minimize flammable vapor emissions from crude oil spills and thermal radiation hazards associated with fires. The unloading facility is designed to drain any spilled oil away from the rail cars and to minimize the potential for flammable vapors to be released, thus significantly reducing the probability of vapor cloud ignition and potential fires and explosions. This is a passive system that will work regardless of any actions, or lack thereof, by facility personnel. However, in spite of the extremely low probability that a spill would be ignited, the QRA evaluated the potential risk of vapor cloud ignition, fires and explosions, including a thermal tear (BLEVE).

#### **E. ACCIDENTS AT OTHER PROJECT FACILITIES WERE EVALUATED**

The first part of this comment is entirely erroneous and contrary to information that was provided to the commenter. One of the largest hazards associated with the unloading facility would be a failure of the pipeline between the unloading facility and storage tanks. The QRA clearly evaluated this risk and evaluated spills at various points along the pipeline. The comment then goes on to evaluate a larger theoretical spill from a different facility EIR (Phillips 66 Rail Spur Expansion Project EIR) without understanding the basis for the differences in estimated spill volumes. The comment then goes on to recommend numerous “mitigation measures”, most of which are required by existing law. In the case of placing the pipeline underground, this would

result in a greater potential for pipeline corrosion and failure due to the inability to inspect the pipeline on a daily basis. Presumably, this “mitigation measure” was suggested as a way to avoid potential damage to the pipeline from refinery vehicles even though the pipeline would be protected by barriers to prevent vehicular damage.

The comment notes that hazards associated with the existing tank farm were not included in the QRA. The existing tanks are considered as part of the CEQA baseline and are already in crude oil service. The QRA is intended to evaluate risks associated with the proposed project and not the entire refinery complex. While spills from the existing crude oil tanks were not evaluated, the QRA did include the risk of spills into the berm area surrounding the tanks, as well as the thermal radiation hazards that could result from a pool fire at the tank farm.

#### **F. FACTORS CONTRIBUTING TO HAZARD IMPACT SIGNIFICANCE**

This section of comments discusses issues associated with the proposed unloading facility location, ignition sources, external events, centroid location and other rail traffic. The comment contains a long discussion of the collocation of the rail unloading facility near a tank farm and the nearby business park. Unfortunately, the comment does not provide any meaningful analysis of how the unloading facility would interact with nearby tanks, other than speculation that an accident could result in additional fires at the tank farm, and again ignores the safety features that are part of the proposed project to minimize the hazards associated with the unloading facility and adjacent refinery tanks and equipment.

The comment also alleges that the QRA did not provide information on ignition sources. As noted in previous information provided to the commenter, flammable vapor clouds have the potential to ignite anywhere within their flammable limits. Hence, it is necessary to identify potential ignition sources that a cloud may encounter, and to quantify the likelihood of ignition, if the cloud encompasses the sources. When determining ignition probabilities, there are two factors to take into account; first, source duration, the fraction of time that the source is present or in operation; and second, source intensity, the chance of the source actually causing ignition if contacted by a flammable cloud. For example, if a ground level flare is operating, it will almost always ignite a cloud, but it may only operate ten percent of the time. This would give an overall chance of ignition by the ground level flare of 0.1.

When a (virtually guaranteed) source of ignition is always in operation, a probability of greater than 0.95 is not generally assigned. There are two related reasons for this: one is the possibility that there may be a failure or unanticipated shut down of the system or item in question; the other reason is that to use a probability of less than 1 will allow some fraction of releases to pass over the source without ignition, to possibly ignite later when a larger area has been covered. This gives a more conservative result.

In general, when trying to identify ignition sources, the search is primarily for open flames, hot surfaces and electrical sparks, and, to a lesser extent, friction sparks from both continuous and intermittent activities. One extensive listing of potential ignition sources may be found in CCPS

"Chemical Process Quantitative Risk Analysis". Estimates of the ignition probabilities of some of these sources are also provided. Typical ignition probabilities that were used in the analysis include:

- Cars - 0.06 per car; although many potential ignition sources within a car like faulty wiring or backfires are due to fuel rich mixtures in intake air, they are not always present nor guaranteed to cause ignition. This value was also applied to golf carts and other utility vehicles. (CCPS)
- Structures - 0.01 per structure; while there are many ignition sources within a structure, such as switches, doorbells, faulty wiring, pilot lights, HVAC systems and industrial equipment. The flammable vapors must first penetrate the structure before these ignition sources pose a hazard. Typical residence times of clouds are often brief enough that this is relatively unlikely; especially since the rail unloading facility will be equipped with a foam suppression system. (CCPS)

Again the comment fails to acknowledge facility design features that are in place to minimize potential flammable vapor emissions and ignition.

The comments also acknowledge that the EIR recognizes external events, such as earthquakes, fog, floods, and sabotage as initiating and contributing causes of rail accidents and though not explicitly recognized, accidents at the Project site, then contends that external events were not considered in the QRA. External events are frequently an initiating event for an incident that could result in an accidental release. In the preparation of a QRA, external events are assigned a probability that could lead to an incident, but not necessarily an accidental release or consequences that would have an adverse offsite impact. Along with the probability of an external event, conditional probabilities also need to be considered that would lead to an accidental release. For example, flooding at the site does not necessarily mean that there would be an accidental release. Similarly, an earthquake could lead to equipment damage or an overturned rail car, but not necessarily a catastrophic release as postulated in the comment. While possible, these catastrophic frequently have very low probabilities and do not result in a significant risk to the public.

Dr. Fox also comments on the location of a potential hazard zone that was depicted in the EIR showing thermal hazard zones. This is a little disingenuous since Dr. Fox was also provided with a map showing release points and hazard zones for other locations at the unloading facility where a worst-case spill could occur (see Figure 1). The comment points to the end of the rail unloading facility as a point where a worst-case accident could occur and impact offsite populations. However, the facility design would preclude potential worst-case accidents at these points due to the design of the unloading facility drainage system, as well as these locations being well removed from the unloading pumps and operated under suction, which would minimize spill volumes at these locations.

April 12, 2016

Ms. Amy Million  
Principal Planner  
City of Benicia  
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Finally, Dr. Fox speculates on potential interactions with rail traffic associated with the LPG and petroleum coke rail cars. While these facilities use the same tracks between the unloading facility and the Union Pacific main line, there would be no simultaneous use of the tracks. Therefore, potential interactions with petroleum and coke trains would not occur.

#### CONCLUSION

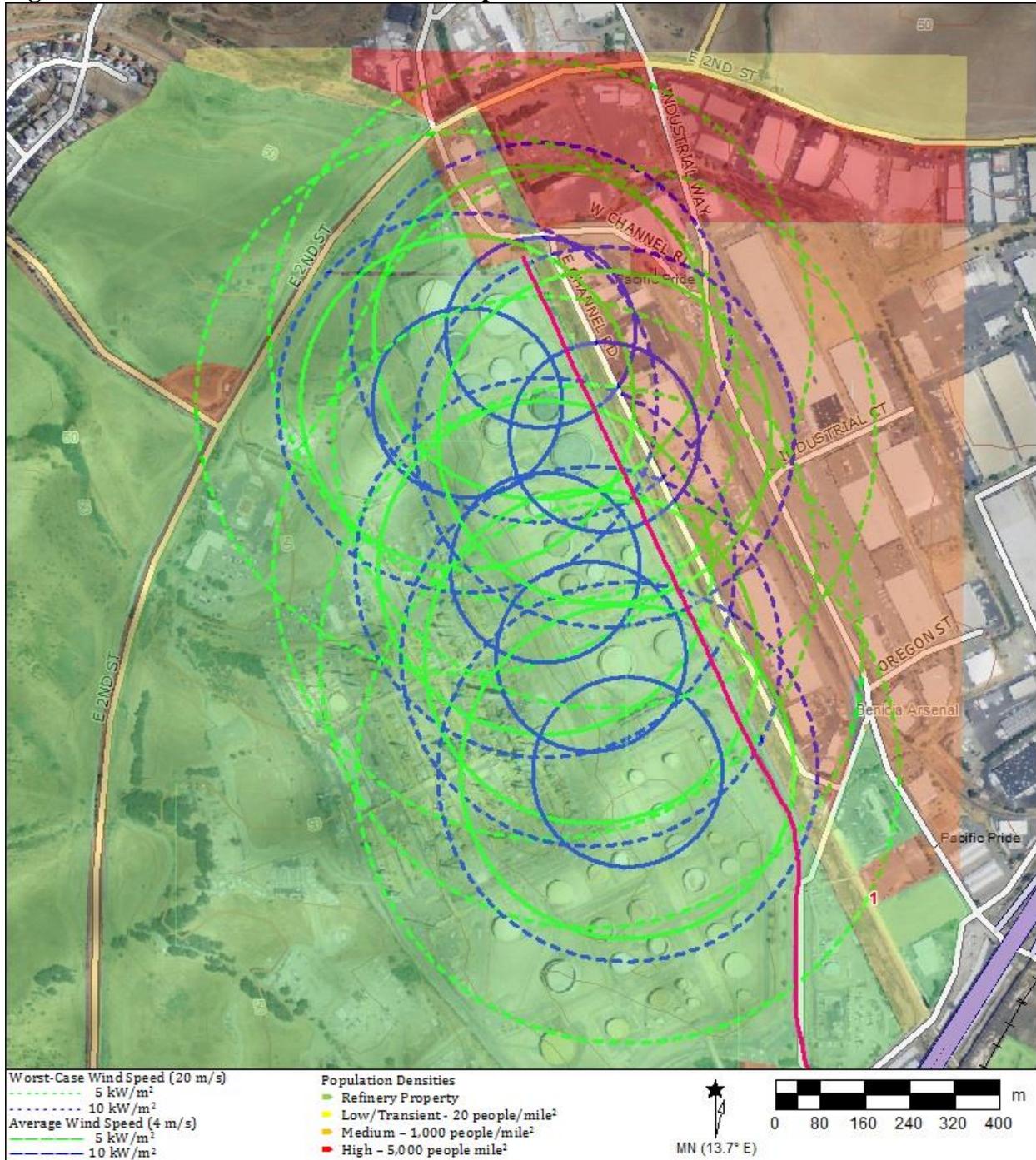
We believe the above responses provide clarification of the issues raised regarding the QRA that was referenced in the Valero Benicia Crude by Rail Project RDEIR. Should you have any questions, or wish to discuss this information further, feel free to call me at (805.289.3927).

Best Regards,

A handwritten signature in black ink that reads "Steven R. Radis". The signature is written in a cursive, flowing style.

Steven R. Radis  
Principal

**Figure 1 – Distribution of Hazards and Population Densities**





# memorandum

date April 11, 2016  
to Amy Million  
from Tim Rimpo, Janna Scott, and Cory Barringhaus  
subject Response to Comments of Phyllis Fox, Ph.D., PE

Dr. Phyllis Fox provided comments dated April 4, 2016 about Valero's appeal of the City of Benicia Planning Commission's denial of Valero's proposed crude by rail project (Project). Her comments relate to the analysis of air quality (on-site emissions of Reactive Organic Gases [ROG] and toxic air contaminants), public safety and hazards, and potential flooding impacts. This memorandum responds to comments about air quality and flooding. We understand that the response to Dr. Fox's public safety and hazards comments is being provided separately by MRS and Dr. Chris Barkan.

**I. THE ANALYSIS OF POTENTIAL AIR QUALITY IMPACTS IS THOROUGH, COMPLETE, AND SATISFIES THE REQUIREMENTS OF CEQA; DR. FOX RAISES NO NEW OR MORE SEVERE IMPACTS THAN ALREADY HAVE BEEN CONSIDERED IN THE ENVIRONMENTAL REVIEW PROCESS.**

***A. Because On-site ROG Emissions Would be Less Than Significant, the Imposition of Mitigation Measures would be Inappropriate and Contrary to CEQA***

Dr. Fox asserts that fugitive emissions of ROG from rail cars during unloading would be above the Bay Area Air Quality Management District's CEQA significance thresholds of 54 lbs. /day and 10 ton/year; however, this assertion is inconsistent with the analysis presented in the EIR. The Revised DEIR and FEIR include emission estimates for rail car tanker fugitive ROG emissions (see Revised DEIR Appendix A). Those estimates show that the Project's railcar fugitive emissions would be less than the significance thresholds, when included with other ROG emission sources (diesel locomotive exhaust). That Dr. Fox has used a purportedly different methodology with different assumptions to reach a different result does not demonstrate any error in the EIR. Several mitigation measures are suggested in Dr. Fox's letter to reduce or offset on-site ROG emissions. However, CEQA only requires an EIR to discuss mitigation measures for potential significant impacts. As just mentioned, ROG fugitive emissions from railcars would be less than the significance thresholds established by BAAQMD and air districts uprill of the Refinery, based on estimates included in the Revised DEIR and FEIR. Consequently, the additional mitigation suggested by the commenter is not required.

Dr. Fox correctly notes that the EIR did not evaluate an increase in ROG emissions from storage tanks in excess of currently permitted levels. This assertion has been addressed in previous responses to comments. Although the proposed Project includes a new air permit associated with offloading crude oil from trains, it does not include any changes to the Refinery's existing permits regarding refinery crude oil storage or crude oil processing. The air analysis evaluates ROG emissions associated with offloading from railcars. However, the analysis does not evaluate ROG emissions associated with storage tank emissions above currently permitted levels because, as part

of this Project, Valero does not propose any changes to its existing storage tank permits. Consequently, approval of this Project would not allow Valero to increase ROG emissions from its storage tanks above currently permitted levels.

***B. On-site Emissions of Toxic Air Contaminants Would be Less Than Significant***

As noted in Section I(A), Dr. Fox’s comments rely on different estimates of ROG evaporative emissions from storage tanks and railcar unloading than those documented and analyzed in the EIR and, on the basis of those different assumptions, claims that the Project would cause increases in benzene emissions and would result in significant health risks. Dr. Fox’s use of different inputs to drive a different output does not demonstrate any error in the EIR. Based on the data and other information documented in the EIR, Dr. Fox overestimates ROG emissions from storage tanks and railcar unloading and overestimates benzene emissions and the resulting health risks. Her disagreement with the methodology and conclusions in the EIR does not constitute new information about on-site air quality-related or health-related impacts and does not identify any potential impact that has not already been considered.

**II. THE ANALYSIS OF POTENTIAL FLOODING IMPACTS IS THOROUGH, COMPLETE, AND SATISFIES THE REQUIREMENTS OF CEQA; DR. FOX RAISES NO NEW OR MORE SEVERE IMPACTS THAN ALREADY HAVE BEEN CONSIDERED IN THE ENVIRONMENTAL REVIEW PROCESS.**

The California Supreme Court's December 17, 2015 opinion in *California Building Industry Association v. Bay Area Air Quality Management District*, upheld four published CEQA decisions and rejected the so-called “reverse CEQA” argument, which would require an analysis of the “impact of existing environmental conditions on a project's future users or residents” except for certain airport, school, and housing construction projects, and when a proposed project “risks exacerbating” existing “environmental hazards or conditions.” Valero’s Project is not an airport, school, or housing construction project, and (for the reasons discussed below) would not risk exacerbating existing flood hazards or conditions. The flooding related concerns expressed in Dr. Fox’s April 4, 2016 letter do not present new information about the Lake Herman Reservoir as it relates to flooding concerns, flood risks along Sulphur Springs Creek, the proposed location of Project infrastructure within Special Hazard Flood Zone within the 100 year floodplain, the known fact that flooding under some circumstances has contributed to train accidents, the spill containment capacity of the proposed unloading area, or how projected sea level rise could affect flooding hazards on the project site. The City has considered these and related questions at various points in the CEQA process.

As a preliminary matter, we note that Dr. Fox’s flooding comments refer to the DEIR; however, the DEIR was supplemented by the Revised DEIR and further modified and clarified in the FEIR in response to comments. The FEIR consists of the DEIR, Revised DEIR, and the responses to comments document issued January 5, 2016. Dr. Fox’s comments apparently fail to consider the information and analysis contained in two thirds of the FEIR.

***A. Dr. Fox’s Comments about Potential Flooding and Flood Hazard Impacts have been Considered***

DEIR pages 4.8-1 and 4.8-14 explains that the Lake Herman Reservoir, which impounds Sulphur Springs Creek, is located approximately 1.5 miles north of the Project site. Below the reservoir, Sulphur Springs Creek traverses a narrow band of marshland and discharges to Suisun Bay. Along the eastern border of the Refinery, this creek flows through an engineered channel through the Benicia Industrial Park. Graham Wadsworth, the City’s Public Works Director, advised City staff in an email dated February 10, 2016, that “Lake Herman is well-maintained” and that “the State has not expressed concerns about dam safety.”

DEIR pages 4.8-6, 4.8-8, and 4.8-19 explain that the Federal Emergency Management Agency (FEMA) prepared a Flood Insurance Rate Map (FIRM) that shows the majority of the Project site along Sulphur Springs Creek and north of Bayshore Road is designated as a regulatory floodway or “Zone RF,” which is a Special Flood Hazard

Area (SFHA) within the 100-year flood zone. The regulatory floodway designation includes land areas adjacent to a watercourse that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities regulate development in these floodways to ensure that there are no increases in upstream flood elevations. In the immediate vicinity of Bayshore Road, the Project site is designated as Zone RF and Zone AE. Zone AE designates areas that have a 1 percent probability of flooding every year (also known as the “100-year floodplain”) and where predicted flood water elevations above mean sea level have been established. Approximately 500 linear feet of the proposed rail alignment south west of Bayshore Road is in an area of minimal flood hazard or in Zone X.

The FEIR acknowledges that construction of aboveground facilities within a flood hazard zone could potentially impede or redirect flood flows and that above-ground facilities, which are not designed to withstand inundation can be damaged during flood events (DEIR, p. 4.8-19). The FEIR also considers the known fact that flooding under some circumstances has contributed to train accidents (Revised DEIR Table 4.7-1, p. 2-64; see also Revised DEIR p. 2-72). The potentially disastrous consequences flooding-related hazards associated with upsets and accidents involving a spill or other release of crude oil are analyzed in Revised DEIR Section 2.12 (p. 2-62 et seq.). See, for example, the analysis of Impact 4.7-6, which concludes that train derailments *and unloading accidents* that lead to hazardous materials spills, fires, and explosions could result in substantial adverse secondary effects, including to Hydrology and Water Quality would be significant and unavoidable (Revised DEIR, p. 2-108 et seq.).

In light of the proposed location of Project components in areas of potential flood hazard, the City of Benicia’s Floodplain Management Policy (per General Plan Goal 4.13) would apply (DEIR, p. 4.8-19). The City’s Floodplain Management Policy includes requiring “all potential developers in the Sulphur Springs Creek floodplain to provide flood hazard mitigation measures that ensure the subject properties are not at risk of flooding during the FEMA-designated 100-year base flood” (General Plan Program 4.13.A). Valero has proposed the Project consistent with the City’s Floodplain Management Policy, including by adopting a Storm Water Master Plan that includes flood control improvements that addresses flood hazard conditions. The DEIR considered Project design components including the Refinery’s adopted plan, in its analysis of potential flooding-related impacts. See DEIR page 4.8-19, which states “The flood hazard mitigation measures incorporated into the design criteria for the Project would comply with construction standards established by the California Building Code.”

The proposed new flood maps circulated by FEMA after the DEIR was issued showed no difference for the Project area. The boundaries of the designated special flood hazard areas did not change, and neither did the established base flood elevations. In evaluating whether the proposed new flood maps would affect the Project or the analysis in the DEIR, the City’s Public Works Director, Graham Wadsworth, noted the following in his email of June 12, 2015: “The FEMA Flood Insurance Rate Map Panel 634 shows the area of Industrial Way between Bayshore Road east of Sulphur Springs Creek and West Channel Road as ‘Zone AO (Depth 2).’ I assume that the [crude by rail] tankers will park in this area parallel to Industrial Way. Since the rail car wheels are probably 24 inches in diameter, I do not see much risk.”

The City’s Public Works Director’s conclusion is consistent with the determinations of the EIR. The discussion of DEIR Impact 4.8-6 (p. 4.8-19) concludes that the Project would result in a less than significant impact relating to the placement of structures within a 100-year flood hazard area. This remains unchanged in the FEIR. Further, the discussion of DEIR Impact 4.8-7 (p. 4.8-19 et seq.) concludes based on data and other information provided by FEMA, Association of Bay Area Governments (ABAG), the California Division of Safety of Dams (DSOD), and the San Francisco Bay Conservation and Development Commission (BCDC) that the Project would have a less than significant impact relating to the placement of people or structures within inundation areas for flooding.

Furthermore, the Valero property is at a higher elevation than Channel Road, indicating that flood waters would be contained on the far side of the Creek. The City’s Public Works Director advised City staff by email on February 10, 2016 that he had “looked at the FEMA Flood Insurance Rate Map” and concluded that “the Valero

property is a higher elevation than East Channel Road by up to 10 feet, so flooding is contained on the west side of Sulphur Springs Creek.”

***B. The Project Proposes Sufficient Spill Containment Capacity***

The proposed offloading area has sufficient spill containment capacity. Potential spills onsite during either a train maneuver at the unloading facility or during transfer of crude from the tank cars to the unloading rack are addressed under DEIR Impacts 4.7-3 and 4.7-4. As noted on under Impact 4.7-4 on Revised DEIR p. 2-107: “The sump under the unloading facility has the capacity to receive and contain a volume almost nine times greater than the capacity of one tank car. This containment volume is significantly larger than the EPA 40 CFR 112.9 SPCC [spill prevention, control, and countermeasures plan requirements], which requires 100% of a single storage container and sufficient freeboard to contain precipitation. Given this, even if the contents of one entire tank car were released during an unloading operation, the impact would remain contained....”

***C. CEQA Does Not Require the EIR to Analyze the Impacts of Sea Level Rise on the Project***

Several commenters expressed a concern about the perceived failure of the EIR to consider the potential impacts of climate change-induced sea level rise on the Project, including the Capitol Corridor Joint Powers Authority (Comment and Response A17-6), San Francisco Baykeeper (Comment and Response B5-19), 350 Sacramento (Comment and Response B7-12), Benicians for a Safe and Healthy Community (Comment and Response J2-3), Natural Resource Defense Council (Comment and Response J3-18), Commissioner Young (Comment and Response C1-42), James MacDonald (Comment and Response D36-19), and Reverend McGarvey (Comment and Response N1-108). Dr. Fox raises similar concerns specifically with respect to flooding.

The FEIR responds to this concern in each instance in which it was raised substantially as it did in Response A17-6 (FEIR, p. 2.4-95), which states: “To the extent that the comment asks the City to consider the effect of rising sea levels on the Project, this analysis is not required. See *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal. App. 4th 455 (EIR not required to discuss impact of possible global-warming-related sea level rise on project)...” Dr. Fox summary dismissal of the *Ballona Wetlands Land Trust* decision as irrelevant based on CEQA Guidelines Section 15126.2(a) is in error, however, since the California Supreme Court invalidated that guidelines provision in *California Building Industry Association v. Bay Area Air Quality Management District*. In short, the support Dr. Fox relies upon as the foundation of her argument no longer is law in the state of California.

In any event, the EIR is not silent on questions of climate change and projected sea level rise as these conditions may relate to flooding events at the Project site. See DEIR pages 4.6-1 and 4.6-2 (effects of global warming on weather and climate are expected to include increased incidence and/or magnitude of extreme high sea level); DEIR Appendix A (identifying the topography of the relevant area as varying between 10 feet to 300 feet above mean sea level, with most of the proposed Project to be implemented at an elevation of approximately 10 feet above mean sea level), and the analysis of Impact 4.8-7 (DEIR, p. 4.8-19 et seq.), which considers the Bay Conservation and Development Commission’s projected sea-level rise of 55 inches by the year 2100 as it would affect large areas around the Bay perimeter.

***D. Because the Project Would Not Significantly Increase Flooding, the Imposition of Mitigation Measures would be Inappropriate and Contrary to CEQA***

Dr. Fox suggests that the Project components, including the crude oil trains parked on the Project site, would be located within a 100-year flood zone and could impede or redirect flood flows. That the unloading rack area would be located within a 100-year flood zone is acknowledged and evaluated (see Section II of this memorandum). Impact 4.8-6 on page 4.8-19 of the DEIR addresses the question of placing structures within flood hazard areas. Dr. Fox asserts that the analysis does not include the actual rail cars parked on the Project site when making the less-than-significant determination and that this would be problematic in the event of a flood because

the rail cars would act like a dam and occupy volume that subsequently would raise flood elevations and create new impacts.

The impact analysis is correctly focused on permanent structures that could redirect flows during a flood event. Although rail cars would be located on-site and within the flood zone during normal operation of the Project, they would not be considered “structures” since they would not be permanently located within the flood zone. As noted in Response to Comment A10-4 on p.2.4-47 of the FEIR, it is logical to assume that the delivery of crude oil trains to the Project site would be temporarily halted during a flood event to prevent damage to the rail cars. Unlike permanent structures, rail cars could be moved off-site to higher ground and their arrivals and departures rescheduled to avoid and minimize flood related risks based on weather predictions. Dr. Fox suggests that the ability to move a rail car in the event of predicted flooding is not an enforceable mitigation measure. This mischaracterizes the issue by presuming a need to mitigate; instead, we suggest that it is wholly appropriate to expect that professionals will exercise a reasonable duty of care in carrying out their official duties. Severe flash flooding and related hurricane precursors that resulted in the Texas derailment shown in photographs included in Dr. Fox’s letter are decidedly unanticipated in the Project area. In fact, zero hurricanes have been recorded within 150 miles of Benicia since 1930.<sup>1</sup> No evidence has been presented suggesting that flood waters would rise so quickly in the area as to preclude a responsible response to potential risk including removing trains from harm’s way. Nonetheless, even if rail cars were located on-site during a flood event, they would not substantially impede flows as water could travel underneath and between cars, i.e., the rail cars would not act like an impenetrable dam or wall to flood flows in any way similar to the photographs shown. Based on the analysis in the FEIR, the topography of the area, and the City’s Public Works Director’s observation that the rail car wheels would provide an additional 24-inches of clearance, potential flood risks would be less than significant.

### *E. Summary*

For several reasons including those documented in the EIR based on published data and other information, those expressed by the City’s Public Works Director based on his review of relevant documents, and those expressed by the City’s environmental consultants based on their review of relevant documents and educated professional judgments, Dr. Fox’s April 4, 2016 letter does not present new information about flooding, do not identify any new impacts not previously considered, and do not identify any more severe impact than already evaluated.

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<sup>1</sup> Homefacts, 2016. Hurricane Information for Benicia, CA. [<http://www.homefacts.com/hurricanes/California/Solano-County/Benicia.html>] Accessed April 11, 2016.

12 April 2016

Amy E. Million  
Principal Planner  
City of Benicia  
250 East L Street  
Benicia, CA 94510

Dear Ms. Million,

Following are responses to the questions that your office received related to rail transport of petroleum crude oil. Some of the statistics described below come directly from government and industry data sources, while others must be estimated because direct information is not recorded in the pertinent databases.

The questions requested information for "the last 5 years"; however, the data recording processes for these statistics are typically not finalized until about the middle of the following year. Consequently, I have provided 2015 data but they should be considered preliminary and subject to change. So that you would have a full five years of information, I have also included final data for the years 2010 – 2014. Following are the questions you requested answers to:

- a) How many total derailments of freight trains?
- b) How many involved trains carrying crude?
- c) Of those carrying crude how many involved just spills and how many fires/explosions?
- d) What is approximate total annual number freight train trips?

**A) How many total derailments of freight trains?**

Accidents exceeding a relatively low, monetary threshold of damages to infrastructure and rolling stock (periodically adjusted for inflation) must be reported to the US DOT Federal Railroad Administration (FRA). In Table 1, the first column, "*Number of Mainline Freight Train Derailments*" addresses your question directly. The FRA also records data for the following additional conditions: Freight train derailments in which there is at least one hazardous materials (Hazmat) car in the train consist, Derailments in which at least one hazmat car is derailed, and Derailments in which at least one hazmat car releases some or all of its contents. All of these are presented in Table 1.

**Table 1. FRA Reportable Freight Train Derailments: 2010 – 2015**  
(data for 2015 are preliminary)

Year	Number of Freight Train Derailments	Derailments With at Least One Hazmat Car in the Train	Derailments With at Least One Hazmat Car Derailed	Derailments With Hazmat Release
2015	278	117	47	14
2014	316	117	54	9
2013	368	126	55	13
2012	320	100	49	18
2011	403	152	64	9
2010	391	123	56	11

Data from the FRA Office of Safety Analysis Web Site: <http://safetydata.fra.dot.gov/officeofsafety/>

**B) How many involved trains carrying crude?**

The FRA database does not provide comprehensive information on the type of hazardous material involved in derailments, so a direct answer to this question is not possible using their data. However, an estimate can be developed using data recorded by the Association of American Railroads on hazardous materials traffic transported by rail combined with the FRA data (Table 2). If we assume that trains with crude oil in the consist derail at approximately the same rate as other trains transporting hazardous materials, then the FRA and AAR data can be used to develop an estimate of trains transporting crude oil that were involved in derailments. This is done by estimating the percentage of railroad hazmat traffic that is crude oil, and multiplying that percentage by the number of Derailments With at Least One Hazmat Car in the Train presented in Table 1. An estimated answer to the question above is provided under the heading, *Estimated Number of Derailments Involving Crude Oil Trains* in Table 2.

**Table 2. Crude Oil Traffic and Estimated Number of Freight Train Derailments in Which Crude Oil Was in the Train Consist: 2010 – 2015**  
(data for 2015 are preliminary)

Year	Total Rail Shipments of Hazardous Materials	Carloads of Crude Oil Shipped	Percentage of Crude Oil Traffic to Total Hazmat Traffic	Estimated Number of Derailments Involving Crude Oil Trains
2015	2,900,641	516,883	17.8%	17
2014	2,938,363	615,403	20.9%	25
2013	2,760,018	485,536	17.6%	22
2012	2,441,388	259,524	10.6%	11
2011	2,207,892	75,378	3.4%	5
2010	2,052,159	28,423	1.4%	2

**C) Of those carrying crude how many involved just spills and how many fires/explosions?**

Again, the FRA database does not provide comprehensive information on spills and fires for specific types of hazardous materials involved in derailments; however, the US DOT Pipeline and Hazardous Materials Administration (PHMSA) does and their data are presented in Table 3. It should be noted that because these data come from the US DOT, they do not include incidents that occurred outside the United States. Several high profile incidents occurred in Canada during this time period and these are included in parentheses.

**Table 3. Crude Oil Train Derailments in Which There Was a Release and Fire or Explosion: 2010 – 2015**  
(data for 2015 are preliminary)

<b>Year</b>	<b>Number of Derailments Involving Crude Oil Trains Resulting in Spills</b>	<b>Number of Derailments Involving Crude Oil Trains Resulting in Fire/Explosions</b>
2015	4 (2)	2 (2)
2014	3 (1)	1 (1)
2013	4 (1)	2 (1)
2012	0	0
2011	1	0
2010	1	0

**D) What is approximate total annual number freight train trips?**

To my knowledge the exact number of individual freight train trips each year is not recorded in any government or industry databases; however, this is an important metric of rail transportation activity and potential exposure to incidents. Consequently another, related metric is recorded, annual train-miles (i.e. one train traveling one mile equals one "train-mile"). The total annual train miles for U.S. railroads are presented in Table 4.

**Table 4. Total Annual Freight-Train-Miles: 2010 – 2015**  
(data for 2015 are preliminary)

<b>Year</b>	<b>Total Freight Train-Miles</b>
2015	532,671,333
2014	556,540,273
2013	542,001,341
2012	533,713,429
2011	522,931,600
2010	508,066,943

Data from the FRA Office of Safety Analysis Web Site: <http://safetydata.fra.dot.gov/officeofsafety/>  
Please do not hesitate to contact me if you have any questions about this information, or if I can be of further assistance.

Sincerely,

A handwritten signature in blue ink that reads "Chris Barkan". The signature is written in a cursive style with a long horizontal flourish at the end.

Christopher P.L. Barkan

April 12, 2016

Ms. Amy Million  
 City Planner  
 The City of Benicia  
 250 East L Street  
 Benicia, CA 94510  
 Email: amillion@ci.benicia.ca.us

Dear Ms. Million:

Thank you for the opportunity to address follow up questions from the City Council regarding our May 2014 report regarding the fiscal and economic impact of Valero on Benicia and the greater San Francisco Bay Area. In total we received seven questions from Council members; the questions and our responses are as follows:

**Question 1: Explanation of the multiplier for 1,000 indirect jobs referred to in Andrew Chang report (TC)**

**Response:** In our report we state, “We estimate that construction will directly and indirectly create over 1,000 jobs in 2014.”<sup>1</sup> We further provide the following graphic that details our statement:

Figure 5.1  
 Jobs Generated by Crude-by-Rail Construction<sup>2</sup>



<sup>1</sup> Andrew Chang & Company, LLC, *Valero’s Economic and Revenue Impacts on the City of Benicia & the San Francisco Bay Area*, Sacramento, May 2014, p. 32.

<sup>2</sup> Ibid, p. 33.

Jobs created by the Crude-by-Rail construction are estimated using generally accepted methodologies pertaining to economic multipliers. The jobs estimate generated from direct and indirect economic activity for the San Francisco Bay Area is derived by factoring Valero's estimate of new construction costs<sup>3</sup> with regional economic multipliers derived from the U.S. Bureau of Economic Analysis (US BEA) for the San Francisco Bay Area.<sup>4</sup> We derive a multiplier for Benicia to estimate the direct and indirect jobs created in Benicia as a result of the cash infusion from construction, yielding approximately 100 jobs.<sup>5</sup>

**Question 2: Explanation of the \$2 million in one-time sales tax (TC)**

**Response:** In our report, we state, “[The Crude-by-Rail project] could produce as much as \$2 million in one-time sales tax revenue for the City.”<sup>6</sup> That statement is based on our estimate that Benicia would obtain between \$1.4 million and \$1.9 million in additional sales tax revenue as a result of direct and indirect economic activity caused by new spending from the proposed Crude-by-Rail project during the construction period. We measure the total impact of \$55 million in new spending from the project as it ripples through the economy using economic multiplier data derived from the U.S. Bureau of Economic Analysis (US BEA) for the San Francisco Bay Area.<sup>7</sup> The tax revenue generated breaks down into two categories:

1. **Direct Valero taxable spending.** Based on material cost estimates<sup>8</sup> provided by Valero for the project and the current statutory tax rate,<sup>9</sup> we estimate that sales tax revenue from direct sales will exceed roughly \$400,000 (without the passage of Measure C in 2014, the direct sales tax revenue generated would have been approximately \$200,000).

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<sup>3</sup> Valero estimates that the Crude-by-Rail project will require a \$55 million investment in construction and related costs.

<sup>4</sup> U.S. Bureau of Economic Analysis, *Regional Multipliers*. Series: 2010 U.S. Annual I-O Data and 2010 Regional Data. Regions: (1) 9 County Bay Area (Type II); (2) Solano/Contra Costa (Type II); and (3) Solano (Type II).

<sup>5</sup> It should be noted that this is consistent with Valero historical spend within the City of Benicia compared to other regions of the Bay Area. Based on Valero data, nearly 20 percent of Valero employees reside in Benicia. It is estimated that between 10 and 20 percent of construction contractors would be from Benicia.

<sup>6</sup> Andrew Chang & Company, LLC, *loc. cit.*

<sup>7</sup> U.S. Bureau of Economic Analysis, *Regional Multipliers*. Series: 2010 U.S. Annual I-O Data and 2010 Regional Data. Regions: (1) 9 County Bay Area (Type II); (2) Solano/Contra Costa (Type II); and (3) Solano (Type II).

<sup>8</sup> Valero estimates that the Crude-by-Rail project will require a \$21 million investment in construction material costs.

<sup>9</sup> With the passage of Measure C in 2014, the statutory sales tax rate was increased to 2 percent.

2. **Taxable spending resulting from indirect economic activity.** Indirect economic activity as a result of the total construction spending would lead to additional sales tax revenue ranging between \$1.0 million and \$1.5 million. The indirect economic activity is derived by factoring the total new construction spend with output based economic multipliers, adjusted for historical distribution, and the output based effective tax rate for the City. Our output multipliers assume that beyond the direct dollars spent on the Crude-by-Rail project, each dollar would ripple through the Benicia economy between 0.5 and 1.3 times more. Our output based effective tax rate for the city of Benicia was 1.08 percent.<sup>10</sup>

These two factors result in a total of \$1.4 million to \$1.9 million in one-time sales tax revenue.

**Question 3: What does this \$55 million valuation for the project actually mean to the City in terms of sales tax, property tax, etc. What is a solid number? (EP)**

**Response:** The \$55 million capital infusion will produce benefits in four ways:

1. **Increased property tax.** In most circumstances, the entirety of the \$55 million could be valued as the capital improvement to the facility in gross. However, the County Assessor's Office will make the final determination. An added assessed value of \$55 million will increase the annual property tax payments made by Valero by approximately \$175,000.
2. **Direct sales tax.** The sales of construction materials for the project could lead to additional sales tax revenues of \$400,000.
3. **One-time indirect sales tax.** The sales tax resulting from the economic activity created by the new construction will produce between \$1.0 million and \$1.5 million in additional sales taxes as described in our response to Question 2.
4. **Ongoing indirect sales tax.** The sales tax resulting from the ongoing economic activity created and maintained by operation expenditures of the project could yield between \$120,000 and \$200,000 in ongoing sales tax revenues for the City.

**Question 4: Of the \$55 million project valuation – how much is considered real property for the purpose of valuation? (AS)**

**Response:** In most circumstances, the entirety of the \$55 million could be valued as capital improvement to the facility in gross. However, the County Assessor's Office will make the final determination. An added assessed value of \$55 million will increase the annual property tax paid by Valero (1% of new assessed value) with the portion returned to Benicia approximately \$175,000.

**Question 5: Solano County sales tax is 7.625% - City of Benicia sales tax is 8.625%: which figure was used in the economic and sales tax report? (AS)**

**Response:** Our estimates are based on the portion of sales tax that is actually received by the City. With the passage of Measure C in 2014, the statutory sales tax rate that is attributable to the City was increased to two percent.

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<sup>10</sup> Prior to the passage of Measure C in 2014, Benicia's 0.54% output based effective tax rate was 0.54%. We estimate the post Measure C effective tax rate to double to 1.08%.

**Question 6: Does the project result in ongoing sales tax? (AS)**

**Response:** Yes, we estimate that the additional operational expenditures resulting from the project could yield between \$120,000 and \$200,000 in ongoing sales tax revenues for the City. In addition, we estimate that the capital improvements to the facility will increase the assessed value of the property by \$55 million and provide an additional \$175,000 in additional property tax to the City during its first year of operations.

**Question 7: \$200,000 sales tax figure is an indirect sales tax Secondary economic impact (CS)**

**Response:** Yes, we estimate that the additional operational expenditures resulting from the project could yield between \$120,000 and \$200,000 in ongoing sales tax revenues for the City as it ripples through the Benicia and Bay Area economies.

Again, thank you very much for the opportunity to address questions about our report. Should you have any additional questions or comments, please feel free to contact me at 916-538-6091 or at [andrew.chang@AChangLLC.com](mailto:andrew.chang@AChangLLC.com).

Sincerely,



Andrew Chang  
Managing Partner

### **C. Union Pacific Railroad Mainline**

The operation of unit and manifest trains to and from the SMR would be performed by Union Pacific Railroad (UPRR), on UPRR property, and on trains operated by UPRR employees. The movements of those trains to and from the Project Site may be preempted from local and state environmental regulations by federal law under the Interstate Commerce Commission Termination Act of 1995 and the Commerce Clause of the United States Constitution.

While the potential impacts of those train movements along the UPRR mainline are described in appropriate chapters of this EIR, the County as CEQA Lead Agency, and other state and local responsible agencies may be preempted from imposing mitigation measures, conditions or regulations on UPRR train movements on the mainline.

Trains could enter California at five different locations (one at the north end of the state from Oregon, two at the northeast from Nevada, one at the southeast from Nevada, and one at the south from Arizona). Depending upon the route taken by the train they could arrive at the Phillips 66 site from the north or the south. It is unknown what route UPRR would use to deliver the trains to the SMR. Figure ES-3 shows the main UPRR train routes in California that could be used to deliver crude to the SMR.

Coming from the north the routes merge at the UPRR Roseville Rail Yard. From the south the routes merge at the Colton Rail Yard. Given that the route the trains would travel to get to these two UPRR yards is speculative, the EIR has evaluated in more detail the impacts of trains traveling from these two UPRR yards to the SMR.

Beyond the two UPRR Yards, trains could travel any number of routes. Also, crude oil delivered to California by UPRR would generally pass through either of these two rail yards in route to the SMR. Depending upon the source of the crude oil, crude oil trains could use any portion of the UPRR network between Roseville/Colton and the source location for the crude oil. The exact route that would be taken would depend upon a number of factors, that could include the source of the crude oil, weather conditions, train traffic conditions, etc. Since the routes past Roseville and Colton are somewhat speculative, the EIR has discussed in a more qualitative nature the potential impacts of train traffic beyond these two rail yards.

### **D. Rail Spur Project Impacts and Mitigation Measures**

In the Impact Summary Tables and throughout this EIR, impacts of the Rail Spur Project and alternatives have been classified using the categories Class I, II, III, and IV as described below.

- Class I – Significant impacts that cannot be mitigated to less than significant levels,
- Class II – Significant impacts that can be mitigated to less than significant levels,
- Class III – Less than significant impacts without mitigation, and
- Class IV – Beneficial impacts.

section of the Impact Summary Tables describes and classifies each impact, lists recommended mitigation, and states the level of impact after mitigation.

The remainder of this section presents a brief summary of the key impacts and mitigation measures for the Rail Spur Project. The reader should refer to the Impact Summary Tables and Section 4.0 of the EIR for a more detailed discussion of the impacts and associated mitigation measures for the Rail Spur Project.

### **Aesthetics and Visual Resources**

There are no significant and unavoidable (Class I) impacts to aesthetics and visual resources associated with the Rail Spur Project.

The impacts on aesthetics and visual resources would be less than significant with mitigation (Class II). The eastern end of the proposed rail spur and the associated trains operating in the area would reduce the quality of the views of the open space as seen from portion of State Route 1, the California Coastal Trail, the De Anza Trail, and other public areas east of State Route 1. Landscaping and the installation of a berm at the east end of the tracks would reduce these impacts to less than significant.

Lighting associated with the Rail Spur Project would create a new source of substantial light and glare which would adversely affect nighttime views in the area. Development of a lighting plan that requires lighting to be minimized and directed downward and to use lights that are dark sky compliant would reduce this impact to less than significant levels.

### **Agricultural Resources**

The Rail Spur Project could result in less than significant with mitigation (Class II) impacts to productivity of adjacent farmlands due to construction activities. Dust, air emissions, and water runoff generated by the construction activities could produce a significant short-term impact and temporarily affect the productivity of row crops. Implementation of the fugitive dust and stormwater control mitigation measures identified in air quality and water resources would reduce these impacts to less than significant.

In the event of an oil spill at the SMR due to the unloading operations there could be impacts to agricultural crops on adjacent properties. These impacts could be direct oiling of the crops or due to impacts to surface or groundwater. These impacts at the SMR were found to be less than significant with mitigation. Implementation of the oil spill containment systems and Spill Prevention Control and Countermeasure Plan (SPCCP) would reduce this impact to less than significant levels.

If there is an oil spill along the UPRR mainline tracks there could be impacts to adjacent agricultural crops due to direct oiling, fire, or surface and groundwater impacts. These impacts were found to be significant and unavoidable (Class I) in the event that a spill where it could impact agricultural resources. Only portions of the UPRR mainline track runs adjacent to agricultural operations. Mitigation measures identified for improving emergency response and oil spill cleanup would help to mitigate these impacts. However, the County may be preempted by Federal law from requiring mitigation for operations on the UPRR mainline tracks (See Section H of the Executive Summary for more discussion on the preemption issue).

## Air Quality

Construction impact for the Rail Spur Project would be less than significant (Class III). Operational pollutant emissions (i.e., NO<sub>x</sub>, ROC, and DPM) within San Luis Obispo County and outside the County on the mainline could be potentially significant and unavoidable (Class I). The operational pollutant emissions associated with operation of the Rail Spur Project within the County would exceed the SLOCAPCD thresholds. Outside the County the mainline emissions would exceed most other air district thresholds. This impact can be reduced to less than significant with the use of Tier 4 locomotive and the application of emission reduction credits, which would make the impact less than significant with mitigation (Class II). However, the County may be preempted by Federal law from mitigating the air impacts associated with the locomotives outside of the SMR property. (See Section G of the Executive Summary for more discussion on the preemption issue). If the County is preempted from applying mitigation to the locomotive emissions on the UPRR mainline, the impact would remain significant and unavoidable (Class I). However, regardless of the preemption issue, the air emissions within the SMR can be mitigated through the use of emission reduction credits.

Air toxic emissions at the SMR would be significant and unavoidable (Class I) since the cancer risk over a 30-year exposure period would be greater than the 10 in a million threshold established by the SLOCAPCD. This cancer risk is driven mainly by diesel particulate emissions. About half of this cancer risk is due to the diesel particulate emissions from the existing trucking operations at the SMR. Use of Tier 4 locomotives would reduce most of the cancer risk from the rail operations, but the cancer risk would remain significant and unavoidable since the baseline risk is already about the SLOCAPCD threshold. As stated above, the County may be preempted by Federal law from applying mitigation to the UPRR locomotives.

Air toxic emissions from the mainline rail operations would be significant and unavoidable (Class I) for areas along the mainline that are in close proximity to populated areas, and there is a speed limit restriction on trains of less than 30 mph (when more emissions occur per length of rail due to the slower speeds). In these locations the 30-year cancer risk would exceed the SLOCAPCD thresholds beyond the railroad right-of-way. There are areas along the mainline rail route that have reduced speed limits for trains that pass in proximity of sensitive receptors. For example, in the City of San Luis Obispo, trains are limited to a speed of 25 miles per hour. In the City of Davis, there are stretches of track that are limited in speed to 10 mph.

Greenhouse gas (GHG) emissions within the State of California could be significant and unavoidable (Class I) since they would exceed the SLOCAPCD threshold for GHG emissions. This impact can be reduced to less than significant with the use of emission reduction credits, which would make the impact less than significant with mitigation (Class II). However, the County may be preempted by Federal law from mitigating the GHG emissions associated with the locomotives outside of the SMR property. (See Section G of the Executive Summary for more discussion on the preemption issue).

Fugitive dust (PM<sub>10</sub>) emissions from the project would be less than significant (Class III). Operation of the Rail Spur Project would generate very low levels of fugitive dust, which are well below the SLOCAPCD thresholds. The Rail Spur Project would not be expected to affect the overall PM<sub>10</sub> emissions in the project area.

### Biological Resources

Most of the biological impacts would be associated with construction of the Rail Spur Project. Construction activities associated could result in impacts to habitat for listed and special status species and habitat for rare plants and animals. These impacts were found to be less than significant with mitigation (Class II). Some of the mitigation measures identified for these impacts include implementing a Sensitive Species Management Plan, a Dune Habitat Restoration Plan, conducting updated surveys of sensitive species habitats, and employing an independent biological monitor. With implementation of these measures the impacts to biological resources would be less than significant.

An oil spill at the SMR due to the unloading operations could result in impacts to biological resources. These impacts at the SMR were found to be less than significant with mitigation (Class II). Implementation of the oil spill containment systems and Spill Prevention Control and Countermeasure Plan (SPCCP) would reduce this impact to less than significant levels.

In the event of an oil spill along the UPRR mainline tracks there could be impacts to adjacent biological resources due to direct oiling, fire, or surface water impacts. These impacts were found to be significant and unavoidable (Class I) in the event that a spill impacted sensitive biological resources. Only portions of the UPRR mainline tracks run adjacent to sensitive biological areas. Mitigation measures identified for improving emergency response and oil spill cleanup would help to mitigate these impacts. However, the County may be preempted by Federal law from requiring mitigation for operations on the UPRR mainline tracks (See Section H of the Executive Summary for more discussion on the preemption issue).

### Cultural Resources

Impacts to cultural resources during construction were found to be less than significant with mitigation (Class II) include unanticipated disturbance to human remains due to construction activities. Mitigation measures for these impacts include developing a monitoring plan and halting area activities for expert assessment if resources are discovered.

In the event of an oil spill at the SMR due to the unloading operations there could be impacts to cultural resources associated with the cleanup operations. These impacts at the SMR were found to be less than significant with mitigation (Class II). Implementation of the oil spill containment systems and Spill Prevention Control and Countermeasure Plan (SPCCP) would reduce this impact to less than significant levels.

An oil spill along the UPRR mainline tracks would require cleanup activities that could impact cultural resources. These impacts were found to be significant and unavoidable (Class I) in the event that a spill occurred in an areas that had cultural resources. Only portions of the UPRR mainline tracks would have the potential to be in areas where cultural resources might be encountered during the cleanup activities. Mitigation measures identified for improving emergency response and oil spill cleanup would help to mitigate these impacts. However, the County may be preempted by Federal law from requiring mitigation for operations on the UPRR mainline tracks.

The impact to fire protection and emergency services along the UPRR mainline was found to be significant (Class I) in the event of a fire or explosion. Many of the local emergency responders along the various mainline rail routes that could be used for transporting crude oil to the SMR lack adequate resources to respond to oil by rail accidents. Many of these first responders are in rural areas and have little or no funding for firefighters and rely on volunteer firefighters. Specifically, 40% of the fire fighters in California are volunteer firefighters, with many fire departments entirely staffed by volunteer firefighters. These departments lack the necessary capacity to support a hazmat team or to obtain training in the specialized areas of oil rail safety and flammable liquid, and their response time to significant oil by rail accident could be hours. In addition, some of these volunteer fire departments are in rural mountain areas where the rail lines traverse local safety hazard areas (LSHA), which historically have had a higher probability of train derailments.

Mitigation measures requiring training, drills, and notification for emergency responders along the mainline rail routes would help to mitigate these impacts. However, the County may be preempted by Federal law from requiring mitigation for operations on the UPRR mainline tracks (See Section H of the Executive Summary for more discussion on the preemption issue). Therefore, the impact would remain significant (Class I).

### **Transportation and Circulation**

There are no significant and unavoidable (Class I) impacts to transportation and circulation associated with the Rail Spur Project.

Minimal traffic would be generated during the operations of the Rail Spur Project. Traffic impacts during construction were found to be less than significant with mitigation (Class II). Trucks delivering construction materials to the SMR would be required to use Willow Road from the new interchange with Highway 101. Implementation of a Construction Traffic Management Plan would reduce the construction traffic impact to less than significant.

The EIR evaluated the impacts of the Rail Spur Project on passenger train on-time performance. Unit trains moving on the UPRR mainline tracks could potentially interfere with schedule passenger trains. The EIR analysis found that impact to on-time performance of passenger train service from two additional trains per day (one coming to the SMR and one leaving the SMR) would be less than significant (Class III).

### **Water Resources**

Construction and operational activities associated with the Rail Spur Project could degrade surface water and groundwater quality, which was found to be a less than significant with mitigation (Class II) impact. Implement a Storm Water Pollution Prevention Plan (SWPPP) using Best Management Practices, and an Oil Spill Contingency Plan would result in less than significant impacts.

Accidental oil spills at the SMR associated with the operation of the Rail Spur Project were found to be less than significant with mitigation (Class II). Oil spills could result from onsite pipelines, or other rail unloading equipment such as the unloading pumps and lines. Implementation of the oil spill containment systems and Spill Prevention Control and Countermeasure Plan (SPCCP) would reduce this impact to less than significant levels.

Accidental oil spills along the UPRR mainline tracks were found to be significant and unavoidable (Class I) in the event that a spill where it could impact water resources. Only portions of the UPRR mainline track run adjacent to water resources. In the event of an oil spill along the UPRR mainline tracks there could be impacts to adjacent surface and groundwater. Mitigation measures identified for improving emergency response and oil spill cleanup would help to mitigate these impacts. However, the County may be preempted by Federal law from requiring mitigation for operations on the UPRR mainline tracks (See Section H of the Executive Summary for more discussion on the preemption issue).

The Rail Spur Project would increase water demand by 250 gallons per day, or 0.3 AFY. The total SMR water demand would be 1,111.3 AFY, which would be less than the 1,550 AFY of water available for SMR use under the Court Stipulation. Therefore, water supply related impacts are considered less than significant (Class III).

### **E. Description of Project Alternatives**

Alternatives to the Rail Spur Project have been developed per CEQA Guidelines Section 15126.6. The EIR has used an alternative screening analysis to select the alternatives evaluated in detail in the EIR. The screening analysis looked at alternative transportation modes such as trucking and marine transport, alternative rail unloading sites, an alternative rail unloading facility configuration, and reduced train deliveries.

The screening analysis provides the detailed explanation of why some of the alternatives were rejected for further analysis and ensures that only potentially environmentally preferred alternatives are evaluated and compared in the EIR. Please see Chapter 5 of the EIR for a detailed discussion of the screened alternatives. The following are the alternatives that were selected as part of the screening analysis for more detailed review.

#### **No Project Alternative**

With the No Project Alternative no rail spur would be built and crude oil would not be delivered by train to the SMR. Crude oil deliveries to the SMR would continue to be via pipeline and truck. Trucks deliver crude oil to the Santa Maria Pump Station, and the oil is then moved via pipeline to the SMR. In the past year the SMR has been receiving Canadian crude via rail and truck. The crude is delivered to a rail unloading facility in Bakersfield and then loaded into truck and delivered to the Santa Maria Pump Station, which it is moved via pipeline to the SMR.

Under the No Project Alternative, Phillips 66 could increase the delivery of North American crudes to the SMR by about 19,660 barrels per day, using the existing rail and truck system without requiring any new permits. Oil would be moved via rail to an existing rail unloading facility in Bakersfield. The oil would then be loaded on to trucks and moved to the Santa Maria Pump Station. The majority of the truck route would be along State Highway 166 in San Luis Obispo County. Movement of 19,600 barrels per day would require 2.5 crude oil unit trains per week.

### **Loop Rail Unloading Configuration**

With this alternative a large circular track would be constructed at the SMR for the delivery and unloading of unit trains. This would eliminate the need to uncouple the train into sections for unloading, however, the area needed for the tracks would be much larger. Trains would pull into the track and twenty cars would be unloaded. The train would then pull forward and the next twenty cars would be unloaded. This process would continue until all eighty cars had been unloaded. The train would then be prepared for departure from the facility. The unloading operations would be the same as described for the proposed unloading operations.

### **Reduce Train Deliveries**

With this option the Rail Spur Project would be built and operated as proposed, but the SMR would receive only a maximum of three unit trains per week instead of the proposed five per week. All of the construction and operational activities would be the same as the proposed project, which are discussed in Chapter 2 of the EIR.

## **F. Environmentally Superior Alternative**

This section summarizes the advantages and disadvantages of each of the alternatives as compared to the Rail Spur Project. A more detailed comparison of the Rail Spur Project and the alternatives can be found in Section 5.4 of the EIR.

CEQA does not provide specific direction regarding the methodology of comparing alternatives to a proposed project. Each project must be evaluated for the issues and impacts that are most important; this will vary depending on the project type and the environmental setting. Issue areas with significant long-term impacts are generally given more weight in comparing alternatives. Impacts that are short-term (e.g., construction-related impacts) or those that can be mitigated to less than significant levels are generally considered to be less important.

For the Rail Spur Project, the determination of the environmentally superior alternative is somewhat complicated by the preemption issue. The level and severity of a number of the mainline and locomotive impacts would vary depending upon whether mitigation can be applied to the Rail Spur Project or some of the Alternatives.

### **No Project Alternative**

With the No Project Alternative, construction and operation of the Rail Spur Project would not occur. Since the No Project Alternative could occur without any new permits, mitigation measures could not be applied. If the County is preempted from requiring mitigation on the UPRR mainline and locomotives, The No Project Alternative offers a number of environmental advantages since fewer trains would be need to move the oil. Some of this advantage is offset by the additional truck transportation that would be needed with the No Project Alternative.

With fewer trains the level of public safety risk would be reduced but would likely remain significant. The trains would avoid the HUTAs of Los Angeles and the Bay Area since the trains would be routed to the San Joaquin Valley. However, they could pass through Sacramento (a HUTA), Davis, Stockton, Fresno, Bakersfield, etc.

OHV activities that is the least environmentally damaging alternative and that incorporates all feasible mitigation measures. As a result, a number of studies have been conducted to examine potential alternative access routes into the ODSVRA. These studies have included a 1991 Environmental Impact Report for the ODSRVA Access Corridor Project, and a 2006 Alternative Access Study Oceano Dunes State Vehicle Recreation Area. Until the CDPR resolves the long standing issues associated with access and staging for the ODSVRA, the type of access for the SMR site is uncertain.

## **H. Known Areas of Controversy and Uncertainty**

According to Section 15123 of the CEQA Guidelines, the EIR shall identify “areas of controversy known to the Lead Agency including issues raised by agencies and the public.” A number of areas of controversy and uncertainty were raised during the preparation of the EIR. Each of these is briefly discussed below.

### **Assessment of Union Pacific Mainline Environmental Impacts**

The operation of unit and manifest trains to and from the Rail Spur Project Site would be performed by UPRR, on UPRR property, and on trains operated by UPRR employees. The movements of those trains within San Luis Obispo County to and from the Project Site, while described in this section of the EIR, may be preempted from local and state environmental regulations by federal law under the Interstate Commerce Commission Termination Act of 1995.

While the potential impacts of those trains movements along the UPRR mainline within San Luis Obispo County are described in appropriate chapters of this EIR, the County as CEQA Lead Agency, and other state and local responsible agencies may be preempted from imposing mitigation measures, conditions or regulations to reduce or mitigate potential impacts of UPRR train movements on the mainline.

By contrast, all activities performed within the Rail Spur Project Site are not preempted by federal law since they would not occur on UPRR property and would not be operated by UPRR employees. The impacts of the activities that occur on the Rail Spur Project Site are described and evaluated in respective chapters of this EIR, and the County as CEQA Lead Agency, and other state and local responsible agencies have the authority to impose mitigation measures, conditions or regulations to reduce or mitigate potential impacts within the Rail Spur Project Site.

### **Train Unloading Sequence and Time**

There is some uncertainty in the estimated time that each of the train unloading steps would require at the SMR. The EIR preparers worked with Phillips 66 to develop a detailed breakdown of the unloading operations that looked at how the locomotive would move while at the SMR and how long each operation would take. The results of this analysis are presented in Chapter 2 of the EIR. Changes in this unloading sequence or associated times could affect the noise and air quality impacts. If the times were shorter than the impact levels could decrease. If time are longer than the impacts could increase. What has been analyzed in the EIR is a reasonable worst case in term of train speeds, uncoupling times and tanker car unloading times. Given the

State Office of Historic Preservation (SOHP) may have to conduct a review of the Rail Spur Project if any of the construction activities would affect registered eligible prehistoric or historic resources subject to federal protection requirements. It is unlikely that any register eligible resources would be affected by the Rail Spur Project.

The California Department of Fish and Wildlife (CDFW) might have to issue permits if State listed species are disturbed as part of the construction process.

The U.S. Fish and Wildlife Service (USFWS) is the agency responsible for assuring compliance with the Endangered Species Act (ESA). If the construction activities could impact species listed under the ESA, then consultation with the USFWS may be required for the Rail Spur Project.

### **1.3 Assessment of Union Pacific Mainline Environmental Impacts**

The operation of unit and manifest trains to and from the SMR would be performed by Union Pacific Railroad (UPRR), on UPRR property, and on trains operated by UPRR employees. The movements of those trains to and from the Project Site may be preempted from local and state environmental regulations by federal law under the Interstate Commerce Commission Termination Act of 1995 and the Commerce Clause of the United States Constitution.

While the potential impacts of those train movements along the UPRR mainline are described in appropriate chapters of this EIR, the County as CEQA Lead Agency, and other state and local responsible agencies may be preempted from imposing mitigation measures, conditions or regulations on UPRR train movements on the mainline.

Trains could enter California at five different locations (one at the north end of the state from Oregon, two at the northeast from Nevada, one at the southeast from Nevada, and one at the south from Arizona). Depending upon the route taken by the train they could arrive at the Phillips 66 site from the north or the south. It is unknown what route UPRR would use to deliver the trains to the SMR. Figure 1-3 shows the main UPRR train routes in California that could be used to deliver crude to the SMR.

Coming from the north the routes merge at the UPRR Roseville Rail Yard. From the south the routes merge at the Colton Rail Yard. Given that the route the trains would travel to get to these two UPRR yards is speculative, the EIR has evaluated in more detail the impacts of trains traveling from these two UPRR yards to the SMR.

Beyond the two UPRR Yards, trains could travel any number of routes. Also, crude oil delivered to California by UPRR would generally pass through either of these two rail yards in route to the SMR. Depending upon the source of the crude oil, crude oil trains could use any portion of the UPRR network between Roseville/Colton and the source location for the crude oil. The exact route that would be taken would depend upon a number of factors, that could include the source of the crude oil, weather conditions, train traffic conditions, etc. Since the routes past Roseville and Colton are somewhat speculative, the EIR has discussed in a more qualitative nature the potential impacts of train traffic beyond these two rail yards.

## **4.0 Rail Spur Environmental Analysis**

This chapter examines the potential environmental impacts of the Rail Spur and Crude Unloading Project. Each issue area analyzed in this chapter provides background information and describes the environmental setting (baseline conditions) to help the reader understand the underlying conditions against which an impact is evaluated. In addition, each section describes how an impact on those underlying conditions is determined “significant” or “less than significant.” Finally, the individual sections recommend mitigation measures to reduce significant impacts. Throughout this chapter, impacts are identified with a letter-number designation (e.g., impact BIO.1, impact AE.3). Corresponding mitigation measures are connected numerically to their impacts (e.g., BIO-1a and AE-3a).

This environmental impact report (EIR) includes many references that have been abbreviated to acronyms. A list of acronyms is included following the Table of Contents, as well as in Appendix H.

### **Assessment Methodology**

The analysis of each issue area begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the California Environmental Quality Act [CEQA] Guidelines) that may be affected by the Rail Spur Project. The effects of the Rail Spur Project are defined as changes to the environmental setting attributable to Rail Spur Project components or operation.

Significance criteria are identified for each environmental issue area. The significance criteria serve as benchmarks for determining if a component action will result in a significant adverse environmental impact when evaluated against the baseline. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.”

The operation of unit and manifest trains to and from the Rail Spur Project Site would be performed by Union Pacific Railroad (UPRR), on UPRR property, and on trains operated by UPRR employees. The movements of those trains within San Luis Obispo County and other counties and cities to and from the Project Site, while described in this section of the EIR, may be preempted from local and state environmental regulations by federal law under the Interstate Commerce Commission Termination Act of 1995 and the Commerce Clause of the United States Constitution.

Trains could enter California at five different locations (one at the north end of the state from Oregon, two at the northeast from Nevada, one at the southeast from Nevada, and one at the south from Arizona). Depending upon the route taken by the train they could arrive at the Phillips 66 site from the north or the south. It is unknown what route UPRR would use to deliver the trains to the SMR.

#### 4.0 Rail Spur Environmental Analysis

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Coming from the north the routes merge at the UPRR Roseville Rail Yard. From the south the routes merge at the Colton Rail Yard. Given that the route the trains would travel to get to these two UPRR yards is speculative, the EIR has evaluated in more detail the impacts of trains traveling from these two UPRR yards to the SMR.

Beyond the two UPRR Yards, trains could travel any number of routes. Also, crude oil delivered to California by UPRR would generally pass through either of these two rail yards in route to the SMR. Depending upon the source of the crude oil, crude oil trains could use any portion of the UPRR network between Roseville/Colton and the source location for the crude oil. The exact route that would be taken would depend upon a number of factors, that could include the source of the crude oil, weather conditions, train traffic conditions, etc. Since the routes past Roseville and Colton are somewhat speculative, the EIR has discussed in a more qualitative nature the potential impacts of train traffic beyond these two rail yards.

While the potential impacts of those train movements along the UPRR mainline are described in appropriate chapters of this EIR, the County as CEQA Lead Agency, and other state and local responsible agencies may be preempted from imposing mitigation measures, conditions or regulations on UPRR equipment and train movements on the mainline.

By contrast, all activities performed within the SMR site are not preempted by federal law since they would not occur on UPRR property and would not be operated by UPRR employees. The impacts of the activities that occur on the Rail Spur Project Site are described and evaluated in respective chapters of this EIR, and the County as CEQA Lead Agency, and other state and local responsible agencies have the authority to impose mitigation measures, conditions or regulations to reduce or mitigate potential impacts within the boundaries of the SMR.

As discussed in the Chapter 2.0, Project Description, there are three possible mainline rail routes to the SMR from the Roseville and Colton rail yards. In assessing the impacts associated with each of these routes it has been assumed that all the trains (250 per year) would use the route being evaluated since this represents a worst case for each route. However, it is possible that the trains servicing the SMR could use different routes over time, which would serve to reduce some of the identified impacts since fewer trains would travel a given route.

#### **Rail Spur and Crude Unloading Project Impact Analysis**

Based upon the Notice of Preparation (NOP) and scoping comments, 13 issue/resource areas were identified where potentially significant impacts could occur from the Rail Spur Project. The impact analysis for each of these issue areas is provided in the following subsections of Chapter 4. The analysis of each issue area has defined the study area for purposes of the impact analysis. In most cases, the study area is the region that is in the vicinity of the Rail Spur Project.

For each identified impact, the following framework was used:

- Impact Discussion;
- Mitigation Measures; and
- Residual Impacts

have value in their age) would be more difficult to mitigate. The loss of some crops, prime soils, and other agricultural resources may not be mitigable through restoration and replacement in kind. Therefore, impacts to agricultural resources associated with an oil spill along the mainline routes would be considered potentially significant.

#### *Spill Impacts beyond Roseville and Colton Yards*

Beyond the two UPRR Yards, trains could travel any number of routes (refer to Figure 2-8). Also, crude oil delivered to California by UPRR would generally pass through either of these two rail yards in route to the SMR. Depending upon the source of the crude oil, crude oil trains could use any portion of the UPRR network between Roseville/Colton and the source location for the crude oil. The exact route that would be taken would depend upon a number of factors, that could include the source of the crude oil, weather conditions, train traffic conditions, etc.

While the exact route the trains would take to get to these two rail yards is speculative, all of the routes within and outside of California would traverse various amounts of agricultural areas, which would increase the probability of a spill impacting agricultural resources. In the event of a spill impacting agricultural resources along this portion of the route the impacts could be significant for the same reasons discussed above for the routes between Roseville/Colton and the SMR.

#### **Mitigation Measures**

*Implement mitigation measures PS-4a through PS-4e and BIO-11.*

#### **Residual Impacts**

Implementation of mitigation measures PS-4a through PS-4e would reduce the likelihood of an oil spill and the ability of first response agencies to respond to a crude oil spill. In particular, PS-4b would require the use of safer tank cars that would reduce the likelihood of a spill in the event of an accident. Use of the upgraded tanker cars would reduce the probability of a 100 gallons or greater oil spill to between once in 172 years and once in 291 years depending upon the route taken to get to the SMR.

Under Federal and State law, UPRR and the owner of the crude oil would be responsible for cleanup and remediation of any oil spill. SB 861 requires that operators demonstrate they have the financial resources to pay for spill response, cleanup, and damages based upon a reasonable worst case spill volume.

Even with these mitigation measures, in the unlikely event of oil spill along the UPRR mainline tracks, impacts to agricultural resources could be significant. Depending upon the location of the spill, impacts may occur to a particular crop or soil or other agricultural resource that cannot be mitigated through remediation and replanting (i.e., old growth vines and orchards, a unique soil type/condition that can't be replenished from off-site areas). A spill could also contaminate an agricultural water source, resulting in long-term and wide-spread impacts to agricultural uses.

Federal law may preempt local agency regulation of rail lines; therefore, implementation of appropriate mitigation measures to protect agricultural resources along the UPRR mainline may not be feasible or enforceable. Therefore, residual impacts to agricultural resources along the

*allow time for refining calculations and for the SLOCAPCD to review and approve any required ROG+NO<sub>x</sub> and DPM emission reductions.*

*AQ-2b Prior to issuance of Notice to Proceed, the Applicant shall implement a program, including training and procedures, to limit all locomotive onsite idling to no more than 15 consecutive minutes except when idling is required for safety purposes. Locomotive idling records shall be maintained and provided to the SLOCAPCD on an annual basis, along with training materials and training records.*

#### **Residual Impacts**

The Environmental Protection Agency (EPA) has established emission standards for oxides of nitrogen (NO<sub>x</sub>), hydrocarbons (HC), carbon monoxide (CO), diesel particulate matter (DPM) and smoke for newly manufactured and remanufactured locomotives. These standards, which are codified at 40 CFR part 1033, include several sets of emission standards with applicability dependent on the date a locomotive is first manufactured. The first set of standards (Tier 0) applies to most locomotives originally manufactured or rebuilt before 1993, Tier 1 to 1993-2004, Tier 2 to those manufactured or rebuilt from 2004-2011, Tier 2+ or Tier 3 to those manufactured or rebuilt from 2012 to 2014 and the most stringent set of standards (Tier 4) applies to locomotives originally manufactured or rebuilt in 2015 and later.

Limits on idling would align the locomotive operations onsite with the CARB Railroad Agreement from 2005, which placed a limit on locomotive idling of 15 consecutive minutes within rail yards. Implementation of this mitigation measure would reduce the idling emissions by about 65% at the refinery. Table 4.3.16 provides an estimate of the criteria pollutant emissions at the refinery with the implementation of the mitigation measures (Tier 4 locomotive and limiting idling to no more than 15 consecutive minutes). A summary of the mitigated emissions at the refinery and the corresponding SLOCAPCD thresholds is shown in Table 4.3.17.

Use of Tier 4 engines for the locomotives and limiting idling time at the refinery to no more than 15 consecutive minutes reduces the annual ROG+NO<sub>x</sub> and DPM emissions. Even with this mitigation ROG+NO<sub>x</sub> and DPM emissions would remain significant for the peak day emissions. Even with these emission reductions the Applicant would still need to provide emission reduction credits for ROG+NO<sub>x</sub> and DPM. With the implementation of the mitigation measures including the application of ROG + NO<sub>x</sub> and DPM emission reduction credits, impacts for criteria pollutants would be reduced to less than significant.

UPRR maintains a large number of locomotives (more than 8,000 nationwide) with a wide range of emissions characteristics and Tier levels. The UPRR 2009 fleet-average emission factors were used in this analysis for the annual emissions in order to accurately assess the potential impacts when the proposed project would be operating. Since UPRR would own and operate the locomotives and they are used for interstate commerce, the requirement to use only Tier 4 locomotives may be preempted by Federal law, and therefore may not be a feasible mitigation measure. In addition, the availability of these cleaner locomotives and the ability of the applicant to ensure their use is uncertain since the locomotives are owned and operated by UPRR.

### 4.3 Air Quality and Greenhouse Gases

EPA standards also apply for existing locomotives when they are remanufactured. Requirements are also in place to reduce idling for new and remanufactured locomotives. EPA has estimated that by 2041 the average nationwide emission factors for mainline locomotives would meet the Tier 4 standards (EPA 2009). This means that even if the County is preempted by Federal law from implementing the Tier 4 mitigation measure as part of the project for the locomotive emissions along the mainline, that overtime the locomotive emissions will still achieve this level due to the EPA emission control requirements for locomotives.

The use of all Tier 1 locomotives would provide about a 15 percent reduction in ROG+NO<sub>x</sub> switching emissions and no reduction in DPM over the project estimated locomotive emissions at the refinery. Use of all Tier 4 locomotives would provide about a 92 percent and 96 percent reduction in switching ROG+NO<sub>x</sub> and DPM emissions, respectively.

The use of the rail spur to import crude oil could potentially displace crude oil from other sources that are currently being used to supply crude oil to the SMR. The majority of crude oil currently being delivered to the SMR is from offshore, Outer Continental Shelf (OCS) sources, which are delivered to the SMR by pipeline and electrically powered pumps. Some of the crude oil is delivered to the SMR via truck through the SMPS. The emissions associated with these trucks (see Table 4.3.7) are estimated to total about 51 lbs/day and 9.2 tons/year of ROG+NO<sub>x</sub> and 1.8 lbs/day DPM within SLO County. Even if these sources of crude oil were completely displaced, and their resulting emissions eliminated, the emissions from the rail spur and associated importation of crude oil by rail would exceed the SLOCAPCD thresholds for operational ROG+NO<sub>x</sub> emissions.

Since the operation of the crude oil trains at the SMR would be on Phillips 66 property and the trains would be operated by Phillips 66 the County can require that emissions within the SMR associated with the trains be mitigated using other onsite/offsite emission reduction credits.

For the mainline rail emissions it is possible that contractually the Applicant could require the use of lower emission locomotives such as Tier 4 locomotives. However, since these are operated by UPRR on UPRR track a requirement that the Applicant enter into this type of contractual provision may be preempted by Federal law. The County may also be preempted by Federal law from requiring emission reduction credits for main line rail emissions. Due to the possible preemption by Federal law which could prevent the mitigation measures from being implemented (outside of the SMR facility boundary), emission reduction credits might not be achievable and impacts would remain *significant and unavoidable (Class I)*.

Impact #	Impact Description	Phase	Impact Classification
AQ.3	Operational activities of trains along the mainline rail route outside of SLOC associated with the Rail Spur Project would generate criteria pollutant emissions that exceed thresholds.	Operations	Class I

Trains traveling to the Refinery could come from the north or the south using the UPRR coastal track. Figure 4.3-5 shows the rail routes that a train traveling to and from the Refinery would be

of the potentially affected Air Districts have available emission reduction credits that can be purchased.

UPRR maintains a large number of locomotives (more than 8,000 nationwide) with a wide range of emissions characteristics and Tier levels. Since UPRR would own the locomotives, which are used for interstate commerce, the requirement to use only Tier 4 locomotives and obtain emission credits is likely preempted by Federal law, and therefore may not be feasible mitigation measures.

The availability of these cleaner (Tier 4) locomotives and the ability of the Applicant to ensure their use are somewhat speculative since Union Pacific controls the locomotives and they would be traveling interstate.

In March 2008, EPA finalized a three part program that will dramatically reduce emissions from diesel locomotives of all types -- line-haul, switch, and passenger rail. The rule will cut PM emissions from these engines by as much as 90 percent and NO<sub>x</sub> emissions by as much as 80 percent when fully implemented. The standards are based on the application of high-efficiency catalytic after treatment technology for locomotives built in 2015 and later.

EPA standards also apply for existing locomotives when they are remanufactured. Requirements are also in place to reduce idling for new and remanufactured locomotives. EPA has estimated that by 2048 the average nationwide emission factors for mainline locomotives would meet the Tier 4 standards (EPA 2009). This means that even if the County is preempted by Federal law from implementing the Tier 4 mitigation measure as part of the project, that overtime the locomotive emissions will achieve this level due to the EPA emission control requirements for locomotives.

Since AQ-3a may not be implemented due to Federal preemption, and it is uncertain if the other Air Districts could require emission reduction credits, the impacts associated with the mainline rail operation would remain *significant and unavoidable (Class I)*.

#### **Health Impacts of Significant and Unavoidable Emissions**

Emissions of NO<sub>x</sub> would remain above the significance thresholds within all Air Districts except Yolo/Solano. NO<sub>x</sub> is a criteria pollutant that reacts in the atmosphere, along with VOCs, to produce ozone. Ozone has a number of health impacts including loss of pulmonary function. Increases in NO<sub>x</sub> and VOC emissions associated with the proposed project could cause incremental increases in the ozone concentrations which could cause an increase in the ppm concentrations and the number of days per year exceeding the ambient air quality standards. NO<sub>x</sub> emissions from the proposed project would be emitted in a number of Air Districts (see Table 4.3.18), contributing to the pollutants measured at basin-wide monitoring stations. Ozone formation is a complex and complicated phenomena where emissions from one area could contribute to increased ozone levels at different locations depending on meteorology and atmospheric chemistry. The respective Districts have established thresholds of pollutant emissions from new projects that are based on modeling of the projected emissions basin-wide and the resulting impact on pollutant concentrations at the monitoring stations. The Districts, through their respective Management Plans, are pursuing actions that can be implemented over the next few years to work towards meeting the 8-hour ozone standards.

Figure 4.3-6 shows the cancer health risk contours for Scenario 2 (including the mainline rail emissions). The impacts with the OEHHA adjustments for age sensitivity would be above the APCD thresholds for residential receptors and would be significant. Impacts for chronic, acute and worker cancer risks would be less than the thresholds.

**Mitigation Measures**

AQ-4 Implement measures AQ-2a and AQ-2b.

**Residual Impacts**

The use of all Tier 4 locomotives (AQ-2a) and limits on locomotive idling time (AQ-2b) would reduce DPM emissions, which are the main driver of the health risk cancer impacts. Cancer risk levels are shown in Table 4.3.24 assuming the use of Tier 4 locomotives and limits on locomotive idling time. These mitigated levels shown in Table 4.3.24 are shown both without and with the OEHHA adjustment factors. In addition, the cancer risk levels with only the reduced idling mitigation are also provided in Table 4.3.24.

**Table 4.3.24 Mitigated Health Risk HARP Modeling Results with and without OEHHA Adjustments: Cancer Risk**

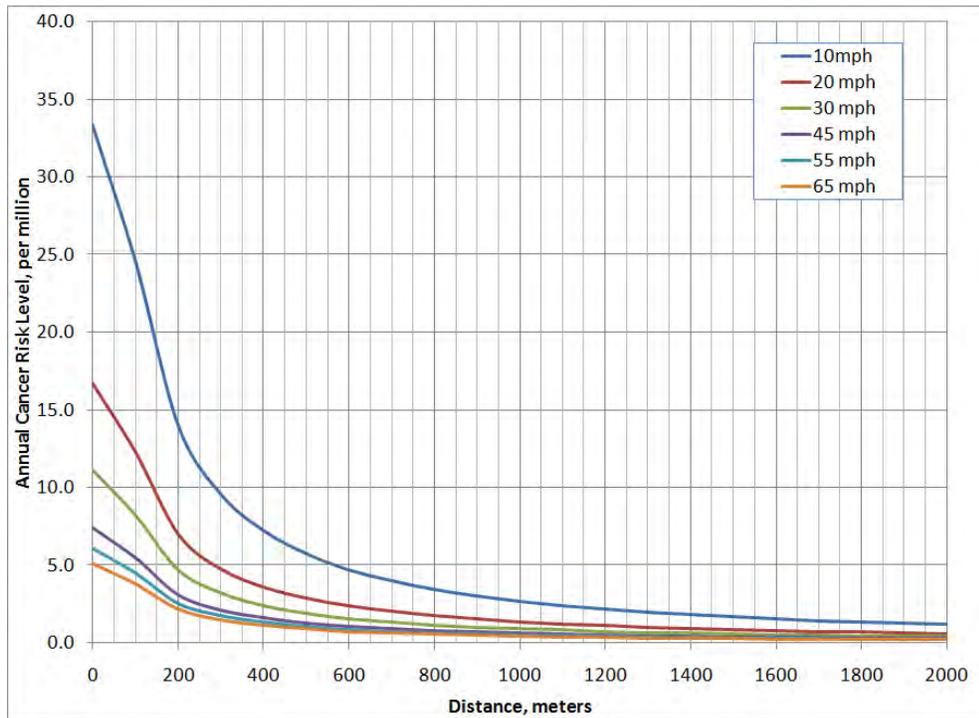
Scenario	PMI	MEIR	Louise Ln	Trilogy Prkwy	Worker	Sig?
<b>Without OEHHA Adjustments</b>						
1 - Rail Spur + SMR and trucks	5.1	5.5	1.5	1.2	0.2	No
2 - Rail Spur + SMR + trucks+ Mainline	5.4	5.6	1.5	1.3	0.2	No
2 - Rail Spur + Mainline + SMR + trucks Idling Mitigation Only	9.8	6.2	2.9	2.2	0.4	No
<b>With OEHHA Adjustments</b>						
1 - Rail Spur + SMR + trucks	19.8	14.6	6.1	4.8	0.7	Yes
2 - Rail Spur + SMR + trucks+ Mainline	21.4	15.1	6.4	5.1	0.8	Yes
2 - Rail Spur + Mainline + SMR + trucks Idling Mitigation Only	43.4	18.1	13.3	9.9	1.9	Yes

See Appendix B for detailed emission calculations.  
 SMR emissions include the increased fraction of BTEX to 1.25% from 0.81%  
 Use of HARP model version 1.4f with adjustment factors based on OEHHA 2012  
 PMI -Point of Maximum Impact, the highest value along the facility fenceline.  
 MEIR-Maximally Exposed Individual Resident

Figure 4.3-7 shows the cancer health risk contours for Scenario 2 (including the mainline rail emissions) with mitigation.

UPRR maintains a large number of locomotives (more than 8,000 nationwide) with a wide range of emissions characteristics and Tier levels. Since UPRR would own the locomotives and they are used for interstate commerce the requirement to use only Tier 4 locomotive may be preempted by Federal law, and therefore may not be a feasible mitigation measure.

In addition, the availability of these cleaner locomotives and the ability of the Applicant to ensure their use are somewhat speculative since Union Pacific controls the locomotives and they would be traveling interstate.

**Figure 4.3-8 Mainline Locomotive Cancer Risk, by speed and distance from Mainline**

Notes: Based on 3 locomotives per train, 250 round train trips per year, Nipomo meteorological dataset (1994-1996) and 70 year average locomotive emission factor (as per EPA). Includes OEHHA adjustment factors.

### Mitigation Measures

*AQ-5 Implement measures AQ-3.*

### Residual Impacts

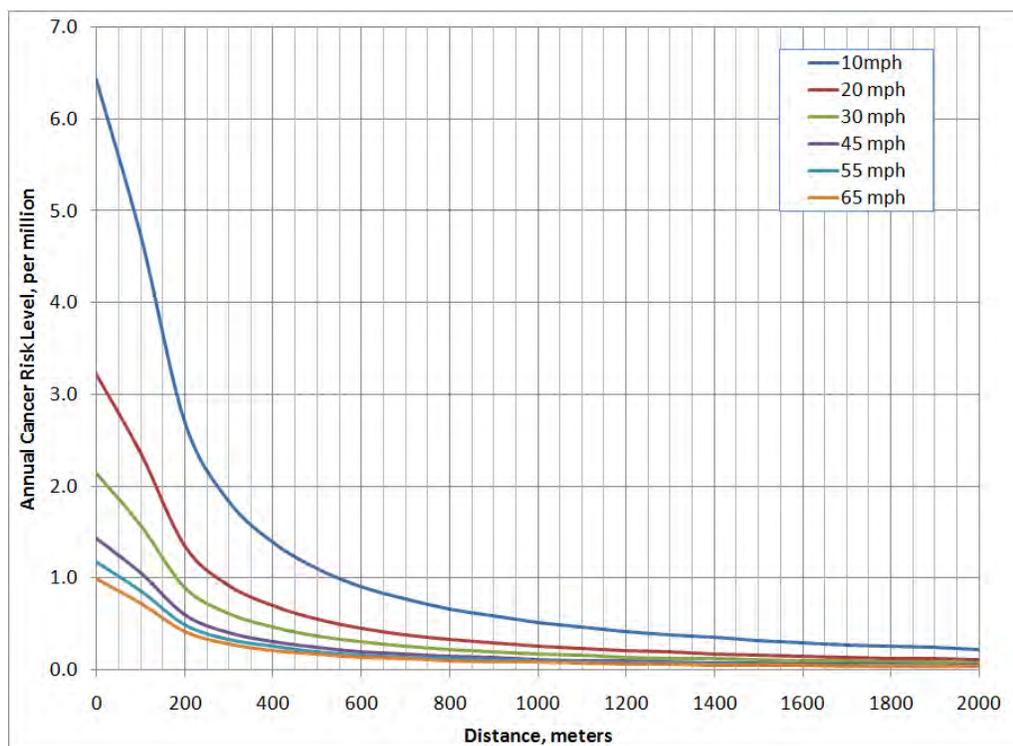
The use of Tier 4 locomotives would serve to reduce the toxic emissions associated with the locomotive operations along the mainline. The use of all Tier 4 locomotives would reduce DPM emissions, which are the main driver of the health risk impacts.

Figure 4.3-9 shows the health risk impacts along the mainline as a function of speed and distance with the use of Tier 4 locomotives. With this mitigation the health risk (including the OEHHA adjustment factors) would be less than the SLOCAPCD threshold for all speeds.

UPRR maintains a large number of locomotives (more than 8,000 nationwide) with a wide range of emissions characteristics and Tier levels. Since UPRR would own and locomotives and they are used for interstate commerce the requirement to use only Tier 4 locomotive may be preempted by Federal law, and therefore may not be a feasible mitigation measures.

In addition, the availability of these cleaner locomotives and the ability of the Applicant to ensure their use are somewhat speculative since Union Pacific controls the locomotives and they would be traveling interstate.

Figure 4.3-9 Mitigated Mainline Locomotive Health Risk, by speed and distance from Mainline



Notes: Based on 3 locomotives per train, 250 round train trips per year, Nipomo meteorological dataset (1994-1996) and Tier 4 locomotive emission rate. Includes OEHHA adjustment factors

In March 2008, EPA finalized a three part program that will dramatically reduce emissions from diesel locomotives of all types -- line-haul, switch, and passenger rail. The rule will cut PM emissions from these engines by as much as 90 percent and NO<sub>x</sub> emissions by as much as 80 percent when fully implemented. The standards are based on the application of high-efficiency catalytic after treatment technology for freshly manufactured engines built in 2015 and later.

EPA standards also apply for existing locomotives when they are remanufactured. Requirements are also in place to reduce idling for new and remanufactured locomotives. EPA has estimated that by 2048 the average nationwide emission factors for mainline locomotives would meet the Tier 4 standards (EPA 2009).

This means that even if the County is preempted by Federal law from implementing the Tier 4 mitigation measure as part of the project, that overtime the locomotive emissions will achieve this level due to the EPA emission control requirements for locomotives.

Given that the County may be preempted by Federal law from requiring the use of Tier 4 locomotives, the health risk impacts along the mainline rail routes would be significant and unavoidable (Class I). This would apply to all areas along the mainline where train speeds are limited to less than 30 mph and the mainline rails are in close proximity to sensitive receptors.

would be eliminated as the crude oil from these sources might just be re-directed to locations in Los Angeles.

**Mitigation Measures**

*AQ-6 Prior to issuance of the Notice to Proceed, the Applicant shall provide GHG emission reduction credits for all of the project GHG emissions for the life of the project. Coordination with the San Luis Obispo Planning and Building Department should begin at least six (6) months prior to issuance of operational permits for the Project to allow time for refining calculations and for the San Luis Obispo Planning and Building to review and approve the emission reduction credits.*

**Residual Impacts**

Since the operation of the crude oil trains at the SMR would be on Phillips 66 property and the trains would be operated by Phillips 66 the County can require that GHG emissions within the SMR associated with the trains be mitigated using emission reduction credits.

For the mainline rail GHG emissions it is possible that contractually the Applicant could require GHG emission reduction credits. However, the County may also be preempted by Federal law from requiring emission credits for main line rail GHG emissions. Due to the possible preemption by Federal law which could prevent the mitigation measure from being implemented (outside of the SMR facility boundary), emission reduction credits might not be achievable and impacts would remain significant and unavoidable (Class I).

Impact #	Impact Description	Phase	Impact Classification
AQ.7	Operational activities associated with the Rail Spur Project could generate odors.	Operations	Class II

Sources of odors from the facility would be related to emissions of hydrocarbons, hydrogen sulfide and emissions of diesel exhaust. Emissions of fugitive hydrocarbons from the Rail Spur Project would be substantially less than that from the existing refinery (1 tons/yr verses 33 tons/year). The Applicant indicates the expected H<sub>2</sub>S content of the crude oil vapor could be about one percent by weight (refer to Table 4.3.13). The release of material that contains even small amounts of sulfur compounds (H<sub>2</sub>S) or hydrocarbons produces an odor. Sulfur compounds, found in oil and gas, have very low odor threshold levels. For instance, H<sub>2</sub>S can be detected by humans at concentrations from 0.5 parts per billion [ppb] (detected by 2 percent of the population) to 40 ppb, qualified as annoying by 50 percent of the population. Above these levels, H<sub>2</sub>S would be detected by most people (AIHA 1989). A conservative H<sub>2</sub>S odor limit of 2 ppb has been used in this analysis with a significant impact being assigned to levels that could exceed the 50% odor threshold (1 ppb).

As crude oil vapors would be mixed with entrained air before the canisters, crude oil vapors would only constitute about 500 ppm of the canister input stream (with remaining composition being entrained air). With a 1% weight percent H<sub>2</sub>S, this would lead to an H<sub>2</sub>S concentration of the vapor going to the carbon canisters of about 4.8 ppmV. The carbon canisters would remove

#### 4.3.5 Cumulative Analysis

The Phillips 66 Pipeline Project, Freeport-McMoRan Oil & Gas Oil Field Expansion, and the Guadalupe Oil Field Remediation would all generate construction and operational air emissions that would likely be significant. Trucking emissions associated with the Guadalupe Project are required to be offset through an agreement with SLOCAPCD. Regional operational impacts from the other cumulative projects could be realized since multiple projects would emit into the South Central Coast Air Basin at the same time. All of the cumulative projects are within the South Central Coast Air Basin and most of these projects are also within the South County planning area. All projects within the South Coast planning area are subject to the air quality impact program as detailed in the Air Quality Handbook (SLOCAPCD 2012) through standard mitigation measures and off-site mitigation which identifies improvements that will help reduce some of the cumulative air quality impacts.

All cumulative projects must comply with SLOCAPCD rules and regulations that include air emission reduction strategies for the basin. These, in concert with individual project mitigation measures, will help reduce air quality impacts. However, until the San Luis Obispo area as a whole attains all federal and state standards, it is likely that the air emissions from the cumulative projects would be regionally significant and unavoidable.

The Rail Spur Project would be required to provide emission reduction credits for all the construction and operational emissions at the refinery, the County may be preempted from mitigating the mainline rail emissions within San Luis Obispo County. These additional project related emissions would be considered cumulatively significant and unavoidable since the area is in non-attainment with some of the federal and state standards air quality standards.

Most of the cumulative projects outside of the refinery are close enough to the project site to result in overlapping toxic emissions that would impact the health risk at the refinery. The Guadalupe Project trucking along Willow Road would add additional toxic emissions in the project area. However, the combined cancer risk for the Rail Spur Project and Guadalupe Trucking would be less than the cumulative threshold of 89 in a million.

Toxic emissions associated with the Throughput Increase Project were determined in the Throughput Project's FEIR to be less than significant. As part of the Throughput Increase EIR an updated HRA utilizing 2010 emission data was developed. The HRA indicated that the highest cancer risks at the facility fence line would be 2.1 in a million, and that chronic and acute risks would be 0.02 and 0.38, respectively, associated with the Throughput Increase operations.

HARP modeling was conducted as part of this EIR with the SMR operating at the Throughput Increase Project permit level along with the rail spur project, including the increased trucking levels. Most of the SMR health risk levels for the current operations are from the diesel engines (fire water pumps, backup generators). Operation of the fire water pump and backup generators would not change with the Throughput Increase Project and therefore risk levels associated with the Throughput Increase Project would be identical to the Proposed Project risk levels. The Throughput Increase Project included a nominal increase in trucking, which had a minor impact on the overall refinery health risk. With the mitigation required as part of the Throughput Increase Project to use newer model year trucks, there was a net decrease in DPM emissions, and

### 4.3 Air Quality and Greenhouse Gases

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a net decrease in the overall health risk at the SMR. With the addition of the Rail Spur Project the overall health risk of the refinery would remain less than the SLOAPCD health risk threshold even with the Throughput Increase Project (without the OEHHA adjustments). However, with the OEHHA adjustments, as the trucking impacts to cancer risk are above the SBCAPCD thresholds associated with the current/baseline operations, the cumulative health risk impact would be significant and unavoidable.

There is the potential for cumulative impacts associated with the crude by rail projects discussed in Chapter 3. The Valero Benicia and WesPac crude by rail projects could use the same UPRR tracks as the Rail Spur Project from the Roseville Yard to the Bay Area if the trains servicing the SMR come from the north. These two projects could have up to three unit trains per day. Assuming the air emissions for each train are similar to the unit trains for the Rail Spur Project, then the air emission from these trains would exceed the NO<sub>x</sub> emission significance thresholds in the Bay Area Quality Management District (BAAQMD), Yolo-Solano Air Quality Management District (YSAQMD), Sacramento Metropolitan Air Quality Management District (SMAQMD), Placer County Air Quality Management District (PCAPCD), and the cumulative impacts within the Sacramento and Bay Area Basins would be significant. In addition, trains servicing the Alon and Plains crude by rail projects would also pass through some of these same air districts on their way south to the San Joaquin Valley contributing additional NO<sub>x</sub> emissions to the Sacramento basin. For ROG/VOC emissions the cumulative impacts of the crude by rail projects could be cumulatively significant in the BAAQMD since the combined ROG/VOC emissions would exceed the daily threshold of 80 lbs per day.

Cumulative toxic air emission for trains operating on the same tracks could be potentially significant and unavoidable. On the stretch of track west of the Roseville rail yard there could be as many as 2,440 crude oil trains per year. Where there are permanent speed restrictions of less than about 35 mph in the vicinity of sensitive receptors, the 30-year cancer risk would be above the cumulative threshold and would be considered significant and unavoidable.

None of the other cumulative crude by rail projects would use tracks within the South Coast Air Quality Management District (SCAQMD), Ventura County Air Pollution Control District VCAPCD, Santa Barbara County Air Pollution Control District (SBCAPCD), San Luis Obispo County Air Pollution Control District (SLOCAPCD), and Monterey Bay Unified Air Pollution Control District (MBUAPCD).

For the Rail Spur Project mitigation measure has been provided that would require the Applicant to obtain emission credits for all main line rail NO<sub>x</sub> emissions. If these emission credits were obtained then the Rail Spur Project's contribution to the cumulative NO<sub>x</sub> and ROG/VOC emission impacts would be less than significant.

However, the County may be preempted by Federal law from mitigating rail emissions outside of the SMR, and therefore may not have the authority to require offsite emission credits for the UPRR mainline emissions. In this case the Rail Spur Project's contribution to cumulative NO<sub>x</sub> emissions associated with the URPP mainline emissions would also be significant and unavoidable in all of the air basins that the train would cross. The Rail Spur Project's ROG/VOC emissions would be cumulatively significant in the Bay Area and San Luis Obispo County air basins.

The California Air Pollution Control Officers Association consider greenhouse gas (GHG) emissions impacts to be exclusively cumulative impacts (CAPCOA, 2008); as such, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. The Rail Spur Project would result in a net increase of 12,132 metric tonnes carbon dioxide equivalents (CO<sub>2e</sub>) per year within the State of California, of which 10,575 tonnes would be from mainline rail operations). The Applicant would be required to provide emission reduction credits for the GHG emissions at the SMR. A mitigation measure is also proposed that would require the Applicant to provide emissions reduction credits for all GHG emissions within California.

However, the County may be preempted by Federal law from mitigating rail emissions outside of the SMR, and therefore may not have the authority to require offsite emission credits for the UPRR mainline emissions. Therefore, when compared to the SLOCAPCD significance threshold of 10,000 metric tonnes CO<sub>2e</sub>, the Project’s contribution to GHG impacts would be cumulatively considerable, and there would be a significant cumulative GHG impact associated with the Project.

**4.3.6 Mitigation Monitoring Plan**

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
AQ-1a	<p>Prior to issuance of grading and construction permits, and throughout project construction, as applicable, the Applicant shall implement the following construction emission reduction measures:</p> <ul style="list-style-type: none"> <li>a. Properly maintain all construction equipment according to manufacturer’s specifications;</li> <li>b. Fuel all off-road and portable diesel powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);</li> <li>c. Use at least CARB Tier 3 certified diesel construction equipment or cleaner off-road heavy-duty diesel engines, and comply with state Off-Road Regulations;</li> <li>d. Use CARB 2007 or cleaner certified on-road heavy-duty diesel trucks and comply with state On-Road Regulations;</li> <li>e. If construction or trucking companies that are awarded the bid or are subcontractors for the project do not have equipment to meet the above two measures, the impacts from the dirtier equipment shall be addressed through SLOCAPCD approved off-site or other mitigation measures;</li> <li>f. All on- and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and job sites to remind drivers and operators of the 5 minute idling limit;</li> <li>g. Diesel idling within 1,000 feet of sensitive receptors is not permitted (Sensitive receptors are defined in the SLOCAPCD Handbook as people that have an</li> </ul>	<p>Review of construction plan documents</p> <p>Site Inspection</p>	<p>Prior to grading permits</p>	<p>SLO County Planning and Building</p> <p>SLOCAPCD</p>

which would increase the probability of a spill impacting sensitive biological resources. In the event of a spill impacting sensitive biological resources along this portion of the route the impacts could be significant for the same reasons discussed above for the routes between Roseville/Colton and the SMR.

### Mitigation Measures

*BIO-11 The Applicant's contract with UPRR, shall include a provision to provide a copy of a letter from the California Department of Fish and Wildlife that all required provisions in Senate Bill (SB) 861, Oil Spill Contingency Plan, are in place for all mainline rail routes in California that could be used for transporting crude oil to the SMR. In addition, the Applicant's contract with UPRR, shall include provisions to provide a copy of UPRR's Oil Spill Contingency Plan required by Senate Bill (SB) 861 to all first response agencies along the mainline rail routes in California that could be used by trains carrying crude oil to the Santa Maria Refinery for the life of the project. Only first response agencies that are able to receive security sensitive information as identified pursuant to Section 15.5 of Part 15 of Title 49 of the Code of Federal Regulations, shall be provided this information. This contract provision shall be in place and verified by the County Department of Planning and Building prior to delivery of crude by rail to the Santa Maria Refinery.*

### Residual Impacts

Implementation of mitigation measures BIO-10 and PS-4a through PS-4e would serve to reduce the likelihood of an oil spill and the ability of first response agencies to respond to a crude oil spill. In particular, PS-4b would require the use of safer tank cars that would reduce the likelihood of a spill in the event of an accident.

The County may be preempted by federal law from implementing this measure as they require particular contractual provisions that might be determined to improperly impact interstate commerce.

OSPR is currently in the process of implementing the requirements of SB 861, which will require railroads to have detailed oil spill response plans and to conduct oil spill response drills. The final rules to implement this legislation are expected to be issued in the Fall of 2014. However, the timing of when the plans will have to be in place and the drill would start is not yet know. Implementation of this legislation would improve oil spill response for train derailments that lead to spills.

In addition, the USDOT is evaluating proposed rules that would require rail operators of crude oil trains to have a comprehensive OSRP that addresses many of the same requirements as the plans required by SB 861. If the DOT adopts a final rule covering crude oil trains, it would improve oil spill response for train derailments that lead to spills.

The USDOT has also proposed rules covering enhancements to tank car standards and operational controls for high-hazardous flammable trains, which would include crude oil trains. If this proposed rule is adopted, it would serve to reduce the likelihood of a train derailment and

**Mitigation Measures**

CR-6 *As part of the Applicant’s contract with UPRR, it shall require that a qualified archaeologist, architectural historian, and paleontologist who meet the Secretary of the Interior’s Professional Qualification Standards prepare an Emergency Contingency and Treatment Plan for Cultural and Historic Resources along the rail routes in California that could be used to transport crude oil to the SMR. The treatment plan shall include, but not be limited to, the following components:*

- a. Protocols for determining the cultural resources regulatory setting of the incident site;*
- b. Provide various methodologies for identifying cultural resources, as needed, within the incident site (e.g., California Historical Resources Information System records search, agency contact, field survey); and*
- c. If cultural resources are present, identify measures for their avoidance, protection, and treatment.*

*The Treatment Plan shall be in place prior to delivery of crude by rail to the Santa Maria Refinery.*

**Residual Impacts**

Implementing mitigation measure CR-6 would potentially reduce potential impacts; however, there is the potential that a derailment or a spill may destroy a significant cultural or historic resource, and remediation actions may not result in the recovery of significant resources. In the event this occurs, the residual effect could be *significant and unavoidable (Class I)*.

Federal law may preempt local agency regulation of rail lines; therefore, implementation of appropriate mitigation measures to protect cultural, historic and paleontological resources along the UPRR mainline may not be feasible or enforceable.

**4.5.6 Cumulative Analysis**

Implementation of the Rail Spur Project could contribute to the cumulative degradation of significant cultural resources in the County and along the proposed rail route. The destruction of cultural resources, which are inherently important to the descendants of native peoples and the heritage of California, can have the potential for significant cumulative impacts. Given the prevalence of cultural resource sites in the immediate vicinity of the project area, and the number of construction activities that involve disturbance of culturally sensitive areas that are not regulated, it is likely that significant pre-historic and historic resources are often not identified and are permanently lost. As such, the cumulative impacts to pre-historic and historic resources from the cumulative projects in the vicinity of the proposed project would likely be significant. For the proposed construction of the project, no impacts to any known CRHR eligible resources would occur, and mitigation measures are in place to reduce potential impacts to unknown buried resources. Therefore, the Rail Spur Project’s contribution to the cumulative impact would be less than significant.

#### 4.4 Biological Resources

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release of crude oil. Section 4.7, Hazards and Hazardous Materials provides additional information on this proposed USDOT rule.

If and when all these rules are adopted and in place, they would serve to reduce train derailments and improve emergency response in the event of an accident.

Given the uncertain timing of these rules and that the County may be preempted from implementing mitigation measures for the mainline rail oil spills impacts to biological resources along the UPRR mainline tracks could be *significant and unavoidable (Class I)*, depending upon the location of the spill.

#### 4.4.5 Cumulative Analysis

The Rail Spur Project significantly increases human activity in portions of the Phillips 66 property that consist of sensitive coastal scrub habitat that has been historically used for cattle grazing. Although this area has been historically cattle grazed, the Rail Spur Project would result in permanent impacts to common and rare plant species and wildlife which utilize this habitat. The Rail Spur Project also increases the potential for oil and other materials spills within the property and along the UPRR mainline.

According to the list of cumulative projects (Table 3-1), no other similar developments are currently proposed in the area that would also impact coastal scrub and suitable habitat for sensitive species, or the species directly. Therefore, impacts from the proposed project would not exacerbate any loss of habitat, impacts to Nipomo Mesa lupine, or western burrowing owl within implementation of these surrounding projects. Adjacent farming and residential uses are expected to continue with little biological effect from the project. Application of appropriate state and local development guidelines such as the Migratory Bird Treaty Act of 1918, and mitigation measures similar to those listed above would reduce cumulative impacts to a significant but mitigable level.

There is the potential for cumulative impacts associated with the crude by rail project discussed in Chapter 3. In conducting the cumulative analysis for crude by rail it has been assumed that all the cumulative projects would use the same tank design and transport similar crude as the SMR Rail Project. It has also been assumed that all of the Rail Spur Project crude oil trains would use routes discussed below.

If all of the crude by rail projects travel via the Roseville area, then up to seven crude oil trains per day could travel on the stretch of track between Roseville and Sacramento, a distance of about 16 miles (two for Valero, one for WesPac, two for Alon, one for Plains All American, and one for the SMR). This level of crude oil train traffic would increase the probability of an oil spill along this stretch of mainline track. With the cumulative crude oil train traffic along this route the probability of a 100 gallon or greater oil spill has been estimated to be once in 138 years. This portion of the mainline rail route passes through a number sensitive biological areas including water body crossings. In the unlikely event of an oil spill along this stretch of the mainline rail route, sensitive biological resources could be impacted.

## 4.7 Hazards and Hazardous Materials

**Table 4.7.13 Estimated Risk of Derailment Resulting in Release of 100 Gallons or More of Crude Oil for Various Rail Routes in California**

Route	Approximate Distance (miles)		Annual Incident Probability	Average Incident Rate
	SMR to California Border	Local Safety Hazard Sites (LSHS)		
Entering California From Nevada to Roseville then via Oakland to the SMR	485	26	0.0325	Once per 30.8 years
Entering California From Nevada to Roseville then via Altamont Pass to the SMR	477	26	0.0371	Once per 27.0 years
Entering California from Washington to Roseville then via Oakland to SMR	663	41	0.0480	Once per 20.8 years
Entering California From Washington to Roseville then via Altamont Pass to the SMR	655	41	0.0526	Once per 19.0 years
Entering California from Nevada to Colton and then to SMR	479	55	0.0439	Once per 22.8 years

1. Assume 250 trains per year on each of the routes.
2. Assumes the LSHS have a derailment rate of 3.10 per million miles, which is for Class 1 track.
3. Derailment rate from SMR to Roseville/Colton is the calculated rate used in the analysis above.
4. Assumes derailment rate for non LSHS track from Colton/Roseville to California border is 0.51 per million miles, which is the highest route specific derailment rate calculated for the routes between Roseville/Colton and the SMR.
5. Route from Nevada assumes use of route through Truckee California
6. Assumes use of UPRR track. Numbers would be different for BNSF track.
7. Distances for LSHS from CPUP Annual Railroad LSHS Report for Calendar Year 2013.

### Mitigation Measures

*HM-2a Only rail cars designed to FRA, July 23, 2014 Proposed Rulemaking Option 1: PHMSA and FRA Designed Tank Car as listed in Table 4.7.6, shall be allowed to unload crude oil at the Santa Maria Refinery.*

*HM-2b For crude oil shipments via rail to the SMR a rail transportation route analysis shall be conducted annually. The rail transportation route analysis shall be prepared following the requirements in 49 CFR 172.820. The route with the lowest level of safety and security risk shall be used to transport the crude oil to the Santa Maria Refinery.*

*HM-2c The Applicant's contract with UPRR, shall include a provision to require that Positive Train Control (PTC) be in place for all mainline rail routes in California that could be used for transporting crude oil to the SMR.*

*HM-2d Implement mitigation measures PS-4a through PS4e.*

**Residual Impacts**

Mitigation measures HM-2a through HM-2d would reduce the potential for a potential rail accident and loss of containment, and would also improve emergency response in the event of an accident. Implementation of HM-2a would reduce the probability of a release from a rail car by about 74 percent over the rail car design that is currently proposed by the Applicant. Figure 4.7-6 shows the risk for the mainline rail transport with implementation of the proposed mitigation measures.

Even with this reduction in release probability, the hazards associated with the Rail Spur Project risk along the UPRR right-of-way would still be potentially *significant (Class I)* in the event of a release of crude oil that resulted in a fire or explosion.

The County may be preempted by federal law from implementing these measures as they require particular contractual provisions that might be determined to improperly impact interstate commerce or conflict with the Interstate Commerce Commission Termination Act (ICCTA), which preempts state and local laws with respect to rail transportation.

As discussed above, the USDOT is proposing to implement new rules that would result in stricter regulation of crude by rail transportation. While these rules are not final, many of the mitigation measures identified above could be implemented as part of this rule making process. The proposed rule has three options for tank car designs. Depending upon what option is in the final rule, the probability of a release from a rail car could be reduced by 49 to 74 percent over the rail car design that is currently proposed by the Applicant.

Impact #	Impact Description	Phase	Impact Classification
HM.3	A change in crude slate from rail deliveries could increase hazards at the refinery that would impact the public.	Operations	Class III

The SMR is designed to handle heavy sour crude, to only partially refine crude oil to extract intermediates and gases, and uses the heavier crude oil components to produce petroleum coke.

The SMR, as with all refineries, is similar to other manufacturing facilities that regularly evaluate their principal manufacturing feedstocks in terms of availability, suitability, and economics. This is certainly true of the crude oil feedstock used at the SMR. The refinery processes a range of crude oils from different sources, and the crudes have varied over time. In addition, the refinery often blends crudes from multiple sources prior to processing to assure the crude is within the processing design limits of the refinery.

For the SMR, key crude slate parameters that could impact hazards and potential releases at the refinery have to do with the corrosivity of the crude oil. Table 4.7.14 provides the key corrosivity driving properties (sulfur and total acid number (TAN)) of the typical crude blend and range of major crudes processed at the SMR as well as a range of typical crudes that could be delivered by rail.

## 4.8 Land Use and Recreation

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As discussed in the Hazards and Hazardous Materials Section (Section 4.7), the worst case spill from a unit train on the mainline tracks was assumed to be 180,000 gallons (about six tanker cars).

The northern and southern UPRR mainline track from the Santa Maria Refinery the California border, would pass in close proximity to a number of recreational areas. Although it is unlikely, derailment of a train could result in the release of crude oil from rail tanker cars, which could affect a recreational area. This could prevent public access to these areas during the cleanup process. Depending upon the location and extent of the spill, the cleanup effort could take anywhere from a few days to months. During this period, public access to the affected recreational area could be limited, but would be temporary.

In the event of a crude oil spill UPRR would rely first upon local emergency response agencies (police and fire). If needed, UPRR has standing contracts with emergency response firms that are available around the clock to manage any release of crude oil. UPRR maintains spill response contracts with companies throughout their rail network in California. All of the UPRR response firms are rated Oil Spill Response Organization (OSRO) by the State of California and classified Oil Spill Removal Organization by the United States Coast Guard. Depending upon the location and extent of a spill local response teams, UPRR response personnel, and State and Federal response agencies would be involved in the containment and cleanup operations.

Given the low probability of a spill impacting recreational areas and that access to a recreational area would be temporary, the impact would be considered less than significant.

### **Mitigation Measures**

Implement of mitigation measures BIO-11 and PS-4a through PS-4e would serve to further reduce any potential impact on access to recreational areas from an oil spill.

### **Residual Impacts**

Implementation of mitigation measure BIO-11 and PS-4a through PS-4e would serve to reduce the likelihood of an oil spill and the ability of first response agencies to respond to a crude oil spill. In particular, PS-4b would require the use of safer tank cars that would reduce the likelihood of a spill in the event of an accident.

The County may be preempted by federal law from implementing BIO-11, and PS-4a through PS-4e as they require particular contractual provisions that might be determined to improperly impact interstate commerce.

OSPR is currently in the process of implementing the requirements of SB 861, which will require railroads to have detailed oil spill response plans and to conduct oil spill response drills. This legislation also would require UPRR to pay for and cleanup any spilled oil. The final rules to implement this legislation are expected to be issued in the fall of 2014. However, the timing of when the plans will have to be in place and the drill would start is not yet know. Implementation of this legislation would improve oil spill response for train derailments that lead to spills.

In addition, the USDOT is evaluating proposed rules that would require rail operators of crude oil trains to have a comprehensive OSRP that addresses may of the same requirements as the

### **California Highway Patrol**

The California Highway Patrol (CHP) provides traffic law enforcement in the unincorporated areas of the County and on all freeways within the County. The CHP also provides general law enforcement services and security on all state property and facilities. San Luis Obispo County is served by the CHP Coastal Division, which included the coastal counties from Ventura to Monterey. The Project Site is served by the CHP's San Luis Obispo Station, which serves approximately 900 square miles and is located at 675 California Boulevard in the City of San Luis Obispo. Currently, 39 sworn officers staff the San Luis Obispo Station. The CHP operates three shifts in a 24-hour period: 5:30 a.m. to 6:00 p.m., 10:30 a.m. to 11 p.m., and 5:30 p.m. to 6:00 a.m. Average deployment for each shift is six, two, and four officers, respectively (Day 2011).

The CHP has a Memorandum of Understanding (MOU) with the County Sheriff's Department, which is an agreement between public agencies to share resources and information among themselves in response to a large-scale emergency.

### **Police Services Along Mainline Rail Routes**

The police services along the mainline rail routes include County Sheriff Departments, City Police Departments, and CHP. The jurisdictions along the route would vary based upon the location of the mainline tracks.

## **4.11.2 Regulatory Setting**

### **4.11.2.1 Federal**

Federal law governs most major aspects of rail transport, and preempts most state regulation. The principal agency responsible for promulgating and enforcing the safety of rail shipments of crude oil is Department of Transportation (DOT), and specifically within DOT the Federal Railroad Administration (FRA) and the Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA has issued an advanced notice of proposed rulemaking that would expand the applicability of comprehensive oil spill response plans (OSRPs) to high-hazard flammable trains (HHFTs) which would include train transporting 20 or more carloads in a single train of a Class 3 flammable liquid, which would include crude oil.

### **4.11.2.2 State**

#### **California Public Utilities Commission**

The California Public Utilities Commission (CPUC) regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. CPUC is responsible for ensuring that California utility customers have safe, reliable utility service at reasonable rates; protecting utility customers from fraud; and promoting the health of California's economy. CPUC establishes service standards and safety rules and authorizes utility rate changes, as well as enforcing CEQA compliance for utility construction (CPUC 2010).

*that can assist in the safe containment and removal of any crude oil spill. This contract provision shall be in place and verified by the Cal Fire/County Fire prior to delivery of crude by rail to the Santa Maria Refinery.*

### **Residual Impacts**

Implementation of mitigation measures PS-4a through PS-4e would help to assure that the emergency responders who might have to respond to an incident along the mainline rail routes would have adequate training, information, and capabilities to address the hazards that could occur with operation of the crude oil train along the mainline route.

The County may be preempted by federal law from implementing these measures as they require particular contractual provisions that might be determined to improperly impact interstate commerce or conflict with the Interstate Commerce Commission Termination Act (ICCTA), which preempts state laws with respect to rail transportation.

OSPR is currently in the process of implementing the requirements of SB 861, which will require railroads to have detailed oil spill response plans and to conduct oil spill response drills. This legislation also would require UPRR to pay for and cleanup any spilled oil. The final rules to implement this legislation are expected to be issued in the fall of 2014. However, the timing of when the plans will have to be in place and the drill would start is not yet know. Implementation of this legislation would improve oil spill response for train derailments that lead to spills.

In addition, the DOT is evaluating proposed rules that would require rail operators of crude oil trains to have a comprehensive OSRP that addresses may of the same requirements as the plans required by SB 861. If the DOT adopts a final rule covering crude oil trains, it would improve oil spill response for train derailments that lead to spills.

The DOT has also proposed rules covering enhancements to tank car standards and operational controls for high-hazardous flammable trains, which would include crude oil trains. If this proposed rule is adopted, it would serve to reduce the likelihood of a train derailment and release of crude oil. Section 4.7, Hazards and Hazardous Materials provides additional information on this proposed DOT rule.

If and when all these rules are adopted and in place, they would serve to reduce train derailments and improve emergency response in the event of an accident.

However, it is not certain that implementation of these various regulations would address all of the mitigation measures discussed above. Given that the County may be preempted from implementing mitigation measures PS-4a through PS-4e, oil spills impacts to fire protection and emergency response services along the UPRR mainline tracks would be *significant and unavoidable (Class I)*.

**4.11 Public Services and Utilities**

crude oil trains along these stretches of track would increase the likelihood that there would be an incident. As discussed in impact PS.4 above, an analysis by OES clearly indicates that fire and emergency responders lack resources, training and information in order to adequately respond to a crude oil train incident along the mainline tracks. Without proper training, information, and capabilities the cumulative impacts of a release of crude oil or fire along these stretches of mainline tracks would have significant cumulative impact on fire protection and emergency response services.

Implementation of the mitigation measures PS-4a through PS-4e would provide training, information, and capabilities to all of the local emergency response agencies along these stretches of mainline track. However, The County may be preempted by federal law from implementing these measures as they require particular contractual provisions that might be determined to improperly impact interstate commerce or conflict with the Interstate Commerce Commission Termination Act (ICCTA), which preempts state laws with respect to rail transportation. Therefore, the cumulative impacts to fire protection and emergency services along these three stretches of mainline track would be considered significant and unavoidable.

None of the other cumulative crude by rail projects would use the mainline tracks along the southern route thorough the Los Angeles Basin since the crude oil trains going to Bakersfield would use Tehachapi Pass via Barstow and would not travel as far west as Colton. Therefore, there would be no cumulative impacts from crude oil transport by rail along the southern route.

**4.11.6 Mitigation Monitoring Plan**

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
PS-1	<p>Prior to issuance of grading permits, the Applicant shall submit a Solid Waste Management Plan (SWMP) for approval by San Luis Obispo County to maintain a diversion rate of at least 50 percent of construction waste from reaching the landfill. The SWMP shall consist of information regarding, but not limited to:</p> <ul style="list-style-type: none"> <li>a. The name and contact information of who will be responsible for implementing the recycling plan;</li> <li>b. A brief description of the Project wastes to be generated, including types and estimated quantities of each material to be salvaged, reused, or recycled during the construction phase of this Project;</li> <li>c. Waste sorting/recycling and/or collection areas shall be clearly indicated on the Site Map;</li> <li>d. A description of the means of transportation and destination of recyclable materials and waste, and a description of where recyclable materials and waste will be sorted (whether materials will be site-separated and hauled to designated recycling or landfill facilities, or whether mixed materials will be removed from the site to be processed at a mixed waste sorting facility);</li> <li>e. The name of the landfill(s) where trash will be</li> </ul>	<p>Review of SWMP</p> <p>Field verification</p>	<p>Prior to Grading Permit</p> <p>During Construction</p>	<p>County Planning and Building</p>

#### 4.13 Water Resources

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While the exact route the trains would take to get to these two rail yards is speculative, all of the routes within and outside of California would traverse numerous creeks, washes, rivers, wetlands, and sloughs, which would increase the probability of a spill impacting water resource areas. In the event of a spill impacting sensitive water resources along this portion of the route the impacts could be significant for the same reasons discussed above for the routes between Roseville/Colton and the SMR.

#### Mitigation Measures

*WR-3 Implement mitigation measures BIO-11 and PS-4a through PS-4e.*

#### Residual Impacts

Implementation of mitigation measure BIO-11 and PS-4a through PS-4e would serve to reduce the likelihood of an oil spill and the ability of first response agencies to respond to a crude oil spill. In particular, PS-4b would require the use of safer tank cars that would reduce the likelihood of a spill in the event of an accident.

The County may be preempted by federal law from implementing BIO-11, and PS4a through PS-4e as they require particular contractual provisions that might be determined to improperly impact interstate commerce.

OSPR is currently in the process of implementing the requirements of SB 861, which will require railroads to have detailed oil spill response plans and to conduct oil spill response drills. This legislation also would require UPRR to pay for and cleanup any spilled oil. The final rules to implement this legislation are expected to be issued in the fall of 2014. However, the timing of when the plans will have to be in place and the drill would start is not yet know. Implementation of this legislation would improve oil spill response for train derailments that lead to spills.

In addition, the USDOT is evaluating proposed rules that would require rail operators of crude oil trains to have a comprehensive OSRP that addresses may of the same requirements as the plans required by SB 861. If the DOT adopts a final rule covering crude oil trains, it would improve oil spill response for train derailments that lead to spills.

The USDOT has also proposed rules covering enhancements to tank car standards and operational controls for high-hazardous flammable trains, which would include crude oil trains. If this proposed rule is adopted, it would serve to reduce the likelihood of a train derailment and release of crude oil. Section 4.7, Hazards and Hazardous Materials provides additional information on this proposed USDOT rule.

If and when all these rules are adopted and in place, they would serve to reduce train derailments and improve emergency response in the event of an accident.

Given the uncertain timing of these rules and that the County may be preempted from implementing mitigation measures for the mainline rail oil spills impacts to water resources along the UPRR mainline tracks could be significant and unavoidable (Class I), depending upon the location of the spill.

### 5.2.5 Loop Rail Unloading Configuration

This alternative would use a different track layout at the SMR for unloading of crude oil. As discussed in Table 5.2, all of the operational impacts for this alternative would likely be the same as for the Rail Spur Project with the exception of air quality, noise, and visual resources. This alternative could reduce the air emissions associated with the switching operations at the SMR since fewer movements of the tanker cars may be needed. Visual impacts would likely increase since the trains would be more visible from State Route 1 and other sensitive view areas.

Construction impacts would increase for most of the issue areas (i.e., biology, cultural, agricultural, geology, water, etc.) since a larger area would need to be disturbed. In addition, a larger amount of cut and fill would be needed to implement this alternative. There would also be excess cut material that would need to be hauled off site via truck. This alternative would increase traffic and air emissions associated with construction and could impact additional biological and cultural resources.

Given that this alternative has the potential to reduce air emissions associated with the rail unloading operations at the SMR, and would meet all of the objectives of the project, it has been selected for further evaluation in the EIR.

### 5.2.6 Reduced Rail Deliveries

This alternative would be identical to the Rail Spur Project except that it would only have three trains per week delivered to the SMR versus five. For all the issue areas other than air quality and hazards the impacts would be the same as the proposed project. This alternative would reduce the annual air emissions from the project, but the peak day emissions would remain the same. The air emissions from the Rail Spur Project were found to be less than significant with mitigation. However, the County may be preempted by Federal law from applying mitigation to the UPRR mainline emissions. In this case, the UPRR mainline emissions would be significant and unavoidable. Reducing the train deliveries to three per week would eliminate the significant and unavoidable air impact associated with the annual emissions. However, the peak day emissions would still remain significant and unavoidable.

The hazard impacts associated with train accidents would be reduced since fewer trains would be delivered to the SMR. However, this was found to be a less than significant impact for the Rail Spur Project. The oil spill impacts associated with biology and water resources would remain the same since the spill volumes from a rail tanker car would remain the same.

If the County is preempted from applying mitigation to the UPRR mainline air emissions, then this alternative would serve to reduce the severity of the significant and unavoidable air quality impact. Therefore, this alternative has been selected for further evaluation in the EIR.

### 5.2.7 Alternative Screening Tables

Table 5.1 and Table 5.2, which follow this section, summarize the screening analysis for the alternatives. The Tables provide a rating of each of the alternatives relative to the Rail Spur

by about 0.1 tons per year. The air emissions associated with locomotives traveling on the UPRR mainline would remain the same as the Rail Spur Project.

Impact AQ.1 (Construction Criteria Pollutants) would remain the same as the Rail Spur Project (Class II), but would increase in severity due to the increased construction activities. Mitigation measures associated with impact AQ.1 for the Rail Spur Project would apply to this alternative.

Impact AQ.2 (Operational Emissions in SLO County) would remain a (Class I) impact but would decrease in overall severity due to the reduction in NO<sub>x</sub>, ROG, and DPM emissions at the SMR site. Mitigation measures associated with impact AQ.2 for the Rail Spur Project would apply to this alternative. The NO<sub>x</sub>, ROG, and DPM emissions from the Rail Spur Project in SLO County were found to be less than significant with mitigation. However, the County may be preempted by Federal law from applying mitigation to the UPRR mainline emissions, so it was considered a significant and unavoidable (Class I) impact.

AQ.6 (GHG Emissions) would remain the same as the Rail Spur Project (Class I) but there would be a decrease in GHG emissions at the SMR due to less switching time for the locomotives, which would be about 154 metric tons of CO<sub>2</sub>E per year. Mitigation measures associated with impact AQ.6 for the Rail Spur Project would apply to this alternative. The GHG emissions from the Rail Spur Project were found to be less than significant with mitigation. However, the County may be preempted by Federal law from applying mitigation to the UPRR mainline GHG emissions, so it was considered a significant and unavoidable (Class I) impact.

All other impacts identified for the Rail Spur Project would remain the same, and their associated mitigation measures would apply to this alternative.

### **Biological Resources**

Construction of the loop track configuration would increase the amount of land that would be disturbed by about four acres, which would increase the biological impacts associated with construction. The sensitive open dune habitat directly east of the refinery would also be impacted with the construction of this alternative.

Impacts BIO.1 (Listed Plant Species), BIO.3 (Sensitive Wildlife Species), BIO.4 (American Badger), BIO.5 (Central Dune Scrub), BIO.6 (Coast Live Oak), BIO.8 ( Bird Species), and BIO.9 (Invasive Plants) would all remain Class II impacts, but could increase in severity due to the larger area of disturbance. Mitigation measures associated with these impacts for the Rail Spur Project would apply to this alternative.

All other impacts identified for the Rail Spur Project would remain the same, and their associated mitigation measures would apply to this alternative.

### **Cultural Resources**

Construction of the loop track configuration would increase the amount of land that would be disturbed by about four acres, which could increase the cultural impacts associated with construction.

Impacts CR.2 (Unknown Archeological Resources), CR.3 (Human Remains), and CR.5 (Paleontological Resources) would all remain Class II impacts, but could increase in severity due

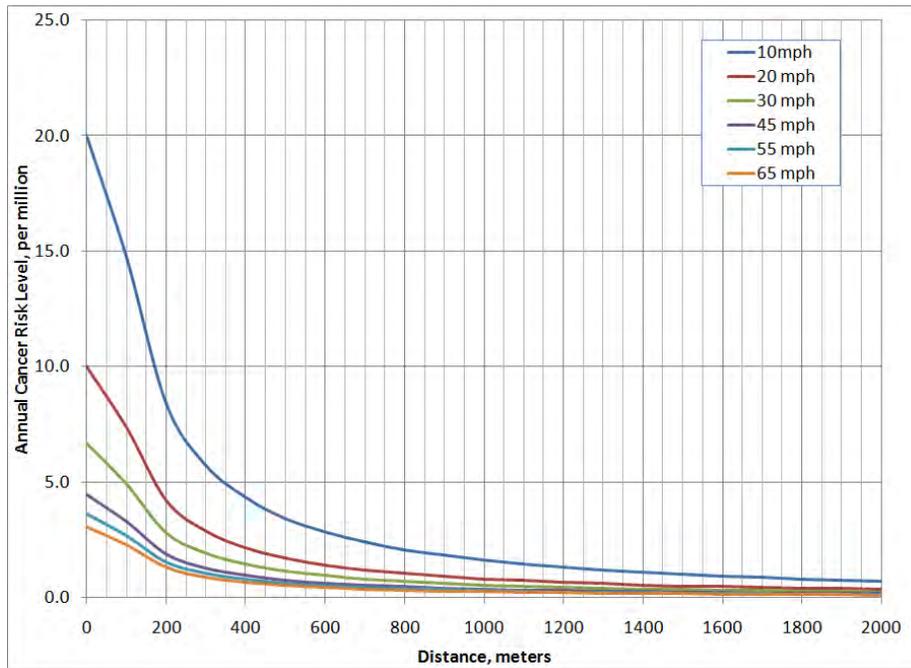
County may be preempted by Federal law from applying mitigation to the UPRR mainline emissions and therefore the emissions were considered significant (Class I). The County could apply the mitigation to all of the ROG+NO<sub>x</sub> and DPM emissions within the SMR site.

Impact AQ.3 (Mainline UPRR Emissions) would remain a Class I impact since the mainline emissions would exceed the SLOCAPCD thresholds. The mainline emissions are shown in Table 5.7 outside of SLO County to the Roseville and Colton rail yards. Table 5.8 shows the mainline air emissions beyond the Roseville and Colton rail yards. The reduction in emissions would be due to fewer trains delivering crude to the SMR (3 vs. 5 per week). Mitigation measures associated with impact AQ.3 for the Rail Spur Project would apply to this alternative. However, the County may be preempted by Federal law from applying mitigation to the UPRR mainline emissions and therefore the emissions were considered significant (Class I).

**Table 5.7 Reduced Rail Delivery Alternative Mainline Rail Emissions, Peak Day and Annual**

Route/Air District	Peak Day Emissions, lbs/day					
	ROG	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Northern Route Via Oakland</b>						
Placer	0.38	0.46	4.65	0.02	0.21	0.21
Sacramento Metro	6.44	7.85	79.69	0.37	3.68	3.57
Yolo Solano	13.41	16.35	166.05	0.77	7.66	7.43
Bay Area	57.82	70.49	715.87	3.30	33.04	32.05
Monterrey Bay	47.37	57.74	586.43	2.71	27.07	26.25
<i>Total</i>	<b>125.4</b>	<b>152.9</b>	<b>1,552.7</b>	<b>7.2</b>	<b>71.7</b>	<b>69.5</b>
<b>Northern Route Via Stockton</b>						
Placer	0.38	0.46	4.65	0.02	0.21	0.21
Sacramento Metro	15.83	19.29	195.94	0.90	9.04	8.77
San Joaquin Valley	20.95	25.54	259.34	1.20	11.97	11.61
Bay Area	37.50	45.72	464.34	2.14	21.43	20.79
Monterrey Bay	47.37	57.74	586.43	2.71	27.07	26.25
<i>Total</i>	<b>122.0</b>	<b>148.7</b>	<b>1,510.7</b>	<b>7.0</b>	<b>69.7</b>	<b>67.6</b>
<b>Southern Route</b>						
Santa Barbara	45.19	55.09	559.54	2.58	25.83	25.05
Ventura	24.13	29.42	298.80	1.38	13.79	13.38
South Coast	36.79	44.85	455.55	2.10	21.03	20.39
<i>Total</i>	<b>106.1</b>	<b>129.4</b>	<b>1,313.9</b>	<b>6.1</b>	<b>60.6</b>	<b>58.8</b>
Route/Air District	Annual Emissions, tons/year					
	ROG	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Northern Route Via Oakland</b>						
Placer	0.01	0.03	0.23	0.00	0.01	0.01
Sacramento Metro	0.18	0.59	3.90	0.03	0.12	0.12
Yolo Solano	0.37	1.23	8.12	0.06	0.25	0.24
Bay Area	1.61	5.29	35.02	0.25	1.07	1.04
Monterrey Bay	1.32	4.33	28.69	0.20	0.88	0.85
<i>Total</i>	<b>3.5</b>	<b>11.5</b>	<b>76.0</b>	<b>0.5</b>	<b>2.3</b>	<b>2.3</b>
<b>Northern Route Via Stockton</b>						
Placer	0.01	0.03	0.23	0.00	0.01	0.01
Sacramento Metro	0.44	1.45	9.59	0.07	0.29	0.29
San Joaquin Valley	0.58	1.92	12.69	0.09	0.39	0.38
Bay Area	1.04	3.43	22.72	0.16	0.70	0.68
Monterrey Bay	1.32	4.33	28.69	0.20	0.88	0.85

**Figure 5-6 Reduced Rail Delivery Alternative Mainline Locomotive Cancer Risk, by speed and distance from Mainline (3 trains per week)**



Notes: Based on 3 locomotives per train, 150 round train trips per year, Nipomo meteorological dataset (1994-1996) and 30 year average locomotive emission factor (as per EPA). Includes OEHHA adjustment factors.

This figure shows that for areas where the train is moving faster than 20 miles per hour, the cancer health risk impacts would be less than significant. However, there are areas along the mainline rail route that have speed restriction of 10 miles per hour or less, such as in the City of Davis. These areas could experience cancer risks that are above the 10.0 in a million threshold. Given that the speed at which a train could cause excess cancer risk above the threshold is lower for the Rail Spur Project, the severity of the impact would be less since fewer areas would be effected.

Impact AQ.6 (GHG Emissions) would remain a significant Class I impact but would decrease in severity since fewer trains would deliver crude to the SMR. Table 5.9 shows the estimated GHG emissions for this alternative. The reduction in emissions would be due to fewer trains delivering crude to the SMR (3 vs. 5 per week). Mitigation measures associated with impact AQ.6 for the Rail Spur Project would apply to this alternative. However, the County may be preempted by Federal law from applying mitigation to the UPRR mainline GHG emissions and therefore the emissions were considered significant (Class I).

SMR. However, in the event of an oil spill that effected cultural resources the potential impacts would remain the same as for the Rail Spur Project. Mitigation measures associated with CR.6 for the Rail Spur Project would apply to this alternative. All other impacts identified for the Rail Spur Project would remain the same, and their associated mitigation measures would apply to this alternative.

### **Hazards and Hazardous Materials**

By reducing the number of train deliveries to the SMR, the probability of a train accident and resultant oil spill along the entire mainline route and at the SMR would be reduced by about 40 percent. This would serve to reduce the level of risk associated with a rail accident particularly along the entire mainline rail route.

Impact HM.1 (Risk of Spill/Fire at Unloading Facility) would remain Class III impacts since the maximum hazards zones would remain the same as for the Rail Spur Project, and would be within the boundaries of the SMR. The worst case spill volume is associated with a pipeline rupture between the rail unloading facility and the existing crude oil storage tanks. This spill volume would not change with this alternative.

Impact HM.2 (Risk of Spill/Fire on UPRR Mainline) would remain Class I, but the level of risk along the entire rail line would decrease since the probability of an oil spill incident would be reduced. Figure 5-7 shows the risk profiles for this alternative for the various routes between the SMR and the Roseville and Colton rail yards. The figure shows that the impacts would be significant (Class I). Even with the reduce annual train trips the potential consequences remain high since the route passes through a number of HTUA (Los Angeles Basin, Bay Area, Sacramento). With the mitigation identified for HM.2 for the Rail Spur Project, the impact would be substantially reduced.

The County may be preempted by Federal law from applying mitigation to the UPRR mainline operations so the unmitigated risk is what is used to determine the significance of the impact. Unmitigated, even one train per week would be a significant impact. For the portion of the rail route past Roseville and Colton to the California Border and beyond, the impacts the public safety risk from mainline rail incidents would remain significant. However, the probability of an incident would be reduced due to few train trips per week.

Impact HM.3 (Crude Slate Changes at SMR) would remain Class III, but would be reduced in severity since less crude would be delivered to the refinery. This would result in a smaller change in the overall refinery crude slate.

### **Noise and Vibration**

Impact N.2 (Operational Unloading) would remain the same as the Rail Spur Project (Class II), but fewer trains would be delivered to the SMR site, which would reduce the amount of time sensitive populations around the SMR are exposed to the noise from the unloading operations. However, this alternative would not reduce the peak hour noise levels associated with the train unloading operations, which is what is used to determine the significance of this noise impact. Mitigation measures identified for the Rail Spur Project would apply to this alternative.

## 5.0 Alternatives Analysis

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trucks and moved to the SMPS, where it would be unloaded and moved via pipeline to the SMR. Phillips 66 is currently using this method for delivering crude to the SMR.

The alternative could eliminate the Class I impact associated with air toxic emissions due to operations at the SMR (AQ.4). This impact would be shifted to the rail facility in Bakersfield and the SMPS. However, there are no sensitive receptor sites in close proximity to these facilities so the impact of operational air toxic emission would be less than significant (Class III).

The No Project Alternative could also reduce the severity of three Class I air quality impacts identified as part of the Rail Spur Project (AQ.2-Operational Emissions, AQ.3-Mainline Rail Emissions, and AQ.5 –Toxic Emission on Mainline Rail). All of these reductions in severity are a result of fewer train trips used to crude delivery (2.5 vs. 5 per week). However, some of the emission reduction from the fewer trains would be offset by the additional truck emissions from moving the oil from Bakersfield to the SMPS. Greenhouse gas emissions would remain Class I, but would increase in severity over the Rail Spur Project due to the additional trucking operations. This alternative would reduce the annual NO<sub>x</sub>, ROG, and DPM, emissions, but would increase the annual GHG emissions. Also, the peak day emissions of all pollutants would be higher for this alternative due to the trucking emissions.

As discussed in the Air Quality Section (Section 4.3) most of these Class I impacts could be mitigated to less than significant levels if the County is not preempted by Federal law from requiring mitigation on the UPRR mainline tracks and UPRR locomotives. Since the County may be preempted, the impacts have been classified as significant (Class I). If the County is not preempted then the NO<sub>x</sub>, ROG, DPM, and GHG emissions can be mitigated and the impacts would be Class II. Only in the case where the County is preempted, would the No Project Alternative reduce the severity of the NO<sub>x</sub>, ROG, and DPM impacts associated with the Rail Spur Project.

This alternative would reduce the severity of HM.2-UPRR Mainline Accidents but would likely remain a Class I impact. The reduction in risk associated with train accidents for the No Project Alternative would be due to fewer trains per year traveling to Bakersfield, and the fact that the trains would not have to travel through the HTUAs of the Bay Area or Los Angeles. The risk from a train accident would be shifted from the Coastal Area, Bay Area and Los Angeles area if the trains come from the South to the San Joaquin Valley. The trains would still pass through some heavily populated areas such as Sacramento, Davis, Bakersfield, Fresno, Stockton, etc., so the risk would likely remain significant (Class I). This alternative would add the risk of an oil spill due to a truck accident, but the truck route (State Highway 166) is not heavily populated. While the probability of a truck accident would be higher than for rail, the spill volume and associated hazards would be less.

The majority of the rail risk can be mitigated via use of safer rail tanker cars as discussed in Section 4.7 (Hazards and Hazardous Materials). However, the County may be preempted by Federal law from requiring mitigation on the UPRR mainline tracks, and may not be able to require the use of the safer tank car design. If the County is not preempted then the risk of a rail accident can be substantially reduced. Only in the case where the County is preempted, would the No Project Alternative likely reduce the severity of the UPRR mainline accident impacts associated with the Rail Spur Project.

Toxic Emission on Mainline Rail, and AQ.6-GHG Emissions) since fewer trains would be delivered to the SMR. This alternative would reduce the annual NO<sub>x</sub>, ROG, DPM, and GHG emissions of these pollutants, but would not affect the peak day emissions.

As discussed in the Air Quality Section (Section 4.3) most of these Class I impacts could be mitigated to less than significant levels if the County is not preempted by Federal law from requiring mitigation on the UPRR mainline tracks and UPRR locomotives. Since the County may be preempted, the impacts have been classified as significant (Class I). If the County is not preempted then the NO<sub>x</sub>, ROG, DPM, and GHG emissions can be mitigated and the impacts would be Class II. Only in the case where the County is preempted, would the Reduced Delivery Alternative reduce the severity of the NO<sub>x</sub>, ROG, and DPM impacts associated with the Rail Spur Project.

This alternative would reduce the severity of two hazard impacts identified as part of the Rail Spur Project (HM.1-Risk of Spill/Fire at Unloading Facility and HM.2-UPRR Mainline Accidents) since fewer trains would be delivered to the SMR.

This alternative would reduce the severity of HM.2-UPRR Mainline Accidents but would remain a Class I impact. The reduction in risk associated with train accidents for this alternative would be due to fewer trains per year servicing the SMR, so the probability of an accident and resulting spill would be less.

The majority of the rail risk can be mitigated via use of safer rail tanker cars as discussed in Section 4.7 (Hazards and Hazardous Materials). However, the County may be preempted by Federal law from requiring mitigation on the UPRR mainline tracks, and may not be able to require the use of the safer tank car design. If the County is not preempted then the risk of a rail accident can be substantially reduced for both the Rail Spur Project as well as this alternative.

The Reduced Rail Delivery Alternative would also reduce the probability of an oil spill from a train accident since fewer trains would be used to deliver crude to the SMR. This would reduce the probability that spill would impact biological, water, agricultural, and cultural resources. However, the spill volumes would remain the same. In the event of a spill that occurred in the vicinity of any of these resources, impacts BIO.11 (UPRR Mainline Oil Spills), WR.3 (UPRR Mainline Oil Spills), CR.6 (UPRR Mainline Oil Spills), and AR.5 (UPRR Mainline Oil Spills) could be significant and would remain Class I, but would be reduced in severity due to the lower probability of a spill impacting these resources.

This alternative would reduce the duration of train unloading noise that sensitive receptors would be exposed to since fewer trains would be unloaded at the SMR. However, the peak hour noise exposure (the criteria used to determine the significance of the unloading noise) would remain the same as the Rail Spur Project.

The reduced rail delivery alternative would meet most of the objectives of the Rail Spur Project. However, it may not allow the SMR to operate at its permitted throughput capacity since less crude oil could be available to the refinery.

The determination of the environmentally superior alternative is somewhat complicated by the preemption issue. If the County is preempted from requiring mitigation of the impacts on the

## I. STAFF RECOMMENDATION

Staff recommends the Planning Commission take the following actions:

1. Deny the application for Development Plan and Coastal Development Permit DRC2012-00095; and
2. Adopt the Findings included in Exhibit C.

The detailed basis for this recommendation can be found in Section V below under “Project Analysis.”

## II. SUMMARY

### A. Project Description:

The project (“Project”) includes modification of the existing rail spur by constructing five parallel tracks and an unloading rack area. The Project would involve unloading of up to five unit trains per week, or a combined total of five unit and manifest trains (manifest trains contain a mixture of goods within separate railcars and are also known as a mixed freight train), with an annual maximum number of trains of 250. Trains would arrive from different North American oilfields and/or crude oil loading points depending on market availability. In a unit train configuration, each train would consist of three locomotives, two buffer cars, and 80 railcars carrying approximately 27,300 gallons each, for a total of approximately 2,190,000 gallons (52,000 bbls) of crude oil. The Project would not affect the amount of material processed at the refinery. Throughput levels at the refinery are capped by previous permits issued by the County and by the San Luis Obispo County Air Pollution Control District. In addition, no crude oil or refined product would be transported out of the refinery by rail. The refined product would be shipped to the Rodeo Refinery in Contra Costa County via pipeline which is the refinery’s current operation.

### B. Community Concerns Regarding Health, Safety and Other Issues:

Extensive community input has been submitted to the County with regards to the Project. Out of the approximately 24,500 comment letters received on the project (including comments on the Draft Environmental Impact Report, Recirculated Draft Environmental Impact Report and throughout the process) approximately 150 of these have been in support of the Project. A majority of the letters submitted with comments and opinions on the project have been submitted from persons outside of San Luis Obispo County. For the remainder of the letters and comments submitted by residents of San Luis Obispo County, a similar ratio of opposition versus support of the project was the case.

The general consensus among the comments received is that Project benefits do not outweigh the potential hazards it will bring to the public. These hazards mainly stem from rail accidents, oil spills, health hazards, and explosions/fires within communities along rail lines as a result of an increase of crude transport via rail. These hazards are also exacerbated because the County is not legally able, due to federal preemption, to require certain conditions of approval for Union Pacific along the main rail lines (e.g., require particular emergency response preparations, use of particular routes to avoid sensitive areas, or modifications to Union Pacific Railroad [UPRR] tracks or operations), therefore the County’s approval of the project would allow an increase in risk to the populations within the County along the mainline (as well as outside the County and throughout the state) without the ability to enforce any measures to mitigate off-site impacts to populations along the rail lines.

safety, hazards, energy development, water resources, riparian areas, cultural resources, and agricultural resources.

The Project would adversely impact the health, safety, and welfare of the public as a result of significant and unavoidable impacts related to air quality, cancer risk, accidental release, fire and potential explosions as a result of the construction and operation of the Project. Public concerns have been expressed regarding the safety of the unloading process on the project site, as well as along the rail lines through the County and through the State. Some of the concern related to mainline rail also has to do with the County likely being preempted from mitigating or conditioning impacts to areas beyond the project site (refer to Section VII below for further discussion on preemption).

## **VII. FEDERAL PREEMPTION**

The federal government has historically, and heavily, regulated rail transportation in the U.S., beginning with the Interstate Commerce Act of 1887. In 1995, Congress enacted the Interstate Commerce Commission Termination Act (ICCTA), which replaced the Interstate Commerce Commission with the Surface Transportation Board. The ICCTA also included a broad statement of preemption of state and local regulation of rail transportation. In essence, this means that the federal government through the Surface Transportation Board has full authority over all rail transportation and therefore the County is unable to require local regulation within these areas:

As outlined in the ICCTA the jurisdiction of the [Surface Transportation] Board includes:

- (1) transportation by rail carriers, and the remedies provided in this part with respect to rates, classifications, rules (including car service, interchange, and other operating rules), practices, routes, services and facilities of such carriers; and
- (2) the construction, acquisition, operation, abandonment, or discontinuance of spur, industrial, team, switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one State, is exclusive. Except as otherwise provided in this part, the remedies provided under this part with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law.

This law preempts state and local regulation “that may reasonably be said to have the effect of managing or governing rail transportation, while permitting the continued application of laws of general application having a more remote or incidental effect on rail transportation.” (*People v. Burlington Northern Santa Fe Railroad* (2012) 209 Cal.App.4th 1513, 1528.). A project falling under the Surface Transportation Board’s jurisdiction is not subject to CEQA or to local regulation, except for ministerial permits and generally applicable codes protecting the public health and safety such as electrical, plumbing, and fire codes.

The Applicant has asserted that the ICCTA preempts the County from subjecting the rail component of the proposed project to CEQA review and from mitigating any of the potential impacts identified from project-related mainline activities. UPRR has generally concurred, pointing to cases where courts have found that local conditions imposed on permits unreasonably burdened rail carriage and were therefore preempted. (See Exhibit J for correspondence from the Applicant and UPRR regarding federal preemption.)

Opponents of this and other recently proposed rail projects state the regulatory authority granted by the ICCTA is not limitless, does not preempt CEQA, that CEQA is an information statute which does not interfere with interstate commerce, and that CEQA requires that all significant impacts of a project be mitigated if reasonably feasible.

In the case of this Project, it is clear that for activities performed within the Santa Maria Refinery (SMR) site the County is not preempted by federal law since these activities would not occur on UPRR property and would not involve infrastructure or trains operated by UPRR. However, federal law would likely limit the ability of the County to regulate the type and design of locomotives since they are owned and operated by UPRR to transport goods throughout the nation and because regulation of the types of locomotives that could be used for this project would likely interfere with interstate commerce. The impacts of the activities that occur on the Project Site are described and evaluated in the FEIR, and the County as CEQA Lead Agency has the authority to impose mitigation measures or conditions of approval to reduce potential impacts within the boundaries of the SMR.

As lead agency, the County determined that it would analyze potential project-related impacts that may occur along UPRR's mainline in order to meet the information disclosure requirements of CEQA. While the FEIR describes these potential impacts of project-related train movements along the UPRR mainline throughout the state, the County Department of Planning and Building, based on input from legal counsel, understands the County as CEQA Lead Agency may be preempted from imposing mitigation measures disclosed in the FEIR on UPRR equipment and train movements statewide on the mainline. This information was included in the FEIR to ensure full disclosure of impacts and mitigations.

## **VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

### **A. Geographic Scope of Analysis**

The FEIR evaluates the environmental issues associated with the Project, both on the project site and beyond the boundaries of the project site onto the UPRR mainline throughout California and beyond. The operation of trains to and from the Santa Maria Refinery (SMR) would be performed by UPRR, on UPRR property, and on trains operated by UPRR employees.

Trains could enter California at five different locations. Depending upon the route taken by the train they could arrive at the project site from the north or the south. It is unknown what route UPRR would use to deliver the trains to the SMR. Coming from the north the routes merge at the UPRR Roseville Rail Yard. From the south the routes merge at the Colton Rail Yard. Given that the route the trains would travel to get to these two UPRR yards is speculative, the FEIR has evaluated in more detail the impacts of trains traveling from these two UPRR yards to the SMR.

Beyond the two UPRR Yards, trains could travel any number of routes. Crude oil delivered to California by UPRR would generally pass through either of these two rail yards in route to the SMR. Depending upon the source of the crude oil, crude oil trains could use any portion of the UPRR network between Roseville/Colton and the source location for the crude oil. The exact route that would be taken would depend upon a number of factors, that could include the source of the crude oil, weather conditions, train traffic conditions, etc. Since the routes past Roseville and Colton are somewhat speculative, the FEIR has discussed in a more qualitative nature the potential impacts of train traffic beyond these two rail yards.

Once the train arrives at the SMR, it would be operated by Phillips 66 personnel on property owned by Phillips 66. Therefore, activities performed within the SMR would not be preempted by federal law since they would not occur on UPRR property and would not be operated by UPRR employees. For the impacts of the activities that occur within the SMR, the County as CEQA Lead Agency, and other state and local responsible agencies have clear authority to impose mitigation measures. The following are discussions of the significant and unavoidable impacts associated with the Project at the SMR (refer to Section VII.B below) and on the mainline (refer to Section VII.C below).

## B. Project Site – CEQA Discussion

The FEIR identifies several project site-specific impacts (versus railroad mainline impacts) that would result from implementation of the project (i.e., impacts that would result solely based on activities on the project site). Of these impacts, most can be reduced to a level of insignificance through the County's ability to require implementation of various mitigation measures (i.e., resulting in Class II impacts). Issue areas where impacts can be reduced to insignificant include aesthetics/visual resources, water resources, biological, cultural, geological, noise, public services, traffic, and air quality impacts.

However, there would remain two project site-specific significant and unavoidable adverse air quality impacts (i.e., Class I impact) for operational activities at the SMR.

- 1. Air Quality (AQ.2):** The Project would exceed the diesel particulate matter (DPM) emission threshold of 1.25 pounds per day at the Santa Maria Refinery. The onsite DPM emissions for the project would be about 8.15 lbs per day. The use of Tier 4 locomotives and reduced idling time for locomotives onsite as mitigation would reduce the DPM emissions to 0.72 lbs per day. However, since UPRR (and not the Project Applicant) would own the locomotives, and the locomotives are used for interstate commerce, the mitigation measure to use Tier 4 locomotives would likely be preempted by Federal law, and therefore may not be a feasible mitigation measure. Without the use of Tier 4 engines the DPM emissions would be 7.45 lbs per day (this includes the reduction in idling at the site). DPM is an air toxic and would contribute to the local PM<sub>10</sub> emissions, which already exceed the State PM<sub>10</sub> air quality standard. Therefore, even with all of the proposed mitigation the County could feasibly implement, the impact would remain significant and unavoidable (Class I).
- 2. Air Quality (AQ.4):** The Project would generate toxic air emissions in the vicinity of the Santa Maria Refinery that exceed San Luis Obispo County Air Pollution Control District (SLOCAPCD) health risk thresholds when factoring in the 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments (refer to FEIR, Section 4.3.4.2, Impact AQ.4). The SLOCAPCD cancer risk CEQA threshold is 10 in a million for toxic emissions.

In assessing health risk impacts, the state-approved Hotspots Analysis and Reporting Program (HARP) model was used for the FEIR. In late April of 2015 OEHHA issued the final Guidance Manual for Preparation of Health Risk Assessments, as well as an updated health risk assessment model (HARP2). Given that this is the most recent up to date HRA model approved by the State, San Luis Obispo County Planning decided that all of the HRA analysis in the FEIR should be updated to reflect the final HRA guidance and HRA model from OEHHA. The California Air Pollution Control Officers Association (CAPCOA) guidelines for Health Risk Assessments (which are the guidelines the SLOCAPCD uses) requires that the health risk assessment for a facility include all existing fixed and mobile sources plus the proposed Project.

HARP2 modeling for the Project, when taking into consideration the existing SMR, all existing trucking operations, and the proposed project, results in a maximum exposed individual resident (MEIR) cancer risk of 26.5 in a million. This includes emission sources at the project site as well as the mainline emissions near the SMR. Both of these sources affect the same receptors near the SMR. The SLOCAPCD cancer risk threshold is 10 in a million for toxic emissions. Note that the APCD considers all sources (both the project site sources and the mainline sources) in comparison to the thresholds when determining significance (see section C.4 below). The maximum exposed individual location is the residential area north of the SMR.

The use of Tier 4 locomotives and reduced idling time for locomotives onsite as mitigation would reduce the MEIR to 6.0 in a million at the same receptor. However, since UPRR (and not the Project Applicant) would own the locomotives, and the locomotives are used for interstate commerce, the mitigation measure requiring the use Tier 4 locomotives would likely be preempted by Federal law, and therefore may not be a feasible mitigation measure. Without the use of Tier 4 engines but with implementation of other mitigation measures, the MEIR would be 13.6 in a million at the same receptor (this includes the reduction in idling at the site, use of cleaner truck engines, and daytime unloading only). Therefore, even with all of the proposed mitigation measures the County could implement, the impact would remain significant and unavoidable (Class I).

### C. Union Pacific Rail Road (UPRR) Mainline – CEQA discussion

The FEIR identifies ten impacts from operation on the mainline that are considered significant unavoidable (i.e., Class I impacts). The following is summary of the ten Class I impacts.

1. **Agricultural Resources (AR.5):** The Project would result in effects that impair adjacent agricultural resources and uses along the UPRR mainline in the event of a derailment and/or spill, including the generation of contaminated air emissions, soil and surface water contamination, and increased risk of fire, which have the potential to adversely affect adjacent agricultural areas. Implementation of mitigation measures have been recommended (i.e., measures that would reduce the likelihood of an oil spill and increase the ability of first response agencies to respond to a crude oil spill along the mainline); however, even with full implementation of these measures impacts to agricultural resources would be significant. In addition, Federal preemption would likely prevent local agency (County) regulation of rail lines and implementation of appropriate mitigation measures to protect and reduce impacts to agricultural resources along the mainline may not be feasible or enforceable. Therefore, oil spill impacts to agricultural resources along the UPRR mainline tracks would be significant and unavoidable (Class I).
2. **Air Quality (AQ.2):** Operational activities associated with the Project within San Luis Obispo County (SLOC) along the UPRR mainline would generate nitrogen oxide (NO<sub>x</sub>), reactive organic gases (ROG), and diesel particulate matter (DPM) emissions that exceed SLOCAPCD thresholds. For the mainline rail emissions it is possible that contractually the Applicant could require the use of lower emission locomotives such as Tier 4 locomotives. However, since these are operated by UPRR on UPRR tracks, a requirement that the Applicant enter into this type of contractual provision is likely preempted by Federal law and therefore unenforceable. The County may also be preempted by Federal law from requiring emission reduction credits for mainline rail emissions. Due to the possible preemption by Federal law which could prevent the mitigation measures from being implemented (outside of the SMR facility boundary), emission reduction credits might not be achievable and impacts would remain significant and unavoidable (Class I).
3. **Air Quality (AQ.3):** Operational activities of trains along the mainline rail route outside of SLOC associated with the Project would generate NO<sub>x</sub> and ROG emissions that exceed thresholds of 15 air districts other than SLOCAPCD. For three of these districts impacts cannot be mitigated to less than significant levels. Mitigation has been recommended that includes use of Tier 4 locomotives and the purchase of emission credits. For the mainline rail emissions it is possible that contractually the Applicant could require the use of lower emission locomotives such as Tier 4 locomotives. However, since these are operated by UPRR on UPRR tracks, a requirement that the

Applicant enter into this type of contractual provision would likely be preempted by Federal law and therefore unenforceable. The County may also be preempted by Federal law from requiring emission reduction credits for mainline rail emissions. Since it is unlikely that these mitigation measures will be implementable and it is uncertain if the other Air Districts could require emission reduction credits, the impacts associated with the mainline rail operation would remain significant and unavoidable (Class I).

4. **Air Quality (AQ. 5):** Operational activities of trains along the mainline rail route associated with the Project would generate toxic air emissions that exceed the San Luis Obispo County Air Pollution Control District (SLOCAPCD) health risk thresholds when factoring in the 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments (refer to FEIR, Section 4.3.4.2, Impact AQ.5). The SLOCAPCD cancer risk CEQA threshold is 10 in a million for toxic emissions. These activities include movement of the locomotives on the mainline (and in areas near the SMR which are also impacted by project site activities) due to the emissions of air toxics such as diesel particulate matter. Calculations in the FEIR show that this Project would exceed the cancer threshold of 10 in a million for areas where trains speeds are limited to 30 miles per hour or less. Mitigation has been recommended that includes use of Tier 4 locomotives and the purchase of emission credits. Since it is unlikely that these mitigation measures will be implementable due to Federal preemption, and it is uncertain if the other Air Districts could require emission reduction credits, the air toxic emission impacts associated with the mainline rail operation would remain significant and unavoidable (Class I).
5. **Air Quality (AQ.6):** Operational activities along the mainline rail routes would generate greenhouse gas (GHG) emissions that exceed SLOCAPCD thresholds. Emissions of GHG would result from locomotives operating along the mainline. Project-related GHG emissions within California would exceed the SLOCAPCD thresholds and therefore would be considered significant. Since the State does not have a GHG threshold, the FEIR used the SLOCAPCD threshold for determining the significance of GHG emissions for mainline operations. For the mainline rail GHG emissions it is possible that the Applicant could be required to obtain GHG emission reduction credits. However, the County may also be preempted by Federal law from requiring emission credits for mainline rail GHG emissions. Due to the possible preemption by Federal law which could prevent mitigation measures from being implemented (outside of the SMR facility boundary), emission reduction credits might not be achievable and impacts would remain significant and unavoidable (Class I).
6. **Biological Resources (BIO.11):** Transport of crude oil by rail, along the UPRR mainline, could result in a crude oil spill that significantly impacts sensitive plant and wildlife species, wetlands, creeks, rivers and waterways. Implementation of oil spill prevention plan and first response mitigation measures (i.e., BIO-11 and PS-4a through PS-4e in the FEIR) would serve to reduce the likelihood of an oil spill and enhance the ability of first response agencies to respond to a crude oil spill. The County may be preempted by federal law from implementing these measures as they require particular contractual provisions that might be determined to improperly impact interstate commerce. There are several state and federal laws and rules that are proposed to help minimize impacts from rail-related oil spills (e.g., SB 861 to be implemented by California Department of Fish and Wildlife/Office of Spill Prevention and Response (CDFW/OSPR) and United States Department of Transportation's (USDOT's) proposal for oil trains to have comprehensive Oil Spill Response Plans in place). Given the uncertain timing of these rules and that the County may be

preempted from implementing mitigation measures for the mainline rail oil spills. potential impacts to biological resources along the UPRR mainline tracks would be significant and unavoidable (Class I).

7. **Cultural Resources (CR.6):** Train traffic associated with the importation of crude oil to the project site could result in a derailment or a material spill, which could result in the disturbance and destruction of cultural resources along the mainline routes. Clean-up of an oil spill would likely require the use of bulldozers, front end loaders, and other construction equipment to remove any contaminated soil. Use of this type of construction equipment could impact both known and unknown cultural, historic, and paleontological resources. Implementing cultural resources emergency contingency and treatment plan mitigation measure CR.6 in the FEIR could reduce potential impacts; however, there is the potential that a derailment or a spill may destroy a significant cultural or historic resource, and remediation actions may not result in the recovery of significant resources. In the event this occurs, the residual effect could be significant and unavoidable (Class I).
8. **Hazards and Hazardous Materials (HM.2):** The potential for a crude oil unit train derailment would increase the risk to the public in the vicinity of the UPRR right-of-way. It is unknown what route UPRR would use to deliver the trains to the SMR. Coming from the north the routes merge at the UPRR Roseville Rail Yard and from the south the Colton Rail Yard. Modeled scenarios ranged from small releases from a tank car, to the complete loss of multiple tank cars. The worst case spill was assumed to be 180,000 gallons (about six tanker cars). An explosion of tank cars, simulated as a Boiling Liquid Expanding Vapor Explosion (BLEVE), was also evaluated. Implementing tank car design improvements, route analysis, positive train control (which is a system of functions for safety control such as GPS and other electronic safety features), and first responder mitigation measures would reduce the potential for a rail accident and loss of containment, and would also improve emergency response in the event of an accident. Even with this reduction in release probability, the hazards associated with the project risk along the UPRR right-of-way would still be significant in the event of a release of crude oil that resulted in a fire or explosion. The County may be preempted by federal law from implementing these measures, particularly those that would require particular contractual provisions that would improperly impact interstate commerce or conflict with the Interstate Commerce Commission Termination Act (ICCTA). Therefore, the risk to the public along the UPRR mainline tracks would be significant and unavoidable (Class I).
9. **Public Services (PS.4):** Operations of the crude oil train on the mainline UPRR tracks would increase demand for fire protection and emergency response services along the rail routes. As discussed above, the worst case spill from a unit train on the mainline tracks was assumed to be 180,000 gallons (about six tanker cars). An accident along the UPRR mainline tracks could result in an oil spill or fire, which would place demand on fire and emergency responders. Mitigation identified for this impact includes requiring the Applicant, as part of their contract with UPRR, to provide for advanced notice of shipments to the SMR, use of enhanced rail cars, annual funding for first responder training, and emergency notification in the event of an accident. It is not certain that implementation of the mitigation measures discussed above is feasible given that the County may be preempted by federal law. Therefore, oil spill impacts to fire protection and emergency response services along the UPRR mainline tracks would be significant and unavoidable (Class I).

10. **Water Resources (WR.3):** A rupture or leak from a rail car on the UPRR mainline track could substantially degrade surface water quality. While the exact route the trains would take to get to these two rail yards is speculative, all of the routes within and outside of California would traverse numerous creeks, washes, rivers, wetlands, and sloughs, which would increase the probability of a spill impacting water resource areas such as surface water bodies. Implementation of oil spill prevention plan and first response mitigation measures (i.e., BIO-11 and PS-4a through PS-4e in the FEIR) would serve to reduce the likelihood of an oil spill and the ability of first response agencies to respond to a crude oil spill. The County may be preempted by federal law from implementing these measures as they require particular contractual provisions that might be determined to improperly impact interstate commerce. There are several laws and rules that are proposed to help minimize impacts from rail-related oil spills (e.g., SB 861 to be implemented by CDFW/OSPR and USDOT proposal for oil trains to have comprehensive Oil Spill Response Plans in place). Given the uncertain timing of these rules and that the County may be preempted from implementing the identified mitigation measures, impacts to water resources along the mainline would be potentially significant and unavoidable (Class I).

## **IX. OTHER ISSUES / MAJOR ISSUES RECEIVED FROM PUBLIC COMMENTS**

### **A. Neighboring Governmental Entities**

In addition to the comments received during the public comment period for the EIR, the Department has continued to receive comments subsequent to the comment period from private individuals and others. Of note are the comments that have been received from state and local governmental officials, counties, cities, schools and fire protection districts expressing concern over the Project's use of the mainline to transfer crude oil through their communities and past their facilities (refer to Exhibit F for a list of post comment period agency and special district commenters). The comments generally request that County decision-makers do not approve the project; or, if they do consider Project approval to first conduct additional risk analysis, adopt the best available tank car standards and ensure that they are adhered to, and require that better crude by rail safety standards be implemented. The letters listed in Exhibit F as well as all others received, including those from private individuals, are included as a part of the record.

Because the Interstate Commerce Commission Termination Act (ICCTA) may preempt the County from imposing a number of conditions that would mitigate project-related impacts along UPRR's mainline, certain impacts would remain unmitigated. Some of those impacts, such as those to fire protection or first responder services, have the potential to negatively affect public health and safety and the health and safety of residents and workers outside of the County. Even though those impacts would occur outside of the County's jurisdiction, these are legitimate concerns to be considered by your Commission. As a political subdivision of the state, created for the purpose of "advancing the policy of the state at large," the County may appropriately consider the impacts its decisions may make on citizens of the state at large. As a result, the proposed findings included in Exhibit C hereto address some of these state-wide concerns.

### **B. Hazard Zone**

An ongoing issue of state and national controversy and concern, for this Project as well as other proposed rail projects, relates to Impact HM.2 (Hazards and Hazardous Materials) in the FEIR and described above. This impact deals with the potential for a crude oil unit train derailment that would increase risk to the public in the form of fire, explosion, and exposure in the vicinity of the UPRR right-of-way. The issue of rail car safety has come to the forefront

## Exhibit C – Findings for Denial

### A. Environmental Determination

1. The Environmental Coordinator, after completion of the initial study, found that there is evidence that the project may have a significant effect on the environment, and therefore a Final Environmental Impact Report (FEIR) was prepared (pursuant to Public Resources Code Section 21000 et seq., and CA Code of Regulations Section 15000 et seq.) for this project. The FEIR considers the following issues: Aesthetics and Visual Resources, Agricultural Resources, Air Quality and Greenhouse Gases, Biological Resources, Cultural and Historical Resources, Geological Resources, Hazards and Hazardous Materials, Land Use and Recreation, Noise and Vibration, Population and Housing, Public Services and Utilities, Transportation and Circulation and Water Resources. The FEIR also considers alternatives in addition to the “No Project” alternative.
2. While a FEIR has been prepared, per the Public Resources Code 21080(b)(5) and CEQA Guidelines, CEQA does not apply to projects which a public agency rejects or disapproves. However, the FEIR has provided evidence and information to support this recommendation for denial, including an evaluation of the significant and unavoidable environmental impacts of the proposed project.
3. There are insufficient specific, overriding economic, legal, social, technological, or other benefits of the project that outweigh the significant effects on the environment, as would be required to approve the project pursuant to Public Resources Code section 21081. Additionally, due to federal preemption, implementation of mitigation measures to lessen the Class I impacts on the Mainline within San Luis Obispo County and the state are infeasible, as argued by the Applicant.

### B. Environmentally Sensitive Habitat

4. The proposed project is located within an Environmentally Sensitive Habitat area:

Following the circulation of the Public Draft EIR, additional biological survey efforts were conducted in 2015 by Arcadis and Leidos to ensure accuracy and consistency with vegetation type mapping with the National Vegetation Classification system, as described within A Manual of California Vegetation (Sawyer et al 2009).

Based on the best available information, it is determined that the Rail Spur Project area:

- a. Is currently occupied by plant species that are listed as Rank 1B status by the California Native Plant Society; and,
- b. Is currently occupied by sensitive communities as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition.

Due to these factors, the project site meets the definition of Unmapped ESHA in the County’s LCP (CZLUO Section 23.11). The area contains sensitive plant and animal species needing protection, including Rank 1B status plants, sensitive communities recognized by the CDFW, burrowing owls, and coast horn lizard. In addition, the Rail Spur Project area meets the definition of ESHA as defined in the guidelines set forth by the California Coastal Commission for defining ESHA (CCC 2013). As discussed further below in impact BIO.5, the Rail Spur Project would permanently impact a total of about 20 acres of ESHA, including the sensitive plant communities as classified by the California Department of Fish and Wildlife (CDFW)

project would be inconsistent with this policy by allowing an expansion of a use that is not compatible with neighboring residential or agricultural uses and would result in additional negative health impacts.

10. **Strategic Growth Goal 1, Objective 2. Air Quality:** This air quality objective is put forth to maintain and protect a living environment that is safe, healthful and pleasant for all residents. The applicable goal associated with this objective seeks to ensure that development projects maintain, or exceed, the minimum state and federal ambient air quality standards. The Project would not comply with this objective and goal because it would generate toxic air emissions that exceed San Luis Obispo County APCD (SLOCAPCD) health risk thresholds when factoring in the 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments. The proposed Project would result in a maximum exposed individual resident (MEIR) cancer risk of 26.5 in a million. This includes emission sources at the project site as well as the mainline emissions near the SMR. The SLOCAPCD cancer risk threshold is 10 in a million for toxic emissions. The use of Tier 4 locomotives and reduced idling time for locomotives onsite as mitigation would reduce the MEIR to 6.0 in a million at the same receptor. However, since UPRR (and not the Project Applicant) would own the locomotives, and the locomotives are used for interstate commerce, the mitigation measure requiring the use Tier 4 locomotives would likely be preempted by Federal law, and therefore may not be a feasible mitigation measure. Without the use of Tier 4 engines but with implementation of other mitigation measures, the MEIR would be 13.6 in a million at the same receptor (this includes the reduction in idling at the site, use of cleaner truck engines, and daytime unloading only). In addition, without full mitigation, the project would also exceed the SLOCAPCD diesel particulate matter threshold of 1.25 lbs per day onsite.

The Project would also not comply with this objective and goal because it would generate toxic air emissions that exceed San Luis Obispo County APCD (SLOCAPCD) health risk thresholds of 10 in a million for mainline rail operations in areas where train speeds would be less than 30 mph. The project would also exceed the SLOCAPCD NO<sub>x</sub>, ROG, and diesel particulate matter emission CEQA thresholds without full mitigation. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and DPM emissions, leaving potential exceedances of the state and/or federal ambient air quality standards unmitigated and making the Project inconsistent with this goal.

11. **Combining Designations, SRA – Sensitive Resource Area, General Objectives: 1.** General Objective 1 states that Environmentally Sensitive Habitats should be identified and protected by construction setbacks, use limitations, and other appropriate regulations. A portion of the Project area of disturbance is located within the existing refinery site in an area previously disturbed for storage and handling of coke; however, a large portion of the improvements associated with the Project would be located within identified sensitive vegetative communities as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition and Unmapped ESHA (i.e., Silver dune lupine – mock heather scrub). Project construction would impact approximately 20 acres of this sensitive vegetative community and Unmapped ESHA. For this reason, the Project would not comply with this objective.
12. **Coastal Zone Framework for Planning, Coastal Zone Land Use Element Strategic Growth Goal 1:** The Land Use Element states that the County will “preserve open space, scenic natural beauty and natural resources” and in addition “conserve energy” and “protect agricultural land and resources.” The project has the potential to result in an increased risk of oil spills and fires that could impact natural resources, scenic areas, and agricultural land along the mainline rail routes as a result of this project. An oil spill could result in significant impacts to agricultural, biological, and water resources in the event of a spill because of the

stating offshore oil and gas lease sales may generate the need for onshore partial oil and gas processing facilities and that expansion of industrial uses in the vacant portion of the rail spur project site may be appropriate in the future to accommodate offshore oil and gas lease sales. However, the Plan does not envision expansion for other purposes such as the Project. The rail spur component of the Project would extend an approximate 200-foot wide swath of development and industrial use approximately 0.8 mile to the east beyond the currently industrialized portion of SMR, toward existing residences and Highway 1. From the eastern terminus of the proposed rail spur, the buffer would be reduced to approximately 0.5 mile to the eastern boundary of the project site. This would reduce the buffer area between the Project and the residential area to the east and would therefore result in the Project being inconsistent with this policy.

18. **Industrial Air Pollution Standards:** This requirement of the South County Area Plan requires that “any expansion or modification of existing petroleum processing or transportation facilities or the construction of new facilities shall meet San Luis Obispo County Air Pollution District (SLOCAPCD) standards.” The Project does not comply with this requirement as it exceeds the minimum threshold for cancer risk of 10 in a million. Without full mitigation, the project would also exceed the SLOCAPCD threshold for DPM of 1.25 lbs per day onsite and due to federal preemption, the County cannot impose measures (e.g. Tier 4 locomotives) to fully mitigate this impact. The toxic air emissions including the DPM added to the basin as a result of this project is not in compliance with this requirement.

*Safety Element of the General Plan:*

19. **Safety Element of the General Plan, Fire Safety Goal S-4:** “Reduce the threat to life, structures and the environment caused by fire.” There is the potential for fire and explosions along the mainline rail routes due to a train derailment, which could impact life, structures and the environment depending on the location of the accident. The County is likely preempted from implementing conditions or mitigation measures that could mitigate these impacts along the mainline rail route. There are significant impacts to the safety of the populations near the rail lines within the County and the project is not consistent with this policy of the General Plan.
20. **Safety Element of the General Plan, Fire Safety Policy S-14, Facilities, Equipment and Personnel:** “Ensure that adequate facilities, equipment and personnel are available to meet the demands of fire fighting in San Luis Obispo County based on the level of service set forth in the fire agency’s master plan.” It has come to the County’s attention through numerous letters from jurisdictions along the mainline that there are not adequate resources through their respective fire agencies to respond to a derailment, spill or explosion as a result of a rail accident. In addition, the County may be preempted from implementing conditions or mitigation measures that could mitigate these impacts along the mainline rail routes, therefore the County can’t ensure there will be adequate facilities, equipment and personnel available in the event of an accident. This is the case throughout the state as well as within San Luis Obispo County. Therefore, the project is not consistent with this policy of the General Plan.
21. **Safety Element of the General Plan, Hazardous Materials Policy S-26, Program S-68:** S-26 states: “Reduce the potential for exposure to humans and the environment by hazardous substances.” S-68 states “Review commercial projects which use, store, or transport hazardous materials to ensure necessary measures are taken to protect public health and safety.” Implementation measure Program S-68 states that commercial projects which use, store, or transport hazardous materials are to ensure necessary measures are taken to protect public health and safety. As the Applicant has stated, the County would not be able to mitigate or require conditions upon the project which would ensure the safety for citizens along the mainline rail routes, including the portions within the County, due to the County likely being preempted from requiring these types of measures. The project is not in compliance with this

policy because the County would not be able to ensure the safety of the residents of the County, or the state, as a result of the additional probability of a derailment, spill, fire or explosion because of the proposed project.

*Conservation and Open Space Element of the General Plan:*

22. **Air Quality Policy AQ 3.2, Attain Air Quality Standards:** Policy AQ 3.2 states that the County will attain or exceed federal or state ambient air quality standards for measured criteria pollutants. San Luis Obispo County is in non-attainment for ozone standards as well as the state particulate matter standards. The Project would generate fugitive dust and DPM onsite that would contribute to PM<sub>10</sub> emissions within the County. It is unlikely that these fugitive dust and DPM emissions (i.e., PM<sub>10</sub> emissions) could be offset at the SMR due to a lack of available onsite emission reductions. The addition of these onsite PM<sub>10</sub> emissions would further exacerbate the ability for the County to attain the state particulate matter standards and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

The rail spur project would be generating NO<sub>x</sub> and ROG emissions along the mainline rail route that would lead to ozone increases and would generate DPM along the mainline rail routes that would contribute to PM<sub>10</sub> emissions within the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and DPM emissions. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions would further exacerbate the ability for the County to attain the state particulate matter and ozone standards. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions along the mainline rail route within the County would further exacerbate the ability for the County to attain the state particulate matter and ozone standards and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

23. **Air Quality Policy AQ 3.3, Avoid Air Pollution Increases:** Policy AQ 3.3 states that the County will, "Avoid a net increase in criteria air pollutant emissions in planning areas certified as Level of Severity II or III for Air Quality by the County's Resource Management System (RMS)." The Nipomo Mesa area is in a level of severity II for Ozone, a level of severity III for PM<sub>2.5</sub>, and a level of severity III for PM<sub>10</sub>. The "PM" or particulate matter includes hazardous materials in the air that gets into the lungs and causes a variety of health effects. The PM<sub>2.5</sub> tends to be a greater health risk because the particles are smaller and can travel deeper into the lungs. Sources of particulate pollution include diesel exhaust, mineral extraction and production, combustion products from industry and motor vehicles, smoke, wind-blown dust and other sources (Source: County Resource Summary Report). The Project does not comply with this standard because it would add diesel exhaust from locomotives to an area which is currently in a level of severity of III. Even with implementation of mitigation measures the Project would exceed the threshold of cancer causing diesel particulate which is 10 in a million by creating a risk factor of about 13.6 in a million (for emissions occurring at the project site and along the mainline impacting the same receptors near the SMR). Without implementation of mitigation, the Project would create a risk factor of 26.5 in a million, both of which are exceeding the threshold. In addition, without full mitigation, the Project would exceed the 1.25 lbs per day threshold for DPM onsite. In addition, the most effective mitigation measure is likely not implementable due to federal preemption (i.e., requiring use of Tier 4 locomotives).

Operation of the locomotives along the mainline rail routes would result in increase in NO<sub>x</sub> and ROG emissions that would lead to ozone increases. The locomotives would also generate diesel particulate matter emissions along the mainline rail routes, which would increase PM<sub>10</sub> emissions in the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and diesel particulate matter emissions. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions would result in air pollution

impacts cannot be mitigated to less than significant levels. Mitigation has been recommended that includes use of Tier 4 locomotives and the purchase of emission credits. For the mainline rail emissions it is possible that contractually the Applicant could require the use of lower emission locomotives such as Tier 4 locomotives. However, since these are operated by UPRR on UPRR tracks, a requirement that the Applicant enter into this type of contractual provision would likely be preempted by Federal law and therefore unenforceable. The County may also be preempted by Federal law from requiring emission reduction credits for mainline rail emissions. Since these mitigation measures may not be implementable and it is uncertain if the other Air Districts could require emission reduction credits, the impacts associated with the mainline rail operation would remain significant.

The locomotives would also generate diesel particulate matter emissions along the mainline rail routes, which would increase PM<sub>10</sub> emissions in the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and diesel particulate matter emissions. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions would result in significant and unavoidable air quality impacts.

This proposed project would increase rail traffic by importing heavy crude via rail into the Santa Maria Refinery. A risk assessment was conducted for the mainline rail routes to the Santa Maria Refinery. The risk along the mainline rail routes that were evaluated was found to be significant in the event of a rail accident that occurred near populated areas. The EIR identified mitigation measures to reduce the potential for release of crude oil in the event of an accident. However, the County may be preempted by Federal law from applying these mitigations to the project. Furthermore it has been communicated to the County through numerous letters from outside jurisdictions that many of the jurisdictions do not have the necessary personnel, equipment or training in order to provide appropriate emergency response to an oil train derailment or explosion within their areas. This proposed project will create a significantly hazardous and potentially dangerous situation within many areas along the mainline not only in San Luis Obispo County, but to other jurisdictions along the main rail lines and therefore, the project is inconsistent with this policy.

**D. The proposed project or use will be inconsistent with the character of the immediate neighborhood or contrary to its orderly development because:**

33. The proposed rail spur project will expand the existing industrial uses of the Santa Maria Refinery onto a currently vacant portion of the refinery property which acts as a buffer between the residential areas to the east and the refinery operations. The South County Coastal Area Plan specifically identifies the undeveloped areas of the project site as providing a desirable buffer from the heavy industrial activities and more sensitive adjacent land uses. The rail spur extension would extend a total of approximately 1.3 miles (6,915 feet), including approximately 0.5 mile (2,445 feet) within the exiting industrial coke area. This would result in an extension of industrial uses approximately 0.85 mile into the undeveloped area in the eastern portions of the project site. The buffer between residential and recreational uses east of State Route 1 would be reduced from approximately 1.4 miles to 0.6 mile. The rail spur extension would similarly reduce existing buffers between the industrial structures and agricultural crops located northeast and southeast of the project site.

This important buffer is what allows these incompatible land uses (refinery and residential) to coexist as neighbors, however this project will greatly reduce this buffer. The rail spur will be incompatible with the residential and agricultural resources that surround the spur and will bring additional toxic air contaminants and PM<sub>10</sub> closer to the residential and agricultural land uses. Therefore, the proposed extension of the industrial activities by allowing the railroad spur would be incompatible with surrounding uses and would therefore not comply with the character of the immediate neighborhood and will be contrary to its orderly development.

SURFACE TRANSPORTATION BOARD

DECISION

Docket No. FD 35853

SEA-3, INC.—PETITION FOR DECLARATORY ORDER

Digest:<sup>1</sup> SEA-3, Inc. (SEA-3), a non-carrier, asks the Board to find that appeals by the City of Portsmouth, N.H., of a zoning decision—which approved SEA-3’s construction of additional rail berths at the liquefied petroleum gas transload facility it owns and operates in the Town of Newington, N.H.—are preempted by federal law. The Board provides guidance on the issue but denies the petition for declaratory order because the law about the extent to which 49 U.S.C. § 10501(b) preemption applies to transload facilities is clear.

Decided: March 16, 2015

By petition filed on August 4, 2014, SEA-3, Inc. (SEA-3), seeks a declaratory order holding that all claims made by the City of Portsmouth, N.H. (the City or Portsmouth), in certain zoning litigation are preempted by 49 U.S.C. § 10501(b).<sup>2</sup> SEA-3 states that Portsmouth has appealed zoning decisions that approved SEA-3’s plan to construct five additional rail berths at the liquefied petroleum gas (LPG or propane) transload facility it owns and operates on land it leases in the Town of Newington, N.H. (Newington). Portsmouth, in a reply filed on August 20, 2014, asks the Board to dismiss the petition for lack of standing or, in the alternative, to deny the petition and find that the City’s appeals do not involve regulation of transportation by rail carrier or preclearance requirements that are federally preempted. On September 30, 2014, Boston and Maine Corporation and Springfield Terminal Railway Company d/b/a Pan Am Railways (Pan Am), the rail carrier serving the transload facility, filed comments in support of SEA-3’s petition.<sup>3</sup> On January 20, 2015, Norfolk Southern Railway Company (NS) submitted comments

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<sup>1</sup> The digest constitutes no part of the decision of the Board, but has been prepared for the convenience of the reader. It may not be cited to or relied upon as precedent. Policy Statement on Plain Language Digests in Decisions, EP 696 (STB served Sept. 2, 2010).

<sup>2</sup> SEA-3 Pet. 20.

<sup>3</sup> In a decision served on August 29, 2014, the Board granted Pan Am’s request for leave to intervene and for a two-week extension to file substantive comments. Pan Am subsequently notified the Board that the parties were engaged in discussions to resolve the issues and requested a further extension to September 30, 2014. The Board granted that extension request in a decision served on September 5, 2014. Pan Am filed its comments on September 30, 2014, after negotiations proved unsuccessful.

as amicus curiae in support of SEA-3's petition. On February 10, 2015, the Propane Gas Association of New England (PGANE) also submitted comments as amicus curiae in support of SEA-3's petition. On February 12, 2015, CSX Transportation, Inc. (CSXT) submitted a petition to intervene and comments in support of SEA-3's petition.<sup>4</sup>

For the reasons discussed below, SEA-3's petition for a declaratory order will be denied.

## BACKGROUND

SEA-3 states that Pan Am's Newington Branch is the only rail line serving the transload facility, which is one of only two propane storage and distribution terminals in New England and the only one with rail access. The facility, according to SEA-3, has been in continuous operation since 1975 and has a storage capacity of 560,000 barrels. While the majority of the propane delivered to the facility historically moved from overseas sources by ship, SEA-3 states that the facility has three rail berths that allow it to offload six rail cars of domestically produced propane per day. SEA-3 seeks to reconfigure and expand the facility by constructing five additional rail berths on land leased from Pan Am. SEA-3 claims that this is necessary because recent market changes have made the cost of overseas-produced propane prohibitively expensive. Asserting that the expansion project would allow it to satisfy the majority of its propane requirements from domestic sources, SEA-3 contends that the additional rail berths are essential if it is to continue supplying the New England market with propane.

According to SEA-3, the Newington Planning Board (Planning Board) approved SEA-3's application to expand the facility on May 19, 2014, and on June 16, 2014, Portsmouth filed an appeal with the Newington Zoning Board of Adjustment (NZBA). Also on June 16, 2014, according to SEA-3, Portsmouth filed with the New Hampshire Superior Court (Court) a petition to overturn the Planning Board's decision, or in the alternative to require a study of the rail effects of the expansion project.<sup>5</sup> SEA-3 contends that Portsmouth has been opposed to the expansion project since it received notice of the application from the Planning Board, and that Portsmouth's sole objective is to block additional LPG rail car traffic from moving through the City.

SEA-3 argues that any attempts by localities or states to direct rail traffic or impose preclearance requirements on transload facilities are federally preempted under § 10501(b). Section 10501(b), as broadened by the ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803, expressly provides that the jurisdiction of the Board over "transportation by rail carriers" is "exclusive." 49 U.S.C. § 10501(b). Section 10501(b) also explicitly states that "the

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<sup>4</sup> Pan Am, NS, PGANE, and CSXT will be referred to as "Petition Supporters."

<sup>5</sup> City of Portsmouth v. Newington Planning Bd., Rockingham County Superior Court Docket No. 218-2014-CV00654. Under New Hampshire law, according to SEA-3, any appeal of a zoning decision by a town's Planning Board must first be resolved by the town's Zoning Board of Adjustment (ZBA). SEA-3 states that when dual appeals are filed, as in this case, court action is stayed pending a ZBA decision, and if the ZBA decision is appealed, the two appeals are consolidated in the court.

remedies provided under [49 U.S.C. §§ 10101-11908] with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law.” SEA-3 asks the Board to find that the claims Portsmouth has made to the NZBA and the Court, including any claims that are derived from, or depend on, allegations that Portsmouth would be adversely affected as a result of increased rail transportation, are preempted.

Portsmouth requests that the proceeding be dismissed for lack of standing, contending that SEA-3 is not a rail carrier; that SEA-3 built, owns, controls, insures, and advertises the facility; and that SEA-3 is the sole applicant for approval of, and is solely responsible for all of the costs of the instant expansion project. In the alternative, Portsmouth requests that the Board find the City’s appeals, which include a request for a safety/hazard study of the SEA-3 expansion site, are not federally preempted preclearance requirements. Portsmouth denies: (1) that it is seeking a safety study of Pan Am’s rail operations, as opposed to a study of the SEA-3 expansion site; (2) that it is seeking to deprive SEA-3 of its right to receive rail services; and (3) that it is using local site plan review regulations and zoning ordinances to regulate rail transportation.

Portsmouth contends that there is no conflict between its request for a safety/hazard study of the planned expansion of the facility and SEA-3’s use of Pan Am for common carrier rail service. In appealing and filing for court review of the Planning Board’s decision approving the expansion project, Portsmouth contends it “is simply asking Newington to comply with its site review regulations and zoning ordinances as they apply to the site itself, not the rails . . . in order to assess whether the project promotes the health[,] safety and welfare of the residents of Newington and [the] other affected communities.”<sup>6</sup> Noting that similar studies were performed the last time SEA-3 expanded its facility in 1996, Portsmouth asserts that, in its zoning appeals, it merely seeks the ability to review and comment on a safety/hazard assessment, claiming that this “would not subject SEA-3 to an unreasonable delay and is not unreasonably burdensome, nor does it discriminate against railroads.”<sup>7</sup>

Pan Am argues that Portsmouth’s appeals to the NZBA and the Court are preempted by § 10501(b) because they would not have been filed absent a potential increase in rail traffic. Pan Am contends that Portsmouth, notwithstanding its denials, is in fact attempting to regulate rail transportation by Pan Am through litigation that would frustrate and delay increased rail service to SEA-3’s transload facility. Pan Am also claims that Portsmouth remains adamantly opposed to the expansion project, even though Pan Am has provided substantial information to the community throughout the Planning Board’s process, attended all Planning Board meetings, met with representatives of Portsmouth and surrounding communities on several occasions, and solicited input from the Federal Railroad Administration (FRA) and the New Hampshire Department of Transportation (NHDOT). Further, Pan Am states that during this community outreach it has pointed out that rail service on the Portsmouth and Newington Branches has continued for decades with at least four active customers now being served in Newington; that the only change in operations that would result from the expansion project would be an increase in rail service from two to potentially six days a week; and that FRA, NHDOT, and emergency

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<sup>6</sup> Portsmouth Reply 10-11.

<sup>7</sup> *Id.* at 16.

responders “have reviewed the potential impact of an increase in rail service [and have] informed the Planning Board, Portsmouth, and other neighboring municipalities that no significant safety concerns exist.”<sup>8</sup> Finally, Pan Am asserts that it has already begun work to upgrade the Portsmouth and Newington Branches from marginal FRA Class 1 to FRA Class 2 standards and that this work should be completed in the summer of 2015.

NS, in its amicus filing, states that it has an interest in this case because SEA-3 is its customer. NS argues that Portsmouth is attempting to regulate rail commerce and that therefore Portsmouth’s position in this case is contrary to the Board’s preemption precedent. NS also raises concerns that Portsmouth’s “attempts to regulate the flow of commerce”<sup>9</sup> are part of a trend of localities enacting regulations that are preempted under § 10501. Similarly, PGANE argues that Portsmouth is seeking to interfere with the flow of interstate commerce by rail, and Portsmouth’s actions would lead to a patchwork of conflicting local regulations over rail operations. CSXT, in its comments, asserts that Portsmouth is attempting to regulate the use of a railroad line through the zoning process, which is one of the most invasive forms of regulation and is clearly preempted under § 10501(b).

## DISCUSSION AND CONCLUSIONS

The Board has discretionary authority under 5 U.S.C. § 554(e) and 49 U.S.C. § 721 to issue a declaratory order to eliminate controversy or remove uncertainty in a matter related to the Board’s subject matter jurisdiction.<sup>10</sup> Where the law is clear, the Board may decline to institute a proceeding and instead provide guidance on the preemption issue presented, and it is appropriate to do so here. See, e.g., 14500 Ltd.—Pet. for Declaratory Order, FD 35788, slip op. at 2 (STB served June 5, 2014).<sup>11</sup>

The Interstate Commerce Act (Act) is “among the most pervasive and comprehensive of federal regulatory schemes.” Chi. & N.W. Transp. Co. v. Kalo Brick & Tile Co., 450 U.S. 311, 318 (1981). The federal preemption provision contained in § 10501(b) bars the application of most state and local laws to railroad operations that are subject to the Board’s jurisdiction.<sup>12</sup>

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<sup>8</sup> Id. at 5-6.

<sup>9</sup> NS Comments 1.

<sup>10</sup> See, e.g., Bos. & Me. Corp. v. Town of Ayer, 330 F.3d 12, 14 n.2 (1st Cir. 2003); Delegation of Auth.—Declaratory Order Proceedings, 5 I.C.C. 2d 675, 675 (1989).

<sup>11</sup> We also note that, according to Pan Am, the NZBA held a hearing on September 15, 2014, and denied all of Portsmouth’s claims. Pan Am Reply 3 n.1 & Ex. A. Thus, it appears that SEA-3 has prevailed at every stage of the zoning process to date.

<sup>12</sup> State or local permitting or preclearance requirements, including building permits, zoning ordinances, and environmental and land use permitting requirements, are categorically preempted as to any facilities that are an integral part of rail transportation. See Green Mountain R.R. v. Vermont, 404 F.3d 638, 643 (2d Cir. 2005). Other state actions may be preempted as applied—that is, only if they would have the effect of unreasonably burdening or interfering with rail transportation. See N.Y. Susquehanna & W. Ry. v. Jackson, 500 F.3d 238, 252 (3d Cir.

(continued . . . )

Because the Board has jurisdiction over “transportation by rail carrier,” 49 U.S.C. § 10501(a), to be subject to the Board’s jurisdiction and qualify for federal preemption under 49 U.S.C. § 10501(b), the activities at issue must be “transportation” and must be performed by, or under the auspices of, a “rail carrier.” The statute defines “transportation” expansively to encompass any property, facility, structure or equipment of any kind related to the movement of passengers or property, or both, by rail, and services related to that movement, including receipt, delivery, transfer in transit, storage, and handling of property. 49 U.S.C. § 10102(9). Moreover, “railroad” is defined broadly to include a switch, spur, track, terminal, terminal facility, freight depot, yard, and ground, used or necessary for transportation. 49 U.S.C. § 10102(6). Whether a particular activity is considered part of transportation by rail carrier under § 10501 is a case-by-case, fact-specific determination. See, e.g., Diana Del Grosso.—Pet. for Declaratory Order, FD 35652, slip op. at 5 (STB served Dec. 5, 2014).

The Board’s jurisdiction extends to rail-related activities that take place at transloading facilities if the activities are performed by a rail carrier, the rail carrier holds out its own service through a third party that acts as the rail carrier’s agent, or the rail carrier exerts control over the third party’s operations.<sup>13</sup> The record presented to the Board in this case, however, does not demonstrate that SEA-3 is a carrier or that it is performing transportation-related activities on behalf of Pan Am or any other rail carrier at the transload facility.

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( . . . continued)

2007); Joint Pet. for Declaratory Order—Bos. & Me. Corp. & Town of Ayer (Ayer), 5 S.T.B. 500, 507-508 (2001), reconsideration denied (STB served Oct. 5, 2001). Even where § 10501(b) preemption applies, there are limits to its scope. Overlapping federal statutes are to be harmonized, with each statute given effect to the extent possible. Moreover, states retain police powers to protect the public health and safety on railroad property so long as state and local regulation do not unreasonably interfere with interstate commerce. Green Mountain, 404 F.3d at 643.

<sup>13</sup> Id. Compare Green Mountain, 404 F.3d at 642 (transloading and temporary storage of bulk salt, cement, and non-bulk foods by a rail carrier qualified for preemption); Lone Star Steel Co. v. McGee, 380 F.2d 640, 647 (5th Cir. 1967), and Ass’n of P&C Dock Longshoremen v. Pittsburgh & Conneaut Dock Co., 8 I.C.C. 2d 280, 290-95 (1992) (an agent undertaking the obligations of a common carrier (i.e., performing services as part of the total rail service contracted for by a member of the public) also holds itself out to the public as being a common carrier by rail, and is therefore subject to federal regulation), with Town of Milford, Mass.—Pet. for Declaratory Order, FD 34444, slip op. at 3-4 (STB served Aug. 12, 2004) (Board lacked jurisdiction over noncarrier operating a rail yard where it transloaded steel pursuant to an agreement with the rail carrier, but the transloading services were not being offered as part of common carrier services offered to the public); High Tech Trans, LLC—Pet. for Declaratory Order—Newark, N.J., FD 34192 (Sub-No. 1), slip op. at 7 (STB served Aug. 14, 2003) (no STB jurisdiction over truck-to-truck transloading prior to commodities being delivered to rail); and Town of Babylon & Pinelawn Cemetery—Pet. for Declaratory Order, FD 35057, slip op. at 5 (STB served Feb. 1, 2008) (Board lacked jurisdiction over activities of a noncarrier transloader offering its own services directly to customers).

Citing Norfolk Southern Railway v. City of Alexandria (Alexandria), 608 F.3d 150 (4th Cir. 2010), and Boston & Maine Corp.—Petition for Declaratory Order (Winchester), FD 35749 (STB served July 19, 2013), SEA-3 argues that any attempt by localities or states to direct rail traffic or impose preclearance requirements on this facility are federally preempted under § 10501(b). SEA-3 and the Petition Supporters further argue that Portsmouth is attempting to use its appeals of the Planning Board’s decision to interfere with Pan Am’s rail operations and to intrude into matters directly regulated by the Board. Portsmouth’s sole objective, Pan Am and PGANE claim, is to prevent an increase in rail service to SEA-3 by blocking additional propane shipments from traveling through the City. Pan Am contends that Portsmouth will use the results of any litigation to impose restrictions on SEA-3’s ability to use, and Pan Am’s ability to provide, rail transportation. In support of preemption, Pan Am, NS, and CSXT also cite Winchester, which they assert has facts almost identical to those at issue here, and Pan Am and PGANE similarly rely on Ayer.

However, the facts in the cases relied on by SEA-3 and the Petition Supporters are very different from those at issue here. The cited cases involved local regulation of transloading performed by the rail carrier or under its auspices (Alexandria and Ayer), or local regulation of the railroad’s ability to conduct common carrier transportation (Winchester). Alexandria involved an ethanol transload facility constructed and owned by Norfolk Southern Railway Company and operated under its auspices. Ayer involved the construction and operation of an automobile unloading facility by Boston and Maine Corp. and Springfield Terminal Railway Co., and their corporate parent, Guilford Transportation Industries, Inc. (now Pan Am). SEA-3 and the Petition Supporters do not allege that SEA-3 is a rail carrier, or that its transloading is performed under the auspices of a rail carrier,<sup>14</sup> as was the case in Alexandria and Ayer.

Winchester involved a local regulation that would have prohibited a rail carrier (Pan Am) from operating trains over the line in question. The Board determined that § 10501(b) preempted this regulation because it prevented the rail carrier from conducting its operations in interstate commerce. Here, SEA-3 and the Petition Supporters have not identified an attempt by Portsmouth to regulate *Pan Am’s* operations, as was the case in Winchester.<sup>15</sup> Instead, Portsmouth’s litigation challenging the Planning Board’s decision involves permitting of the expansion of *SEA-3’s* facility, and as noted, it is undisputed that SEA-3 is not a rail carrier or acting under the auspices of a rail carrier.<sup>16</sup> Thus, it appears that the only regulatory action at issue in this case is a local government’s participation in zoning litigation over the expansion of a non-carrier facility. Without more, this situation does not reflect undue interference with

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<sup>14</sup> See n.13, *supra*.

<sup>15</sup> NS is incorrect when it suggests that Winchester addressed a “contested municipal zoning ordinance . . . applied to the shipper facility . . .” NS Comments 3. As noted above, the municipal ordinance at issue in Winchester would have prohibited *the rail carrier* from operating trains over the line in question. See Bos. & Me. Corp.—Pet. for Declaratory Order, FD 35749, slip op. at 4-5 n.17 (STB served Oct. 31, 2013) (observing that the Winchester decision applied to the rail carrier’s operations over the line, not to the shipper facility).

<sup>16</sup> See SEA-3 Pet. 20 (requested declaratory order would find preemption only with respect to “claims made in Portsmouth’s Superior Court Petition and ZBA Appeal”).

“transportation by rail carriers.” See 49 U.S.C. § 10501(b). Accordingly, SEA-3 and the Petition Supporters have not demonstrated on this record that preemption under § 10501(b) applies to Portsmouth’s zoning appeals.

If Portsmouth or any other state or local entity were to take actions as part of a proposed safety/hazard study, or otherwise, that interfere unduly with Pan Am’s common carrier operations, those actions would be preempted under § 10501(b). See, e.g., Bos. & Me. Corp.—Pet. for Declaratory Order, FD 35749 (STB served Oct. 31, 2013) (confirming that the Town of Winchester’s directive prohibiting Pan Am from conducting transportation over a rail line was preempted). As the Board and the courts have explained, Portsmouth may apply non-discriminatory regulations to protect public health and safety, but only provided that its regulations do not have the effect of foreclosing or unduly restricting Pan Am’s ability to conduct operations over its Newington and Portsmouth Branches, or otherwise unreasonably burden interstate commerce.<sup>17</sup>

This action will not significantly affect either the quality of the human environment or the conservation of energy resources.

It is ordered:

1. SEA-3’s petition for declaratory order is denied, and this proceeding is discontinued.
2. This decision is effective on the date of service.

By the Board, Acting Chairman Miller and Vice Chairman Begeman.

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<sup>17</sup> As discussed above, state and local regulation is not preempted where it does not interfere with rail operations. Localities retain their reserved police powers to protect the public health and safety so long as their actions do not unreasonably burden interstate commerce. See Green Mountain, 404 F.3d at 643. Electrical, plumbing, and fire codes also are generally applicable. See Green Mountain, 404 F.3d at 643. State and local action, however, must not have the effect of foreclosing or unduly restricting the rail carrier’s ability to conduct its operations or otherwise unreasonably burden interstate commerce. See CSX Transp. Inc.—Pet. for Declaratory Order, FD 34662, slip op. at 5 (STB served May 3, 2005).

## 50- Car Project Train (3,200 ft.)



West side of Park Road to unloading rack



Unloading rack to west side of Bayshore Road/  
Sulphur Springs Creek crossing

**Notes:** Purple shaded area is Valero Property  
—●—●— represents a 50-car train

**AGENDA ITEM**  
**CITY COUNCIL MEETING DATE - OCTOBER 1, 2013**  
**CONSENT CALENDAR**

**DATE** : September 13, 2013

**TO** : City Council

**FROM** : City Attorney

**SUBJECT** : **APPROVAL FOR AMENDMENT TO CONTRACT SERVICES AGREEMENT BETWEEN CITY OF BENICIA AND WOODRUFF, SPRADLIN, & SMART FOR OUTSIDE COUNCIL REGARDING VALERO CRUDE BY RAIL**

**RECOMMENDATION:**

Approve, by motion, a contract amendment with Bradley R. Hogin of Woodruff, Spradlin, & Smart for outside council regarding Valero Crude by Rail, and authorizing the City Attorney to execute the contract amendment on behalf of the City.

**EXECUTIVE SUMMARY:**

The City has contracted Bradley Hogin of Woodruff, Spradlin & Smart as outside council for the Valero Crude by Rail Project. This firm was selected based on Bradley Hogin's knowledge, experience, and qualifications in this area. The cost for services required for Valero Crude by Rail will exceed \$50,000. Staff is proposing that the Council approve an amendment to allow the project costs to exceed \$50,000.

**STRATEGIC PLAN:**

N/A

**BUDGET INFORMATION:**

The work provided under this contract will exceed \$50,000.

**BACKGROUND:**

On July 10, 2013 the City of Benicia entered into an agreement with Bradley Hogin of Woodruff, Spradlin & Smart for services of outside council on the Valero Crude by Rail Project. The City sent out a request for proposals for outside council receiving twenty responses. From those responses staff then interviewed five law firms. Bradley Hogin was selected based on impressive qualifications and experience with legal cases in the field. Bradley Hogin's qualifications include experience with advising clients on the California Environmental Quality Act and state and federal laws regulating air quality, water quality, endangered

species, contaminated property, and historic resources. Bradley Hogin also litigates environmental and land use matters in state and federal courts. He has defended court challenges to a wide variety of development projects, including oil wells, oil refineries, power plants, large-scale commercial and residential development, and schools. He has also handled challenges to federal, state, and local environmental regulations in the areas of air quality, water quality, and oil production. Bradley Hogin also has substantial experience in counseling public agencies on CEQA compliance for public projects. Specific examples are attached in his Statement of Qualification.

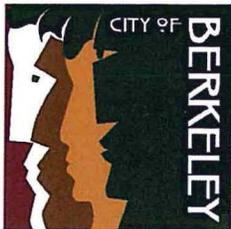
Note that expertise and staffing resources required for these services do not exist in-house. The work performed by the firm to date has clearly demonstrated the expertise that is necessary to effectively provide the needed outside council to effectively move forward with this project.

This amendment provides for additional funding for consulting services in an amount that is likely to exceed \$50,000. It is unclear at this time the total cost of the services required, but the City Attorney will continue to monitor the progress and expenses of this project.

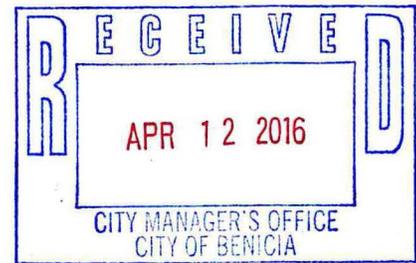
Attachment:

- Statement of Qualification for Bradley R. Hogin to City of Benicia





City Clerk Department



April 7, 2016

Benicia City Council  
Benicia City Hall, 250 East L Street  
Benicia, CA 94510

RE: Opposition to Application for a Rail Spur, by the Valero Refinery, to the City of Benicia

At its meeting of April 5, 2016, the Berkeley City Council voted to oppose the Valero Refinery's application for a rail spur -- to receive hazardous and volatile crude by rail -- to the City of Benicia, and communicate said opposition to the Benicia City Council.

Sincerely,

A handwritten signature in blue ink that reads "Mark Numainville".

Mark Numainville  
City Clerk

Enclosure: Staff report

cc: Linda Maio, Councilmember, District 1  
Laurie Capitelli, Councilmember, District 5  
Dee Williams-Ridley, City Manager



CITY COUNCIL  
**Linda Maio**

**CONSENT CALENDAR**

April 5, 2016

TO: Honorable Mayor and Members of the City Council

FROM: Councilmembers Linda Maio and Laurie Capitelli

SUBJECT: Opposition to Application for a Rail Spur, by the Valero Refinery, to the City of Benicia

**RECOMMENDATION**

Oppose the Valero Refinery's application for a rail spur, to receive hazardous and volatile crude by rail, to the City of Benicia, and communicate our opposition via formal letter to the Benicia City Council

**BACKGROUND**

As Phillips 66 has proposed in San Luis Obispo, the Valero refinery has made an application to the City of Benicia to build a rail spur to enable it to facilitate receiving crude oil products by rail. The Valero refinery is clear in its application that Bakken Crude is on their receiving list. Currently, hazardous and explosive Bakken crude, brought to market through fracking in the Dakotas, is destined to travel across the northwest and then southwest to refineries via rail. However, similar fracked crude oil products are planned to be brought to market from inland states in the south, such as Texas, where discoveries are underway. The rails are their best way of bringing product to the West Coast refineries. Once a rail spur is approved, products can travel to refineries by rail from every direction, in whatever volume is desired, without seeking approval from any community through which these "bomb trains" would travel.

The industry could, but is not, removing the dangerous volatiles before shipping. Although production by fracking has slowed due to global oil market competition, clearly the industry is readying itself for resumption of extraction. All of the towns and cities within close proximity of these rail lines would be exposed to the highly volatile products transiting through our locales, often directly adjacent to residences, businesses, community activities, and the Bay.

Given the number and seriousness of rail accidents involving hazardous crude, and on the rail lines in general, opposition is critical. Berkeley could experience an unknown

number of shipments of these hazardous materials, from whatever direction, of which we would not even be informed. The rail lines are governed at the federal level and local communities have no jurisdiction. However, a rail spur is a land use decision of the local jurisdiction, in this case, the City of Benicia. The Valero EIR, like the Phillips 66 EIR, totally ignored the exposures to hazards that local communities will experience from these shipments, which is both wrong and unacceptable. The hearings before the Benicia City Council will be taking place in early April. By passing this resolution Berkeley will join the considerable opposition to the Valero proposal.

### **FINANCIAL IMPLICATIONS**

None.

### **CONTACT**

Office of Councilmember Linda Maio, Vice Mayor of the City of Berkeley, District 1  
510.981.7110 | lmaio@cityofberkeley.info | cityofberkeley.info/lindamaio  
Office of Councilmember Laurie Capitelli, District 5  
510.981.7150 | lcapitelli@cityofberkeley.info | cityofberkeley.info/council5



# INVESTIGATION REPORT

## LPG FIRE AT VALERO – MCKEE REFINERY

(Four Injured, Total Refinery Evacuation, and Extended Shutdown)

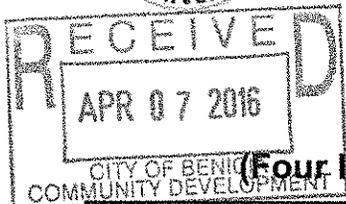


Photo: Associated Press

**VALERO ENERGY CORPORATION**

SUNRAY, TEXAS

FEBRUARY 16, 2007

### KEY ISSUES:

- FREEZE PROTECTION OF DEAD-LEGS
- EMERGENCY ISOLATION OF EQUIPMENT
- FIREPROOFING OF SUPPORT STEEL
- FIRE PROTECTION FOR HIGH PRESSURE LPG SERVICE
- CHLORINE RELEASE

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## Acronyms and Abbreviations

AIChE	American Institute of Chemical Engineers
API	American Petroleum Institute
BPD	barrels per day (100 BPD = 2.92 gallons per minute)
CCPS	Center for Chemical Process Safety
CFR	Code of Federal Regulations
CSB	U.S. Chemical Safety and Hazard Investigation Board
DAGO	DeAsphalted Gas Oil
DCS	distributed control system
EIV	emergency isolation valve
EHS	extremely hazardous substance
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERPG	Emergency Response Planning Guideline
IChemE	Institute of Chemical Engineers (UK)
IDLH	immediately dangerous to life or health
LPG	liquefied petroleum gas
MOC	Management of Change
NPRA	National Petrochemical and Refiners Association
NWS	National Weather Service
OSHA	Occupational Safety and Health Administration
PDA	Propane DeAsphalting Unit
PEL	permissible exposure limit
PHA	Process Hazard Analysis
psi	pounds per square inch (1 psig = 6.89 kPa)
PSM	Process Safety Management (OSHA)
RMP	Risk Management Program (EPA)
ROSOV	Remotely Operable Shut-Off Valve
TCEQ	Texas Commission on Environmental Quality
UDS	Ultramar Diamond Shamrock

## EXECUTIVE SUMMARY

On February 16, 2007, a liquid propane release from cracked control station piping resulted in a massive fire in the propane deasphalting (PDA)<sup>1</sup> unit at Valero's McKee Refinery near Sunray, Texas, injuring three employees and a contractor. The fire caused extensive equipment damage and resulted in the evacuation and total shutdown of the McKee Refinery. The refinery remained shut down for two months; the PDA unit was rebuilt and resumed operation nearly one year after the incident. Direct losses attributed to the fire were reported to exceed \$50 million.<sup>2</sup>

The following are key findings of the Chemical Safety Board's (CSB) investigation:

1. The propane release was likely caused by the freeze-related failure of high-pressure piping at a control station that had not been in service for approximately 15 years. The control station was not isolated or freeze-protected but left connected to the process, forming a dead-leg.<sup>3</sup> Water in the propane accumulated in the low point formed by the control station and froze during cold weather prior to the incident, cracking an inlet pipe elbow. Ice sealing the failed pipe from the process melted as the air temperature rose on the day of the incident, releasing 4,500 pounds per minute of liquid propane, which ignited.
2. The refinery did not conduct a management of change<sup>4</sup> review when the control station was removed from active service in the 1990s. Consequently, the freeze-related hazards of the

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<sup>1</sup> The McKee propane PDA unit uses liquid propane as a solvent to separate gas oil from asphalt. The gas oil is fed to other units in the refinery for further processing. The asphalt is sold as paving material.

<sup>2</sup> RMP submittal, December 2007.

<sup>3</sup> A dead-leg is a section of piping connected to the process that has no flow through it.

<sup>4</sup> Management of change is a systematic method for reviewing the safety implications of modifications to process technology, facilities, equipment, chemicals, organizations, policies, and standard operating practices and procedures.

dead-leg formed by the control station were not identified or corrected when the change was made.

3. The McKee Refinery's freeze protection practices did not ensure that process units were systematically reviewed to identify and mitigate freezing hazards for dead-legs or infrequently used piping and equipment.
4. American Petroleum Institute (API)<sup>5</sup>-recommended safety practices for oil refineries do not provide detailed guidance on freeze protection programs, nor do they sufficiently stress freeze protection of dead-legs, or of infrequently used piping and equipment.
5. The rapidly expanding fire prevented field operators from closing manual isolation valves or reaching local pump controls to isolate the high-pressure propane being vented to the atmosphere. Control room operators were unable to shut off the flow of propane because remotely operable shut-off valves (ROSOVs)<sup>6</sup> were not installed in the PDA. The lack of remote isolation significantly increased the duration and size of the fire, resulting in extensive damage to the PDA, the main pipe rack, and an adjacent process unit.
6. API provides safety guidance for the use of ROSOVs in LPG storage installations, but does not address their use in refinery process units handling large quantities of flammable materials. Valero internal standards require the use of ROSOVs in such process units, but the McKee Refinery had not retrofitted them in the PDA unit.

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<sup>5</sup> The API, an industry trade group, publishes recommended practices and standards widely used in the refining industry.

<sup>6</sup> ROSOVs, also called emergency isolation valves (EIVs), are equipped with actuators and are configured to be quickly and reliably operated from a safe location, such as a well-sited control room.

7. Flame impingement on a non-fireproofed structural support caused a pipe rack to collapse, significantly increasing the size and duration of the fire, and led to the evacuation and extended shutdown of the refinery.
8. API-recommended practices and Valero standards for fireproofing do not provide sufficiently protective guidance for fireproofing distance for pipe racks near process units containing high-pressure flammables.
9. The exposure of three one-ton chlorine containers to radiant heating from the fire led to the release of approximately 2.5 tons of highly toxic chlorine,<sup>7</sup> which was used as a biocide in an adjacent cooling tower. Biocides that are inherently safer than chlorine are available.
10. A butane storage sphere was exposed to radiant heating that blistered its paint. The manual firewater deluge valve for the butane sphere was located too close to the PDA unit and could not be opened during the fire.
11. API-recommended practices do not require the evaluation of hazards posed by adjacent process units when specifying the design, operation, or location of firewater deluge valves.
12. The McKee Refinery's Process Hazard Analysis was ineffective in identifying and addressing the
  - risk of pipe failure due to freezing,
  - need for ROSOVs in the PDA unit to rapidly isolate LPG releases, and
  - hazards posed by fire exposure to neighboring equipment, including the chlorine ton containers and the butane storage sphere.

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<sup>7</sup> Chlorine has a permissible exposure limit (PEL) of 1.0 ppm, and is listed by the Environmental Protection Agency (EPA) as an extremely hazardous substance (EHS).

This CSB report identifies root and contributing causes, and makes recommendations to Valero Energy Corporation, Valero–McKee Refinery, the API, the United Steelworkers Union, and Steelworkers Local 13-487.

## 1.0 Introduction

### 1.1 Background

At 2:09 p.m. on Friday, February 16, 2007, liquid propane under high pressure was released in the Propane De-Asphalting (PDA)<sup>1</sup> unit of Valero's McKee Refinery, 50 miles north of Amarillo in the Texas panhandle, near the town of Sunray. The resulting propane vapor cloud found an ignition source, and the subsequent fire injured workers, damaged unit piping and equipment, and collapsed a major pipe rack. The fire grew rapidly and threatened surrounding units, including a Liquefied Petroleum Gas (LPG) storage area. Fire-fighting efforts were hampered by high and shifting winds and the rapid spread of the fire. A refinery-wide evacuation was ordered approximately 15 minutes after the fire ignited.

Three of the four workers injured were seriously burned, including a contractor. The refinery was completely shut down for just under two months, and operated at reduced capacity for nearly a year.

Because of the serious nature of this incident, the U.S. Chemical Safety and Hazard Investigation Board (CSB) launched an investigation to determine root and contributing causes and to make recommendations to help prevent similar incidents.

### 1.2 Investigative Process

The CSB investigators arrived at the McKee Refinery the morning of Sunday, February 18, 2007. The CSB interviewed Valero and contractor personnel, reviewed company documents and data from the PDA unit's computerized control system, examined physical evidence, and tested valves and piping components. The CSB investigation team was aided by experts in metallurgical analysis and high-pressure flow testing. The investigation focused on the refinery's programs to identify and address

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<sup>1</sup> The McKee PDA unit uses liquid propane as a solvent to separate gas oil from asphalt. The gas oil is fed to other

process hazards, and on the fire protection measures used in and around the PDA unit. Investigation activity was coordinated with the U.S. Occupational Safety and Health Administration (OSHA); the U.S. Environmental Protection Agency (EPA); and the Texas Commission on Environmental Quality (TCEQ).

## 2.0 Valero Energy Corporation

### 2.1 Company History

Valero Energy Corporation was formed in 1980 as a natural gas-gathering company<sup>2</sup> based in San Antonio, Texas. In the early 1980s, the company began expanding into the refining industry, and in 1997, separated its refining and marketing businesses into an independent company under the Valero name.

Valero Energy expanded rapidly in the late 1990s and early 2000s, as it acquired 16 U.S. refining facilities, as well as plants in Quebec, Canada; and Aruba. Valero Energy became North America's largest refiner in 2005, operating 18 refineries<sup>3</sup> with capacity of approximately 3.3 million barrels per day (bpd). In 2006 the company had assets of approximately \$33 billion; annual revenues of \$91.8 billion; and 21,800 employees.<sup>4</sup>

### 2.2 McKee Refinery

The McKee Refinery in Sunray, Texas, was built in 1933 by Shamrock Oil and Gas Company.<sup>5</sup> Major unit upgrades were made in the 1950s, 1990s, and, most recently, in 2004. The refinery became part of

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units in the refinery for further processing. The asphalt is sold for use in paving materials.

<sup>2</sup> Gathering companies consolidate gas production from many natural gas wells into one or more large production pipelines for treating and distribution.

<sup>3</sup> This number includes two separate plants (east and west) at one physical location. Since the February 2007 incident, Valero has divested its Lima, Ohio, refinery, bringing Valero's total to 17.

<sup>4</sup> Dunn & Bradstreet, Directory of Corporate Affiliations, s.v. "Valero Energy Corporation," dated Dec. 11, 2007, accessed Dec. 13, 2007.

<sup>5</sup> *Handbook of Texas Online*, s.v. "Diamond Shamrock." <http://www.tshaonline.org/handbook/online/articles/DD/hed6.html>, accessed Jan. 2, 2008.

Valero in late 2001 when Ultramar Diamond Shamrock (UDS), the previous owner, merged with Valero Energy.

On July 29, 1956, the McKee Refinery experienced a tragic workplace accident when a light hydrocarbon storage vessel failed catastrophically during a fire, resulting in the deaths of 19 emergency responders.

The refinery processes 170,000 barrels of crude oil per day, and distributes its products by pipeline to customers in Texas, New Mexico, Arizona, Colorado, and Oklahoma.

### 2.3 Propane Deasphalting (PDA) Unit

The PDA unit (Figure 1) recovered fuel feedstock and paving-grade asphalt from the heavy bottoms (pitch<sup>6</sup>) produced in the refinery's vacuum crude oil fractionator. In the McKee PDA process, two liquid/liquid extraction towers used liquid propane as a solvent to extract gas oil<sup>7</sup> from the pitch under approximately 500 pounds per square inch (psi)(3,447 kPa) pressure. The recovered gas oil was processed into gasoline in another refinery unit. The asphalt produced was sold for use in paving materials. Figure 2 is a simplified process flow diagram for the No. 1 Extractor, including the location from which the propane was initially released.

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<sup>6</sup> Pitch is the heavy, viscous material discharged from the bottom of the vacuum fractionator after the lighter fractions have been removed – the heaviest hydrocarbon mixture produced from crude oil in the refinery.

<sup>7</sup> Gas oil is a hydrocarbon mixture with molecular weight and viscosity somewhat higher than diesel.

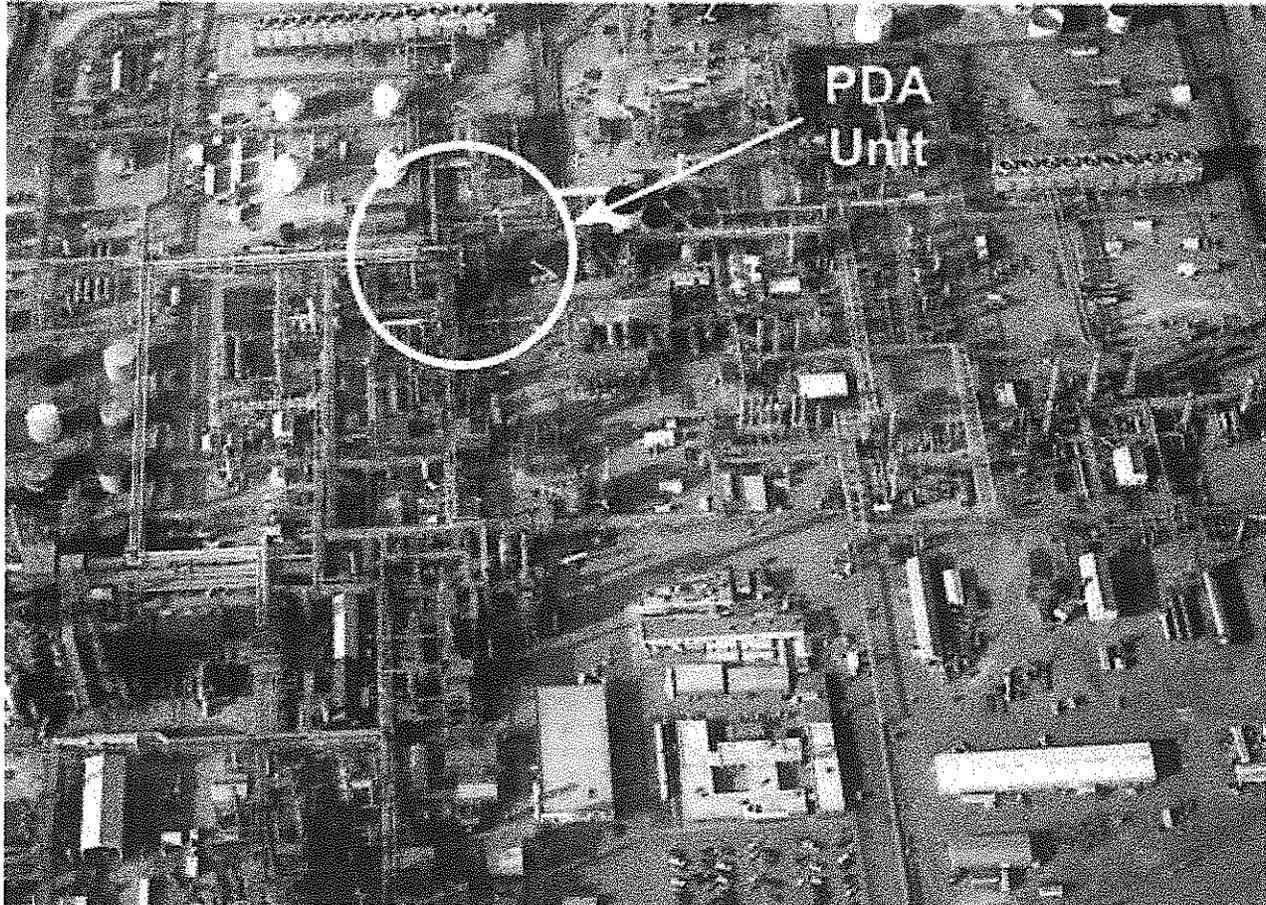


Figure 1. PDA unit location in the McKee Refinery

The relatively dense pitch entered an upper section of the extractor and flowed to the bottom of the tower. Less dense liquid “wash” propane entered a lower section and flowed to the top of the extractor. Internal structures in the tower promoted effective contact between the two streams. DeAsphalted Gas Oil (DAGO) extracted from the pitch flowed out of the top of the tower with much of the propane. This liquid flowed through a series of flash drums<sup>8</sup> to remove propane from the gas oil. The DAGO was sent elsewhere in the refinery for processing.

A mixture of asphalt and propane flowed from the bottom of the extractor. This stream was also heated and flashed to remove entrained propane, and the asphalt sent to storage.

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<sup>8</sup> This is referred to as “flashing,” in which the pressure of a liquid mixture is suddenly reduced, causing light materials to vaporize, or “flash off,” separating them from heavier liquid components.

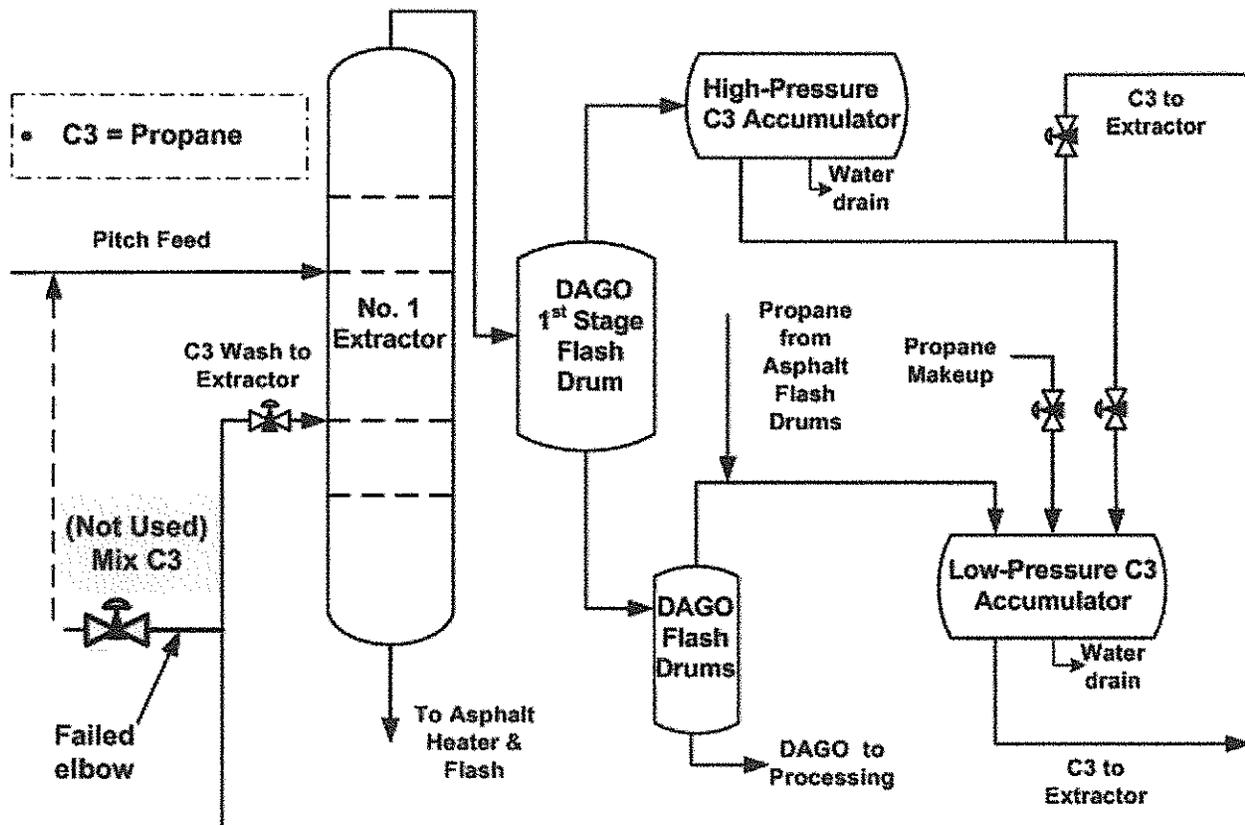


Figure 2. No. 1 Extractor simplified process flow diagram

Propane from the various flashing steps was condensed and sent to either the low- or high-pressure accumulators. Propane from both accumulators was pressurized by pumps, blended for temperature control, and recycled to the extractors. A small amount of makeup propane (about 0.5 percent of the circulating propane rate) entered the low-pressure accumulator to replace losses. Operators told the CSB investigators that the makeup propane contained a variable amount of entrained water, which was regularly drained from the low points on the accumulators.<sup>9</sup> Appendix A contains a more detailed process flow diagram of the PDA unit showing the major process flows and drainage points.

<sup>9</sup> Many refinery streams normally contain small amounts of water.

## 3.0 Incident Description

### 3.1 The Incident

On Friday, February 16, 2007, at approximately 2:09 p.m.,<sup>10</sup> plant personnel and contractors working in the PDA unit heard a “pop,” and saw what appeared to be steam blowing from a control station near ground level at the No. 1 Extractor tower. Plant personnel quickly determined that the escaping cloud was propane and directed workers in the area to evacuate.

The propane escaping from the high-pressure system formed a vapor cloud that traveled downwind toward the boiler house, where it likely ignited.<sup>11</sup> The flames flashed back to the leak source.

Surveillance video (Figure 3) shows the fire developing rapidly as flames impinged on piping around the No. 1 Extractor, releasing additional propane.

A steel support column on the east/west (E-W) pipe rack was impacted by a high-pressure propane jet fire. The column, which was not protected by fireproofing insulation, buckled, collapsing the rack and causing multiple pipe failures. Liquid petroleum products discharged from the damaged pipes, contributing to the rapid spread of the fire and the damage caused to surrounding equipment, such as the No. 2 Cooling Tower and No. 4 Naphtha Column.

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<sup>10</sup> The time of 2:09 p.m. is based on control system records examined after the incident.

<sup>11</sup> Nearby fired heaters were another possible source of ignition.



Figure 3. Approximately 90 seconds after ignition (from surveillance video)

### 3.2 Injuries

Two Valero employees, who have since returned to work, and one contractor were seriously burned in the initial flash fire. The injured contractor continued to receive medical treatment for over a year after the incident. A member of the fire brigade received minor burn injuries while setting up fire-fighting equipment early in the response. Ten other Valero employees and contractors were treated for minor injuries and released. There were no fatalities and no reported off-site injuries.

### 3.3 Emergency Response and Refinery Evacuation

According to Valero's incident response records, the fire alarm was activated at 2:10 p.m., about one minute after employees heard the "pop" of the initial release. The refinery's emergency response team approached the fire, staging from the south. They attempted to activate stationary fire water monitors, but

the high and shifting winds and the rapid growth of the fire hampered their efforts.

Fifteen minutes after the fire erupted, managers at the Emergency Operations Center (EOC) ordered a total refinery evacuation. Refinery alarm records show that the evacuation alarm sounded at 2:26 p.m. The EOC tactical operations director later stated that the main concerns driving the evacuation decision were the number of pressurized pipes rupturing as the pipe rack collapsed and the proximity of the responders to the liquid propane filled extractor vessels, which were engulfed in flames and possibly at risk of failing catastrophically. This decision pulled responders and workers away from a rapidly deteriorating situation that could have endangered many lives.

The refinery was shut down by isolating main feeds and the fuel gas supply. Emergency response teams later entered to isolate fuel sources, gradually shrinking the fire. Valero planned to stage a joint entry with responders from the nearby Conoco Phillips refinery<sup>12</sup> to extinguish the fire the following day; however, chlorine and sulfuric acid leaks<sup>13</sup> made this entry too hazardous. The fire was extinguished by Valero personnel on Sunday afternoon, February 18, 2008, approximately 54 hours after it ignited.

### 3.4 Aftermath

The refinery remained completely shut down for nearly two months. Media reports indicated spot shortages of reformulated gasoline in Denver, Colorado,<sup>14</sup> in the weeks immediately following the fire. This incident occurred during a period when unplanned refinery outages kept approximately 480,000 bpd

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<sup>12</sup> Refineries often establish mutual aid agreements to increase the resources available for responding to large emergencies.

<sup>13</sup> The chlorine and sulfuric acid were used to treat water circulating in a nearby cooling tower.

<sup>14</sup> Reformulated gasoline contains a specified content of oxygenated fuels to meet EPA requirements for automotive emissions in certain regions. Valero's McKee Refinery is located approximately 400 miles from Denver, and typically supplies, via pipeline, much of the gasoline consumed in the Denver market.

of capacity offline nationwide, of which 170,000 bpd was attributed to the McKee fire.<sup>15</sup> Operations resumed at reduced throughput roughly two months after the fire.

The PDA unit was heavily damaged (Figure 4). Much of the piping, control wiring, and heat exchange equipment in the area of the extractors was destroyed and major equipment items, including the extractor towers, required extensive evaluation to determine if they were safe for continued use. Valero restarted the rebuilt PDA unit in January 2008, nearly one year after the fire, restoring the refinery to full production capacity.

### 3.5 Near-Miss Events

The Center for Chemical Process Safety<sup>16, 17</sup> (CCPS) defines a near-miss as “an extraordinary event that could reasonably have been expected to result in negative consequences, but actually did not” (1992).

Two events during the February 16 fire could have resulted in serious, or even catastrophic, consequences if the wind direction had been different or if personnel had been nearby.

#### 3.5.1 Butane Sphere Heat Exposure

At the time of the initial propane release, the wind was blowing from the west-northwest, pushing the fire in the general direction of the boiler house. Interviews, records, and security camera video footage indicate that the wind shifted several times during the fire, forcing the EOC to relocate.

Radiant heat from the intense PDA fire blistered the paint on a 10,000 barrel (420,000 gallon) capacity butane storage sphere located 270 feet northwest of the No. 1 Extractor (Figure 4). Fortunately, the wind

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<sup>15</sup><http://tonto.eia.doe.gov/oog/info/twip/twiparch/080221/twipprint.html>; accessed Feb 2008.

<sup>16</sup> The CCPS, an industry-sponsored affiliate of the American Institute of Chemical Engineers, publishes widely recognized process safety guidelines.

<sup>17</sup> CCPS defines process safety as a “discipline that focuses on the prevention of fires, explosions and accidental chemical releases at chemical process facilities.” Process Safety Management (PSM) applies management principles and analytical tools to prevent major accidents (CCPS, 1992).

tended to move the flames away from the sphere; strong winds from the southeast might have greatly exacerbated the sphere's thermal exposure. Even with favorable winds, heat from the fire kept responders from reaching the fire water deluge system valve for the sphere, preventing them from establishing a protective flow of water over its surface. During interviews, emergency responders indicated that they were concerned for the safety of the butane sphere, in light of a recent commemoration of the 1956 incident in which the failure of a vessel in similar service caused 19 fatalities.

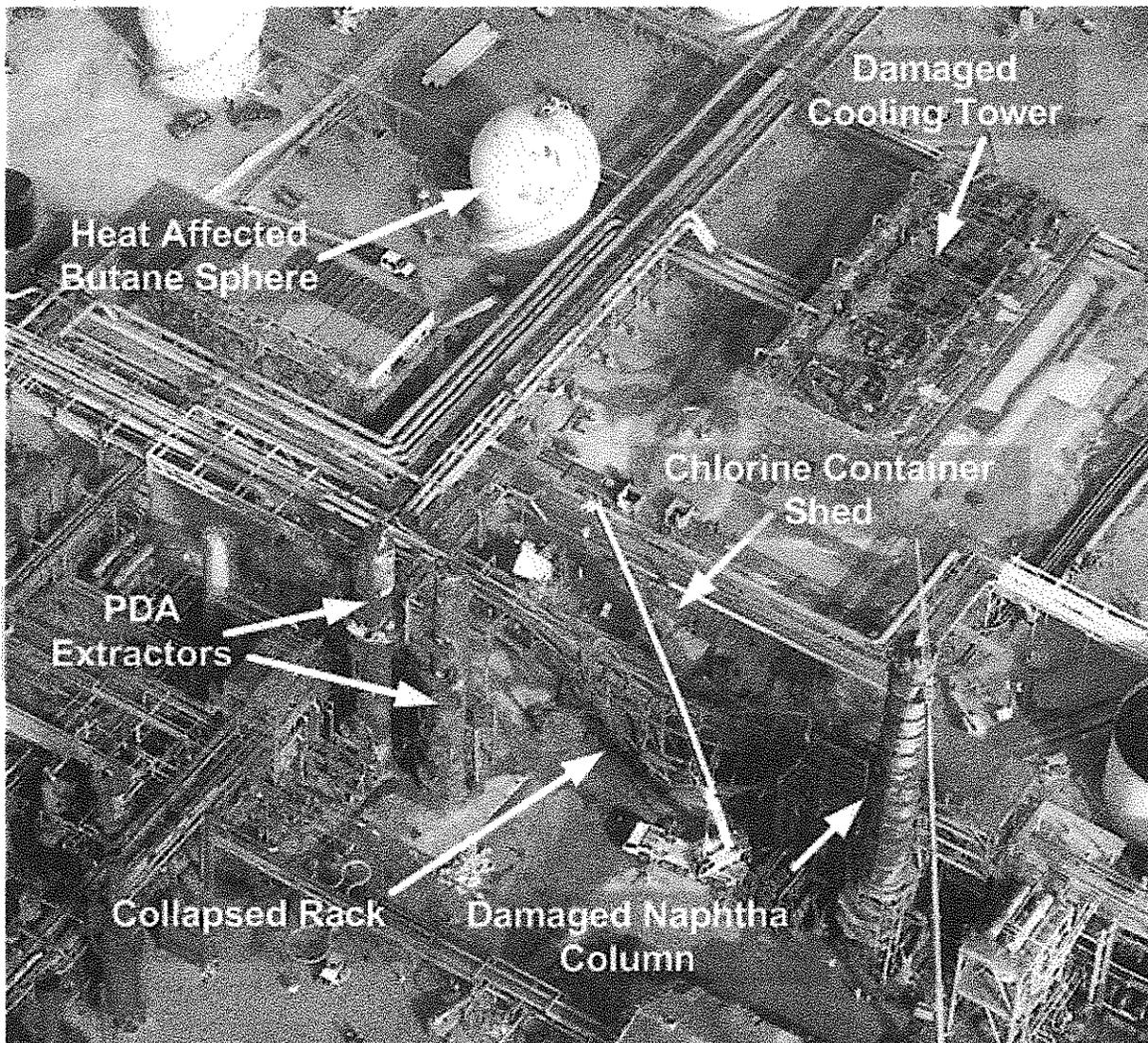


Figure 4. Aerial photograph of damage from the PDA unit fire

### 3.5.2 Chlorine Release

Post-incident examination revealed that three one-ton chlorine containers in a cooling tower water treatment shed were subjected to radiant heating due to their proximity to the PDA unit (100 feet to No. 2 Extractor) and pipe rack (20 feet). All three containers vented when their fusible plugs, installed to prevent container rupture, melted as designed. One container ruptured despite the operation of its fusible plugs, and another vented completely. The third developed a leak through a partially melted plug that was repaired by emergency responders using self-contained breathing equipment for protection against the toxic vapor. More than 2.5 tons of chlorine, an extremely toxic material, were released.<sup>18</sup>

Fortunately, emergency responders and other refinery personnel had pulled back from the area before the major chlorine release likely occurred.<sup>19</sup> There is no evidence that personnel on- or off-site were exposed to hazardous levels of chlorine gas. However, if responders had been nearby when the cylinders released their contents, significant exposures could have occurred.

## 4.0 Incident Analysis

This section provides detailed analysis of the sequence of events and causal factors leading to the origin and spread of the February 16, 2007, fire and its impact on adjacent equipment.

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<sup>18</sup> Chlorine has an OSHA PEL of 1.0 ppm; an NFPA toxicity rating of 4, the highest possible; and is listed by the EPA as an EHS.

<sup>19</sup> The CSB investigators could not precisely determine the time of release, but it was likely shortly after the collapse of the main E-W pipe rack, when a large pool fire burned just south of the chlorine container storage pad.

## 4.1 Incident Sequence

In this incident, water settling out of a propane stream likely leaked through a 10" NPS<sup>20</sup> (250 DN) inlet block valve and accumulated in the low point formed by a control station (Figure 5). The control station was connected to the process, but had not been used for approximately 15 years. A period of cold weather likely froze the water, fracturing the pipe elbow upstream of the control valve. Warmer weather then melted the ice, resulting in a release of highly pressurized liquid propane through the fractured elbow. Appendix B contains a detailed time line of the incident.

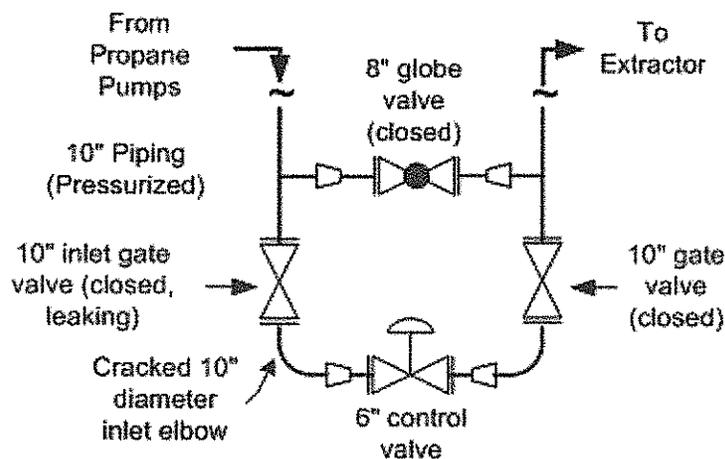


Figure 5. Propane mix control station schematic (not to scale)

### 4.1.1 February Cold Weather

National Weather Service records indicate that the Texas panhandle typically experiences periods of below-freezing weather during the winter, often in February. The 2007 cold snap began four days before the fire at the Valero-McKee Refinery, when temperatures dropped below 32°F and stayed below freezing for 87 hours. The average temperature in nearby Dumas, Texas, on February 14, 2007, was 26°F. A low temperature of 6°F was reached early in the morning of February 15. The temperature did not rise above

<sup>20</sup> NPS refers to U.S. Nominal Pipe Size. Dimensions of NPS pipe and fittings are specified in the American Society of Mechanical Engineers (ASME) standard B36.10. The metric equivalent is given in millimeters, nominal diameter (DN).

freezing until the morning of February 16, approximately five hours before the incident (Weather Underground, 2007).

#### 4.1.2 Propane Mix Control Station Inlet Elbow Freezing and Failure

The 6" NPS (150 DN) propane mix control valve originally mixed liquid propane into the pitch fed into the No. 1 Extractor. Due to a change in extractor control in the 1990s, use of the control valve was discontinued; however, this subsection of the No. 1 Extractor was left connected to the process under high pressure.<sup>21</sup> The block valves around the control valve were closed, but the subsection was not removed or positively isolated from the process using slip blinds.<sup>22</sup> The refinery conducted no formal process safety management of change (MOC) review of this idled control station.<sup>23</sup>

The station's configuration made it a dead-leg: a section of piping connected to the process with no flow through it. Water in the propane likely sank into the dead-leg, leaked by the inlet block valve, and accumulated in the control station piping.<sup>24</sup>

The extended period of cold weather and the lack of freeze protection on the control station allowed the water to freeze and expand, cracking the elbow upstream of the control valve. The crack propagated along the inner radius of the elbow, the line of highest stress (Timoshenko, 1958), opening wider as it developed (Figure 6). Appendix C contains a more detailed discussion of the CSB's analysis of crack formation and propagation. The damage to the inlet elbow and the post-incident leak rate determined for the inlet block valve are consistent with the estimated initial propane release rate during the incident.

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<sup>21</sup> Senior operators in the PDA unit could not recall the exact time the control valve was last used. The change in extractor control occurred approximately 15 years before the incident.

<sup>22</sup> Slip blinds are solid pieces of metal inserted between flanges to positively isolate piping or equipment.

<sup>23</sup> MOC requires that changes to equipment, process, or design intent be reviewed for safety implications. It is a required element of OSHA's Process Safety Management regulation, promulgated in 1992, and an element of API Recommended Practice 750, *Management of Process Hazards*, published in 1990.

<sup>24</sup> Water, which is insoluble (immiscible) in and denser than liquid propane, was known to be present in the propane. Water droplets entrained in propane can accumulate in the bottom of piping and vessels.

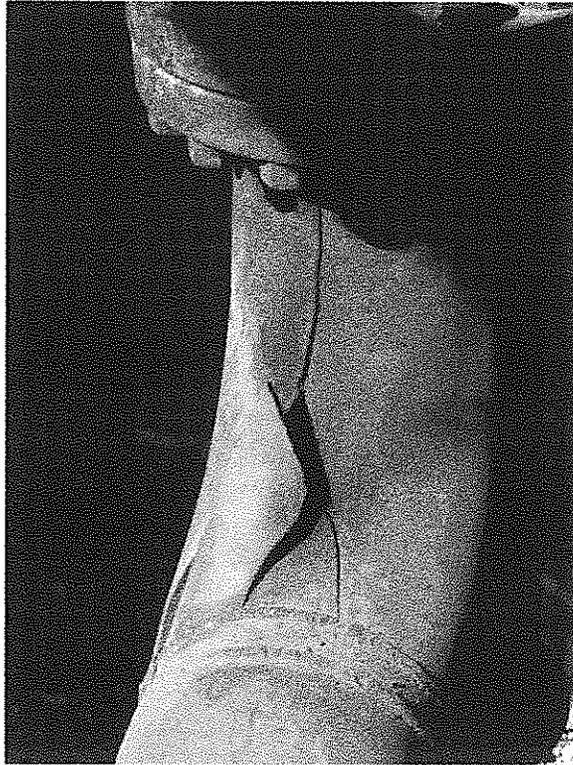


Figure 6. Crack in the 10" diameter propane mix control station inlet elbow

#### 4.1.3 Thaw and Propane Release

On February 16, 2007, shortly after 9:00 a.m., ambient temperatures rose above freezing and the ice inside the elbow began to thaw. Post-incident examination of the control station inlet block valve (Figure 7) revealed that a foreign object was jamming the valve,<sup>25</sup> creating a leak path. When tested in a laboratory after the incident, this valve allowed over 1,025 gpm (233 m<sup>3</sup>/hour) of water to leak through at process pressure. At approximately 2:09 p.m., melting ice opened the leak path, releasing liquid propane at 500 psig (3,447 kPa) pressure through the cracked elbow. A flammable vapor cloud rapidly formed. Based on recorded data from the PDA unit's computerized control system, the CSB estimated an initial propane leak rate of 4,500 pounds (2,040 kg) per minute (Appendix D describes the propane mass balance calculations used to develop this figure).

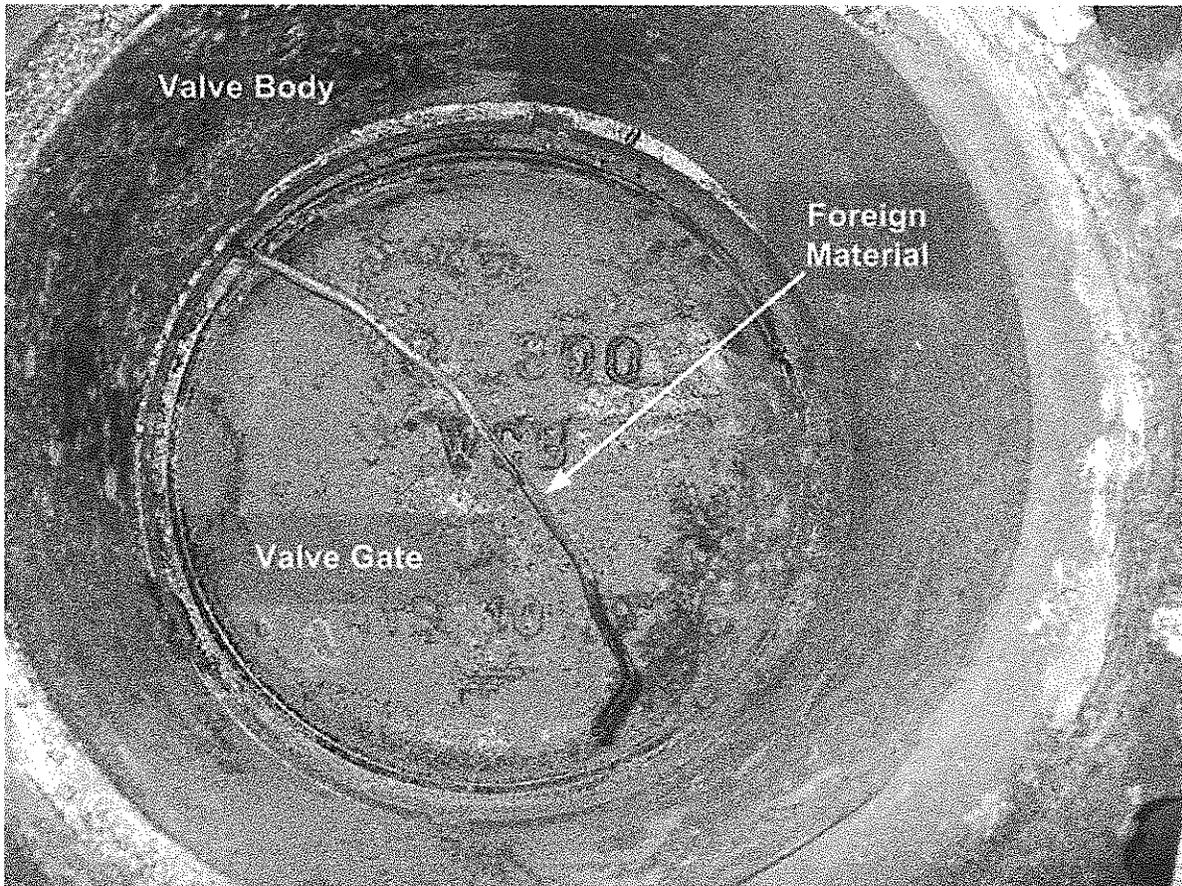


Figure 7. Downstream view of propane mix control station inlet block valve

The wind blew the propane cloud toward the boiler house, where it likely ignited.<sup>26</sup> The flames flashed back to the release point. The size and intensity of the resulting fire blocked access to manual shut-off valves and pump on-off switches that might otherwise have been used to control the propane discharge. Within minutes, the fire damaged piping and pipe rack supports, spreading the fire (Figures 4, 8, 9).

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<sup>25</sup> In gate valves, a circular gate slides against metallic seat rings, providing a leak-tight seal when the valve is closed. The foreign object in the inlet gate valve prevented a tight fit between the gate and the seat rings.

<sup>26</sup> While the boiler house was the most likely source of ignition, nearby fired heaters could not be ruled out.



Figure 8. Damaged 10" propane inlet on Extractor No. 1

## 4.2 Dead-Leg Freeze Protection

The initial release of propane was due to the McKee Refinery's failure to recognize and address the freezing hazard posed by the propane mix valve control station dead-leg.

### 4.2.1 Dead-Leg Not Recognized or Addressed

The McKee Refinery had not identified the station as a dead-leg. A piping and instrumentation drawing (P&ID) update project for the PDA unit, completed in 2006, identified only dead-legs that were visually apparent, such as one formed when a control valve was physically removed and its flanged connections slip-blinded. However, the P&ID update did not detect the propane mix control station dead-leg, which was formed by closing block valves in the piping.

A Process Hazard Analysis (PHA)<sup>27</sup> performed on the PDA unit in 2006 did not examine freezing as a threat to piping integrity. Furthermore, the McKee Refinery's freeze protection program did not periodically survey process units for potentially freeze-prone dead-legs.

#### 4.2.1.1 Inherently Safer Approach

According to safety guidance by the CCPS in *Inherently Safer Processes, A Life Cycle Approach* (1996), the preferred way to control hazards is to eliminate them where possible. According to *Lee's Loss Prevention* (2005), the best approach for managing dead-legs, such as the propane mix control station, is to remove them. If removing them is impractical, other approaches, in order of decreasing protective value, could include 1) positively isolating the dead-leg by installing slip blinds; 2) freeze-protecting them; or 3) procedures to regularly monitor and drain water from low points.

#### 4.2.2 McKee Refinery Freeze Protection Program

Sunray, Texas, is in the north Texas panhandle, an area where below-freezing temperatures are common in February. Valero's McKee Refinery protected piping and equipment from freezing by insulating and "tracing" with steam-filled tubing or electric heat tape.<sup>28</sup> It was an unwritten practice to review and repair freeze protection components every fall. However, these activities focused on maintaining existing freeze protection measures, not on periodically reviewing units for dead-legs or other idle/infrequently used piping systems, or surveying process units for areas where water could collect.

The refinery's inspection program contained provisions for more frequent inspection of identified dead-legs, but these focused on identifying long-term corrosion issues, not acute freeze hazards. Freeze

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<sup>27</sup> OSHA defines a PHA as a "thorough, orderly, systematic approach for identifying, evaluating, and controlling the hazards of processes involving highly hazardous chemicals." PHAs must be updated and revalidated at least every five years under the Process Safety Management regulation 29 CFR 1910.119.

<sup>28</sup> Heat tracing involves providing a source of heat along the length of a pipe, usually by attaching or wrapping steam tubing or heating tape to or around the piping, and then insulating the protected piping.

protection is both a mechanical integrity (inspection) and operational issue, and requires an integrated approach.

#### 4.2.3 Valero Corporation Freeze Protection Survey

Following the McKee fire, Valero surveyed the freeze protection programs at its US refineries. Most of the refineries in freeze-prone areas had informal programs similar to McKee's, while several had legacy freeze protection guidelines from previous owners. Valero did not have a corporate policy for freeze protection to set minimum standards for freeze protection programs at its facilities.

#### 4.2.4 Other Dead-Leg and Freeze-Related Incidents

In a 2002 brochure, *Understanding the Hazard: Freeze*, FM Global<sup>29</sup> cited "151 freeze incidents in industry with an average estimated gross loss of about \$115,000 per incident from 1991 to 2000." The following is a sampling of specific incidents identified by the CSB:

- January 1962, Texas City, TX: An entire refinery was crippled and major process units shut down when the area experienced temperatures below freezing for 66 hours: "Dead-end water lines and steam lines froze, causing valves to break and some pipes to split"(API Publication 758, 1983).
- March 1979, Exxon, Linden, NJ: Seven injured when butane and propane released from a dead-leg formed a large vapor cloud and exploded (Garrison, 1985).
- February 1996, Total Petroleum, Denver, CO: Abandoned pump gland oil piping under process pressure froze and then burst above a vacuum bottom pump, causing a fire (*Denver Post*, June 28, 1996).

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<sup>29</sup> FM Global, a large process industry insurer, has developed widely used guidance documents.

- February 2001, Bethlehem Steel, Burns Harbor, IL: Freezing in a dead-leg condensate line near a coke oven led to two fatalities and four injuries (CSB 2001-02-I-IN, 2002).
- January 2008, Chevron, Pascagoula, MS: A freeze-related fire was reported at the refinery. This fire is an example of incidents where freezing temperatures occur occasionally, but not consistently during the winter (AP, January 3, 2008).

The IChemE<sup>30</sup> BP Process Safety Series publication, *Hazards of Water*, also lists numerous examples of process incidents related to water freezing.

#### 4.2.5 Available Industry Guidance

FM Global's *Freeze* brochure (2002) describes the risk and provides guidance for evaluating susceptible piping systems, with particular emphasis for facilities in regions where the risk of freezing weather is intermittent. The brochure provides general guidance for mitigating the hazard, but does not describe the specifics of freeze protection programs. However, FM Global has also published a Property Loss Prevention Data Sheet, *Prevention of Freeze-Ups*, (2007, latest edition) that does give guidance for establishing and maintaining freeze protection programs.

Zurich, another major insurer, has published a cold weather checklist that tells users to "drain the vessels and piping of idle equipment"(Zurich, 2003).

The CSB reviewed available publications by the API, an industry group that publishes voluntary standards, and found no detailed guidance for refineries on establishing effective freeze protection programs.<sup>31 32</sup>

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<sup>30</sup> The Institute of Chemical Engineers (IChemE) is a UK engineering professional organization that publishes widely referenced process safety guidance.

<sup>31</sup> API publication *Safety Digest of Lessons Learned, Section 9, Precautions Against Severe Weather Conditions*, which provided general guidance for preparing a refinery for extreme cold weather, is no longer in print.

### 4.3 Fireproofing

A non-fireproofed structural support for a pipe bridge<sup>33</sup> spanning a 90-foot wide open area north and east of the PDA unit (Figure 9) collapsed early in the incident, greatly increasing the magnitude of the fire. The support was located on a major E-W pipe rack north of the unit, outside the fireproofing distances recommended by API guidance and Valero internal standards. The collapse opened multiple lines carrying flammable and combustible materials from other areas of the refinery, contributing significantly to the damage experienced by adjacent units, and extending the time that the refinery was down for repairs. Fireproofed pipe rack support steel columns inside the PDA unit and at the No. 4 Naphtha Column all survived the fire without collapsing (Figure 10).

Fireproofing is “fire resistant insulating material applied to steel to minimize the effects of fire exposure by flame impingement, to reduce the steel’s rate of temperature rise, and to delay structural failure”(API Publication 2510A, 1996). Without fireproofing, exposed structural steel members, such as pipe rack support columns, can rapidly lose their strength and fail, possibly within minutes (API 2218, 1999; CCPS, 2003). Jet fires, such as the pressurized LPG release in this incident, can cause very rapid heating and failure of unprotected structural steel (Appendix E).

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<sup>32</sup> API 570, *Piping Inspection Code*, mentions a variety of hazards associated with dead-legs, including freezing. API Recommended Practice 2001, *Design and Construction of LPG Installations*, discusses the importance of winterization and prevention programs in verifying that out-of-service piping and dead-legs are freeze-protected. However, neither document addresses freeze protection management systems, such as requirements for a formal written program or the need for periodic inspections to identify freeze hazards, which pertain to this incident.

<sup>33</sup> A pipe bridge is a reinforced section of a pipe rack that carries piping over a longer than normal span.

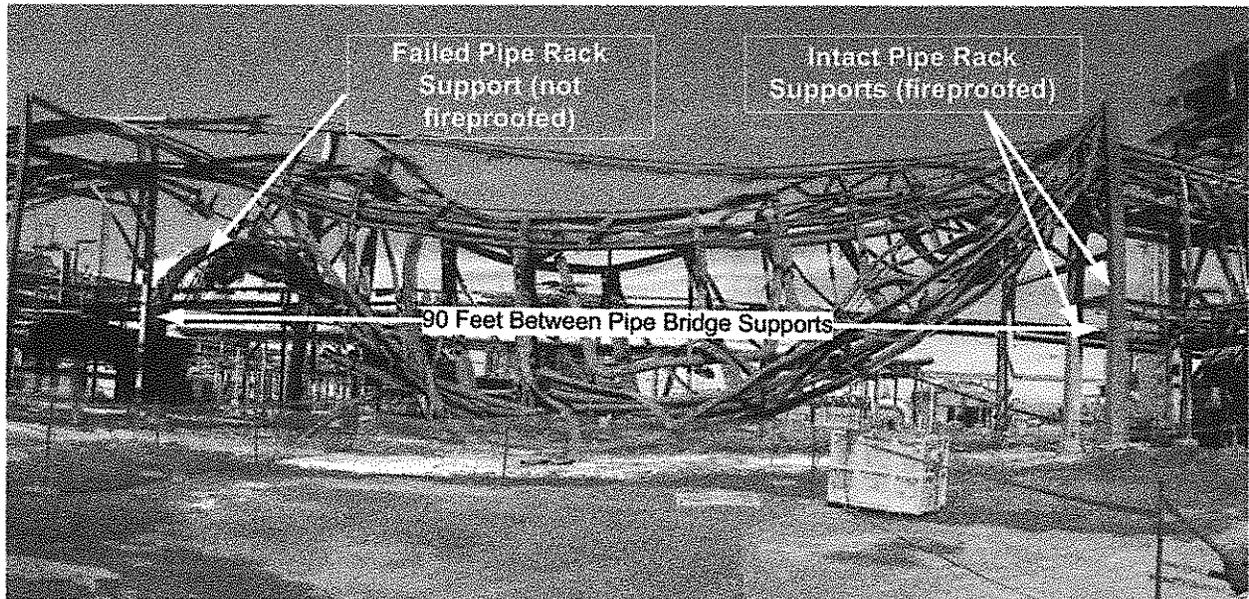


Figure 9. Pipe bridge support fireproofing

Fireproofing is a passive defense that can maintain the integrity of protected structures until a fire is controlled. According to Nolan (1996), “The primary value of fireproofing is obtained in the very early stages of a fire when efforts are primarily directed at shutting down [the] process, isolating fuel supplies to the fire...and conducting personnel evacuations.”

Key guidance for fireproofing in refineries is API Publication 2218, *Fireproofing Practices in Petroleum and Petrochemical Processing Plants*. API Publications 2510, *Design and Construction of LPG Installations*, and 2510A, *Fire-Protection Considerations for the Design and Operation of Liquefied Petroleum Gas (LPG) Storage Facilities*, provide additional information on fireproofing in LPG<sup>34</sup> storage facilities.<sup>35</sup> These publications recommend fireproofing pipe rack support steel that is 20 to 40 feet from fuel sources for general refinery service, and up to 50 feet from LPG vessels.

<sup>34</sup> LPG includes the following light hydrocarbons and mixtures: propane, propylene, normal and iso-butane, and butylenes (API Standard 2510, 2001). These materials are all commonly handled as liquefied gases under pressure.

<sup>35</sup> LPG storage facilities are commonly found in refineries, including the McKee Refinery, which had four storage spheres northwest of the PDA unit.

Valero Energy Corporation's SP-00-04, *Fire Proofing Specifications*, calls for fireproofing pipe racks within 30 feet of equipment with the potential to cause a serious fire, but makes no special provisions for processes handling LPG. A loss-prevention report produced for the McKee Refinery listed fireproofing of pipe rack support steel, including the E-W pipe rack north of the PDA unit, as a top priority for the site fireproofing program, but the rack had not been fireproofed at the time of the incident.

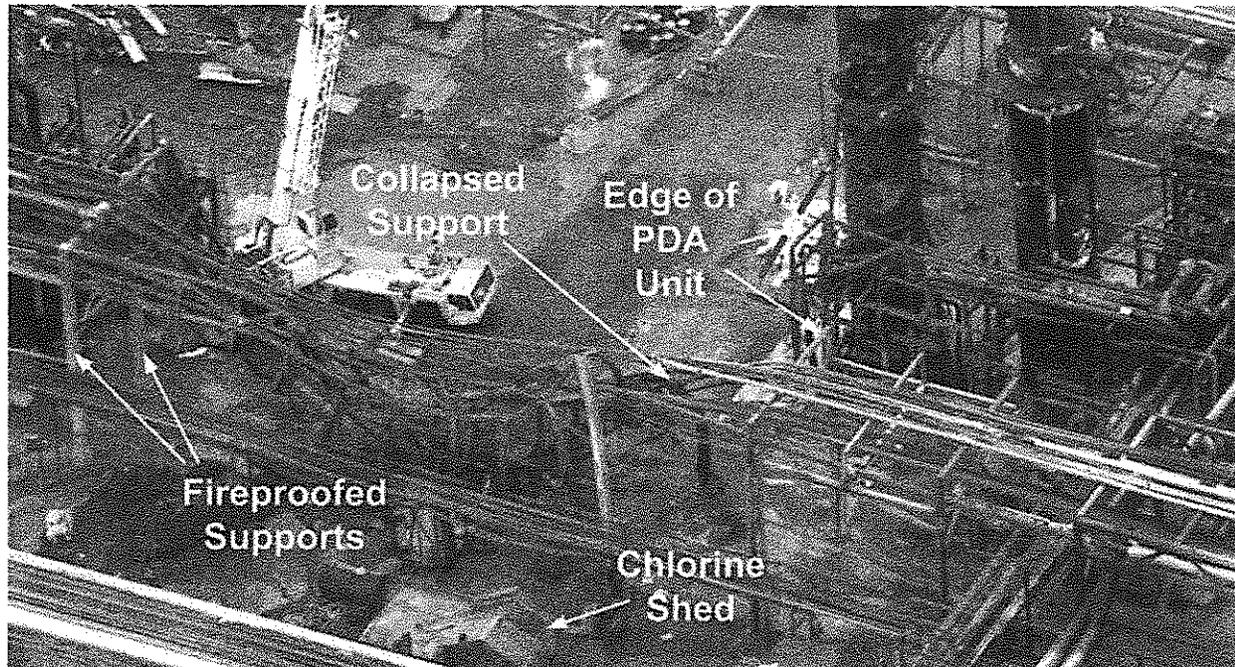


Figure 10. Extractor towers (upper right) and collapsed pipe rack

A failed inlet flange to the No.1 Extractor, located 77 feet away from the buckled pipe bridge support, was the most likely source of the jet fire that collapsed the pipe bridge (Figure 11). The closest major process vessel (the No. 2 Extractor) was 51 feet away from the support. These distances exceed both API's and Valero's recommended fireproofing distances.

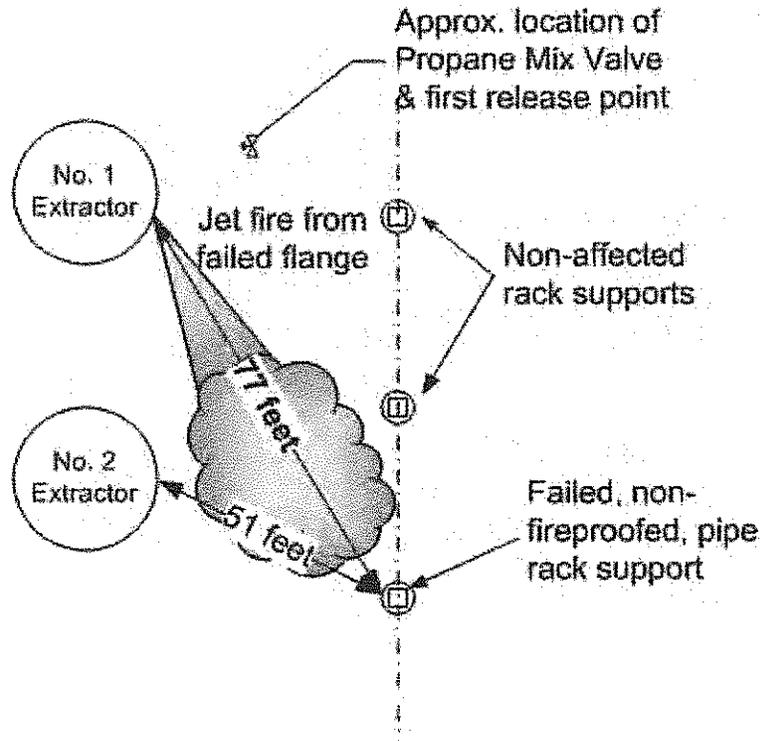


Figure 11. Distances between the E-W pipe rack supports and the extractors

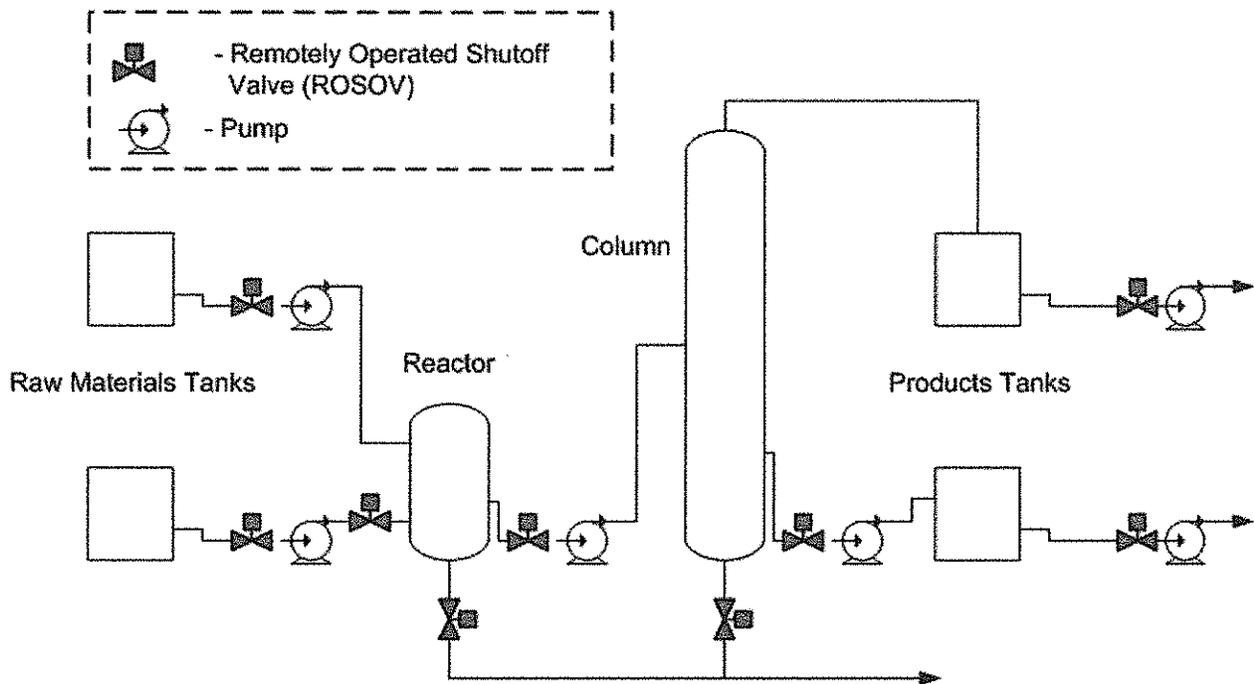
API 2218 references the API 2210/2210A LPG fireproofing distance of 50 feet, developed for pool fires in LPG storage units. Neither standard addresses fireproofing for LPG processes or jet fire scenarios, even though process unit conditions, including pressure, can be more extreme than those found in storage facilities. In this incident, the high operating pressure of the extractors (500 psig, 3,447 kPa) likely produced a jet fire with a range and intensity beyond that anticipated in the API standards for LPG storage releases.

In the Formosa–Point Comfort, Texas, propane/propylene fire in October 2005 that the CSB investigated, non-fireproofed steel columns supporting a critical structure also collapsed while adjacent fireproofed supports survived without damage (CSB 2006-01-I-TX, 2006). If the E-W pipe rack support columns in

this incident had been fireproofed, the severity and duration of the fire would likely have been greatly reduced.<sup>36</sup>

#### 4.4 Emergency Isolation and Shutdown

Although the PDA unit contained large inventories of high-pressure propane, it was not equipped with remotely operable shut-off valves (ROSOVs)<sup>37</sup> to rapidly stop propane releases. ROSOVs should be used in facilities, such as the PDA unit, where fast and effective isolation is needed to reduce the impact of major hazardous releases (HSE, 1999).



Graphic based on FM Global Property Loss Prevention Data Sheet 7-14, 2004

Figure 12. Insurer-recommended locations for ROSOVs

<sup>36</sup> Jet fire scenarios may require the use of fireproofing rated for longer fire exposure and greater resistance to erosion than might be required for protection in pool fire scenarios.

<sup>37</sup> ROSOVs, also referred to as EIVs, are equipped with actuators and configured to be quickly and reliably operated from a safe location, such as a well-sited control room.

Figure 12 shows insurer-recommended ROSOV locations for a typical process unit. ROSOVs should be installed on large inventories of highly flammable materials,<sup>38</sup> especially when downstream pumps are present that could produce pressurized releases. Such pumps should be interlocked to shut down when ROSOVs are closed.

#### 4.4.1 American Petroleum Institute (API) Guidance

API's *Recommended Practice 2001, Fire Protection in Refineries* and API 2030, *Application of Fixed Water Spray Systems for Fire Protection in the Petroleum Industry*, discuss the use of isolation valves in emergencies, including considering access to valves during fires. However, while these recommended practices briefly reference remotely operable isolation valves, they focus on fire- and heat-actuated valves and their limitations. The 2007 release of API 521, *Pressure-relieving and Depressuring Systems*, addresses the limitations of pressure relief systems in protecting against jet fires, and states that "unlike a pool fire, a jet fire can, in essence, be 'turned off' through isolation and depressurization of the jet fire source..."<sup>39</sup> However, none of these guidance documents provide specific guidance on the design, location, and use of ROSOVs for the rapid isolation of LPG processes during emergencies.

#### 4.4.2 Valero Corporate Emergency Isolation Valve (EIV) Standard

Valero's *Emergency Isolation Valve Standard* (SP-40-01) requires evaluation and installation of ROSOVs during new construction projects, and application of the standard during PHA revalidations in existing

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<sup>38</sup> Guidance varies on appropriate threshold quantities for installing ROSOVs. Valero's corporate procedure gives highest priority to installing ROSOVs on vessels containing more than 10,000 pounds of LPG-like materials (NFPA Class 4 flammables), such as propane. One insurer recommends ROSOV use on flammable inventories greater than 4 m<sup>3</sup> (4,225 gallons) in volume. The UK's Health and Safety Executive (HSE) recommends installing the capability to physically isolate "large" inventories of hazardous substances.

<sup>39</sup> API 521 (5<sup>th</sup> ed.) also highlights the need for an integrated approach to mitigating jet fire hazards, including fireproofing and other measures in addition to emergency isolation capability. However, it does not provide detailed guidance.

process units, such as the PDA.<sup>40</sup> The standard specifies giving the highest priority to installing EIVs on vessels containing 10,000 pounds or more of National Fire Protection Association<sup>41</sup> (NFPA) Class 4 materials, such as propane.<sup>42</sup> The CSB confirmed that both the high- and low-pressure accumulators (as well as the extractors) could contain well over 10,000 pounds of propane under normal operating conditions,<sup>43</sup> yet neither was equipped with ROSOVs nor was SP-40-01 applied as required during the 2006 PDA unit PHA revalidation. A UDS PHA in 1996 had identified the need for ROSOVs in the PDA unit; however, they were never installed, and the action item was incorrectly closed out as having been completed.

#### 4.4.3 Formosa–Point Comfort, Texas, Incident

In a similar incident in 2005 involving an uncontrolled release of LPG (CSB-2006-I-TX), operators were also unable to reach locally operated valves to isolate the fuel source of the fire. The resulting fire extensively damaged Formosa Plastics Corporation's Point Comfort, Texas, Olefins 2 unit. In both the Formosa and Valero incidents, the use of ROSOVs would have enabled operators to quickly control the initial releases, prevent the rapid spread of the fires, and mitigate the serious damage that occurred.

## 5.0 Near-Miss Analysis

Near-misses are extraordinary events that could reasonably have been expected to result in negative consequences, but actually did not. Examples of near-misses include releases of flammable vapors that

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<sup>40</sup> OSHA's PSM regulation requires PHAs to be periodically "updated and revalidated." CCPS (2001) states that PHAs are revalidated to "produce an updated PHA that adequately identifies, evaluates, and proposes controls for the hazards of the process, as they are currently understood."

<sup>41</sup> The NFPA develops widely recognized consensus fire protection codes and standards.

<sup>42</sup> The NFPA classifies the degree of hazard of a material on a scale of 0-4, with 4 the most hazardous or "severe." Class 4 flammable materials are defined as either gases or materials that will flash to a gas at ambient temperature, such as LPG. The 10,000 pound criterion in the Valero standard applies to either the mass of a single Class 4 material or to the Class 4 components of a mixture.

<sup>43</sup> Based on control system data and field measurements of the vessel diameters.

dissipate without igniting, activation of safety protective and shutdown systems, and process conditions that exceed predefined control limits (CCPS, 1992).

In this incident, two near-misses resulted from the exposure of nearby equipment to radiant heating by the fire. While no injuries or serious damage resulted, under slightly different circumstances the consequences could have been much more serious, even catastrophic.

## 5.1 Chlorine Release

### 5.1.1 Damage to Chlorine Containers

Three one-ton containers of highly toxic<sup>44</sup> liquid chlorine, used in cooling tower water treatment, were located in a shed approximately 100 feet from the PDA unit (Figure 4). The fire exposed the containers to radiant heating, rupturing one (Figure 13) despite the melting of its fusible plugs, and causing the other two to vent chlorine through their melted plugs.<sup>45</sup> Valero reported to the Texas Commission for Environmental Quality (TCEQ) that 5,332 pounds of chlorine were released (see Section 7.2). Fortunately, responders had pulled back from the area prior to the release and no injuries were attributed to chlorine exposure.

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<sup>44</sup> The NFPA rates chlorine's health risk as a "4," the most hazardous rating.

<sup>45</sup> Fusible plugs are safety devices that use metal alloys that melt at comparatively low temperatures, in this case roughly 155°F (68°C) to vent containers exposed to excessive heating. The one-ton container that ruptured was likely exposed to an extremely high radiant heat flux, causing the container wall to weaken due to over-temperature and fail before its contents could be vented through the fusible plugs.

The cooling tower water treatment shed served the No. 2 Cooling Tower, directly to the north; however, the shed did not need to be located next to the PDA unit and pipe rack. Furthermore, the PHA for this system had not examined the hazards of locating the chlorine containers close to the PDA unit.

Following the incident the refinery rebuilt the treatment system, using bleach as the biocide, on the north side of the cooling tower.

Chlorine was used at the McKee Refinery to prevent microbial growth in cooling water; however, its toxicity made it an inherently hazardous material to work with.<sup>46</sup> The release of the contents of a single one-ton container of chlorine can create toxic effects up to three miles away, presenting a serious risk to workers and the public.<sup>47</sup>

### 5.1.2 Inherently Safer Alternatives

In applying inherent safety principles,<sup>48</sup> the preferred approach to control hazards is to eliminate them. However, if elimination is not feasible, replacing hazardous materials with less dangerous ones (substitution) should be examined (CCPS, 1996). This basic principle was described by noted process safety expert Trevor Kletz, who stated that “what you don’t have can’t leak” (1998).

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<sup>46</sup> The EPA’s toxic endpoint for chlorine release modeling (the Emergency Planning Response Guideline-2 concentration) is 3 ppm. The National Institute for Occupational Safety and Health (NIOSH)-recommended exposure limit is 0.5 ppm.

<sup>47</sup> Based on the CSB runs of the EPA’s “RMP Comp” software, v. 1.07, 2,000 pound release, RMP worst case, rural area (appropriate for the McKee Refinery’s location).

<sup>48</sup> “A chemical manufacturing process is inherently safer if it reduces or eliminates the hazards associated with materials and operations used in the process, and this reduction or elimination is permanent and inseparable” (CCPS, 1996).

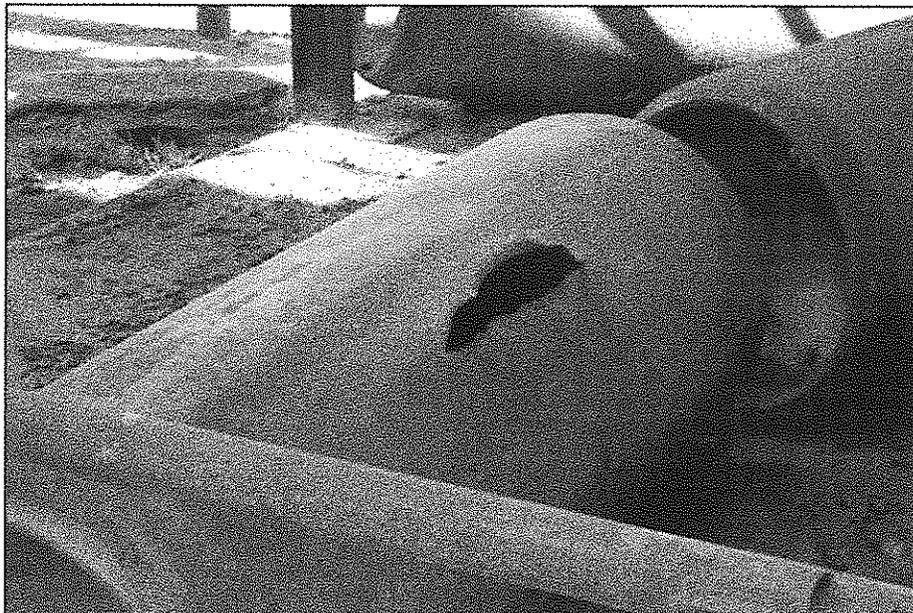


Figure 13. Ruptured one-ton chlorine container

Safer materials for controlling biological growth in cooling towers are available, and Valero has identified replacing chlorine in cooling water treatment at all its refineries as a safety goal in its 2008-2012 Strategic Plan. The plan noted that 10 of its 18 refineries (as of May 2007) used ton container quantities of gaseous chlorine as a cooling water biocide. The McKee Refinery substituted sodium hypochlorite (bleach) for chlorine in its No. 2 Cooling Tower during PDA unit reconstruction. Bleach essentially stores chlorine in a form that presents a much lower inhalation hazard, an example of the inherently safer principal of attenuation (Kletz, 1998).<sup>49, 50</sup>

## 5.2 Butane Sphere Deluge Valves

### 5.2.1 Heat Damage to Butane Sphere

Four 10,000 barrel (420,000 gallon, 1590 m<sup>3</sup>) spherical tanks storing LPG were located northwest of the PDA unit (see Figure 4, page 19). At the time of the incident, the tank closest to the PDA unit contained

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<sup>49</sup> Kletz states, "The worst that can happen with hypochlorite is far less than the worst effects of chlorine, and on balance the change seems justified."

approximately 3,600 barrels (151,000 gallons, 572 m<sup>3</sup>) of liquid butane under pressure, and was exposed to radiant heat from the fire. Figure 14 shows heat damage to the white protective coating on the tank's exterior.

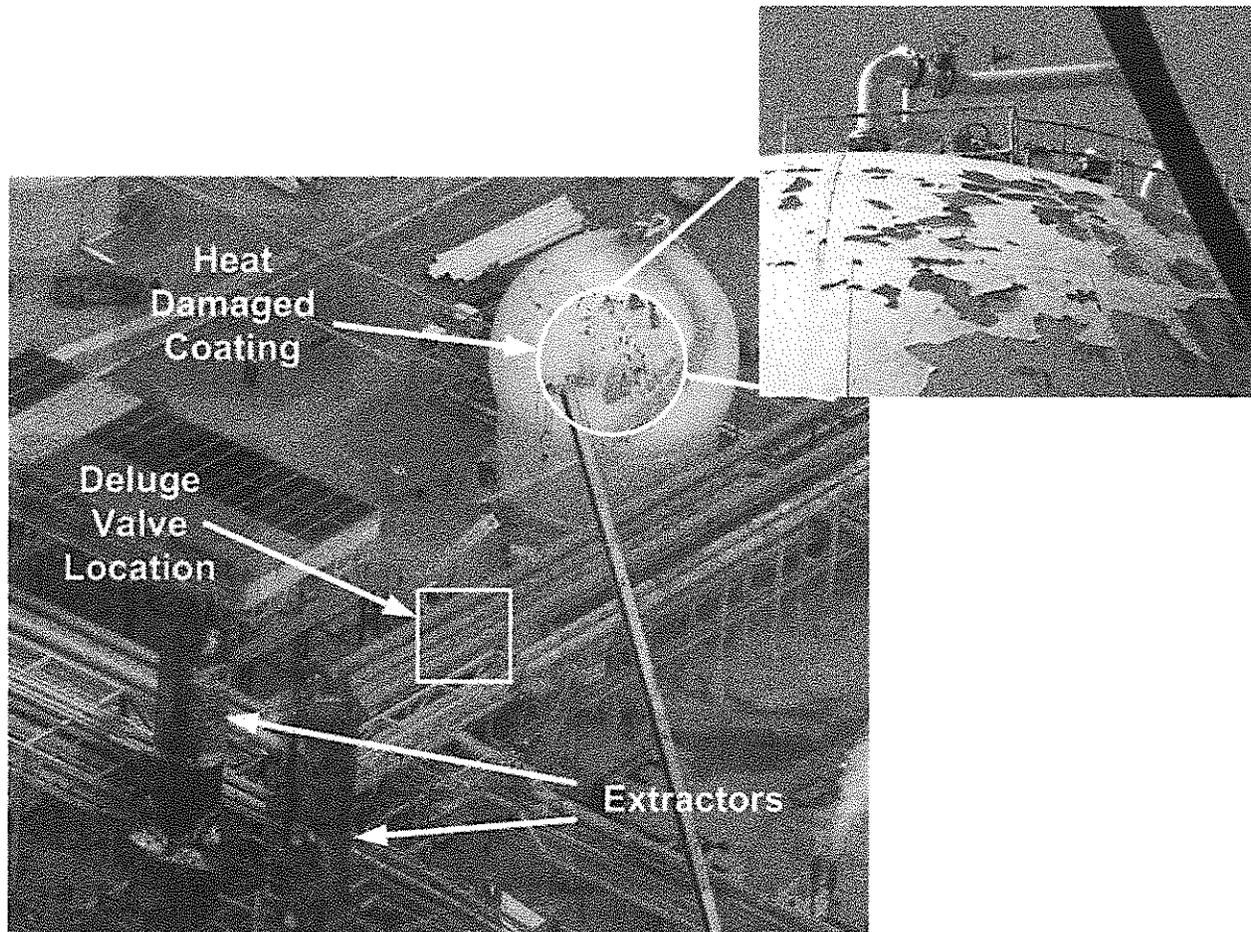


Figure 14. Heat-damaged coating on sphere and location of sphere deluge valves

Analysis of the overall effects of the fire revealed significant vessel damage as far as several hundred feet away from the PDA unit, generally downwind from the initial release, and including the insulated No. 4 Naphtha Column. Although the wind shifted several times during the fire, it never blew strongly from the southeast, which would have directed the flames toward the uninsulated butane sphere. Exposure to direct flame impingement or to significant heating over a prolonged period might have resulted in a vessel failure with potentially catastrophic consequences.

<sup>50</sup> Using bleach requires chlorine handling at the bleach production facility.

Emergency responders were unable to reach the fire water deluge valves intended to protect the butane sphere (Tank 195) from excessive heating due to fire exposure. These manual valves were located under a pipe rack north of the PDA unit (Figure 14), and were too close to the fire to be safely approached.

While the butane sphere was equipped with pressure relief devices, these primarily protect against the effects of pool fires on the liquid filled (wetted) portion of the sphere. In a pool fire, the liquid butane boils, cooling the wall of the sphere and generating vapor that would vent through the relief system.<sup>51</sup> The vapor-filled section of the sphere facing the PDA fire had no liquid to provide cooling, and could be protected against excessive heating only by applying water to the external surface via the deluge system. Without deluge protection, the sphere was vulnerable to possible failure through loss of metal strength due to over-temperature. While favorable winds limited the sphere's thermal exposure during this incident, the inability of operators to reach the deluge valves to establish water flow over the sphere was nonetheless a serious failure of the butane sphere's fire protection system.

API standards do not require refineries to evaluate hazards from nearby units when locating fire water deluge valves, and Valero's PHA for the LPG spheres did not examine the possibility that a fire could block access to the valves.<sup>52</sup>

### 5.2.2 Effective Deluge Valve Operation

API Standard 2510, *Design and Construction of LPG Installations*, provides guidance on the design of LPG storage systems, and includes details on deluge system requirements for fire protection. API 2510 specifies the use of manual deluge valves, such as the ones used for the LPG spheres, and specifically

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<sup>51</sup> API 521, *Pressure-relieving and Depressuring Systems*, describes the design and application of pressure relief systems for pool fire scenarios.

allows the use of automatic or remotely operated valves<sup>53</sup> only if the tanks are unattended or partially attended, which was not the case at the McKee Refinery.

Had the butane sphere deluge valve been remotely operable from a safe location at the time of the incident, emergency responders could have activated the water deluge system, greatly reducing the likelihood of a catastrophic vessel failure in the event of an unfavorable shift in wind direction.

## 6.0 Process Hazard Analysis (PHA)

PHA is a formal method for identifying process hazards. The PDA unit PHA revalidation performed in 2006 did not address hazards that were causal to the February 16, 2007, incident. Furthermore, the PHAs performed on the water treatment system and the LPG storage spheres did not rigorously examine siting issues causal to the two near-miss incidents discussed in section 5.0.

The CSB identified several areas where the McKee Refinery's 2006 PDA unit PHA was ineffective in identifying hazards that contributed to the February 16, 2007, incident:

- As documented in section 4.2.1, the process safety information developed for the PDA unit PHAs did not identify the propane mix control station as a dead-leg, which could be subject to freezing. Identifying and addressing this dead-leg could have prevented the propane release.
- The node size selected for the "HAZOP" PHA method<sup>54</sup> used was too large, which can lead to inadequate review of node components. In this case, the large node size likely led to the propane mix control station not being reviewed.

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<sup>52</sup> However, OSHA's PSM compliance directive (CPL2-2.45A, Appendix B) addresses automating deluge valves to improve protection when process units are closely spaced.

<sup>53</sup> Automatic deluge valves are opened by a control system based on sensor input, such as high temperature or the presence of flammable concentrations of LPG. Remotely operated valves can be opened by facility personnel from a safe location.

- According to CSB interviews, the 2006 PHA did not effectively engage the operators in the review process; rather, the contract facilitator performed most of the analysis. Involving the operating staff directly in the PHA process is a key to performing an effective PHA.
- As documented in section 4.4.2, the 2006 PHA did not apply Valero Emergency Isolation Valve standard SP-40-01 to identify locations requiring ROSOVs. Installing these valves on the propane accumulator vessels would likely have greatly reduced the severity of the incident.
- The PHA did not revisit recommendations from earlier PHAs to confirm that they had been properly implemented. As a result, the 1996 recommendation that ROSOVs be installed in the PDA unit was not reviewed.

Furthermore, as discussed in sections 5.1 and 5.2, the PHAs for the water treatment system and the LPG storage spheres did not address the potential for fire exposure from the adjacent PDA unit. The OSHA PSM regulation specifically requires consideration of siting issues when performing PHAs. Exposure of chlorine containers and LPG storage tanks to heating from fires is a well-recognized hazard.

PHAs are an important component of a PSM system. Guidance on performing effective PHAs is available; examples include *Guidelines for Hazard Evaluation Procedures*, (2<sup>nd</sup> ed.), and *Revalidating Process Hazard Analyses*, both from CCPS, and *HAZOP Guide to Best Practice* from the European Process Safety Center, among others.

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<sup>54</sup> For the HAZOP (hazard and operability study) PHA methodology used in this PHA, a “node” is a section of equipment with definite boundaries (e.g., a line between two vessels) within which process parameters are investigated for deviations (CCPS, 1992).

## 7.0 Regulatory Analysis

The OSHA PSM (29 CFR 1910.119) and the EPA Risk Management Program (RMP - 40 CFR Part 68) regulations both aim to reduce the risk of catastrophic releases of hazardous chemicals. The PSM standard addresses employer requirements to implement effective PSM programs to protect workers. RMP incorporates the elements of PSM and adds requirements for evaluating off-site consequences, emergency response, and community outreach. These regulations apply to processes containing hazardous materials above specified threshold quantities. The PDA and LPG storage areas were covered under both regulations, as they contained more than the specified threshold quantity (10,000 pounds) of flammable propane or butane. The cooling water treatment system was also covered under both, as it contained an above threshold quantity (1,500 pounds for PSM; 2,500 pounds for RMP) of chlorine gas.

### 7.1 OSHA Process Safety Management

The PSM regulation is performance-based and requires companies with covered processes to implement programs addressing 12 key elements, many of which are mutually supporting. As discussed in section 4.0, the CSB investigation found causal deficiencies in several elements of the McKee Refinery's PSM program, including:

- Process safety information – the propane mix control station was not identified as no longer in use or as a dead-leg freeze hazard.
- PHA – the PDA unit piping was not reviewed for freeze rupture, Valero's ROSOV procedure was not applied, and chlorine container siting issues were not considered.

### 7.2 EPA Risk Management Program (RMP)

The RMP regulation requires that covered facilities implement an RMP that includes hazard assessment, prevention program, and coordinated emergency response elements. Facilities such as Valero's McKee

Refinery must prepare an RMP, submit it to the EPA, and periodically update it.

The McKee RMP included an estimate of the worst-case scenario for a toxic chemical release; a release of one ton of pressurized chlorine gas (a single one-ton container) from the water treatment facility with a toxic endpoint distance of three miles. Slightly over 2.5 tons of chlorine were estimated to have been released from the three co-located containers impacted by the fire.<sup>55</sup>

### 7.3 Regulatory Enforcement History

Federal OSHA administers and enforces worker safety and health standards in Texas. OSHA had inspected the McKee Refinery twice under Valero's ownership; however, neither inspection was PSM-oriented.<sup>56</sup> Based on its investigation of this accident, OSHA issued three serious citations<sup>57</sup> to Valero for violating the PSM standard with proposed penalties of \$21,000; one citation was related to the PHA, and two to the "Mechanical Integrity" elements of the PSM regulation. An informal settlement agreement<sup>58</sup> between Valero and OSHA resulted in one of the "serious" citations being reclassified as "other," and a penalty reduction to \$15,000, along with a stipulation that the refinery would, "as a voluntary hazard recognition measure[,],...adopt measures to manage 'dead-legs' within piping systems."

The McKee Refinery had not been audited by the EPA prior to the February 2007 incident. While the EPA responded to the fire, it did not investigate the refinery's RMP compliance after the incident.

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<sup>55</sup> EPA guidance requires companies to consider releases from co-located vessels. *General Guidance for Risk Management Programs* (40 CFR Part 68), Office of Solid Waste and Emergency Response, EPA-550-B-00-008, May 2000, page I-8.

<sup>56</sup> [www.osha.gov/pls/imis](http://www.osha.gov/pls/imis).

<sup>57</sup> OSHA, *Citation and Notification of Penalty*, Diamond Shamrock Refining Company, L.P., dba Valero - McKee Refinery, Inspection Number 310690086, August 13, 2007.

<sup>58</sup> OSHA, *Informal Settlement Agreement*, Diamond Shamrock Refining Company, L.P., dba Valero - McKee Refinery, OSHA Inspection No. 310690086, September 4, 2007.

## 8.0 Root and Contributing Causes

The CSB's investigation determined the following root and contributing causes<sup>59</sup>:

### 8.1 Root Causes

1. The McKee Refinery had no formal written program in place to identify, review, and freeze-protect dead-legs or infrequently used piping and equipment, such as the propane mix control station.
2. The McKee Refinery did not apply Valero's mandatory *Emergency Isolation Valve* procedure when evaluating risks in the PDA unit to ensure that the large quantities of flammable materials in the unit could be rapidly isolated in an emergency.
3. API guidance and Valero's corporate *Fire Proofing Specifications* standard do not specify sufficiently protective distances for fireproofing pipe rack support steel for processes handling high-pressure flammables, such as the LPG in the PDA unit.

### 8.2 Contributing Causes

1. API-recommended practices on locating and operating LPG firewater deluge valves do not address potential hazards from nearby processes.
2. Valero-McKee Refinery's hazard assessment process did not recognize the risk of using chlorine in close proximity to equipment handling flammable hydrocarbons.

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<sup>59</sup> Appendix F contains an event tree used to help develop root and contributing causes.

## 9.0 Recommendations

### American Petroleum Institute (API)

- 2007-05-I-TX-R1** Issue API-recommended practices for freeze protection in oil refinery process units that include, as a minimum:
- the establishment of a written program;
  - periodic inspections to identify freeze hazards in dead-legs or infrequently used piping and equipment where water could collect;
  - specific approaches to eliminate or protect against such freeze hazards; and
  - identification of infrequently used piping or equipment subject to freezing as a trigger for Management Of Change (MOC) reviews.
- 2007-05-I-TX-R2** Revise API 2218, *Fireproofing Practices in Petroleum and Petrochemical Processing Plants*, so that conformance with the standard addresses jet fire scenarios, and requires more protective fireproofing radii and other measures (e.g., emergency isolation valves, depressuring systems) for pipe rack support steel near process units containing highly pressurized flammables.
- 2007-05-I-TX-R3** Revise API Recommended Practice 2001, *Fire Protection in Refineries*, and API 2030, *Application of Fixed Water Spray Systems for Fire Protection in the Petroleum Industry*, so that conformance with these recommended practices includes the design, installation, and use of ROSOVs and interlocked equipment controls to enable the safe and rapid emergency isolation of process equipment containing highly pressurized flammables.
- 2007-05-I-TX-R4** Revise API Standard 2510, *Design and Construction of LPG Installations*, and API Publication 2510A, *Fire-Protection Considerations for the Design and Operation of Liquefied Petroleum Gas (LPG) Storage Facilities*, to address effective deluge system activation during emergencies originating in nearby process units.

## Valero Energy Corporation

- 2007-05-I-TX-R5** Identify all processes in this and other refineries where Valero's mandatory *Emergency Isolation Valve* standard is applicable, and ensure that Remotely Operable Shut-off Valves (ROSOVs) are installed to control large accidental releases of flammable materials.
- 2007-05-I-TX-R6** Establish corporate requirements for written freeze protection programs at Valero refineries subject to freezing temperatures, including identification, mitigation, MOC, and audit requirements.
- 2007-05-I-TX-R7** Revise Valero standards, including *Fire Proofing Specifications*, to require evaluation of jet fire scenarios and, as a minimum, ensure more protective fireproofing for pipe rack support steel near process units containing highly pressurized flammables.
- 2007-05-I-TX-R8** Audit PHA performance at its refineries to ensure adherence to company standards and good practice guidelines.
- 2007-05-I-TX-R9** Implement Valero's strategic plan to replace chlorine used as a biocide in cooling water treatment with inherently safer materials, such as sodium hypochlorite, at all refineries.

## Valero–McKee Refinery, United Steelworkers Union, and Local 13-487

- 2007-05-I-TX-R10** Work together to benchmark effective PHA methods and practices and implement improvements to the McKee Refinery PHA program, including:
- involving the workforce in PHA preparation, performance, and follow-up;
  - training participants;
  - conducting PHA quality control checks; and
  - following up on recommendations for timely implementation and appropriate close-out.

By the

U.S. Chemical Safety and Hazard Investigation Board

John S. Bresland  
Chair

Gary L. Visscher  
Member

William B. Wark  
Member

William E. Wright  
Member

Date of Board Approval

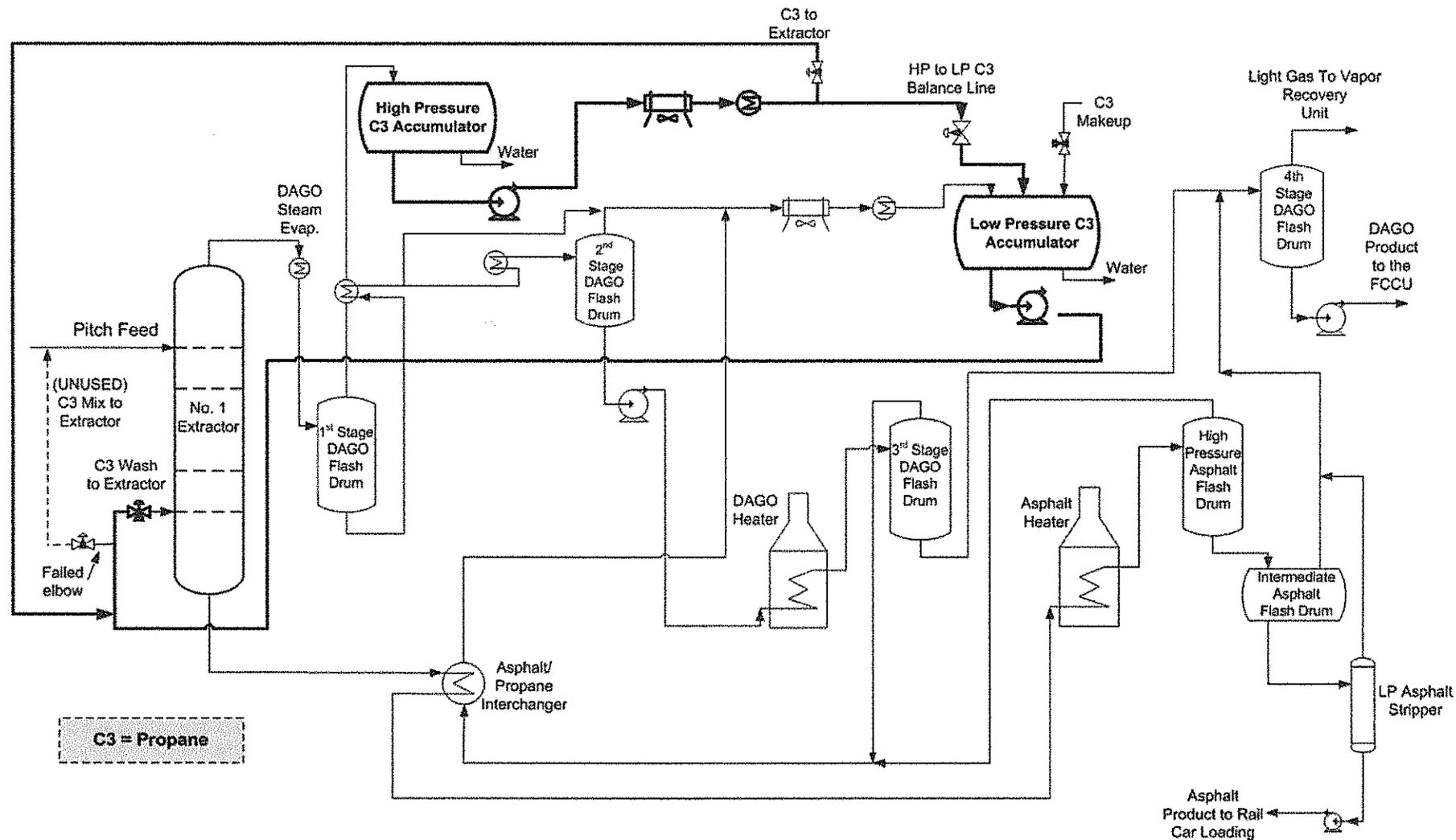
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## Appendix A. Flow Diagram

### Valero-McKee PDA Extractor No. 1 - Process Flow Diagram



## Appendix B. Incident Timeline

Date	Time	Event
Circa 1992		Extractor control changed. Propane mixture control station idled
March 1, 1996		Initial PHA of the PDA included recommendations to install ROSOVs to shut off flow in event of pipe leak or rupture Action item inaccurately closed out as "complete"
July 13, 2001		PDA PHA revalidation did not verify actual status of recommendation to install ROSOVs
January 1, 2002		Valero takes ownership of McKee Refinery
February 23-27, 2004		PSM/RMP compliance audit identified that P&IDs had not been updated and that PHA recommendations were not being resolved in a timely manner
February 21-24, 2006		PDA HAZOP study did not identify the need for ROSOVs due to deficiencies in study methodology
February 12-15, 2007		National Weather Service winter weather advisory in effect
February 12, 2007		Sub-freezing temperatures began. Ambient temperatures drop below 32°F for 87 hrs
February 15, 2007		Minimum temperature recorded of 6°F in Dumas Texas
February 16, 2007	9:05 AM	Temperature rises above 32°F
	1:30 PM	Team personnel sign in at PDA unit Control Room
	1:35 PM	Board Operator issues work permit to Team personnel
	2:09-2:10 PM	Process flow indicators swing sharply, consistent with an initial propane release of 4,500 pounds per minute First signs of a release occurring on security camera
	2:10-2:11 PM	Ignition of propane vapor cloud: one contractor and two Valero workers burned. A fire brigade member is later burned during response activities
	2:11 PM	Fire alarm received at Dumas Fire Department
	2:12 -2:15 PM	Multiple fireballs/ruptures
	2:15 PM	First wisps of smoke visible from burning No. 2 Cooling Tower
	2:16 PM	Wind shifts from northwest to north affecting emergency response.
	2:19-2:22 PM	First water stream seen from due south Security camera captures multiple large fireballs/ruptures in or near the pipe rack Flames intensify

	2:23 PM	<ul style="list-style-type: none"> <li>• Dumas Fire Department arrives on scene</li> <li>• Wind shifts slightly, coming from northwest</li> </ul>
	~2:24-2:26 PM	Multiple fireballs/ruptures captured on camera
	2:26 PM	Total evacuation of refinery
	3:00 PM	Life Flight helicopter arrives
	3:30 PM	Emergency Operations Center (EOC) relocated outside refinery fence
	3:40 PM	EOC relocated to west of Tank 300 M3
	3:50 PM	Evacuated employees directed to the Dumas Community Center
	4:00 PM	EOC relocated SW of Tank 300 M3
	4:06 PM	EOC relocated east of the refinery due to wind shift.
	4:15 PM	EPA notified
	4:25 PM	EOC relocated to ammonia plant (north of refinery)
February 17, 2007	~1:00 PM	Fire declared out

## Appendix C. Piping Elbow Failure Analysis

The fracture in the inlet elbow of the No. 1 Extractor propane mix control station initiated in the exterior surface (cap) welding pass of the girth weld that joined the 10" NPS inlet flange to the 10" elbow, on the intrados (the inner radius) of the elbow (Figure C- 1). No flaw was observed at the initiating site, and the elbow and flange materials were within specification for tensile properties and chemical composition.<sup>1</sup>

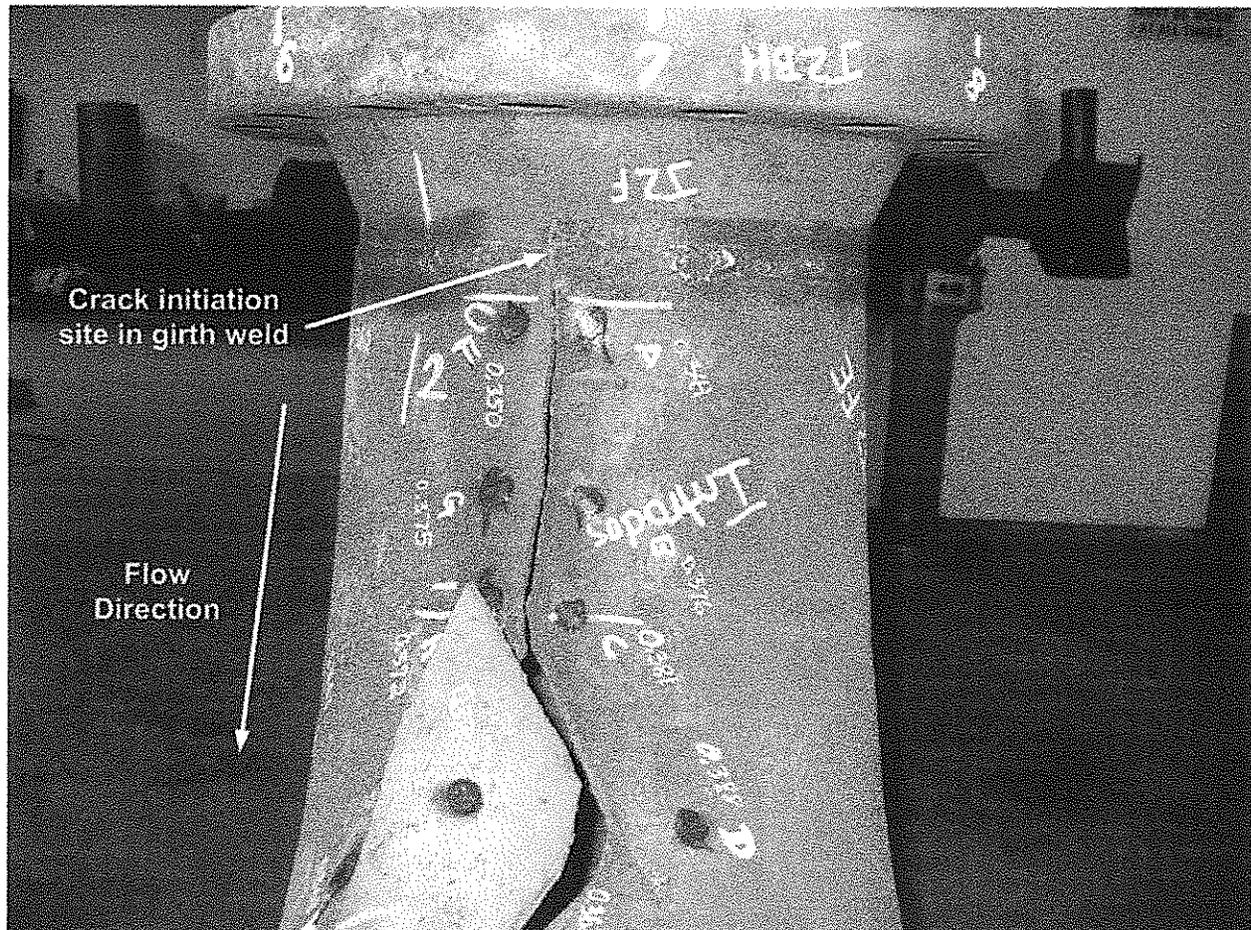


Figure C- 1. Fractured inlet elbow

<sup>1</sup> ASTM A105 for the flange material and ASTM A234 for the elbow.

The fracture propagated parallel to the pipe axis in both directions, with the surface exhibiting brittle fracture propagation features (Figure C-2).

Charpy V-notch (CVN) toughness tests were performed on the elbow and flange materials. Based on a 50 percent shear-area appearance, ductile to brittle transition temperatures were determined to be 95°F and 70°F (35°C and 21°C), respectively. Given that this piping was exposed to temperatures as low as 6°F (-14°C), brittle propagation behavior could be expected in these components.

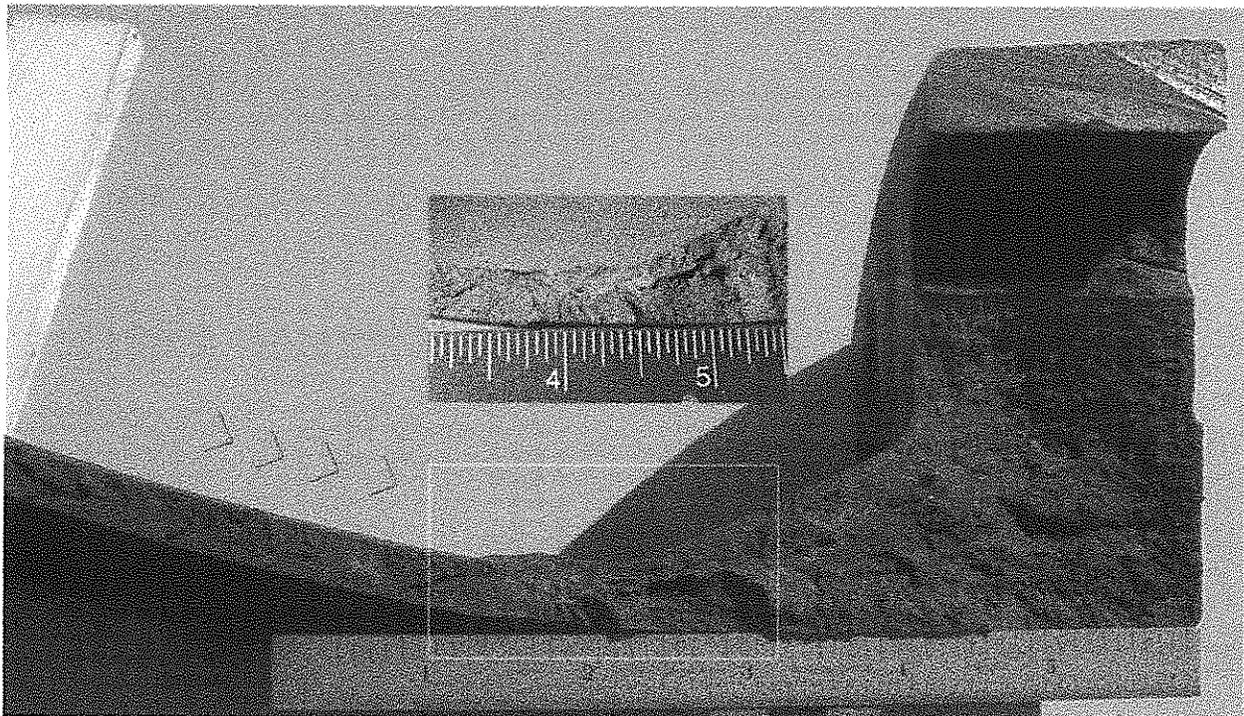


Figure C- 2. Origin and brittle propagation markers

The deposited weld metal and heat-affected zone of the girth weld were CVN-tested. However, insufficient material was available to determine the complete ductile-brittle transition. Testing at -20°F (-29°C) gave from 20 to 85 percent shear area appearance, consistent with a brittle-ductile transition temperature near -20°F (-29°C). However, based on the observed grain structure, the cap weld likely had lower toughness (higher transition temperature) than the underlying weld metal, which had likely been annealed by heat from subsequent welding passes. Because the thickness of the cap was on the order of

the depth of the CVN specimen notch, it was not possible to measure these differences with standard or subsized CVN specimens.

Correction of the weld metal and heat-affected zone samples for the difference in thickness of the specimens and the actual pipe wall, based on the method of Rosenfeld,<sup>2</sup> shifts their transition temperatures 25°F (14°C) warmer, again implying reduced toughness at low temperatures.

The probable reduced toughness of the cap weld, combined with a relatively high transition temperature, likely promoted brittle failure at a point along the line of highest stress along the intrados of the elbow. Brittle initiation could possibly have been caused by dynamic loading of the elbow (e.g., an external impact), or by high internal pressures combined with low ambient temperatures. There was no evidence of impact, nor are there records of activities in the area during the likely period of failure that might have applied such a dynamic load. However, ambient temperatures were as low as 6°F (-14°C) prior to the release, and water in the piping could easily have generated very high internal pressures as it froze and expanded.<sup>3</sup> The CSB concluded that the failure likely resulted from water trapped in the propane mix control station dead-leg freezing due to low ambient temperatures.

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<sup>2</sup> Rosenfeld, M.J., Procedure Improves Line Pipe Charpy Test Interpretation, *Oil & Gas Journal*, April 14, 1997.

<sup>3</sup> Atypically, water expands (its density decreases) as it freezes.

## Appendix D. Initial Propane Release Rate

### Background

Witness statements were consistent with the initial release originating from either of two control stations. Physical examination and flow-testing of components, as described in the body of this report, demonstrated conclusively that the release was from the cracked inlet elbow on the No. 1 Extractor propane mix flow control station. Recovered control system data supported the mix control station as the location of the leak, and allowed the CSB investigators to estimate the propane release rate during the first minute of the incident. The fire damaged the instrumentation in the area of the release almost immediately after the fire ignited.

### Propane Release Estimate

Data from PDA unit propane flow meters indicated a significant increase in flow upstream, and a significant decrease in flow downstream, of the No. 1 Extractor propane mix flow control station at the time of the incident.<sup>1</sup> This is consistent with the leak occurring at the cracked inlet elbow of the mix control station.

Figure 1 plots the sum of the upstream and downstream flow meter readings, in bpd.<sup>2</sup> The offset prior to the incident is due to an unmeasured process flow between the low- and high-pressure propane supplies upstream of the leak point. Assuming that this offset was fixed during the incident is conservative – the actual release rate was likely modestly higher than estimated here.

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<sup>1</sup> Data recovered from the PDA unit's AspenTech IP21 datalogger, recorded at 30-second intervals.

<sup>2</sup> Refining barrels hold 42 U.S. gallons; 100 bpd equal 2.917 gpm.

$$\text{Propane release rate} = [\text{increase in upstream flow}] + [\text{decrease in downstream flow}]$$

$$[21,900] + [19,500] = 41,400 \text{ bpd.}$$

Based on a liquid propane density of 27.7 lb per cubic foot at process conditions, the CSB estimated an initial release rate of 4,500 lb/min.

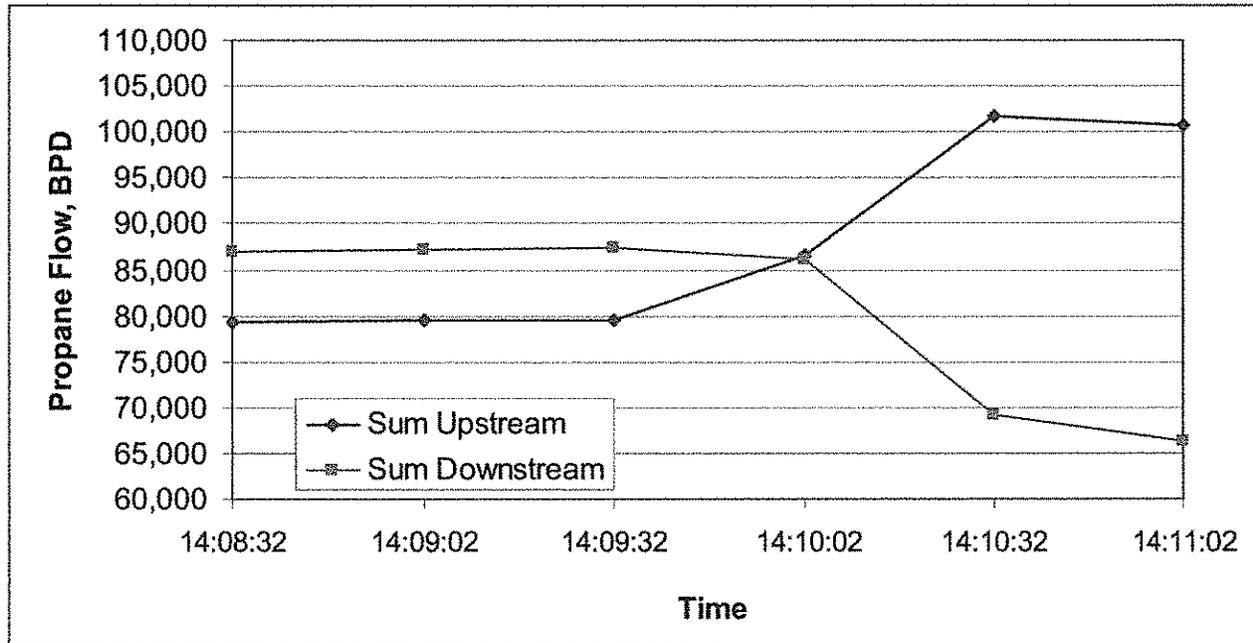


Figure D- 1. Changes in propane flows upstream and downstream of the cracked elbow

## Appendix E. Response of Structural Steel to Fire Heating

CCPS' *Guidelines for Fire Protection in Chemical, Petrochemical, and Hydrocarbon Processing*

*Facilities* discusses the importance of fireproofing during the early stages of a fire, when "if non-fireproofed equipment and pipe supports fail due to fire related heat exposure, they could collapse and cause gasket failures, line breaks, and equipment failures, resulting in expansion of the fire." This type of knock-on damage was a significant factor in the damage caused by the PDA unit fire. As Figure E-1 illustrates, exposure to a jet fire, as can occur in pressurized LPG fires, can lead to rapid heating and the failure of exposed steel within a few minutes.<sup>1</sup>

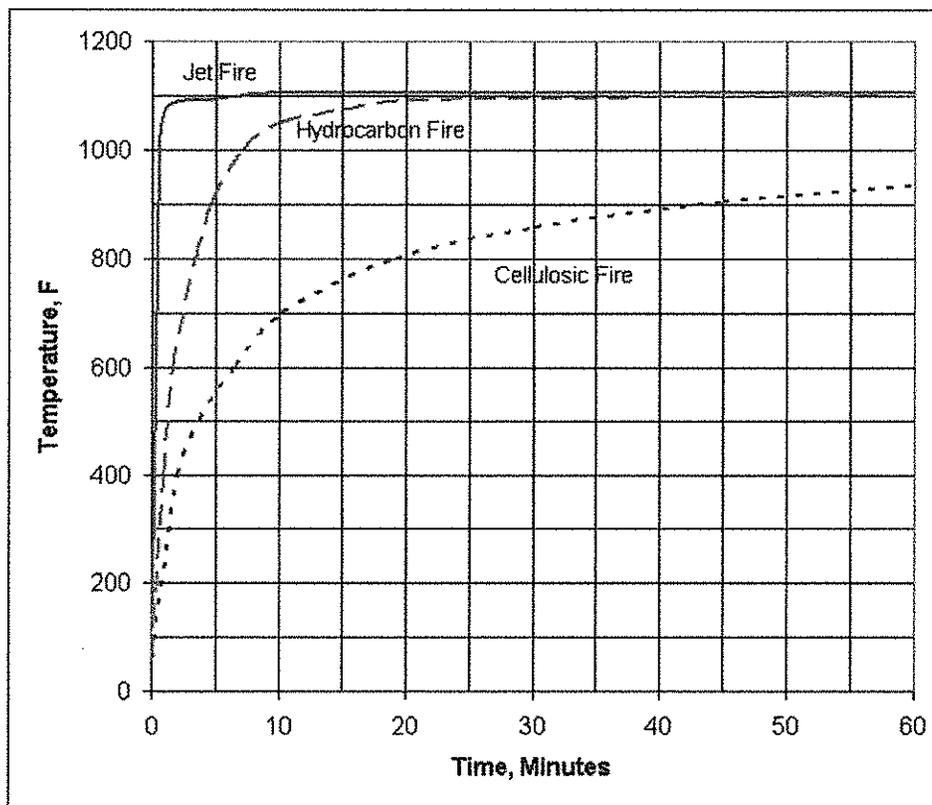


Figure E-1. Time temperature curves for fire tests (CCPS, 2003)

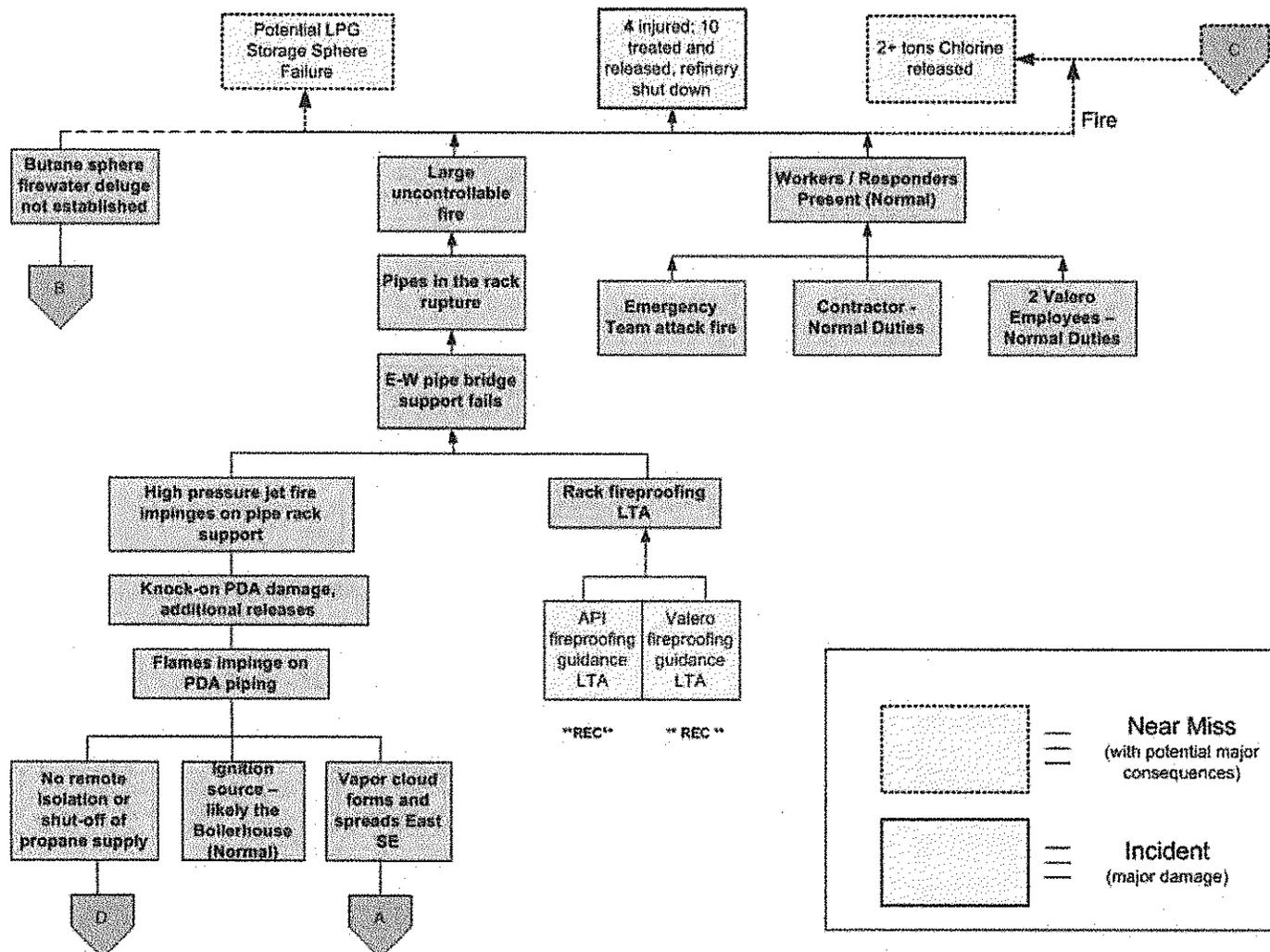
<sup>1</sup> The curves shown are based on standardized tests and are illustrative only.

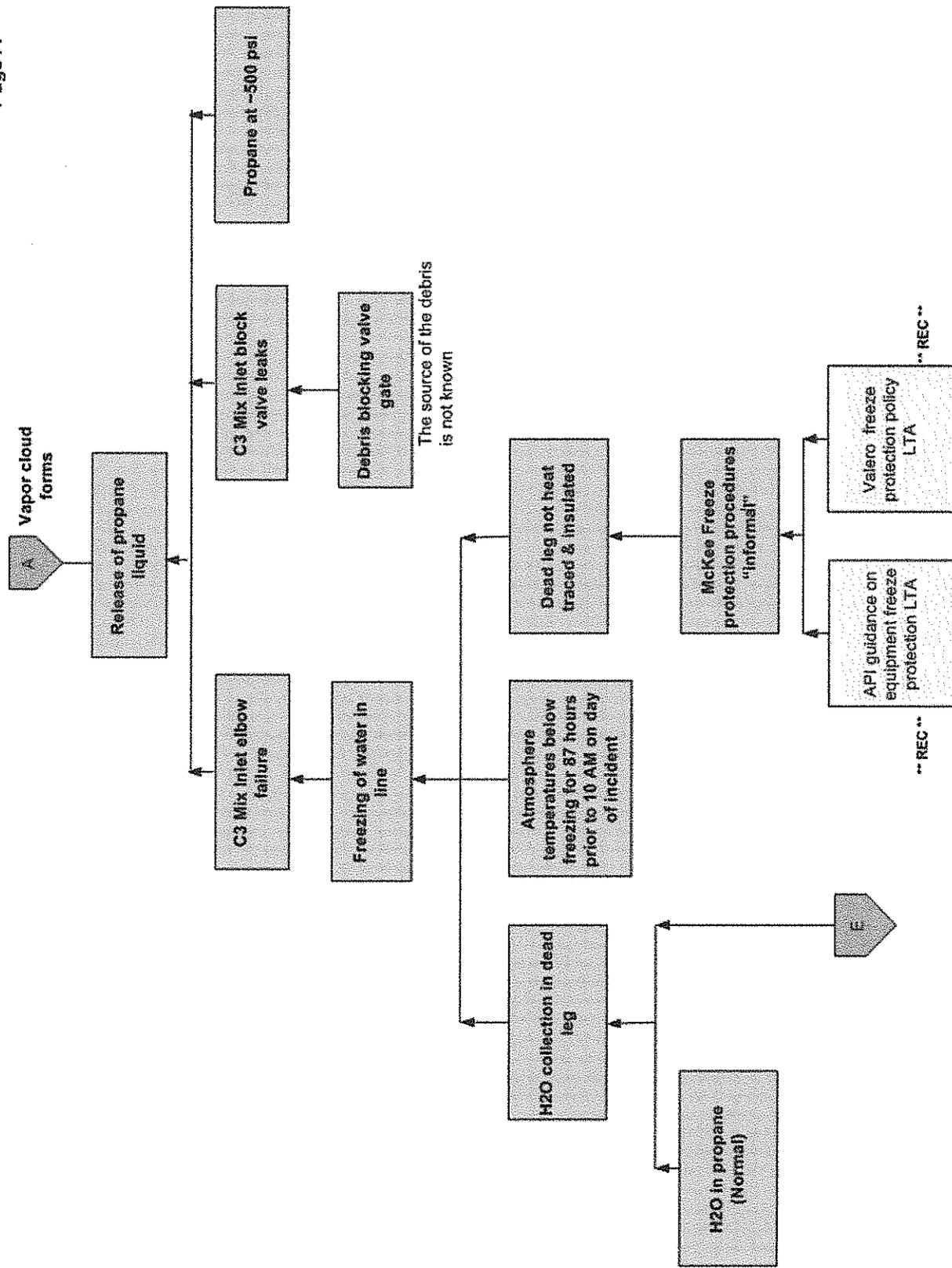
CCPS describes key factors to consider when specifying the required duration of fireproofing protection, including the

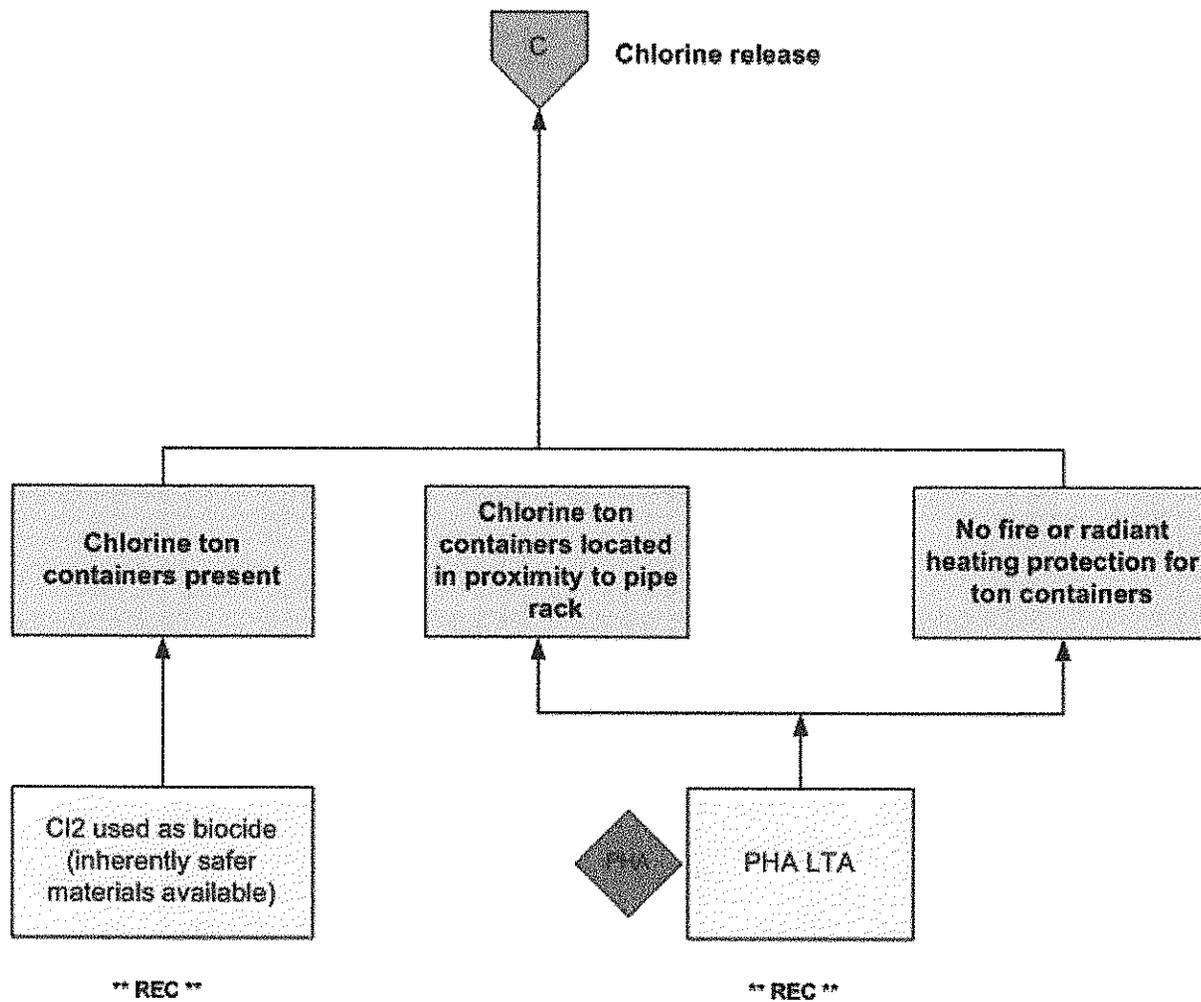
- time required to isolate fuel supplies;
- availability and capacity of fire-fighting water;
- time required to establish cooling from fixed fire monitors (as were installed at the McKee Refinery), including personnel response time; and the
- time required for drainage to remove hydrocarbon spills.

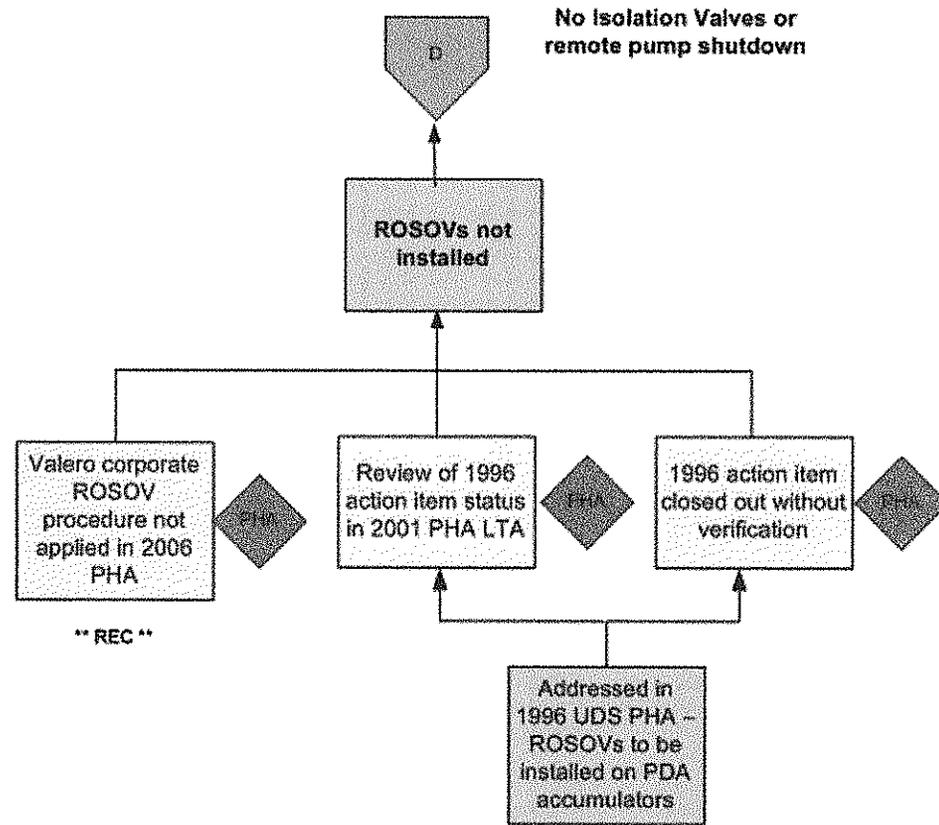
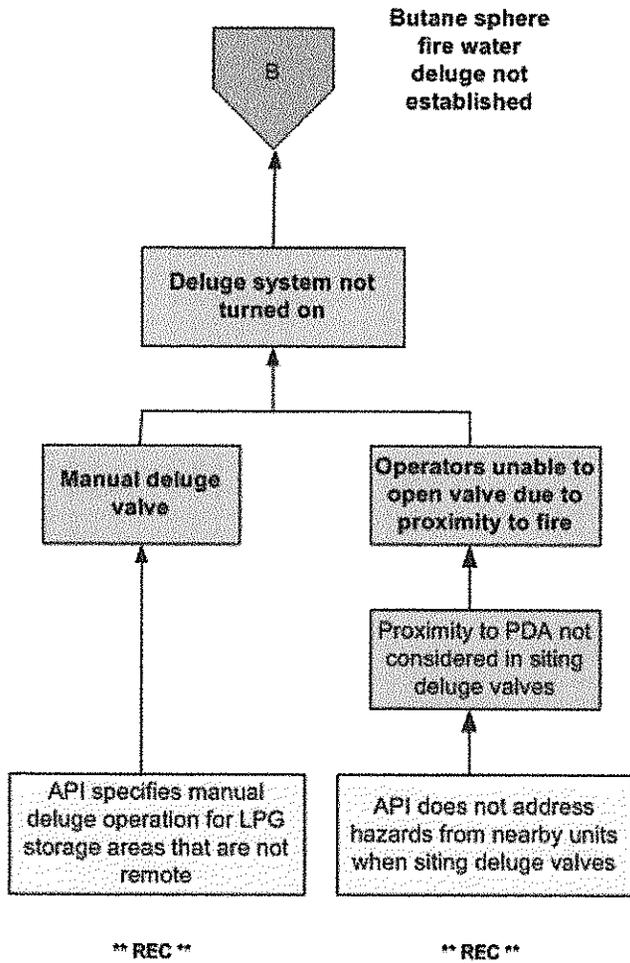
In this incident, the severity of the fire caused rapid knock-on damage before fuel supplies could be isolated or effective water sprays established. The use of ROSOVs, combined with fireproofed pipe rack supports, would likely have significantly reduced the damage caused by this fire.

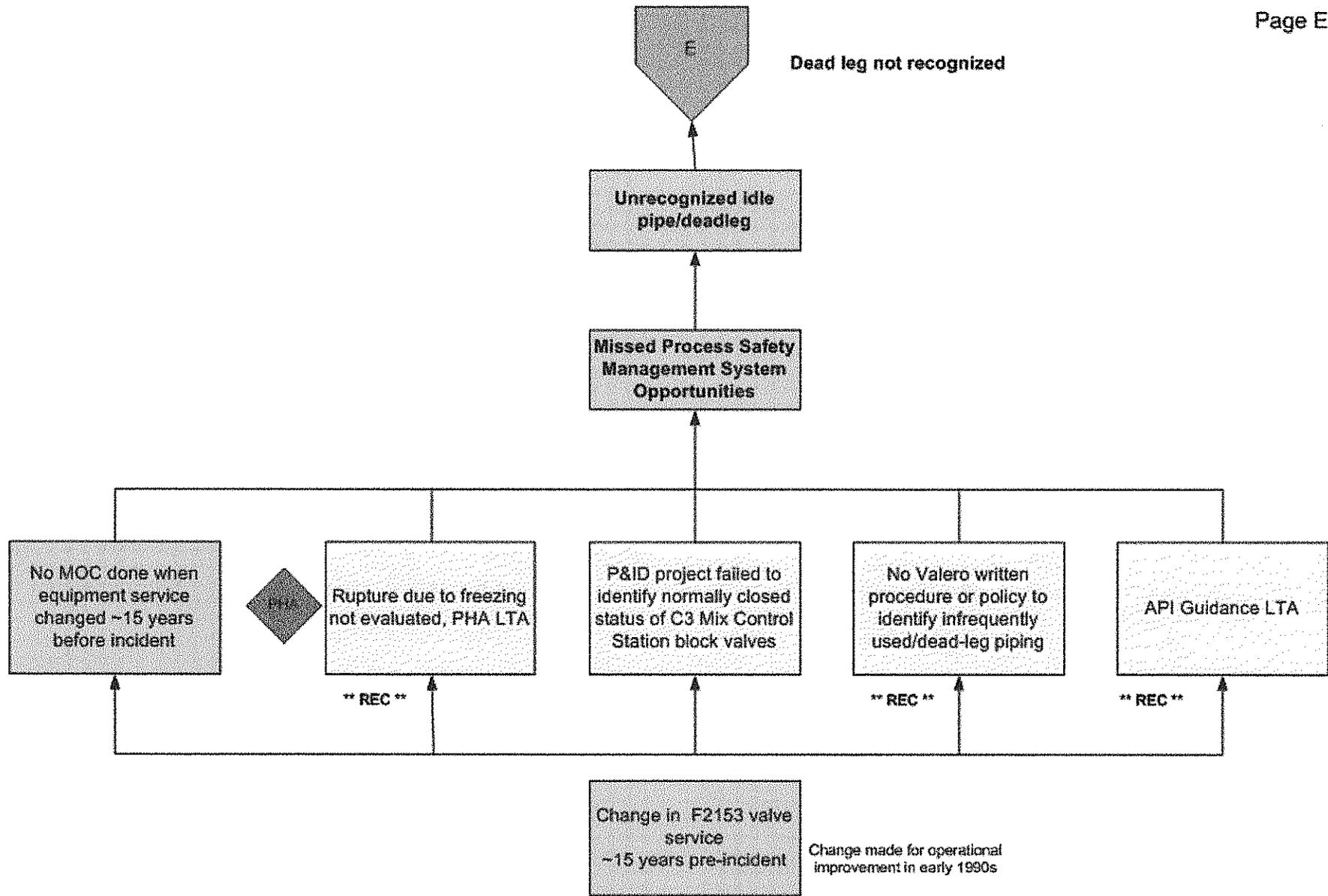
# Appendix F. Event Tree







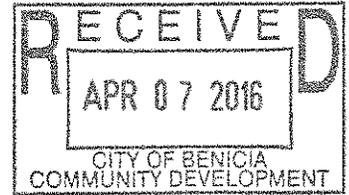






**BENICIANS FOR A SAFE AND  
HEALTHY COMMUNITY**

P.O. Box 622  
Benicia, CA 94510  
(707) 742-3597  
info@safebenicia.org  
SafeBenicia.org



April 6, 2016

Christina Ratcliffe, AICP  
Community Development Director  
City Hall  
250 East L Street,  
Benicia, California 94510

Re: Submission of Petition Signatures In  
Opposition to Valero's Crude by Rail Project

Dear Ms. Ratcliffe:

I am the Steering Committee Chairperson with *Benicians for a Safe and Healthy Community* ("BSHC"). On Monday, April 4, 2016, during the City Council hearing to receive public comment on Valero's proposed crude by rail project, BSHC presented petition signatures for all of the signatures we gathered during the pendency of this process. As everyone saw, we had previously taped together the pages of signatures that were handwritten, put them on a roll ("Scroll Version") and then unfurled that roll during BSHC's portion of the public comment. At the same time, we submitted a typewritten version for the record ("Typed Version").

Directly after that, not understanding that we had submitted the Typed Version for the record, City Staff presumed the Scroll Version was what we were going to submit, and attempted to physically pick-up the Scroll Version which was on the floor. Roger Straw from BSHC and City staff both attempted to retrieve it at the same time, resulting in a minor struggle for possession. Roger explained what was intended to be submitted and what wasn't. Staff argued with him but eventually gave back the Scroll Version. The City's presumption and resulting misunderstanding caused a minor disturbance during the City Council meeting which BSHC regrets.

Yesterday, the Typed Version was uploaded to the City's website. However, on the cover it included the attached memorandum from City staff which states:

A scroll of signed petitions was shown during the presentation which the representatives for Benicians for a Safe and Healthy Community refused to submit for the record. In its place, they submitted the following typed document and note for the record. Due to the fact that we could not examine the scroll, we cannot verify if the lists are the same.

BSHC considers this memo to reflect a serious prejudice by staff against BHSC and a continuing bias in favor of Valero. It misrepresents our intentions and the legitimacy of the document itself. Staff has no right to include their thoughts about the document or how we wanted it to be presented for the record as a prelude to the submitted document itself.

BSHC's submission, given to staff at the conclusion of our formal verbal presentation, included all legible and confirmed signatures from our local petition along with the extensive list of additional persons who oppose Valero Crude by Rail, gathered from four different online petition signature campaigns.

That extensive list of 4,081 names was itself carefully culled to remove duplicates and formatted for presentation to our City Council representatives. It includes 1,204 Benicia citizens, many of whom are well-known and respected leaders of our community. The Scroll Version only consisted of the handwritten signatures. It would have taken a lot longer than 15 minutes if we were to have printed out and unfurled ALL 4,081 signatures. Everything was merged into the Typed Version which we submitted.

We understand that it could have just been a misunderstanding, and once staff realized that we had another document that was easier to read, more inclusive and more concise, that should have been the end of it. A scroll is not easy to put into the record, or post on line for that matter. It was for demonstration purposes **ONLY**. Council chambers is not a courtroom. City staff has no right to choose what we want to submit and what we don't, nor to make derogatory comments such as, "...refused to submit for the record." What we submit is our choice only, and to interfere with that process impedes the democratic process of the Council hearings.

If the intent of staff's memo is to discredit the submission, that is clearly wrong and completely inappropriate. We have spent three years gathering signatures, and with a brush of a pen, the staff memo puts a shadow on the legitimacy of the entire document. It is not only inappropriate, it is insulting to BSHC and to all of the petition signors, all 4,081 of them. Valero has submitted similar typewritten lists without back-up material. Why wasn't Valero's submission given the same critique?

To remedy this matter, BSHC requests that staff's April 5, 2016 memo on top of the petition signatures be removed from the on-line version and from the record entirely, along with Roger Straw's handwritten note of explanation, as it has no bearing as to the submitted document. The Typed Version submission of 4,081 names should stand on its own, highlighting the broad opposition to Valero's proposal, with no comments regarding the scroll, the document's legitimacy or the inappropriate comments regarding our intentions, "...refusal to submit it for the record."

Please respond to me regarding this matter as soon as possible.

Thank you,

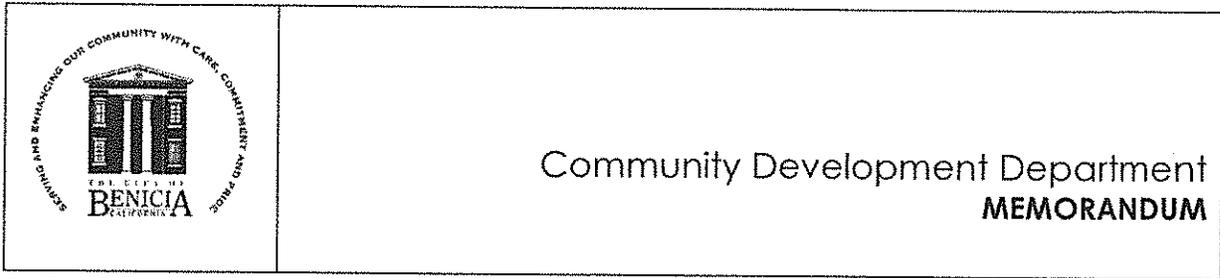


Katherine Black

Steering Committee Chair

*Benicians for a Safe and Healthy Community*

CC: Mayor Elizabeth Patterson  
Vice Mayor Mark Hughes  
Council Member Tom Campbell  
Council Member Alan Schwartzman  
Council Member Christina Strawbridge  
City Manager Brad Kilger  
City Attorney Heather McLaughlin



**Date:** April 5, 2016  
**To:** Valero CBR File  
**From:** Amy Million, Principal Planner  
**Re:** **Benicians for a Safe and Healthy Community Petition Submitted at City Council Meeting- April 4, 2016**

---

A scroll of signed petitions was shown during the presentation which the representatives for Benicians for a Safe and Healthy Community refused to submit for the record. In its place, they submitted the following typed document and note for the record. Due to the fact that we could not examine the scroll, we cannot verify if the lists are the same.

Amy + Heather -

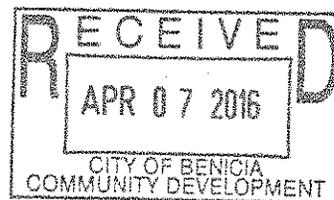
The transcribed document turned in by Andrés Soto includes all the signatories on our "demonstration hand-signed petitions." So, the demo is not needed for the record.

Roger Straus

## Amy Million

---

**From:** gofindnancy@yahoo.com  
**Sent:** Wednesday, April 06, 2016 5:31 PM  
**To:** Amy Million  
**Subject:** Public comment for Valero expansion project



Amy Million  
Principal Planner  
Community Development Department  
City of Benicia

April 6, 2016

Dear Ms. Million,

I am writing this statement on behalf of Crockett Rodeo United to Defend the Environment. We want to add our voice to the other communities in Northern California that have opposed the ill-advised and dangerous Valero crude oil expansion project before the City Council tonight.

The EIR does not meet the requirements of the California Environmental Quality Act (CEQA) because it fails to properly analyze, disclose, and mitigate the Project's significant environmental impacts.

The oil trains will snake down the Feather River Canyon and edge the Delta. Any derailment, fire and spill into those bodies of water will imperil the drinking water for millions of Californians.

The City and Valero coyly refuse to disclose the change of CRUDE slate, changes that could affect the air quality for the entire region.

Finally, it is disturbing that the City of Benicia staff and Valero continue to insist that all mitigation for this Project is federally preempted, which flies in the face of decisions made by regional planners elsewhere in the state (San Luis Obispo County) who have weighed in on similar projects.

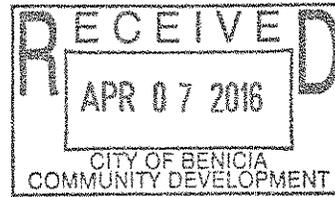
I encourage you to honor and follow the unanimous decision of the Planning Commission and deny this project.

Nancy Rieser

Co-founder

Crockett-Rodeo United to Defend the Environment

Mayor Elizabeth Patterson and  
Benicia City Council  
City of Benicia  
250 East L Street Benicia, Ca 94510



Dear Mayor Patterson and Benicia City Council:

I am a licensed Civil and Structural engineer in California practicing engineering for the last 37 years and I have been a Benicia resident for more than 35 years. I submitted my written and verbal comments regarding this project on February 10, 2016 at the planning commission hearing. There was some discussion of my comments at the planning commission hearing of February 11, 2016 with Valero, ESA consultants and City Staff responding to some of the issues raised by me. Here is a link to the February 11 hearing video (there is no transcript of that hearing available yet): [http://benicia.granicus.com/MediaPlayer.php?view\\_id=1&clip\\_id=10](http://benicia.granicus.com/MediaPlayer.php?view_id=1&clip_id=10)

Below I summarize my comments that were previously submitted, along with my paraphrasing of some of the Valero, ESA, and City Staffs' responses and my final clarifying notes to wrap up the discussion. These sections are prefixed with **R** and **RC** for clarity, and have different font color.

1. From a Land Use and City Planning point of view, we do not understand the advisability of the City Planning Department decision to permit Valero to do major work and construct permanent structures and tracks to receive railroad cars filled with hazardous material, day in day out all throughout the year, so close to the property line and the Sulfur Spring in a flood zone, on downstream of a dam (lake Herman) and in the process reducing the existing setback to the property line and top of a stream and eliminate and/or drastically degrade service road access over 3655 feet of the property (see below for detailed discussion). If you want an example of bad City Planning, this is one.

See items 3-8 for further discussion.

2. Presently, there is a 20 feet wide service road all along the interior perimeter of Valero property, specifically all along the top bank of the Sulfur Spring at the north-east side of the property. This service road not only provides easy access for inspection, security, fire suppression, and hazardous spill containment from entering the Sulfur Spring but also helps to contain flood in the Sulfur Spring from entering structures and other improvements on the Valero property. This road also increases the setback and buffer zone available for the properties to the east of Valero site across the Sulfur Spring.

See items 3-8 for further discussion.

3. The proposed CBR project eliminates this service road and builds a railroad track in its place where a 50 car train could be parked over extended period of time every day and night, 365 days a year. Valero proposes to construct a 1900 feet partial replacement service road 60 feet away and parallel to the present road on its south-east (Figure 3-3 of DEIR enclosed at the end of this letter). Along this segment (Section B-B of Figure ES-3 of DEIR) there will be a substantial degrading of emergency vehicle access to the eastern most train (departure track) and the middle train, as well as the Sulfur Spring. Along the remaining 1755 feet segment (Section A-A of Figure ES-3 of DEIR) there is actually no emergency vehicle access at all where potentially up to 5 trains could be in an emergency situation with no access to them or to the Sulfur Spring banks to contain any hazardous spill or suppress fire/explosions.

We note that both Valero proposal, and DEIR which basically cuts and pastes Valero's proposal in their DEIR, fail to mention this major change and its implications when they describe the key component of the project (see page 2-6 of DEIR). We can understand why Valero might not want to emphasize this negative point by discussing the degradation of accessibility and fire/flood protection when they apply for permit, however, we are at a loss why the City Planning department and the City consultants in charge of EIR, who are the technical parties with the responsibility of clarifying ramifications of the proposed project, failed to do so.

3R:

Benicia fire chief responded that Avenue A will be still available for vehicular access if there are no trains parked there. He also mentioned if there are trains parked there they could access the trains via alternate roads, and that works for him. He added that he might not necessarily want to drive right along any train (i.e. Avenue A) anyway. He mentioned that he will not necessarily access the refinery through Park Road entrance and he will access it through the Second Street entrance.

Regarding making upright any tanker car that is tipped over after a jolt, the fire chief said it is not done by the City Fire Department, and it is done by other specialty contractors and he was not sure how it is exactly done.

Regarding any spill into creek and using booms or other measures to stop the spill, he said he does not need vehicles to install protection measures; it can be done on foot.

3RC:

I understand that the Benicia Fire department will do its utmost in any fire, in spite of adverse site conditions and structural obstacle. However, this is not the point for us now during decision making and planning stage for the future configuration of the refinery. At this stage, our task is to give the Benicia as well as Valero fire departments the best configuration possible for ease of access, direct access, visible access, reliable access, having multiple and redundant access roads. Please be reminded that the stated reason for Valero to want to do this project is NOT that it is losing money now or that it cannot get enough crude via pipelines and marine transport. Valero's main reason is that it wants to have more OPTIONS more CHOICES. Therefore, we do not understand why City of Benicia (and consequently residents and other businesses) have to live with fewer OPTIONS and CHOICES, or with degraded and worse OPTIONS and CHOICES in the future compared to now. We should not have to rely on good luck and hard work of our fire fighters only in future fires. We should also demand to have

OPTIONS and CHOICES (to use vehicles or do it on foot when installing spill containment equipment along the creek at avenue A; whether to use Park Road or Second Street for access, etc.)

Regarding any tipped over train car that requires making it upright, we are not sure why an important scenario like this is not discussed in the EIR and the consequences, procedures, and responsibilities clearly identified.

Finally we would like to mention that we could not find in the EIR any mention that the EIR has actually checked the revised configuration of the refinery with the trains loading dock and berms and storage tanks in the new and more dense configuration and have found that the dangers of fire at any location jumping to other locations is not a concerns for this new and denser arrangement.

4. Benicia Municipal Code Section 17.70.340 Stream setbacks requires:

*All development shall be set back a minimum of 25 feet from the top of the bank of streams (both seasonal and perennial) and ravines. No development shall be permitted within the setback. (Ord. 01-6 N.S., 2001).*

Obviously the proposed departure track violates this along 3655 feet of its length parallel to Sulfur Spring. There is no mention in the EIR if Valero has applied for and/or received a variance from the City for this non-compliance.

4R:

Ms. Million responded that the project has to comply with all the City Ordinances, and the 25 foot setback is required and has to be complied with in the final project configuration and if it does not then the project will not be issued a permit. However, she then claimed that all the drawings in the Valero submittals are all preliminary and in her word are "architectural" [sic], and the real official drawings will be submitted for review and approval before construction.

4RC:

We find this strange that checking of the setback requirements are pushed to the final stage, more than 3 years after the beginning of the project, and after thousands of pages of documents produced and thousands of hours of staff time, consultants time, Valero's team time, and the general public' time spent on a project that might not be buildable.

City of Benicia Municipal Code's section regarding the setback is very brief. This might cause ambiguity for some as to what really constitutes a "development", and what is the meaning of "top of the bank"? That is why I have enclosed at the end of this letter similar provision for the City of Santa Rosa, where "development" is defined in detail, and "top of the bank" geometry is graphically defined in sketches. Please note that roads and walls are defined as development and are prohibited in the setback. Also please note that the top of bank definition requires drawing a 2.5 to 1 line from toe of the stream bank to the ground surface.

Also please note that the soil in this area is subject to large lateral and vertical movements, as well as the heavy weight of crude carrying train cars and subsequently the heavy pressure on the soil. This makes any ground failure that much more critical and likely. The departure track is theoretically used by empty trains and therefore lighter than train cars filled by crude. However, there is no guarantee for this to be the case all the time and no way to verify that Valero or other owners in the future will never have trains with full cargo loads on "departure" track.

Finally we note that none of the drawings that Valero has submitted includes a true sectional view of the Sulfur Spring creek in sufficient detail and extent to make it possible to establish clearly top of the bank and the setback distance on the plans. This shortcoming of the Valero documentations should have been brought up by the City Staff and ESA consultants and they should have commented on the setback requirements.

5. We do not see any berm/trench or other mechanisms that are proposed by Valero to contain potential hazardous spills from the parked railroad cars and stop them before they enter the Sulfur Spring. Please be reminded that these railroad cars will be like permanent fixtures at this location, since the process of arrival-unloading-departure will be continuous on a 24 hour basis every day of the year. The omission of berm/trench becomes more critical due to violation of the required setback from the stream banks discussed above. We also note that both Sections A-A and B-B on Figure ES-3 of DEIR show the proposed finish grade sloping down from the new tracks toward the Sulfur Spring and thus directing any contamination or spill into the Spring. This appears to be a violation of environmental regulation that has not been addressed in the Valero proposal or in the EIR.

5R:

Valero representative testified that there is a 3 foot high retaining wall at the top of creek (the east edge of the departure track road) that will stop the trains from tipping over and will also contain the spill from falling into the creek.

5RC:

We note that there are no retaining walls or barriers at this location on the drawings that we have seen. The latest drawing available (Dwg 89413, revision 01-08-16) in Sections A-A or D-D shows only an 8 inch high curb. Moreover, given the trains size and weight, we do not believe a 3 foot high wall will stop a train from tipping over. (See the attached Section A-A, where we have shown a 3 foot high wall and it is apparent even to non-engineers that this not a serious solution to prevent train tip over.

Moreover, we note as discussed above in part 4, construction of the train tracks as well as the "protective" retaining walls are not permitted in this Setback area.

Finally, we note that this area according to the EIR and geotechnical reports for the subject project will be subjected to ground failure by lateral spreading of up to 39

inches, fissures of 6 inches and settlements of several inches. The only mitigation mentioned in the EIR is to design the railroad ties to accommodate these deformations. Frankly due to lack of details of construction and detailed design criteria, we are not sure how the tacks, loading racks, underground pipes and storage for the spill will behave under stresses and deformations imposed on them by the surrounding soil. If these systems fail, the promised protections against spill after such ground failure cannot be kept.

6. DEIR Section 4.8-6 discusses flood hazard. In the middle of the paragraph it relies on the following reasoning to belittle impact of the flood since it claims that “the facility is not occupied by humans”:

*Further, the Project elements are not habitable structures for human occupancy.*

The author of DEIR is reminded that the Valero parking of railroad cars, unloading, and departure of the cars are done by human beings and not robots. Moreover, since these operations are done on a continuous basis, the probability of workers being at this location at all hours day and night is very high. We do not understand why the workers are not classified as occupants here.

6R:

ESA Consultant response was that this is not a habitable occupancy like a house or office, since presumably nobody sleeps in it or perhaps since it is not enclosed with walls and roof or some other reasoning.

6RC:

Again our point was and is that since there are workers in this area more or less continuously day and night every day of the year, then this area is more akin to a house in terms of continuous occupancy and human presence than a warehouse or storage room.

7. DEIR Section 4.8-7 discusses Dam safety and its effect on this project. Section 4.8-7 of DEIR relies on the following reasoning to dismiss the effect of potential dam failure:

*However, all dams are routinely inspected and evaluated for seismic integrity as overseen by the California Division of Safety of Dams (DSOD). When a dam is found to have a failure potential, the water level behind the dam is reduced to allow for partial collapse without loss of water as required by DSOD (ABAG, 2013). Thus, the probability of dam failure resulting in significant loss, injury, or death is low (ABAG, 2013). Given the low risk of dam failure, and because the proposed facilities would be designed to withstand natural hazards, potential impacts related to dam failure are considered less than significant.*

If the project was an existing structure and we were evaluating its risk profile, then the above reasoning has some merit. But this project does not exist yet. It is only being proposed. We do not know the state of dam safety program ten or twenty years in future and we do not know for certain all different scenarios that might result in dam failure. For example, Lake Herman fault is mentioned in the report but is dismissed as being a not active fault. But how confident are we about this issue? Therefore, it is advisable that we do not act with bravado as if daring the nature by building hazardous facilities in a flood zone downstream of a dam. We recommend practicing prudence in City and Land Use planning and change location of the project. It is not as if we are under the gun and have to approve the project in its present location no matter what.

7R:

ESA Consultant response was that CEQA guidelines prohibit considering items that were of concern and mentioned by me.

7RC:

It appears everybody is counting on other entities and agencies to take care of everything else perfectly even when one has made a very unwise and risky overall

decision to do a project a certain way. This is similar to the reasoning that train related issues are preempted, since federal government is taking care of it perfectly well; or dam safety concern is not warranted since presumably DSOD is taking care of it adequately; or building safety is not to be a concern, since CBC is taking care of it. My point is that as users and neighbors of a project that have to live with it, we should not abdicate our own responsibility to choose wisely and we should not blindly trust most decision makings to others.

8. DEIR and final EIR discussions of structural issues and building code are full of platitudes and short of substance. There are so many errors in the reports that it leads me to doubt the author's knowledge of the subject matter, which leads me to lose confidence in their discussion of other subjects such as probabilities, risks, environmental impacts, .etc. Below, I will paste some portions of reports with the errors highlighted to illustrate my point. For instance, DEIR Section 4.5-11 second paragraph from top says:

*The 2013 CBC is based on the 2009 International Building Code. In addition, the CBC contains necessary California amendments that are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements...*

The first sentence is erroneous, since any building official, structural/civil engineer, or even architect knows that the 2013 CBC is based on 2012 International Building Code. The second sentence is also erroneous, since again professionals with elementary knowledge of the subject matter, know that 2013 CBC is based on ASCE 7-10. This appears not to be a problem of carelessness on the part of the author due to haste in preparation of the DEIR, since the final EIR repeats the same mistake in answering comments. See for example the final EIR Section 2.7-108 item D32-18 middle of paragraph which states:

*Also discussed, specific to seismic hazards in California, are the California amendments to the CBC that are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements.*

Again there is repetition of the erroneous reference to ASCE 7-05 rather than the correct edition ASCE 7-10. Moreover, in the first sentence there is the incorrect and funny statement that there are California amendments to CBC, which is absurd, since CBC stands for California Building Code, and state of California does not amend its own Code.

8R:

ESA consultants agreed that the code editions used in the EIR documents were old and should have been superseded by the current one. However, they said it does not make that much difference since the current edition requirement is not that much different.

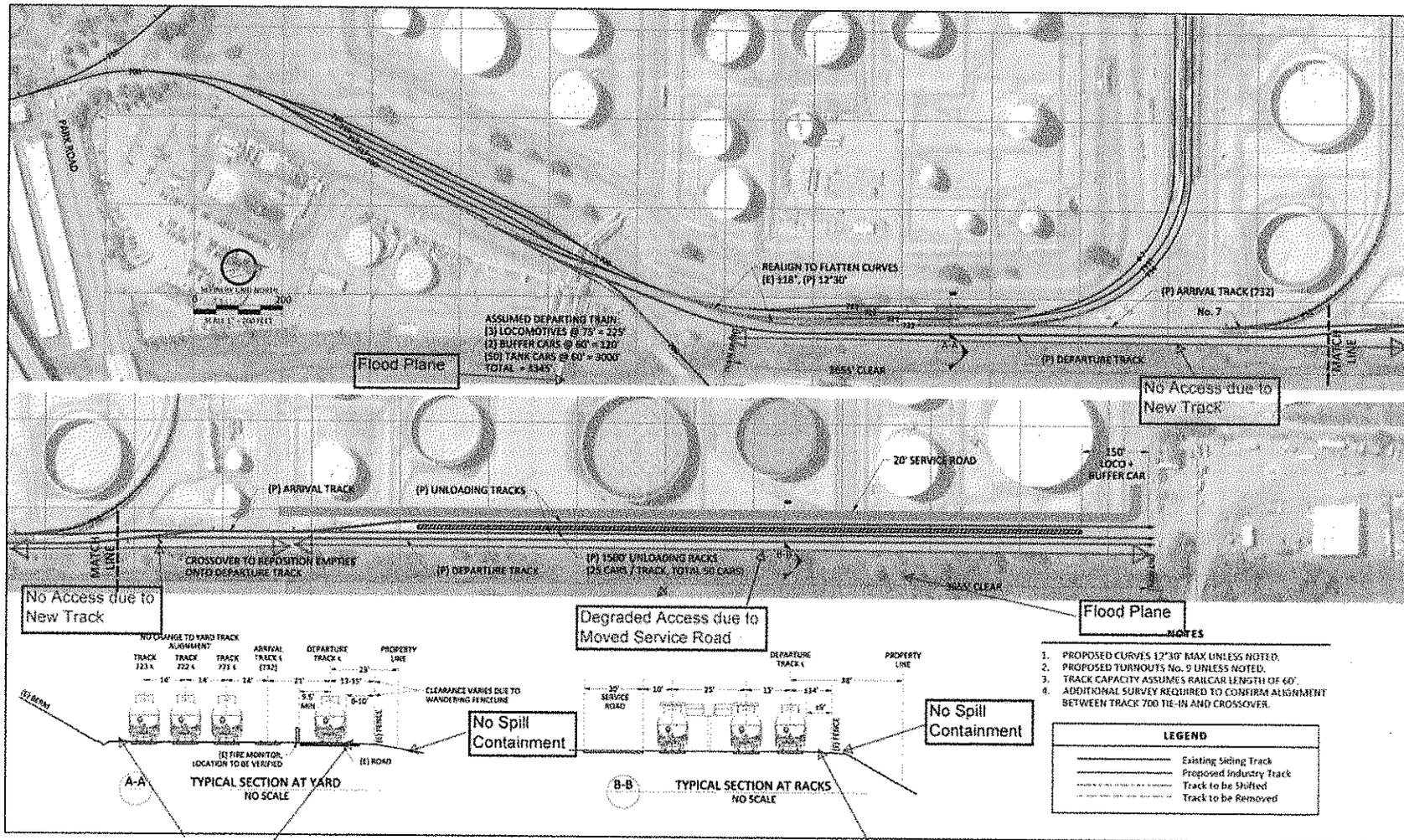
On our second comment, the ESA consultant disagreed and insisted that California Building Code indeed amends CBC.

8RC:

We disagree with the EIR authors. The correct terminology is that the California Building Code amends IBC (international Building Code) and not CBC (California Building Code). Since the authors of the EIR insist on using the incorrect terminology, even after being reminded of it, it leads us to conclusion that they are not familiar with the Code writing process and Code adoption process.

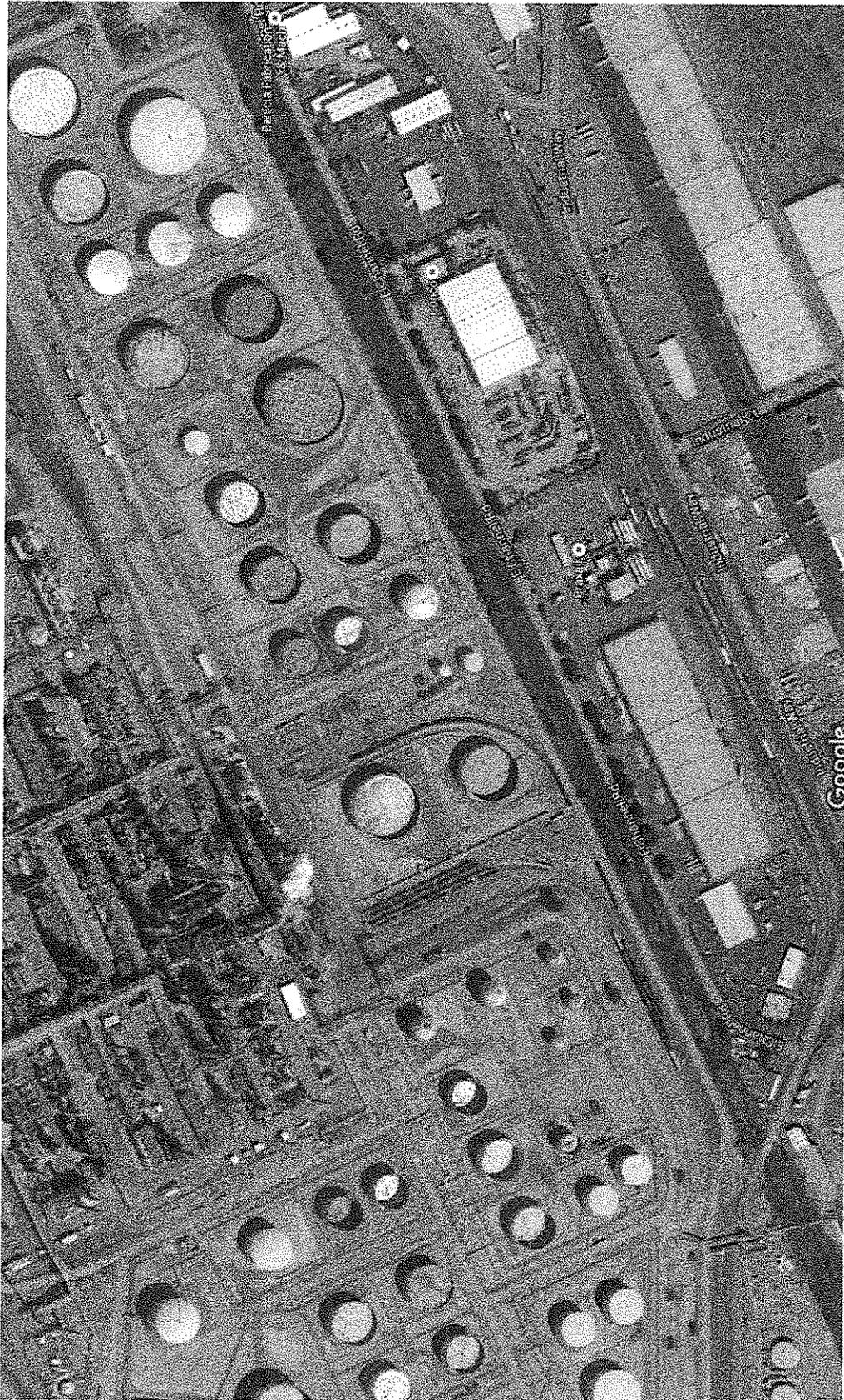
Sincerely,  
Amir Firouz  
Benicia, CA

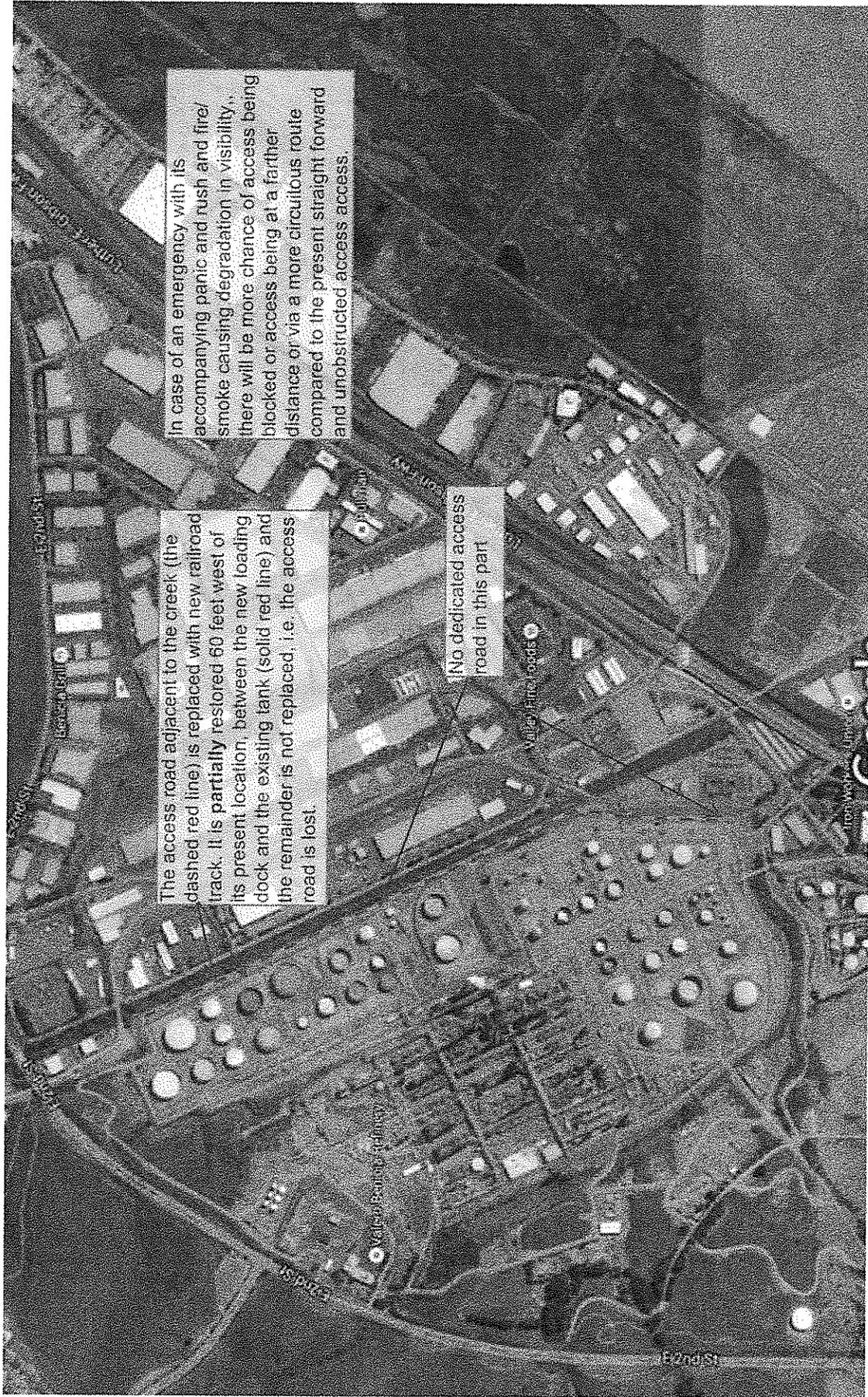
*Encl: Annotated Figure 3-3  
Google Map  
Google Map with Avenue A  
Santa Rosa Creek Side Development Setback requirements  
Section A-A*



SOURCE: Valero

Benicia Valero CBR, 202115.01  
**Figure 3-3**  
Site Plan





In case of an emergency with its accompanying panic and rush and fire/smoke causing degradation in visibility, there will be more chance of access being blocked or access being at a farther distance or via a more circuitous route compared to the present straight forward and unobstructed access access.

The access road adjacent to the creek (the dashed red line) is replaced with new railroad track. It is partially restored 60 feet west of its present location, between the new loading dock and the existing tank (solid red line) and the remainder is not replaced, i.e. the access road is lost.

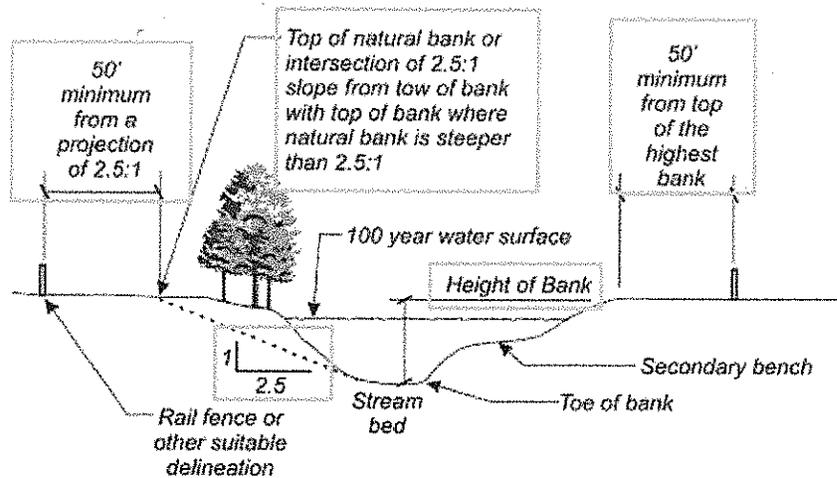
No dedicated access road in this part

## Santa Rosa City Code

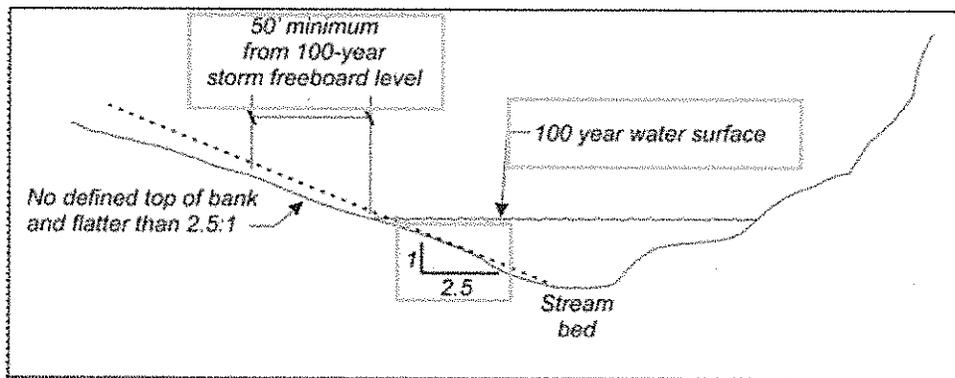
[Up](#)   [Previous](#)   [Next](#)   [Main](#)   [Search](#)   [Print](#)   [No Frames](#)

Title 20 ZONINGDivision 3 Site Planning and General Development RegulationsChapter 20-30 STANDARDS FOR ALL DEVELOPMENT AND LAND USES**20-30.040 Creekside development.**

- A. **Purpose.** This Section requires minimum setbacks from waterways for new structures, to provide reasonable protection to owners of riparian property and the public from the hazards of stream bank failures and flooding, while allowing owners of property near waterways reasonable use of and the opportunity to improve their properties consistent with general safety.
- B. **Applicability.** No structure, including buildings of any type, swimming pools, including prefabricated swimming pools, driveways, streets, parking areas, patios, platforms, decks, fences, liquid storage tanks, mobile homes, broken concrete rubble, earth fill or other structural debris fill, or retaining walls, shall be placed within the creekside setbacks required by this Section.
1. **Existing structures.** An existing, lawfully constructed structure that is located within a setback required by this Section is subject to the requirements for nonconforming structures in Chapter 20-61 (Nonconforming Uses, Structures, and Parcels).
  2. **Exceptions.** This Section shall not apply to:  
Storm drainage, erosion control, and creekbank stability improvements that have been approved as required by law by the governmental agencies having jurisdiction over them.
  3. **Design guidelines.** See also Section 4.4 (Creeks, Riparian Corridors, and Storm Drainage) of the City's Design Guidelines.
- C. **Definitions.** Definitions of the technical terms and phrases used in this Section may be found in Division 7 (Glossary), under "Waterway."
- D. **Creekside setback requirements.**
1. **Waterway with defined bank.** The exterior boundary of the setback area on each side of a natural or modified natural waterway shall be 50 feet from the top of the highest bank on that side of the waterway, as determined by the Director. When the bank of a natural or modified natural waterway is steeper than 2.5:1, the exterior setback boundary shall be measured by the projections of a slope of 2.5:1 from the toe of the stream bank to ground level, plus 50 feet. See Figure 3-1.
  2. **Waterway without defined bank.** The exterior boundary of the setback area adjacent to the side of a natural or modified natural waterway, where the top of the stream bank is not defined, shall be 50 feet, measured horizontally, from the established 100-year storm freeboard level. See Figure 3-2.



**Figure 3-1 – Setback with defined bank (see exceptions Section 20-30.040.D.4.)**



**Figure 3-2 – Setback without defined bank (see exceptions Section 20-30.040.D.4.)**

3. Channelized waterway. Where a fully channelized waterway exists and the channel is owned by, or under the control of the Sonoma County Water Agency, structures may be closer to the top of the bank than a distance of 2.5 times the depth of the bank plus 50 feet, provided that this encroachment into the setback area will not obstruct or impair the channel’s hydraulic functions, impede Water Agency access or maintenance of the channel, or impair the stability of the slope, bank, or maintenance of the channel, or impair the stability of the slope, bank, or creekbed fountain, all as determined by and approved by the Department, the Public Work Department, and the Sonoma County Water Agency.

4. Exceptions.

- a. The setbacks required in Section 20-30.040 shall be 30 feet for existing properties or adjacent areas within the City that were developed in compliance with applicable setback requirements in effect prior to September 3, 2004.
- b. The setbacks required in Section 20-30.040 shall be 30 feet for new development that is surrounded by existing structures that were developed in compliance with applicable setback requirements in effect prior to September 3, 2004.

E. Bridges and utilities within setback areas. Bridges for motor vehicles, pedestrians, and/or bicycles, and/or public utility infrastructure may cross through a waterway setback area and over or under its channel, provided that the installation has received all required approvals from the City. “Bridges” as used in this Subsection includes the segments of the street connecting with the ends of the bridge and the use of

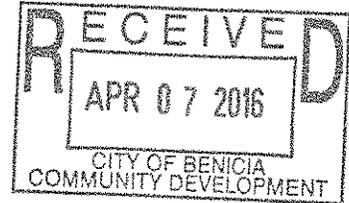
box culverts to contain the waters of a waterway for a street overcrossing.  
(Ord. 3711 § 1 Exh. A, 2005; Ord. 3677 § 1, 2004)

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View the [mobile version](#).



April 6, 2016



Mayor Patterson, City Council Members, and Staff  
City of Benicia  
250 L Street  
Benicia, CA

**Re: Valero Crude by rail project**

Dear Honorable Major Patterson, City Council Members, and Staff,  
I have a few questions for you listed below. I apologize in advance for my lack of knowledge on the permitting process or what the city can require locally.

***1. Why has the safer alternative of using the KLM pipeline and/or other pipelines from Kern County to deliver the crude oil not been considered?***

Pipeline segments do currently exist serving Valero that run from Kern County. This alternative was never considered.

For example, in responding to this criticism in the Final EIR on P. 3.5-152, the consultant stated "**...it is possible that the Refinery could receive oil from the San Joaquin Valley, Kern County, or LA basin by rail via the project...**Accordingly, the identification of the San Joaquin Valley as a potential source **would not be an alternate** to the Project. Importation of crude by pipeline would not meet most of the basic objectives of the project." (emphasis added)

The consultant's response **does not make any sense!** Why can't Valero use this much **SAFER** and **EXISTING** methodology?

Here are some articles mentioning the pipeline network:

**Chevron agrees to sell pipeline linking Kern to Bay Area refineries**

"The 295-mile KLM comprises segments ranging in diameter from 16 to 18 inches. With a southern terminus in Kern, it delivers oil directly to three Bay Area fuel processing plants: Tesoro Petroleum Co.'s Golden Eagle Refinery, Valero's Benicia Refinery and Shell's Martinez Refinery."

<http://www.bakersfield.com/news/business/2015/10/01/chevron-agrees-to-sell-pipeline-linking-kern-to-bay-area-refineries.html>

## **PIPE LINE COMPANY – VALERO KLM INTERCONNECT PROJECT**

“In late 2006 and early 2007, Pipe Line Company (PL) constructed a new, approximately two-mile long, 12-inch diameter crude oil pipeline segment in the unincorporated area east of Martinez, California. This new segment interconnects PL’s existing Kettleman to Los Medanos (KLM) pipeline to the south end of an existing Valero 20-inch diameter pipeline. The capacity of the new pipeline segment is 55,000 to 70,000 barrels per day (BPD). The project also included pig launching and receiving facilities, custody transfer metering, stationary meter prover, electrical power connections to PG&E, leak detection, and over-pressure protection.”

<http://edmsvc.com/pipe-line-company-valero-klm-interconnect-project/>

**2. *Can the city charge Valero any fee, or is there is particular land use fee? For example, could the city impose a \$10 million per year fee with the proceeds being used to provide for city services, provide incentives to attract new business to Benicia, and the like?***

**3. *As with other building projects, can the city impose other local safety constraints? For example:***

a. Could the city require Valero put overpasses on Lakeshore road to allow traffic to flow to and from the east side businesses? While this may be outside the refinery, could this not be part of an agreement with Valero?

b. Could the city require the trains be contained within a crude containment basin that would be setup to completely contain a 3 million gallon spill? In this case, the containment basin would be similar to a boat lock where the trains enter the basin, which is then sealed by a containment gate on the entrance once the trains are inside the lock.

c. Could the city require Valero to completely house the trains inside a building to prevent off gassing from leaking into the local environment (Here, I would suggest combining the basin with a building)?

d. Could the city impose a bond on Valero, such as a \$1 billion bond in case of an internal accident?

**4. *With all due respect for the city Attorney and consulting Attorney, since the law is usually on the boundary of disputes, and there are so many other Attorney’s that advise that the federal preemption is unsettled law for companies such as Valero, that are not rail carriers, but use rail services, doesn’t it make sense to hire an Attorney who is an expert in this area that would guide the city into ways to provide local mitigation of the potential risks without running afoul of federal preemption?***

**5. Why not deny the permit and EIR now and let the state court system settle the preemption issue?**

There seems to be a number of legal cases that address the preemption issue which indicate that we, as other states have, may look to our state court system for help in this preemption matter. For example, I found Florida E. Coast Ry. Co. v. City of W. Palm Beach, 266 F.3d 1324, 1332 (11th Cir. 2001)

“...ICCTA preemption is circumscribed, and Congress did not intend to foreclose the ability of State and local governments to protect the health, safety, and welfare of their residents through enforcement of State and local laws...”

“State courts are authorized to decide whether ICCTA preempts state or local laws. As a general matter, state courts are always empowered to determine their own subject matter jurisdiction. See, e.g., *State ex rel. Bell v. Pfeiffer*, 131 Ohio St. 3d 114, 2012-Ohio-54, ¶ 19 (2012) (“[A] court possessed of general subject-matter jurisdiction can determine its own jurisdiction.”)

In addition I found the following information online from:

<http://www.kaplankirsch.com/portalresource/lookup/wosid/cp-base-4-6014/overrideFile.name=/EP%20LGA%20PresentationFINAL.pdf>:

“[S]tates and towns may exercise traditional police powers over the development of railroad property . . . to the extent that the regulations protect public health and safety, are settled and defined, can be obeyed with reasonable certainty, entail no extended or open-ended delays, and can be approved (or rejected) without the exercise of discretion on subjective questions.”

*N.Y., Susquehanna & W. Ry.*, 500 F.3d at 253-54 (3d Cir. 2007).

**“IF NOT DISCRIMINATORY AND NO SUBSTANTIAL IMPACT ON RAIL OPERATIONS:**  
Require compliance with building and fire codes...Enforce federal environmental laws where enforcement is delegated to state and local governments...Enforce environmental and similar laws, particularly where impacts are off-railroad property...Filling Wetlands...Dumping Waste  
(*Emerson v. Kansas City Southern Ry. Co.*, 503 F.3d 1126 (10th Cir. 2007))

“No case law or STB decision...Above principles would seem to allow communities to require mitigation to avoid impacts on community...Fire Protection equipment...supplies & training Spill Containment...Railroads generally cooperate on these issues”

“Federal Railroad Administration (FRA)

(a) National uniformity of regulation.--(1) Laws, regulations, and orders related to railroad safety and laws, regulations, and orders related to railroad security shall be nationally uniform to the extent practicable.

(2) A State may adopt or continue in force a law, regulation, or order related to railroad safety or security until the Secretary of Transportation ..., prescribes a regulation or issues an order covering the subject matter of the State requirement. A State may adopt or continue in force an additional or more stringent law, regulation, or order related to railroad safety or security when the law, regulation, or order--  
(A) is necessary to eliminate or reduce an essentially local safety or security hazard;  
(B) is not incompatible with a law, regulation, or order of the United States Government; and  
(C) does not unreasonably burden interstate commerce. 49 U.S.C. § 20106"

In another example I found, under *J.P. Rail, Inc. v. N.J. Pinelands Comm'n*, 404 F. Supp. 2d 636, 651-52 & n. 30 (D.N.J. 2005)

"Finally, it should be noted that manufacturing and facilities not integrally related to the provision of interstate rail service are not subject to our jurisdiction or subject to federal preemption."

"We envision that it will be the rare situation when fairly enforced fire, health, plumbing, safety, or construction regulations interfere with a railroad's operations."

"Congress did not intend to preempt federal environmental statutes such as the Clean Air Act and the Clean Water Act."

"ICCTA preempts State regulation of "transportation by rail carriers." 49 U.S.C. § 10501(b). Therefore, the Court must determine as a threshold matter: (1) whether the activities occurring at the five NYS W sites in North Bergen, New Jersey qualify as "transportation"; and (2) whether the activities occurring at the sites are being performed by a "rail carrier."

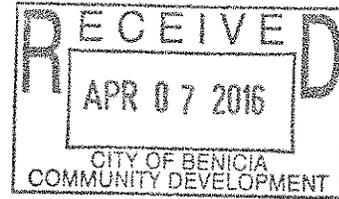
"[t]he STB stated in *Riverdale* that "facilities not integrally related to the provision of interstate rail service are not subject to [its] jurisdiction or subject to federal preemption." *Borough of Riverdale Petition for Declaratory Order*, 4 S.T.B. 380, at \*23 (1999) (emphasis added). During the High Tech litigation, the STB declared that transloading activities and facilities "must be closely related to providing direct rail service," in order to constitute transportation under ICCTA. *Hi Tech Trans, LLC Petition for Declaratory Order*, No. 34192, 2003 WL 21952136, at \*4 (STB Aug. 14, 2003) (emphasis added)"

Thank you for your consideration of these questions and information provided.

Sincerely,

C. Bart Sullivan  
1543 Sherman Drive  
Benicia, CA 94510

Dona Rose  
300 E. H Street Sp 31  
Benicia, Ca. 94510  
707.771.1688



## Subject: Crude by Rail City Council Meeting 4.6.16

Valero's appeal to bring crude by rail to Benicia should be denied. Do we want to put our town in jeopardy? The decision you make here has far reaching broad implications that affect many communities besides our own.

Proponents say Valero is a good neighbor and that the project will create jobs and bring in taxes.. They even say it's safe to transport crude by rail. If it is so safe, how is it that the towns of Lac Megantic, Aliceville, Al, Casselton ND, and Lynchburg, Va suffered such heavy losses and are still suffering from the devastation resulting from derailments which caused blasts and widespread fires?

How do you think the residents and council members of those towns would have voted if in hindsight they were given the chance? Would they have been considered hysterical if they voted no? What if they had united and said No. before the disasters that struck their cities dramatically changed their lives forever.

We can't afford to live in the denial that Valero and proponents do. We can't afford to let these trains rumble by schools, houses, businesses, and our cities. Day after day after day. Trains cars were never made to carry and transport volatile crude oil. We shouldn't have to live in fear. There's a better way, pipelines and ships. Look, people make mistakes. There was no engineer on the Lac Megantic train. Yikes!

One other point to remember is that real estate transactions will have to disclose adverse conditions which could negatively impact prospective buyers. Would you knowingly buy a house in an area where crude trains arriving daily?

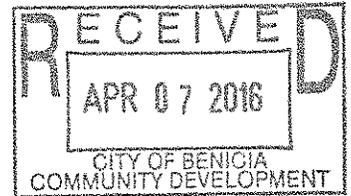
My last point is Lac Megantic looked a little like Benicia. A beautiful downtown area and a lake. Look at the before and after pictures. 47 people perished. It will never be the same. It will take years while placing a huge financial burden upon the future.

Let's not let big oil cram this project down our throats. It is indeed a bitter pill to swallow.

I respectfully request you deny Valero's appeal. That would be being a good neighbor.

Thank you for your time.  
Dona Rose

Comment Before the Benicia City Council  
By Katherine Black  
April 4, 2016



Good evening Madam Mayor and Members of the Council. My name is Katherine Black and I am the Chairperson for Benicians for a Safe and Healthy Community.

I have spoken on many occasions against this project before the Planning Commission on various topics, so my comments are already in the record. I just wanted to read a list of organizations, public agencies and public officials that have either had major concerns or have spoken out directly against this project. This is a partial list and are in no particular order. They are:

- Benicians for a Safe and Healthy Community
- Solano County
- The Air Pollution Control and Air Quality Management Districts, which consist of
  - The Bay Area Air Quality Management District
  - The Butte County Air Quality Management District
  - The Feather River Air Quality Management District
  - The Placer County Air Pollution Control District
  - The Sacramento Metropolitan Air Quality Management District
  - The County of Shasta
  - and the Yolo-Solano Air Quality Management District

To continue with the list:

- University of California, Davis
- California Office of Spill Prevention & Response, and the California Public Utilities Commission
- Capitol Corridor Joint Powers Authority (Amtrak)
- California Department of Transportation
- San Francisco Bay Keeper
- Safe Fuel and Energy Resources - California
- Fischer Communications
- Cool Davis
- 350 Sacramento
- 350 Bay Area
- 350 Marin
- Communities for a Better Environment – both legally and technically
- Natural Resources Defense Council – both legally and technically
- Phil Serna, Sacramento County Supervisor
- Iron Workers 378 – who withheld support, which is significant because Valero had previously held their community forums on this at their venue
- Stand – formerly known as ForestEthics
- The Sierra Club
- The Center for Biological Diversity
- Sacramento Area Council of Governments (aka SACOG), and which is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba and the 22 cities within, who are:

- Auburn
- Citrus Heights
- Colfax
- Davis
- El Dorado County
- Elk Grove
- Folsom
- Galt
- Isleton
- Lincoln
- Live Oak
- Loomis
- Marysville
- Placer County
- Placerville
- Rancho Cordova
- Rocklin
- Roseville
- Sacramento
- Sacramento County
- Sutter County
- West Sacramento
- Wheatland
- Winters
- Woodland
- Yolo County
- Yuba City
- Yuba County

To continue with the list:

- Yolo County Board of Supervisors
- Martinez Environmental Group
- Richmond Progressive Alliance
- Global Community Monitor
- Expert Dr. Petra Pless, from Pless Environmental, Inc.
- Bay Localize
- The City of Albany
- The City of Briggs
- The City of Briggs Fire Department
- The City of Gridley
- The City of Gridley Fire Department
- The County of Nevada Community Development Agency
- The Town of Truckee
- The City of West Sacramento
- Shasta County Department of Resource Management
- Community Science Institute

- Crockett-Rodeo United to Defend the Environment (aka CRUDE)
- The City of Davis Foundation
- Sunflower Alliance
- Pittsburg Defense Council
- Greenaction for Health and Environmental Justice
- Asian Pacific Environmental Network
- Bay Area Refinery Corridor Collation
- Attorney General Kamala Harris
- Other attorneys from 5 different organizations – NRDC, CBE, SF Baykeeper, Center for Biological Diversity, Sierra Club
- Expert Dr. Phillis Fox
- Bay Area Air Quality Management District (aka BAAQMD) - individually
- Feather River Air Quality Management District - individually
- Sacramento Metropolitan Air Quality Management District - individually
- The Placer County Air Pollution Control District - individually
- Yolo-Solano County Air Quality Management District - individually
- The Goodman Group
- Yolo Climate Action

We just heard from Jessie Arreguin, Berkeley City Council member

- Alejandro Soto-Vigil, City of Berkeley
- A representative from State Sen. Lois Wolk's office
- Vice Mayor Linda Maio, Berkeley
- Ellen Cockerin, Sacramento School District Board
- And lastly – our own Benicia Planning Commission

To add to that, there are thousands and thousands of letters from individuals opposing the project that have been submitted as part of the record, which come from Benicians, neighboring cities, Californians, Americans and even those concerned literally around the world. Now, we also have 4,081 petition signatures of which 1,204 are Benicians.

Are all of these people, organizations, public agencies and public officials wrong? The world is watching Benicia. Think about what this city will look like to your public official colleagues and the others I have mentioned. This city is at a precipice. We can either be the city that is part of the problem by going forward the way the world has been going, which has produced global warming. Or we can be the city that says no – not now, not on my watch, and be part of the solution to it all.

Please do not grant Valero a delay and please uphold the Planning Commission's decision to deny this project.

---

Note: These were received after I spoke

- League of Conservation Voters of the East Bay
- Expert Scott Cashen, Senior Independent Biological Resources Consultant
- Russell Hands, M.D., Chief of Surgery, Kasier, Napa, Solano County

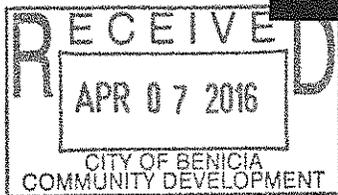
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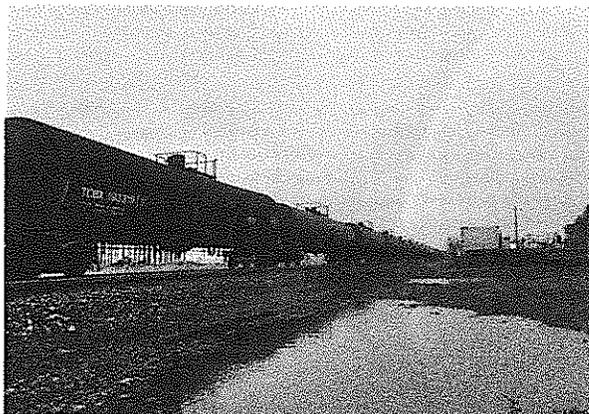
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Email: don@guthrie.com  
www.donguthrie.com

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REAL ESTATE, INC.

# THE DAVIS enterprise

YOLO COUNTY NEWS



A train rolls into Fairfield, underneath a rainbow last month. Final hearings on the Valero crude oil-by-rail project are planned Monday evening at the Benicia City Hall. Robinson Kuntz/McNaughton Newspapers photo

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Columns

## Davis at greater risk for oil train explosion

By Special to The Enterprise From page B7 | February 07, 2016

By Alan Miller

**Have your say**

**What:** Final hearing on Valero oil refinery expansion proposal

**When:** 6:30 p.m. Monday; sign-ups will be taken all day. Hearings may be continued Tuesday evening and beyond if all who wish to speak cannot be heard Monday

**Where:** City Council Chambers, Benicia City Hall, 250 E. L St., Benicia

Central Davis could be incinerated. An estimated 1.5 million gallons of highly flammable crude oil will roll through Davis per train, cutting through the core of our commerce and population. Directly adjacent lie the Olive Drive neighborhood, the Nishi Gateway, the Mondavi Center, Solano Park, the Old East Davis Neighborhood and downtown Davis.

These oil trains will run as close as 50 feet from the nearest residential structures, and less than one block from core downtown businesses. Maybe the odds are one in a million, maybe one in a billion, that a given train will derail and ignite on any given day at any one point on the railroad (such as Davis).

But rest not easy on those odds, for 12 hours later another 1.5 million gallons of fuel will roll

through Central Davis, another one in 1 billion chance of incineration. That chance of incineration will recur more than 700 times a year, perhaps for the next several decades. More than 1 billion gallons of flammable crude annually. Hell on wheels.

The Union Pacific rail line already carries a plethora of flammable liquids and dangerous chemicals. Rail is the safest form of transport for these materials. But oil trains are a unique animal, and the proof is in the pudding.

Oil train accidents have increased several-times-over in the past five

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years, largely in response to the sheer quantity of oil being shipped. In the past three years there have been more than a dozen derailments resulting in tanker ruptures, several of which ignited in catastrophic explosions. For an idea of the catastrophic magnitude, search the web for "oil train explosion video."

The deadliest of these explosions occurred in the center of downtown Lac Mégantic in eastern Canada. The burning lake of oil released flowed through the town for several city blocks, engulfing buildings and leaving 47 people dead, some burned so intensely there were no remains.

Benicia is considering expansion of its crude oil refinery in Benicia. The project EIR states the "odds" of a derailment/spill, but this vague average ignores the specific risks at any point along the rail line. Davis has a much higher than average chance for a derailment due to an inherent weak link in the rail infrastructure. This weak point is a left-handed, low-speed crossover between the main lines. It lies a few hundred feet east of the Amtrak passenger platform, adjacent to the PG&E substation near Second and L streets.

Prior to the early 1990s, the railroad operated one direction per track on the right, so mainline trains could not access this crossover. However, in the early 1990s, the track was upgraded for Capital Corridor service and trains now travel on either track in either direction. Trains cross over between tracks at new crossover points throughout the corridor, all of which are rated for 45 mph operation and protected by bi-directional signaling.

However, the crossover switch in Davis is a legacy item from Southern Pacific days, originally installed to allow trains coming off the West Valley line (that runs along H Street) to turn and travel east. Since trains coming off the West Valley line already were coming around a slow curve, the crossover presented no inherent safety hazard at the time.

Today, however, mainline trains coming from the east on Track No. 2 can travel on the left-hand track and enter this crossover, and trains from the west on Track No. 1 may enter this crossover as well. Freight train top speeds east of Davis vary from about 50 to 65 mph, while curve speed is 30 mph. While all other mainline crossovers on the line are designed for 45 mph operation, the aforementioned crossover is rated at just 10 mph!

What makes this crossover so dangerous is the extreme difference in speed rating between the mainline and the crossover. This is compounded by the fact that train engineers see a "red-over-green" signal, just like the signal for crossovers on this line that are rated at 45 mph. Train engineers are sometimes lulled into the hypnotized rhythm of mainline rail operations, and must remember that this one crossover is the 10 mph exception.

Remembering this is an engineer's job, but that doesn't mean they will always remember. About 10,000 freight trains pass through Davis each year, and if oil trains run, there will be more than 1,000 more. If only 1 percent of trains pass through this crossover, and 1 percent of engineers forget the crossover speed, that predicts that about one train per year will blow through the crossover at full speed.

The threat from having a low-speed crossover between higher-speed main tracks is real and known. Several rail accidents have happened due in this scenario. On Feb. 26, 2012, such an accident in Ontario, Canada, killed three members of the train's crew. Safety board officials called into question the practice of allowing low-speed crossovers between much-higher-speed mainline tracks.

While the Davis crossover is used for relatively few freight trains, the crossover in Ontario similarly was used relatively rarely. This fact was cited as a contributing factor in the accident, as it was speculated that the train crew may have used that crossover so rarely that they simply forgot the posted speed.

Trains passing through the Davis crossover at excessive speed in Davis is not theory. In 2006, I witnessed a westbound unit liquid-petroleum-gas (LPG) train pass through this 10 mph crossover at 47 mph! The scene was terrifying. As the engine entered the crossover, the headlight swung like an inverted pendulum to the right, then back left. I thought the engine was going to tip over the motion was so extreme. The engine and tank cars whipped side to side on their wheel trucks, accompanied by the

sickening sound of screeching metal. Oddly, the train eventually slowed but did not stop.

I thought at the time I had witnessed a once-in-a-lifetime event. However, in 2009 I witnessed an eastbound train pass through the 10 mph crossover at mainline speed. The engineer immediately realized his mistake, as he “dumped the air” (made an emergency brake application) and the train quickly ground to a halt. That train also carried LPG cars.

In neither case did the train derail, but a rail track engineer related to me, “I’m surprised they didn’t derail.” How many more trains have nearly derailed at this crossover that I did not witness? Without a derailment, the crew could continue on and not report the incident, as the event recorders (railroad black boxes) are checked only if there is an accident or suspicion of misconduct.

My attempts to report these “near misses” as near disasters to the National Transportation Safety Board and the Federal Railroad Administration were met with terrifying bureaucratic incompetency. The NTSB claimed they couldn’t investigate since no actual derailment occurred, while the FRA simply found an unrelated typo in a Union Pacific manual and closed the case.

The railroad views such incidents as “crew error” while failing to acknowledge the inherent hazard of the crossover. Only the crew itself has the power to slow those 1.5 million gallons of crude should their train be routed through the crossover; there are no automatic-override safety devices to slow such a train. Blaming humans for human error does nothing to make the railroad itself safer.

Positive Train Control is a system that would bring a freight train to a stop should it approach a speed restriction (such as the crossover) too fast. PTC was due to be implemented by 2015. However, PTC implementation requirements have been delayed to 2020 at least. Freight railroads are claiming a 40-percent failure rate with PTC testing in 2015. The technology is simply not ready.

To run oil trains through Davis with this crossover in place — and without PTC — would be the height of brazen corporate aloofness. This crossover must be upgraded to the 45 mph standard if oil trains are to run before PTC is fully implemented.

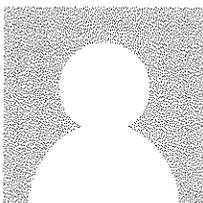
I wrote a comment letter expressing the nature of the crossover hazard for the project EIR. The response was bureaucratic jargon speaking of “unavoidable impacts” and “insignificant risks.” This language says nothing as far as acknowledging corporate awareness of the specific danger in Davis. Fixing this crossover is not optional. This is a disaster waiting to happen.

“Everyday Davis citizens” (read *you!*) must act — not just the handful of Davis anti-oil activists. One last chance to act remains.

The final hearing on the project begins Monday, Feb. 8, at 6:30 p.m. at the City Council Chambers at Benicia City Hall, 250 E. L St. in Benicia. Sign up to speak all day at the same location. Hearings may be continued Tuesday evening and beyond if all who wish to speak cannot be heard Monday.

Come an hour early with a protest sign against the oil trains, or about boycotting Benicia and not buying Valero gas if they continue to ignore the very real safety risks in Davis and other “up-rail” communities. I hope to see you there!

— Alan C. Miller is a 37-year resident of Davis with a lifetime interest and working knowledge of railroading. He has worked in various areas of public transportation and rail transportation for the past 20 years. He lives near the railroad in Old East Davis.



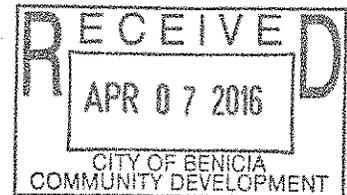
**Special to The Enterprise**

## Amy Million

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**From:** Charles Davidson <charlesdavidson@me.com>  
**Sent:** Thursday, April 07, 2016 12:51 PM  
**To:** Elizabeth Patterson; Tom Campbell; Alan Schwartzman; Christina Strawbridge; Mark Hughes  
**Cc:** Amy Million; Charles Davidson  
**Subject:** With brief project description: Resolution to Cap Bay Area Oil Refinery Emissions and to Severely Limit the Planned Bay Area Influx and Refining of Toxic Tar Sands Bitumen"

**To:** [epatterson@ci.benicia.ca.us](mailto:epatterson@ci.benicia.ca.us), [tcampbell@ci.benicia.ca.us](mailto:tcampbell@ci.benicia.ca.us),  
[aschwartzman@ci.benicia.ca.us](mailto:aschwartzman@ci.benicia.ca.us),  
[cstrawbridge@ci.benicia.ca.us](mailto:cstrawbridge@ci.benicia.ca.us), [mhughes@ci.benicia.ca.us](mailto:mhughes@ci.benicia.ca.us)  
**Cc:** Amy Million <[Amy.Million@ci.benicia.ca.us](mailto:Amy.Million@ci.benicia.ca.us)>



My name is Charles Davidson. I am a scientist, I live in Hercules and am writing to you as a citizen concerned with the planned influx of tar sands to the Bay Area and its refineries. This influx and radical crude slate change is unnecessary for the refinery, economically, it is a unique departure from past refinery operations. Most importantly, the crude by rail nature of the Project poses a threat to local and uprailand air quality and to the environment of Benicia, the Bay, the Delta and upstream ecosystems and to critical water-source aquifers.

Please read the following brief introduction that describes the important aspects of the current project and then read the following resolution that describes, as close to lay language as is possible, what exactly tar sands is and why its processing and transport are a unique threat, that could last for decades, if Valero's Project is approved by the Benicia City Council.

Respectfully,

Charles Davidson  
USPTO 6,594,335

The Valero Crude by Rail Project:

Valero's recent Valero Improvement Project (VIP) was designed to facilitate the processing of much higher sulfur and heavier crudes than the refinery's former crude oil "slate". The VIP expressly facilitated the Refinery to process heavier, high sulfur feedstocks as 60% of its total supply, up from only 30% prior to the VIP. And the project could raise the average sulfur content of the imported raw materials from past levels of about 1 - 1.5% up to new levels of about 2 - 2.5% sulfur.

Valero's proposed crude by rail (CBR) Project is specifically designed for the importation into Valero of so-called "mid-continent", north american crudes, that would only be either very lightweight, flammable shale oil from Bakken ND or extra heavy tar sands from Alberta Canada, which are on opposite ends of the oil density spectrum.

Because the Valero CBR project combined with the VIP are related parts of an expanded heavy oil project, the CBR project could only be for the deliver of tar sands bitumen, that has distinct qualities that render it both

more toxic and difficult to process (ie, energy intensive) (1) than even so-called extra-heavy oils, such as from Venezuela. (2)

#### References:

1) Know Your Oil: Towards a Global Climate-Oil Index. <<http://carnegieendowment.org/2015/03/11/know-your-oil-creating-global-oil-climate-index>> (2015)

2) 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/>).

From: Charlie Davidson <[charlesdavidson@me.com](mailto:charlesdavidson@me.com)>

#### Revised Tar Sands Resolution

WHEREAS tar sands, a nearly solid material mined in Alberta, Canada, is increasingly being used by U.S. and Bay Area petroleum refineries as an inexpensive substitute for liquid petroleum for making gasoline; and West Coast refineries are expected to increase their tar sands usage eight-fold by 2030, especially in the Bay Area, which has the highest percentage of heavy crude refining capacity in the U.S.; and importantly, tar sands contains far more noxious sulfur and toxic heavy metals than traditional crudes, containing 21, 11 and 5 times more vanadium, nickel and lead, respectively, according to a U.S. Geological Survey report; and

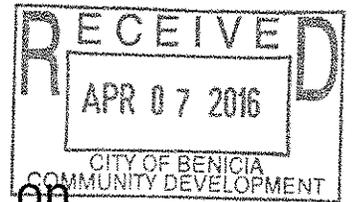
WHEREAS, in order to refine tar sands into gasoline, vastly greater amounts of heat and energy-intensive hydrogen production are required to (1) remove the sulfur, found at a percentage level greater than in any other crude worldwide, and to (2) break the bonds in heavy, complex molecules that are not found in traditional liquid petroleum; and the high amounts of sulfur and acidity found within tar sands tend to accelerate the corrosion of pipe metal, which according to the conclusions of U.S. Chemical Safety Board led to the 2012 Chevron fire in Richmond CA; and moreover, peer-reviewed literature as well as a recent Carnegie Endowment study of a wide range of global crudes types, entitled "Know Your Oil: Towards a Global Climate-Oil Index," have determined that refining tar sands produces the most global warming greenhouse gases, implicated as a central cause of climate change; and most critically, the refining of tar sands will invariably release more local toxic air pollutants, the principal cause of asthma and implicated in cancer, into front-line communities; and

WHEREAS, in order to flow into railroad tank cars, pipelines and refinery equipment, tar sands must be diluted with lightweight, flammable hydrocarbon solvents, so it is actually a diluted bitumen called "DilBit"; and in order for DilBit to be delivered to California refineries, primarily by mile-long trains of railroad tanker cars not constructed to carry this volatile cargo, it must travel through cities and delicate ecosystems and over vital water-source aquifers, such as the Feather River Canyon and the Delta; and a DilBit spill penetrates deeply into water and soil, tends to remain far underground, and is virtually impossible to adequately remediate, as evidenced by the 2010 Kalamazoo River Enbridge Pipeline spill that has cost over \$1 billion to date; and a tar sands railroad derailment fire would release a dense, heavy, metal-laden toxic cloud of smoke that would contaminate nearby homes and schools in the Bay Area and along the rail line; and currently, no mandated

mitigation measures, at either the state or federal level, adequately address the above-mentioned public health and safety risks of DilBit railroad tanker transport or refining beyond a small percentage of that risk;

THEREFORE, MAY IT BE RESOLVED, in light of the expected nearly ten-fold increase in Bay Area refining of tar sands, and also for critical public health and safety reasons, I call on the board members of the Bay Area Air Quality Management District, i.e., the "Air Quality District", as an elected representative or political party official, to demand that Air Quality District executive staff institute an enforceable numerical "cap," or limit on each refinery's total greenhouse gas and toxic co-emissions, in order to prevent otherwise predictable increases in local disease-causing toxic air pollutants, railroad diesel pollution within communities from possibly several mile-long DilBit trains per day, and risk of a major refinery fire due to sulfur corrosion; and

THEREFORE, MAY IT FURTHER BE RESOLVED, as an elected representative or party official, I call on jurisdictions to deny refinery project land-use permits for refinery tar sands DilBit projects and deliveries that will increase local toxic pollution, create the above stated non-mitigable public safety and environmental hazards, and counter state, federal and international efforts to control greenhouse gas emissions responsible for climate change.



At the last Council meeting, held March 15th, on Valero's appeal, several council members expressed surprise at Valero's request for a delay, and wondered why the request could not have been made much earlier in this 2-1/2 year process.

The answer is that the idea of indirect pre-emption did not exist until very recently.

The Draft EIR, released in 2014, included a statement from Union Pacific on how federal law pre-empted local control of railroad operations. But there was no statement at that time from either Valero or the City that even hinted at the idea that Valero itself could somehow be covered under the pre-emption shield.

It was not until the release of the Revised Draft EIR in August 2015 that this idea was presented at all, and that was in Appendix H, which was the final inclusion in a group of Appendices only provided on a CD attached at the back of the RDEIR document, or available online.

By the time of the release of the Final EIR just four months later, this indirect pre-emption argument had become the basis for the staff recommendation that the applicant should not be held responsible for any of the significant and unmitigated impacts of their project, as required by CEQA – either here or in any of the uprail communities that would take on significant unbudgeted

expenses as a result of this project.

The request to delay the decision and ask the Surface Transportation Board for an opinion should not be approved.

Further delay will keep the staff from attending to other pressing duties, and will not serve the citizens of Benicia who have been waiting nearly three years for a final decision on this project.

The Surface Transportation Board is a regulatory panel in Washington DC that, according to their website, "is an independent adjudicatory and economic-regulatory agency charged by Congress with resolving railroad rate and service disputes and reviewing proposed railroad mergers. The agency has jurisdiction over railroad rate and service issues and rail restructuring transactions (mergers, line sales, line construction, and line abandonments)". I do not see how giving an opinion on indirect pre-emption falls within those defined duties.

The purpose of the STB is to rule on disputes between shippers and railroads. In this case, Valero is the shipper and UP is the railroad. But there is no dispute between those two parties- they are on the same side of the issue.

So to allow Valero to characterize BOTH sides of the issue, and then seek an opinion on an issue on which they themselves do not disagree, would lead to an inevitable, but irrelevant, opinion.

This issue of pre-emption by proxy will likely end up in the courts where it belongs. Ample testimony was received by attorneys from both governmental agencies and environmental groups that directly contradicted the opinions put forth by Valero and the City's contract attorney Mr. Hogin.

In summary, the issue of indirect pre-emption is a novel approach by Valero and their attorneys-but can certainly NOT be characterized as settled law.

### Findings of Overriding Consideration

I am sure your staff and attorneys have informed you that, in order to approve a project under CEQA where there are significant and unavoidable impacts that will not be mitigated, it is necessary for you to make Findings of Overriding Consideration.

In this case those Findings, included in your packet, are not supported by facts that have been entered into the public record, as required by CEQA.

The first benefit listed in the Findings involves extra tax revenue as estimated by a report from the Andrew Chang company commissioned by Valero. That report references the \$55 million value of the project and the up to 20 new jobs that would be created.

However, it then expands those benefits from the known 20 new jobs to 1000 jobs generated from unknown sources. There is no justification presented for this 50 fold increase in jobs to be created.

It further claims that the City will receive a one time injection of \$2 million in one time sales tax from the sales of construction materials.

According to the Benicia Finance Department, the City receives approximately 1% of the sales tax generated by sales by Benicia companies. To generate \$2 million in sales tax would, therefore, require total sales by Benicia companies of construction materials totaling \$200 million.

Not only is it unclear that there are Benicia companies able to produce that amount of steel, concrete, piping and electrical materials required for this project, but the entire project, including labor, materials and engineering, is estimated to cost only \$55 million.

The math simply does not add up, and there is no factual basis to accept this Finding.

Benefit 1 also says the project will increase property tax

revenues by \$175,000 per year.

This number needs to be put in perspective.

According to the Solano County Assessor, in 2004, Valero had their property tax assessment reduced on appeal from \$864 million to \$674 million. That reduction in their property tax assessment cost the City general fund \$600,000 per year.

In 2005, after the completion of the Valero Improvement Project, Valero's assessed value was increased to \$963 million. They again appealed their assessment and had it reduced to \$848 million. That action by Valero cost the City general fund another \$300,000 per year.

Currently, Valero has another assessment appeal pending that would lower their property tax assessment from \$900 million to \$100 million-an astonishing request.

If that appeal is granted, as were the last two, that would cost the City general fund an additional \$3 million per year.

If the Council chooses to approve this project against the unanimous recommendation of your Planning Commission, I would hope that part of the approval would include a requirement for Valero to drop their current assessment appeal and pledge not to seek additional reductions in the future. The City can ill afford the lost revenue from Valero's repeated appeals of their property

tax assessment.

A second benefit listed in the Findings is the presumed reduction in GHG emissions from the switch from tankers to diesel locomotives. This is based on the assertion that the average distance of tanker travel is approximately 7300 miles. However, the data needed to support that claim has never been made public as Valero is claiming it is a trade secret.

CEQA requires that findings of overriding consideration be based on known, accepted, data and the City needs to seek substantiation of this claim, and share that data with the public, before relying on it in making this Finding.

The Findings also say that the switch to trains from ships will reduce the likelihood of an oil spill. In my careful review of all the documents, I can find no scientific or other support for that conclusion.

There continues to be a lack of clarity over questions of liability in the event of an accident or spill. Who would be responsible for clean up and reimbursement for actions by first responders and property damage anywhere along the route?

In past instances, liability on crude oil leaks and explosions has been a subject of multiple lawsuits and bankruptcies, with insurance companies, railroads, tank car owners and shippers all pointing fingers of responsibility at each other- and with local governments

left holding the bag to address immediate clean up and recovery costs and longer term impacts while the liability issues work their way through a jammed legal system.

While UPRR states that they are self-insured, that does not provide any level of coverage for potential victims of an accident. Valero has not addressed this issue at all.

In describing the Phillips 66 project in San Luis Obispo (SLO) County at the March 14 hearing, a very similar project to this one, the SLO staff position was characterized by Mr. Hogin as adopting the same position as Valero and City staff in regards to pre-emption.

That characterization was misleading, as was pointed out at the April 6 hearing.

Among the significant differences between the two projects is the fact that the EIR for the SLO project did, unlike the Benicia EIR, identify mitigating measures that could be imposed on the applicant to address impacts in uprail communities. In fact, SLO County Deputy County Counsel, Whitney McDonald, was quoted in the local paper as follows: "The County could consider impacts along the main rail line because the County is charged with carrying out and implementing state law and policy. We are required to look at the environmental effects of a project we are evaluating and if we approve it, what may happen as a result. And what may happen as a result may need to be addressed by other agencies."

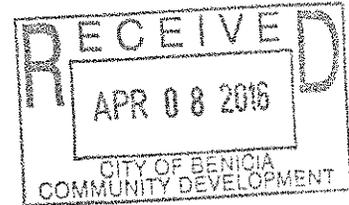
In addition, Planning staff in SLO County is recommending denial of the application.

The request for a delay in this process should be denied, and the actions of your Planning Commission should be upheld.

Thank you for your attention to this important issue.

Steve Young

April 6, 2016



Dear Mayor Patterson and City Council Members,

Thank you for the opportunity to comment on the Valero Crude By Rail Project. Many concerns come to mind when addressing this important issue. Previous public written and verbal comments have been submitted on this Project since the Negative Declaration of Impact during the summer of 2013, which are already part of the Public Record. I ask that these along with what is being shared here will be included in your current deliberations about whether or not to approve the Valero CBR Project. This letter's purpose is to cover the topics of whether or not to accept or deny the STB Proposal, the FEIR and the CBR Project. I am requesting the denial of all three for a number of reasons;

1. The STB does not deal with land issue railroad preemption so it would not apply to our situation, nor would it be a valued opinion in court since the STB's jurisdiction is to deal with disputes between a shipper and a railroad.

2. Reasons for inadequacy of the FEIR: Topics of "on-site issues" were not properly evaluated.

- The location for the unloading ramp is dangerously close to the storage tanks.
- b. The unloading ramp site is too close to Sulphur Springs Creek, when considering being able to maneuver emergency equipment around the area in case of a derailment or accident.
- c. Emergency access road would be blocked by new railroad spurs/oil trains inconveniencing local businesses for prolonged periods of time, creating a potentially dangerous situation for them if they had an emergency when the area was blocked by a unit train, or in the advent of a CBR accident.
- d. Available site for unloading ramp is too small for adequate emergency access.
- e. There was no in-depth discussion of the Project aligning it accordance with Benicia's General Plan in regard to the health and safety of the community nor is the Project in line with our City's sustainability and climate action goals. The Valero GHG emission estimates in the EIR were not reliably accurate particularly concerning marine vessel transport.
- f. Improper use of outdated 2002 health assessment for statistical analysis of health issues was used in the EIR from the Valero BIP Project for the CEQA Review. An updated analysis is necessary for the purpose of CEQA document.

- g. Traffic concerns leading into and throughout the Benicia Industrial Park from the freeway off-ramp were considered by many not to be adequately covered by the traffic study done by the CEQA Review. According to local residents' testimonies and photos, traffic backups can push the flow of cars all the way up the off-ramp and into the next lane of the highway. The size of the freight trains used in the traffic study were not as long as two 50 CBR unit trains. These two projected 50 tank car unit trains per day could conceivably be coming to and leaving from the refinery twice daily, making four crossings a day at these intersections of concern. The RDEIR did not revisit the traffic study as the consultants deemed it to be a less than significant issue. Several members of the public held an opposing view, seeing the traffic of these CBR freight trains to be a significant impediment to the flow of the BIP traffic, further reducing the ability of the Industrial Park to attract new businesses.

The traffic study has repeatedly drawn complaints from some businesses in the Industrial Park as well as from commuters. Many consider this to be an unsafe condition due to the 780 flyover merging into either 680 or the one lane exit to the Industrial Park. Cars move at various speeds, some trying to exit 680 into the BIP. As traffic starts backing up, waiting cars stack up on the freeway exit lane causing hazardous conditions to the the high speed of vehicles coming up from behind on the 780 flyover.

- h. A large number of complaints have been received by Benicia residents and from those up and down rail concerning railroad health and safety issues. These were not sufficiently dealt with in the FEIR. City staff deems railroad issues to be "off limits" for this project due to their perspective on Federal Preemption of the railroads, an opinion disputed by the Planning Commission and many others. This conflict of legality was not dealt with in the FEIR, which considering the ruckus it has caused maybe considered another flaw. The FEIR expressed only one side of the preemption opinion of this, and ignoring the other. Since federal preemption of railroads is considered to be a matter of "unsettled law," it remains a point of contention, with lawyers defending both sides of the issue.
- i. The late disclosure to the Planning Commission about the City Staff's position of preemption was not dealt with upfront from the beginning of this project evaluation which is also considered a flaw of the document.
- j. The City Staff asserts "the benefits of the project do not outweigh the significant and unavoidable hazards." The FEIR fails to adequately explore options available to deal with this assertion. No mitigations are offered to assist the City in coping with the challenges CBR presents, nor does the City feel free to explore any options due to the restrictive belief in federal preemption of railroads.

- k. Failure to expose in the FEIR anticipated increase in marine vessel exports due to decreasing need for refined oil products in CA/US markets. These are down by more than 20%, and continuing to decrease as our reliance on fossil fuels lessens with the development of more sustainable energy resources in accordance with the CA/US climate action plans. Flexibility re: obtaining fuel delivery via CBR is seen to be not only for price flexibility but in order to provide openings at the port for increased exports overseas, particularly for the increased refined products that can be made out of the cheaper low grade crudes. This significant motivation for this change in oil delivery was carefully obscured in all the environmental impact reports.

3. Several of us, including many experts, had their comments dismissed, ignored and/or erroneously responded to by the consultants, often skirting the issues being discussed. Many examples could be cited. For the sake of brevity, only a couple of samples from my letters will be addressed, although other substantial examples could be used. In checking the responses to comments yourself, you will no doubt be aware of how often these dismissive responses occurred. One letter, (D/79) addressed concern about the refinery's persistent violations of BAAQMD Air Quality Emission Regulations. A series of questions about the ongoing history and progression of these infractions were posed. Since CEQA is an Environmental Impact Report, facts about Valero's track record in this area is important. Particularly since the new domestic crude slates planned to be brought in with the chemical additives are known to be even more toxic than the conventional crudes currently being refined at Valero.

It is important to question what kind of steward to the environment Valero has been so far and what can be projected for the future when considering the increased TAC pollutants anticipated with the new lower grade crude slates planned to be delivered via CBR. The response received in the DEIR was not only dismissive without providing any requested information, but told me I could find out this information myself by checking the BAAQMD website. I feel the information sought was significant for the DEIR's evaluation. One can't help but wonder why this was not considered to be a valid inclusion in a California Environmental Quality Act Review?

Other inquiries on the same general subject of air pollution were about the TAC, Bitumun Coke/PM2.5, which never got responded to from any of my letters. Recently it was discovered that Valero along with the local Tesoro and Phillips 66 Refineries, are doing a joint appeal in opposition to BAAQMD's new regulation requiring them to cover large mounds of Bitumun Coke/PM2.5 on their properties. This appeal further led me to question their disturbing stance regarding protecting the public from toxic air pollution by this protest.

Leaving these mounds uncovered allows them to be free to blow in the wind contaminating our air space before being transported elsewhere. This refined byproduct is made up of tiny particles PM2.5 and other toxic chemicals which easily enter the lungs, causing numerous respiratory health problems for sensitive receptors,

a condition which one might assume will increase with the dirtier toxic crude slates projected to be brought in by this CBR Project. The commenter's standard reply to questions regarding Pet. coke was: "Valero must blend feedstocks to a narrow range of weight and sulfur content before they can be processed. This project would not alter any processing equipment at the refinery, which means crude blends must fall with a narrow range of weight and sulfur content before being processed." This answer did not make sense in response to questions being asked, and nor to questions of the new crude stocks which received the same response. Many of us received this repetitive reply when seeking information about the TAC emissions involved in the new crude slates involved as they related to health issues. Even experts in the refinery business asking similar questions received this stock reply to their more detailed scientific inquiries. This lack of respect and disclosure to the public is another serious flaw of the FEIR.

Between 2013-April 6, 2016, 31 CBR accidents have occurred in the U.S. alone. Two thirds of these accidents resulted in oil spills, some of which contaminated waterways which supply cities connected to them, fires and/or fireball explosions. This more up to date information demonstrates that these kinds of accidents are increasing. I recommend an ongoing awareness on this subject as the facts change on a regular basis. The uptick in CBR accidents, even with the 1232 tank cars, needs to be duly noted. The infrastructure of the rails, which are old and not designed to carry the weight of these CBR unit trains are a significant contributing cause for these accidents. Further damage to the rails because of this kind of transport are said to be causing even more fractures in the rails, which is now problematic for other trains having to use the same tracks.

The city staff has claimed that Federal Preemption of the Railroads precludes their ability to deny or safely mitigate this CBR Project, even though their assessment of it has been "the benefits do not outweigh the significant and unavoidable hazards." There is much debate about that conclusion. I ask you to stand by the unanimous Planning Commission's decision. They have spent the last three years examining this situation in detail. No matter what the city's stance happens to be, it is important for the city staff, mayor and city council to stay abreast of the increasing number of CBR accidents in the U.S. since the 13 ones listed in the RDEIR were examined.

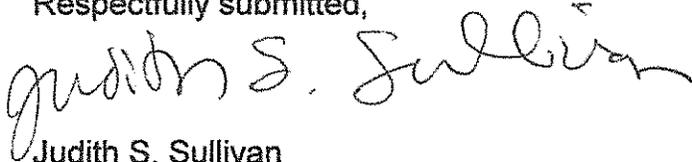
For all of the above reasons and those previously submitted during this review process, the FEIR and CBR Project are considered to be seriously flawed. I respectfully request that the mayor and city council deny adequacy of the EIR and deny the Valero Benicia CBR Project. If the city council decides to deny the project, there would be no need to recirculate the EIR, which would save the staff time and Valero money. The "on-site issues," which Valero cannot really do anything about due to the footprint available for this project, is enough of a reason for denial, without even having to deal with the railroad preemption issue.

Significant and unavoidable hazards such a project would impose can be avoided if the CBR Project is denied. The Valero Benicia Refinery still is able to be quite profitable

without the addition of CBR. They have already demonstrated their ability to receive these domestic crudes by marine vessel and pipeline. By denying the project, our beautiful city and those cities up and down rail would be spared the challenges and impacts CBR would present, for perpetuity.

Each one of you has the sacred trust of our town and many other communities in your hands. As our decision-makers, I ask you to follow your hearts in making a choice that once made, cannot be undone.

Respectfully submitted,

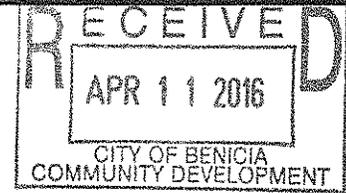
A handwritten signature in black ink that reads "Judith S. Sullivan". The signature is written in a cursive, flowing style.

Judith S. Sullivan  
37 year Benicia resident and homeowner

**Amy Million**

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**From:** Janet Leventhal <janetbleventhal@hotmail.com>  
**Sent:** Friday, April 08, 2016 7:16 PM  
**To:** Amy Million  
**Subject:** Submit written comments regarding Crude by Rail



I am Dr. Janet Leventhal, a retired physician living in Benicia for 26 years. I attended the public meeting on April 4 but was unable to speak before the meeting adjourned. Here are my comments:

From the expert report by Greg Karras, the EIR does not address the increased substances released into the environment by refining the crude that will be delivered by rail. The increased emission of toxic substances from the refinery will increase incidence of respiratory cancers in our community.

Lung cancer is already our top cause of cancer deaths. Non-smokers' lung cancers are the most common lung cancer. Incidence of non-smokers' lung cancer is known to be linked to fossil fuel pollution.

As a physician who saw more and more cancer during my career I am concerned about our community's health.

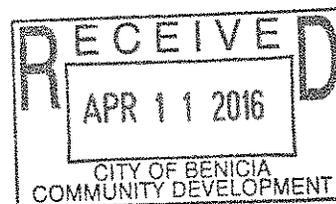
As for the claim that Crude by Rail is good for our economy, we need to consider the larger cost both to our priceless health and the actual price for medical treatment of increasing cancer our community.

Please to what's right for citizens and deny Valero's request.

Thank you,

Janet B. Leventhal, MD

Nicholas Zefeldt  
350 East O Street  
Benicia, CA 94510



April 9, 2016

To Whom it May Concern,

I would like to take a moment to voice my opinion that the city council should vote no on Valero's proposed crude by rail project.

My wife and I purchased our home in Benicia in 2014. Coming from Berkeley and San Francisco, we chose Benicia because it is quiet, safe, and charming. It is the kind of place ideal for starting a family. There is a sense of community here that we have fallen in love with. We believe that the crude by rail project will significantly change the quality of life that we will be afforded as members of this community. We prioritize our community's safety and the environment's well-being over the profits of a private corporation.

We watched nearly every moment of the planning commission meetings touching on this subject. It was so clear that the community does not want this project to pass. Nearly every community member who spoke during public comment was against the project. Nearly every person who was in favor of the project was either an employee or a contracted worker of the refinery - with something to gain directly from the project. The planning commission unanimously voted against the project. The city council should follow their recommendation.

I have found myself taken back by the widespread opposition to the project outside of our community as well. We have heard opposition from a state senator and elected officials and citizens from Yolo county, the Solano air district, the cities of Davis, Sacramento, Berkeley, Dixon, Vallejo, Richmond, and Lafayette. This is a project that has impact outside of the boundaries of our community. Those effected by this project have little to gain and much to lose - they do not want this project either.

As a new home owner in Benicia, I would like to be clear. This is the decision that will define my choice of whom to vote for during elections moving forward. I cannot support anyone in elected office who would support a private corporation over the reasonable, nearly unanimous concerns voiced by the community they represent.

Please vote no on Valero's proposed crude by rail project.

Sincerely,

Nicholas Zefeldt  
Educator of the Year, San Ramon Valley Unified School District, 2013

My name is Carol Thompson and I've lived in Benicia since December of 2014. My daughter and her husband have been here over 5 years, and my first grandson came home to Benicia not quite two years ago.

While my daughter was pregnant I was living in Vermont and became concerned when I found out about the poor air quality in the Bay area. I signed up to receive the "Spare the Air Alert" notifications for the East Bay. There were frequently several days in a row when the air quality was deemed "unhealthy for sensitive groups" with a warning to "active children and adults", as well as people with asthma to limit outdoor exertion and stay inside. It was a bit worrisome, to say the least, and something to consider as far as investigating a move to bring me closer to my family.

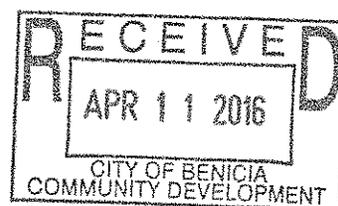
A couple of weeks ago I attended a Planning Commission's meeting and heard Steve Young discuss the many aspects of Valero's Crude by Rail request for a land use permit. I was impressed by his knowledge of the project and his ability to clarify many of the details in the request that the Planning Commission would be voting on.

I was also surprised by the apparent lack of facts that Valero kept turning to, such as the conditions (rated on a scale of 1 to 5) of some of the tracks and nobody could confirm where the sub-par tracks were located. The frightening thought of 50 railroad cars filled with dangerously explosive types of oil, either from Alberta tar sands or the Baaken fields in North Dakota, and not knowing exactly which car was holding which crude (because that would be important to know in case of a spill), caused my imagination to picture those 50 cars going over Donner Pass (possibly twice a day) and all I could think was, "this looks like a disaster waiting to happen".

In the time that I have called Benicia my home, I have noticed a pride that this town shows with its many community parks, the Holiday tree lighting, the 4<sup>th</sup> of July Parade, farmer's markets, community gardens and a strong commitment to the arts. Today as I was walking along the shoreline trail, overlooking the Carquinez Strait, I watched a train on the tracks on the other side of the water, pulling 34 cars filled with shipping containers. The long string of cars covered most of my direct field of view and I imagined a future line of black oil tankers, over twice as long, making their way to our town, from a dirty, polluting environmental nightmare far, far away.

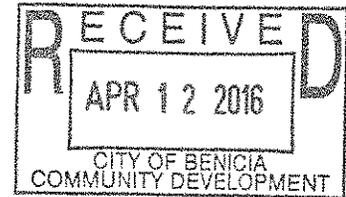
I can only hope that the powers that be in the Oil Industry eventually call "Uncle" and admit that the cost of extracting, transporting, refining and distributing crude from thousands of miles away has reached beyond the scope of economic viability. There are some who do not agree with the scientists who tell us to "leave it in the ground", but once the pollutants caused by excavating and burning these fossil fuels get into my air, and especially into the lungs of my two year old grandson, I am not thrilled.

Carol Thompson  
131 E. B Street  
Benicia, CA 94510



April 11, 2016

Mayor Patterson, City Council Members, and Staff  
City of Benicia  
250 L Street  
Benicia, CA 94510



**Re: Valero Crude by rail project**

Dear Honorable Major Patterson, City Council Members, and Staff,

I have a few comments and questions for you pertaining to the Valero Crude by rail project, listed below.

***1. Nossaman LLP is incorrect in their assessment of Federal Preemption.***

In the Valero Appeal, Valero's Attorney, Nossaman LLP, argues that the "City Counsel's hand are, in fact, tied by the law of federal preemption," This statement does not appear to be correct. It appears that federal preemption is invoked when a rail carrier is prevented by local or state regulation from passing through a particular area to avoid having local control of rail operations when transporting goods. Here, there is nothing in this project preventing rail operations from transporting crude oil along the rail lines owned and operated by the Union Pacific. In fact, the rail lines are being asked to transport oil to Valero on private property using a rail line spur owned and operated by Valero. Here, the crude oil could be transported by rail to Valero whether or not the city approves the project. However, if the city denies the project due to local onsite issues, Valero would not be able to receive the oil.

Therefore, there is nothing limiting Union Pacific from transporting crude oil along the rail lines they own and operate. For example, Nossman cites *Norflok Southern Railway Corporation v. City of Alexandria* (4<sup>th</sup> Cir. 2010) 608. F.3d 150 which a local ordinance placed limits on what could "hailed through the city." Here, a denial of the project would NOT place limits on what could be hauled through Benicia on rail lines owned and operated by Union Pacific, only limit Valero's ability to receive oil via Valero's private transloading facility.

***2. To promote the health and safety of Benicia residents, why can't Valero build a transloading facility nearby in an unincorporated area along highway 680 and use a short pipeline to transport the oil to Valero?***

Since due to the design of the transloading facility it appears that the proposed project would place Benicia residents in serious risk due to unmitigable local safety and health concerns, and impact traffic to local business in the industrial business park, it seems logical that Valero should be able to build a transloading facility along highway 680 where there is plenty of open space to build a separate track and transloading facilities away from heavily populated areas. Valero can then use existing pipelines to deliver the oil safely to the refinery, or build a short pipeline section using underground pipelines and pipeline routes already in use.

**3. The denial of the Phillip 66 Company Rail Spur Extension Project (permit #DRC2012-00095) by the San Luis Obispo Planning Commission is a good model to look to when analyzing the Valero Project and EIR.**

The Phillips 66 project contains local issues that seem identical to the Valero Project. I urge you to carefully consider the findings of the San Luis Obispo Planning Commission that denied the Phillips 66 project.

[http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Phillips\\_66\\_Company\\_Rail\\_Spur\\_Extension\\_Project.htm](http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Phillips_66_Company_Rail_Spur_Extension_Project.htm)

In short, the planning commission found that because there was **unmitigable** local safety and health concerns, the plan did not meet their general plan. Here are some excerpts to consider:

**“There are insufficient specific, overriding economic, legal, social, technological, or other benefits of the project that outweigh the significant effects on the environment, as would be required to approve the project pursuant to Public Resources Code section 21081. Additionally, due to federal preemption, implementation of mitigation measures to lessen the Class I impacts on the Mainline within San Luis Obispo County and the state are infeasible, as argued by the Applicant.”**

“20. Safety Element of the General Plan, Fire Safety Policy S-14, Facilities, Equipment and Personnel: “Ensure that adequate facilities, equipment and personnel are available to meet the demands of fire fighting in San Luis Obispo County based on the level of service set forth in the fire agency’s master plan.” It has come to the County’s attention through numerous letters from jurisdictions along the mainline that there are not adequate resources through their respective fire agencies to respond to a derailment, spill or explosion as a result of a rail accident. In addition, the County may be preempted from implementing conditions or mitigation measures that could mitigate these impacts along the mainline rail routes, therefore **the County can’t ensure there will be adequate facilities, equipment and personnel available in the event of an accident. This is the case throughout the state as well as within San Luis Obispo County. Therefore, the project is not consistent with this policy of the General Plan.**”

“21. Safety Element of the General Plan, Hazardous Materials Policy S-26, Program S-68: S- 26 states: “Reduce the potential for exposure to humans and the environment by hazardous substances.” S-68 states “Review commercial projects which use, store, or transport hazardous materials to ensure necessary measures are taken to protect public health and safety.” Implementation measure Program S-68 states that commercial projects which use, store, or transport hazardous materials are to ensure necessary measures are taken to protect public health and safety. As the Applicant has stated, the County would not be able to mitigate or require conditions upon the project which would ensure the safety for citizens along the mainline rail routes, including the portions within the County, due to the County likely being preempted from requiring these types of measures. **The project is not**

**in compliance with this policy because the County would not be able to ensure the safety of the residents of the County, or the state, as a result of the additional probability of a derailment, spill, fire or explosion because of the proposed project.**

“22. Air Quality Policy AQ 3.2, Attain Air Quality Standards: Policy AQ 3.2 states that the County will attain or exceed federal or state ambient air quality standards for measured criteria pollutants. San Luis Obispo County is in non-attainment for ozone standards as well as the state particulate matter standards. The Project would generate fugitive dust and DPM onsite that would contribute to PM10 emissions within the County. It is unlikely that these fugitive dust and DPM emissions (i.e., PM10 emissions) could be offset at the SMR due to a lack of available onsite emission reductions. **The addition of these onsite PM10 emissions would further exacerbate the ability for the County to attain the state particulate matter standards and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.**

The rail spur project would be generating NOx and ROG emissions along the mainline rail route that would lead to ozone increases and would generate DPM along the mainline rail routes that would contribute to PM10 emissions within the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NOx, ROG, and DPM emissions. The addition of these NOx, ROG, and PM10 emissions would further exacerbate the ability for the County to attain the state particulate matter and ozone standards. **The addition of these NOx, ROG, and PM10 emissions along the mainline rail route within the County would further exacerbate the ability for the County to attain the state particulate matter and ozone standards and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.**

“23. Air Quality Policy AQ 3.3, Avoid Air Pollution Increases: Policy AQ 3.3 states that the County will, “Avoid a net increase in criteria air pollutant emissions in planning areas certified as Level of Severity II or III for Air Quality by the County’s Resource Management System (RMS).” The Nipomo Mesa area is in a level of severity II for Ozone, a level of severity III for PM2.5, and a level of severity III for PM10. The “PM” or particulate matter includes hazardous materials in the air that gets into the lungs and causes a variety of health effects. The PM2.5 tends to be a greater health risk because the particles are smaller and can travel deeper into the lungs. Sources of particulate pollution include diesel exhaust, mineral extraction and production, combustion products from industry and motor vehicles, smoke, wind-blown dust and other sources (Source: County Resource Summary Report). The Project does not comply with this standard because it would add diesel exhaust from locomotives to an area which is currently in a level of severity of III. Even with implementation of mitigation measures the Project would exceed the threshold of cancer causing diesel particulate which is 10 in a million by creating a risk factor of about 13.6 in a million (for emissions occurring at the project site and along the mainline impacting the same receptors near the SMR). Without implementation of mitigation, the Project would create a risk factor of 26.5 in a million, both of which are exceeding the

threshold. In addition, without full mitigation, the Project would exceed the 1.25 lbs per day threshold for DPM onsite. In addition, the most effective mitigation measure is likely not implementable due to federal preemption (i.e., requiring use of Tier 4 locomotives).

Operation of the locomotives along the mainline rail routes would result in increase in NOx and ROG emissions that would lead to ozone increases. The locomotives would also generate diesel particulate matter emissions along the mainline rail routes, which would increase PM10 emissions in the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NOx, ROG, and diesel particulate matter emissions. **The addition of these NOx, ROG, and PM10 emissions would result in air pollution increases in the County and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.**

"24. Air Quality Policy AQ 3.4, Toxic Exposure: Policy AQ 3.4 states that the County will, "Minimize public exposure to toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead." This Project does not comply with this Policy of the General Plan because it allows for an increase in hazardous emissions as a result of the project. Calculations in the FEIR have shown that this Project would exceed the cancer threshold, which is 10 in a million, by resulting in a cancer risk of about 26.5 in a million (with no mitigation), or about 13.6 in a million (with partial mitigation). **This impact would exceed San Luis Obispo County Air Pollution Control District (APCD) health risk thresholds when factoring in the 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments.**

The Project does not comply with this Policy of the General Plan because it allows for an increase in hazardous emissions as a result the locomotives operating on the mainline rail routes in the County. Calculations in the FEIR show that the Project would exceed the cancer threshold of 10 in a million for areas where trains speeds are limited to 30 miles per hour or less and thus impacting people in the county along the routes which will see the additional rail traffic as a result of this proposed project."

"25. Air Quality Policy AQ 3.5, Equitable Decision Making: Policy AQ 3.5 states that the County will, "Ensure that land use decisions are equitable and protect all residents from the adverse health effects of air pollution." This policy is also consistent with the discussion above regarding air quality Policy AQ 3.3. The Project would bring locomotives (up to 5 trains per week, 10 round trips) to the site for unloading of heavy crude, and would depart the site empty. **The additional diesel exhaust from these locomotives, upwind of many residences and sensitive receptors, would cause a significant impact to the air quality for these residences.** In addition, a large onsite buffer between the residential neighborhoods and the facility would be reduced from over 7,600 feet to approximately 3,300 feet. This project application for a "Development Plan/Coastal Development Permit" is a discretionary land use permit with the discretion by the County to decide if this project complies with the General Plan including the health

and safety of the County's residents. **The Project imposes health risks which would be inconsistent with the health and safety requirements of the General Plan with regard to air quality from the property (increase in cancer causing thresholds). This project would not ensure that all residents are protected from the adverse health effects of air pollution as this policy requires.**

"26. Air Quality Goal AQ 3: Implementation Strategy AQ 3.6.1, Identify Health Risks to Sensitive Receptors: This implementation strategy of the General Plan states that health risks are to be mitigated consistent with Air Pollution Control District standards. This is generally applicable to projects for which construction would occur near a freeway or rail line and mitigation would be required to reduce the air quality hazards to "sensitive receptors" or citizens which are sensitive to these pollutants. However, this project would increase the amount of toxic emissions as an increase in rail traffic would occur as a result of the proposed project. **Toxic emissions from the locomotives operating on the mainline rail routes would exceed the cancer risk thresholds for areas where speeds are limited to 30 miles per hour or less and thus impacting people in the county along the routes which will see the additional rail traffic as a result of this proposed project. Therefore, the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.**"

"27. Biological Resources Policy 1.2, Limit Development Impacts: This policy calls for the regulation and minimization of proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, coastal and riparian habitats, and wildlife habitat and movement corridors as necessary to ensure the continued health and survival of these species and protection of sensitive areas. The Project would result in the extension of refinery infrastructure (i.e., rail spur, unloading facility, pipelines, and emergency vehicle access road) into a dune habitat system. **Approximately 20 acres of various project features would be constructed within dune vegetation that is considered sensitive habitat as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition and is also considered Unmapped ESHA; therefore, the Project does not comply with this policy.**"

I have attached the "Exhibit C – Findings for Denial" along with other pertinent information for your review. Thank you for your consideration of these questions, comments, and information provided.

Sincerely,

C. Bart Sullivan  
1543 Sherman Drive  
Benicia, CA 94510

## Report finds overwhelming opposition to project that would bring crude-by-rail through Bay Area cities

By Tom Lochner, [tlochner@bayareanewsgroup.com](mailto:tlochner@bayareanewsgroup.com)  
San Jose Mercury News

Posted: Fri Mar 04 05:44:34 MST 2016

BERKELEY -- A crude-by-rail project in Central California that could bring up to five trains a week through Berkeley and other East Bay shoreline cities has garnered overwhelming opposition among local politicians and the public, an observer for the city reports.

Ray Yep, a member of the Public Works Commission working with Councilwoman Linda Maio, represented Berkeley at hearings before the San Luis Obispo County Planning Commission last month on the Phillips 66 Rail Spur Project. The proposal calls for bringing out-of-state crude oil, likely the tar sands variety, to the Phillips 66 Santa Maria refinery via 80-car trains, via a 1.3-mile spur that would connect the refinery with the Union Pacific mainline.

Possible access routes to the refinery from outside the area would be from the south via the Los Angeles Basin, and from the north via the East Bay and South Bay along Amtrak's Capitol Corridor tracks.

As early as 2014, the Berkeley and Richmond city councils voted to oppose the transport of crude oil through the East Bay.

Hearings were held Feb. 4 and 5, with at least one more hearing before the planning commission votes on the project. The next hearing is 9 a.m. March 11.

At the Feb. 4 hearing, the county staff gave a presentation, ending with a recommendation to deny the project. A county attorney followed with a discussion of federal pre-emption, characterizing it as a "gray area," according to the Berkeley report.

Phillips 66 has challenged the county's standing to evaluate Union Pacific mainline issues -- including possible effects on the communities it traverses. In an ensuing presentation, the company held that mainline issues fall under federal regulations, the Berkeley report noted.

Phillips 66 said the rail spur project is needed because of declining of oil production in California, and that it would keep the refinery in operation and provide local jobs and taxes, according to the Berkeley report. The company declared willingness to reduce the volume of trains to three per week, which critics have derided as a tactic to facilitate approval without addressing the danger of fire, explosion and pollution.

Without approval of the rail spur project, 100 trucks would transport crude oil daily from Kern County to the Santa Maria refinery, according to the report.

About 300 people submitted speaker cards at the Feb. 4 hearing and 69 spoke that day, from as far away as Crockett, Davis and Sacramento, according to the Berkeley report. Some 430 speaker cards were submitted at the Feb. 5 hearing.

The report noted that 17 elected officials spoke, all but one against the project.

Maio is expected to present the report to the City Council on Tuesday. It is available online at [bit.ly/1QsQL6w](http://bit.ly/1QsQL6w).

Contact Tom Lochner at 510-262-2760. Follow him at [Twitter.com/tomlochner](https://twitter.com/tomlochner).

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# County Of Santa Barbara

Mona Miyasato  
County Executive Officer



105 East Anapamu Street, Room 406  
Santa Barbara, California 93101  
805-568-3400 • Fax 805-568-3414  
www.countyofsb.org

Executive Office

November 24, 2014

Mr. Murry Wilson  
County of San Luis Obispo Department of Planning and Building  
976 Osos Street, Room 200  
San Luis Obispo, CCA 93408

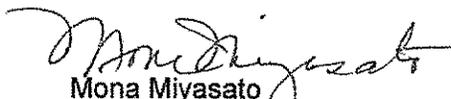
**Re: Notice of Availability of Recirculated Draft Environmental Impact Report – Phillips 66  
Company Rail Spur Extension Project**

Mr. Wilson:

Thank you for the opportunity to comment on the Recirculated Draft Environmental Impact Report for the Phillips 66 Company Rail Spur Extension Project. At this time, the County is submitting the attached letter from the County Planning and Development Department.

The County has no further comments on this project at this time and looks forward to hearing more about the project's progress. If you should have any further questions, please do not hesitate to contact my office directly or Matt Schneider, Deputy Director in the Office of Long Range Planning, at (805) 568-2072.

Sincerely,

  
Mona Miyasato  
County Executive Officer

cc: Glenn Russell, Ph.D., Director, Planning and Development Department  
Matt Schneider, Deputy Director, Long Range Planning Division  
Kevin Drude, Deputy Director, Energy and Minerals Division

Attachments: November 19<sup>th</sup> Letter, Planning and Development Department



# County of Santa Barbara Planning and Development

Glenn S. Russell, Ph.D., Director  
Dianne Black, Assistant Director

November 19, 2014

Murry Wilson  
County of San Luis Obispo Department of Planning and Building  
976 Osos Street, Room 200  
San Luis Obispo, CA 93408

**Re: Comments on the Proposed Phillips 66 Company Rail Spur Project Recirculated  
Draft Environmental Impact Report**

Mr. Wilson,

Thank you for the opportunity to comment on the Revised Draft EIR for the proposed Phillips 66 Company Rail Spur Project. The primary purpose that the EIR was recirculated was to expand the discussion of the mainline rail impacts beyond the borders of San Luis Obispo County, which has been adequately done. However, the EIR fails to identify any pipeline alternatives to rail transportation which, if feasible, could reduce or even eliminate some of the most significant public safety and environmental impacts. The comments presented herein provide additional information and suggested EIR changes to address this deficiency. Our comments are focused on the Project Objectives, the Project Description and Project Alternatives.

## 2.1 SMR Rail Project Purposes and Objectives

A project objective that limits transportation by rail alone sets an unreasonable and restrictive limit of the Lead Agency's ability to develop project alternatives that may identify safer and less environmentally damaging forms of crude oil transportation, like pipelines. The primary objective of the proposed project should be more appropriately stated as allowing the refinery to obtain a range of competitively priced crude oil from North American sources via existing and possible upgraded transportation systems. If so stated, the potential list of project alternatives could be effectively expanded beyond the limited list identified in EIR Section 5.0, including pipeline alternatives.

## 2.7 Rail Spur Project Effect on Refinery Throughput

The Santa Maria refinery has a single feed stock pipeline which serves local producers. The rail project is proposed by Phillip 66 to give them access to a broader market of crude oil, or "Advantaged Crudes", so that they can remain competitive. The EIR further notes that Advantaged Crude production areas often have limited pipeline service, causing transportation challenges to refinery destinations. These reported pipeline system limitations are driving the rail

transportation proposal, but the question remains why new pipeline capacity is not proposed, or even considered as an alternative given that pipeline transportation is a more environmentally protective and safe means to transport crude oil.

This section also describes, accurately, that more imported crude to the refinery could displace local production feed-stocks. This would likely result in those displaced volumes being transported to other areas for refining. The County believes this is a reasonably foreseeable result of the proposed project and should be analyzed in the EIR. The current combined onshore and offshore production volume of approximately 61,000 barrels per day could be displaced. Although much of this oil is already transported by trucks to local pump stations for transportation to the Santa Maria refinery, displacing it entirely would require that it be transported to other refinery destinations, likely in the Los Angeles and Bay areas, and in trucks for most or all of that distance due to the lack of pipeline capacity. This would undoubtedly result in air quality and traffic impacts greater than current levels. As the trend in Santa Barbara County for the last decade has been an increase in onshore production, the impacts caused by such a displacement of local production could be significant.

## 5.0 Project Alternatives

Santa Barbara County has long been at the forefront of developing and enforcing policies and rules that regulate the transportation of hazardous liquids. The County strictly enforces the transportation of Natural Gas Liquids (NGLs), requiring maximum blending of the liquids in crude streams, then only by truck on designated haul routes and by certified carriers. Natural gas and oil transportation is similarly regulated, involving careful risk-based design review and permitting of the pipelines and associated processing facilities. Because the proposed project involves the transportation of crude oil with its associated risks, and because the transportation path cuts directly through Santa Barbara County, it's imperative that the EIR consider a pipeline alternative(s) consistent with our strict pipeline transportation policies and rules.

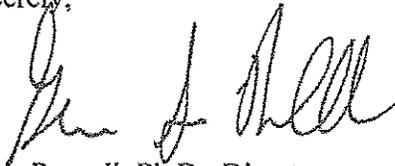
As is apparent in reviewing the Alternatives Analysis, there are many complications associated with the acquisition of crude oil stock for refining. Because the crude oil is identified as coming from numerous North American locations, the transportation infrastructure will vary and is difficult to precisely identify at this time. The County also understands that pipeline networks are operated by numerous entities, transport multiple feed stocks, are sometimes contractually dedicated and have other legal and technical constraints limiting their use or modification. However, the EIR fails to include a discussion of pipeline transportation alternative(s) even in the screening study, giving the reader no opportunity whatsoever to comment on or even understand why such options are not considered.

The rail transportation of crude presents numerous potential and known risks to the environment, all dangerous and some potentially catastrophic or fatal. Impacts to our local environment including creeks and streams, groundwater and the ocean would be significant in the event of a train accident, and the health and welfare of our residents would be negatively affected by the fugitive emissions from the rail cars. Because the project is anticipated to lengthen the operational life of the Santa Maria refinery for 20 to 30 years or more, the associated impacts of rail transportation would continue for that duration, with little or no opportunity for the County

to mitigate project impacts in our jurisdiction once approved. In fact, as the County grows and changes over time, a long-term and dangerous rail transportation project cutting directly through our jurisdiction would present difficult planning challenges.

The County asks that the EIR include a robust discussion of pipeline transportation alternatives, identifying to the extent feasible potential pipeline system upgrades and of primary importance how pipeline transportation in the general vicinity could be augmented or constructed anew to avoid the rail transportation of crude in our County altogether. If you have any further questions or comments regarding this letter, please contact Kevin Drude at (805) 568-2519.

Sincerely,



Glenn Russell, Ph.D., Director

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SBC-01	<p>While one of the project objectives is to obtain a range of competitively priced crude oil from North American sources that are served by rail, another is to avoid and minimize environmental and community impacts, and mitigate any unavoidable impacts to the maximum extent feasible. This has allowed the County to evaluate a wide range of transportation alternatives. Chapter 5.0, Alternatives Analysis looks at a number of transportation alternatives for delivering crude oil including trucking, marine tankers, as well as pipelines.</p>
SBC-02	<p>A discussion of pipeline alternatives has been added to Chapter 5.0, Alternatives Analysis. Also see Response to SBC-06.</p>
SBC-03	<p>Not all of the 61,000 barrels per day of onshore and offshore oil production from Santa Barbara County is processed at the SMR. As discussed in the Project Description (Chapter 2.0) the majority of the crude that is processed at the SMR comes from the OCS platforms offshore Santa Barbara County, with The Exxon Santa Ynez Unit providing the largest share. All of the Point Pedernales crude is processed at the SMR. The SMR also processes oil from local producers in the Santa Maria area, most of which is trucked to the Santa Maria Pump Station (SMPS) and then moved via pipeline to the SMR. Oil from the Price Canyon Oil Field in Southern San Luis Obispo County is also trucked to the SMPS for delivery via pipeline to the SMR. A breakdown of the major sources of crude currently being run at the SMR the Outer Continental Shelf (60-85%), Price Canyon/Santa Maria Valley/San Joaquin Valley (5-20%), San Ardo (5-10%) and Canada (2-7%).</p> <p>The Rail Spur Project would be able to deliver an average of 37,142 barrels per day. With the approval of the Throughput Increase Project, the SMR would have a capacity of 48,000 barrels per day. This would leave a capacity of 10,858 barrels per day for other local crudes. If the Rail Spur Project is approved, it is likely that OCS crude moving through the All American Pipeline to the Sisquoc Pipeline would be displaced. This OCS oil would continue to move via the All American Pipeline system to other refinery destinations in Los Angeles. However, it is possible that other local crude oils could be displaced and would have to find other refinery destinations.</p> <p>As discussed in the Project Description (Chapter 2.0), in the short-term, depending upon the volume of crude oil received by rail, some of the oil delivered via pipeline or via truck to the Santa Maria Pump Station could be displaced. Any displaced crude oil would likely be sold to other refineries in the Los Angeles or Bay areas. The amount, location, and destination of any displaced oil would be driven by market forces. Given the dynamics of the crude oil market, it is speculative as to what if any local crude oil would be displaced, and what would happen to any oil if it were displaced. However, if local crude oil was displaced producers may have to transport their crude oil via truck to markets other than the SMR. This would increase air emissions associated with trucking the crude oil a farther distance or trucking as opposed to pipeline transportation, which could result in cumulative air quality and</p>

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	<p>safety impacts.</p> <p>Another option would be for the Phillips 66 Sisquoc Pipeline, which connects the All American pipeline to the Santa Maria Pump Station (SMPS) to be reversed, allowing local producers to ship their crude oil via pipeline to Los Angeles via pipeline. Such reversal of the pipeline flow direction would allow production from area producers to be transported to refinery destinations via pipeline instead of by truck if the SMR is not available. This pipeline reversal project was approved by Santa Barbara County in 2002 and a permit, but the permit subsequently expired and the pipeline was never reversed.</p> <p>There are also a number of oil development projects in various stages of development and permitting in Northern Santa Barbara County that have proposed to transport the crude oil production to the SMR. The cumulative analysis has been expanded to discuss these cumulative projects (see Table 3.1 in Chapter 3.0, Cumulative Project Description). The cumulative impact discussions in Chapter 4.0, Environmental Analysis, have been expanded to discuss the potential cumulative impacts associated with the potential for displacing local crudes from the SMR.</p>
SBC-04	<p>A discussion of pipeline alternatives has been added to Chapter 5.0, Alternatives Analysis. Also see Response to SBC-06.</p>
SBC-05	<p>The RDEIR has identified significant and unavoidable (Class I) impacts in Santa Barbara County related to air and GHG emissions, and well as spill impacts to public safety, biological, water, agricultural, and cultural resources.</p> <p>It is speculative as to whether the Rail Spur Project would extend the life of the SMR. In the short-term there are a number of local oil development projects that could provide crude supplies to the SMR. For example, the Arroyo Grande Oil Field (AGOF) in San Luis Obispo has applied to the County to increase production to 10,000 barrels per day. If this project is approved it would increase the production from the AGOF by about 8,000 barrels, which would all go to the SMR. There are a number of other oil development projects currently proposed in northern Santa Barbara County that could add an additional 23,000 barrels per day of oil production that could be transported to the SMR. These include projects such as Santa Maria Energy, which could move 3,000 barrels per day via pipeline to the SMR, Pacific Coast Energy, which could move 3,600 barrels per day to the SMR via pipeline, ERG Cat Canyon, which could move 5,000 barrels per day via pipeline to the SMR, the PetroRock development, which could move 1,600 barrels per day, and the Aera Energy Cat Canyon Project that could add 10,000 barrels per day. A listing from Santa Barbra County shows a total of 943 oil production wells in various phases of development, all of which could provide oil to the SMR. While some of these projects state that the oil will move to the SMR, some do not. For example the Aera Energy Project will truck oil to various customers.</p>

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	<p>A May 2014 report by the United States Energy Information Administration (EIA) estimated that as much as 13.7 billion barrels of oil may be recoverable from the Monterey Shale, of which some of this shale formation is in northern Santa Barbara County and Southern San Luis Obispo County. While it is unknown, when and if any of these reserves would be developed (and in what quantity), they could in, the future, provide local crude supply to the SMR.</p> <p>It is also possible in the future that the portions of the All American Pipeline between the Sisquoc Pump Station and Kern County could be reversed to allow crude oil to move to the Sisquoc pipeline. This portion of the All American Pipeline that connects to the Sisquoc Pipeline is current used to move only OCS crude from Southern Santa Barbara County to the Kern County and then on to refinery destination in the Bay Area and Los Angeles. When OCS production reaches a level where it does not make economic sense to operate this portion of the All American Pipeline, it could be reversed to move crude oil from the Kern County to the SMR. This would provide the SMR with access to other sources of crude. If and when this would happen is unknown and speculative, but it is a potential future option for obtaining crude for the SMR.</p> <p>The point of this discussion is to show that there are potential options in the future for the SMR to obtain crude oil without the rail project, however, they are unknown, and as with all crude supply issues, would be determined based upon market forces, including the future price of crude oil. This point can be illustrated by the past history of the crude supply at the SMR. In the 1970's the SMR did not receive any crude from offshore Santa Barbara County since none of this crude had been developed. With the development of the offshore crude, pipelines were built that allowed the SMR to receive this crude source. Now offshore crude from Santa Barbara is a major source of crude for the SMR. As this source of crude declines, it is likely that other sources of crude will become available to the SMR as discussed above. This would occur with or without the Rail Spur Project. What future crude is processed at the SMR will depend upon economic and market factors.</p> <p>Therefore, it would be speculative at best to estimate when the local crude supply would not be sufficient to support further operation of the SMR without the proposed Rail Spur Project.</p>
SBC-06	<p>A discussion of pipeline alternatives has been added to Chapter 5.0, Alternatives Analysis. Two pipeline alternatives were addressed. One would be a cross country pipeline the other was a pipeline to Kern County. Both of these were found to be potentially infeasible due to environmental and/or technical factors. With regard to a cross country pipeline, permits would be needed from a large number of Federal, State and local jurisdictions, and Phillips 66 does not own the land that would be needed along a pipeline route. The Keystone XL Pipeline project is an example of the difficulties that a long-distance pipeline project alternative would face.</p>

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	<p>With regard to the pipeline from the Sisquoc Pump Station to Kern County. This alternative would have to connect with one of the proposed rail unloading facilities such as the Alon Terminal or the All American Terminal. Oil could then be unloaded via rail and then moved via pipeline to the SMR. This alternative would just move most of the rail impacts to the San Joaquin Valley. Also, Phillips 66 does not own the land along the pipeline right-of-way and permits would be needed from various Federal, State, and local agencies, which are outside of the control of the County of Santa Barbara.</p> <p>The law does not require in-depth review of alternatives which cannot be realistically considered and successfully accomplished; the County could properly find that an alternative located outside of its decision making authority was not a feasible project alternative (<i>Citizens of Goleta Valley v. Bd. of Supervisors</i> (1990) 52 Cal.3d 553, 566, 575).</p>
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## Exhibit C – Findings for Denial

### A. Environmental Determination

1. The Environmental Coordinator, after completion of the initial study, found that there is evidence that the project may have a significant effect on the environment, and therefore a Final Environmental Impact Report (FEIR) was prepared (pursuant to Public Resources Code Section 21000 et seq., and CA Code of Regulations Section 15000 et seq.) for this project. The FEIR considers the following issues: Aesthetics and Visual Resources, Agricultural Resources, Air Quality and Greenhouse Gases, Biological Resources, Cultural and Historical Resources, Geological Resources, Hazards and Hazardous Materials, Land Use and Recreation, Noise and Vibration, Population and Housing, Public Services and Utilities, Transportation and Circulation and Water Resources. The FEIR also considers alternatives in addition to the "No Project" alternative.
2. While a FEIR has been prepared, per the Public Resources Code 21080(b)(5) and CEQA Guidelines, CEQA does not apply to projects which a public agency rejects or disapproves. However, the FEIR has provided evidence and information to support this recommendation for denial, including an evaluation of the significant and unavoidable environmental impacts of the proposed project.
3. There are insufficient specific, overriding economic, legal, social, technological, or other benefits of the project that outweigh the significant effects on the environment, as would be required to approve the project pursuant to Public Resources Code section 21081. Additionally, due to federal preemption, implementation of mitigation measures to lessen the Class I impacts on the Mainline within San Luis Obispo County and the state are infeasible, as argued by the Applicant.

### B. Environmentally Sensitive Habitat

4. The proposed project is located within an Environmentally Sensitive Habitat area:

Following the circulation of the Public Draft EIR, additional biological survey efforts were conducted in 2015 by Arcadis and Leidos to ensure accuracy and consistency with vegetation type mapping with the National Vegetation Classification system, as described within A Manual of California Vegetation (Sawyer et al 2009).

Based on the best available information, it is determined that the Rail Spur Project area:

- a. Is currently occupied by plant species that are listed as Rank 1B status by the California Native Plant Society; and,
- b. Is currently occupied by sensitive communities as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition.

Due to these factors, the project site meets the definition of Unmapped ESHA in the County's LCP (CZLUO Section 23.11). The area contains sensitive plant and animal species needing protection, including Rank 1B status plants, sensitive communities recognized by the CDFW, burrowing owls, and coast horn lizard. In addition, the Rail Spur Project area meets the definition of ESHA as defined in the guidelines set forth by the California Coastal Commission for defining ESHA (CCC 2013). As discussed further below in impact BIO.5, the Rail Spur Project would permanently impact a total of about 20 acres of ESHA, including the sensitive plant communities as classified by the California Department of Fish and Wildlife (CDFW)

under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition.

5. The Proposed Project does not meet the requirements of Coastal Zone Land Use Ordinance Section 23.07.170 b for Environmentally Sensitive Habitat Areas:

a. *There would be a significant negative impact on the identified sensitive habitat and the proposed uses would be inconsistent with the biological continuance of the habitat because the proposed rail spur would remove approximately 20 acres of habitat area containing "rare" or "1B" species, and is not a project that is included within the list of projects noted in the ordinance as a "development project (which) would be allowable within an ESHA" such as a resource dependent use, habitat enhancement project, or coastal access way.*

b. *The proposed uses would significantly disrupt the habitat because development would remove approximately 20 acres of habitat area containing listed "rare" or "1B" species by the California Department of Fish and Wildlife and the California Native Plant Society. The Project is located within dune habitat containing sensitive vegetative communities as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition (i.e., Silver dune lupine – mock heather scrub). The Project and associated infrastructure would extend within this habitat area. Due to the extensive distribution of Unmapped ESHA, there does not appear to be an alternative design or Project configuration that would avoid disturbance and removal of this habitat in order for the Project, or any project alternative, to proceed on the portion of the property outside the existing disturbed envelope of the refinery. The inability to avoid ESHA is in direct conflict with sub-section (e) of 23.07.170 which states, "All development and land divisions within or adjacent to an Environmentally Sensitive Habitat Area shall be designed and located in a manner which avoids any significant disruption or degradation of habitat values."*

**C. Development Plan Findings**

*The proposed project does not meet the requirements of 23.02.034.c.4 as follows:*

**A. *The proposed project or use is not consistent with the Local Coastal Program, the Land Use Element of the General Plan, and the General Plan. Following is a list of the items for which the project is not in compliance:***

*Coastal Plan Policies:*

6. Environmentally Sensitive Habitats, Sensitive Habitats, Policy 1, Land Uses Within or Adjacent to Environmentally Sensitive Habitats: This policy states that new development within or adjacent to locations of environmentally sensitive habitats (within 100 feet unless sites further removed would significantly disrupt the habitat) shall not significantly disrupt the resource. Within an existing resource, only those uses dependent on such resources shall be allowed within the area. Unmapped ESHA is present throughout the Project area and within 100 feet of other areas determined to be Unmapped ESHA, including portions of the project area where the rail spur and unloading facility would be constructed, the emergency vehicle access route, and the area where the pipelines would be constructed from the rail spur unloading facility to the existing storage tanks. The Project would impact 20 acres of Unmapped ESHA. The Refinery was built in 1955 to be in close proximity to local onshore oil sources (non-coastal dependent). In the mid-1980's, upon development of offshore oil, the Refinery began use of offshore crude as a major source. During this time, and to present day, the Refinery has used a combination of offshore crude as well as a variety of onshore sources (including Canadian

Tar Sands crude which arrives by truck from the Central Valley and is delivered to the Santa Maria Pump Station). The Refinery is dependent upon a complex arrangement of roadways, rail lines, pump stations, and pipelines that are located, in some instances in the coastal zone, but primarily outside of the coastal zone. The Refinery does not rely on the ocean or marine resources and is therefore not coastal dependent. Because the Project would impact Unmapped ESHA and is not a coastal dependent use, it would be inconsistent with this policy.

7. **Environmentally Sensitive Habitats, Sensitive Habitats, Policy 29, Protection of Terrestrial Habitats:** This policy states that designated plant and wildlife habitats are environmentally sensitive habitat areas and emphasis for protection should be placed on the entire ecological community. Only uses dependent on the resource shall be permitted within the identified sensitive habitat portion of the site. The Project would be located within and would impact an approximate 20-acre area that contains Unmapped ESHA. In addition the Project is not a coastal dependent use as described above. Because the Project is not considered a coastal dependent use and would impact Unmapped ESHA, it is not consistent with this policy.

The proposed Project has the potential to result in oil spills and resultant fires that could impact terrestrial habitats along the mainline rail routes. Depending upon the location of an oil spill it could result in significant impacts to terrestrial habitats. Given the potential significant impacts that could occur to terrestrial habitats within the County in the case of an oil spill, rail transport of crude oil along the mainline it is not consistent with this policy.

8. **Environmentally Sensitive Habitat Area Policy 36, Protection of Dune Vegetation:** Policy 36 states "disturbance or destruction of any dune vegetation shall be limited to those projects which are dependent upon such resources where no feasible alternatives exist and then shall be limited to the smallest area possible. Development activities and uses within dune vegetation shall protect the dune resources and shall be limited to resource dependent, scientific, educational and passive recreational uses. Coastal dependent uses may be permitted if it can be shown that no alternative location is feasible, such development is sited and designed to minimize impacts to dune habitat and adverse environmental impacts are mitigated to the maximum extent feasible." Based on the location of proposed improvements associated with the Project, portions of the development would be located within and would impact approximately 20 acres of Unmapped ESHA. As described above, neither the Project nor the existing refinery are coastal dependent uses (i.e., requiring a site on, or adjacent to, the sea to be able to function at all). The objective of the Project is to increase the Applicant's ability to access more economically priced crude from a wider diversity of suppliers throughout various locations in North America. Because the Project and the existing refinery are not "coastal dependent" and would result in the removal of Unmapped ESHA, the Project does not comply with this policy.

*Coastal Zone Framework for Planning:*

9. **Land Use Goal 4:** The Land Use Element land use categories identify areas that are to be compatible with each other and specific goals related to conflicts of uses and preservation of important areas. Land use goal no. 4 provides that "areas where agricultural, residential, commercial and industrial uses may be developed in harmonious patterns and with all the necessities for satisfactory living and working environments." The proposed rail spur project would modify an existing industrial property to allow the construction of the spur within a buffer area between neighboring residential and agricultural land uses. Operation of the rail spur project could result in significant health risk impacts to the closest residences mainly due to diesel particulate matter from the locomotives servicing the refinery. The project would also generate additional particulate matter emissions due to fugitive dust and diesel locomotive engines at the refinery in an area that already exceeds state PM<sub>10</sub> standards. Therefore, the

project would be inconsistent with this policy by allowing an expansion of a use that is not compatible with neighboring residential or agricultural uses and would result in additional negative health impacts.

10. **Strategic Growth Goal 1, Objective 2. Air Quality:** This air quality objective is put forth to maintain and protect a living environment that is safe, healthful and pleasant for all residents. The applicable goal associated with this objective seeks to ensure that development projects maintain, or exceed, the minimum state and federal ambient air quality standards. The Project would not comply with this objective and goal because it would generate toxic air emissions that exceed San Luis Obispo County APCD (SLOCAPCD) health risk thresholds when factoring in the 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments. The proposed Project would result in a maximum exposed individual resident (MEIR) cancer risk of 26.5 in a million. This includes emission sources at the project site as well as the mainline emissions near the SMR. The SLOCAPCD cancer risk threshold is 10 in a million for toxic emissions. The use of Tier 4 locomotives and reduced idling time for locomotives onsite as mitigation would reduce the MEIR to 6.0 in a million at the same receptor. However, since UPRR (and not the Project Applicant) would own the locomotives, and the locomotives are used for interstate commerce, the mitigation measure requiring the use Tier 4 locomotives would likely be preempted by Federal law, and therefore may not be a feasible mitigation measure. Without the use of Tier 4 engines but with implementation of other mitigation measures, the MEIR would be 13.6 in a million at the same receptor (this includes the reduction in idling at the site, use of cleaner truck engines, and daytime unloading only). In addition, without full mitigation, the project would also exceed the SLOCAPCD diesel particulate matter threshold of 1.25 lbs per day onsite.

The Project would also not comply with this objective and goal because it would generate toxic air emissions that exceed San Luis Obispo County APCD (SLOCAPCD) health risk thresholds of 10 in a million for mainline rail operations in areas where train speeds would be less than 30 mph. The project would also exceed the SLOCAPCD NO<sub>x</sub>, ROG, and diesel particulate matter emission CEQA thresholds without full mitigation. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and DPM emissions, leaving potential exceedances of the state and/or federal ambient air quality standards unmitigated and making the Project inconsistent with this goal.

11. **Combining Designations, SRA – Sensitive Resource Area, General Objectives: 1.** General Objective 1 states that Environmentally Sensitive Habitats should be identified and protected by construction setbacks, use limitations, and other appropriate regulations. A portion of the Project area of disturbance is located within the existing refinery site in an area previously disturbed for storage and handling of coke; however, a large portion of the improvements associated with the Project would be located within identified sensitive vegetative communities as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition and Unmapped ESHA (i.e., Silver dune lupine – mock heather scrub). Project construction would impact approximately 20 acres of this sensitive vegetative community and Unmapped ESHA. For this reason, the Project would not comply with this objective.
12. **Coastal Zone Framework for Planning, Coastal Zone Land Use Element Strategic Growth Goal 1:** The Land Use Element states that the County will “preserve open space, scenic natural beauty and natural resources” and in addition “conserve energy” and “protect agricultural land and resources.” The project has the potential to result in an increased risk of oil spills and fires that could impact natural resources, scenic areas, and agricultural land along the mainline rail routes as a result of this project. An oil spill could result in significant impacts to agricultural, biological, and water resources in the event of a spill because of the

additional rail traffic from this proposed project. These impacts are discussed in applicable sections of Chapter 4.0 of the FEIR. Because the project is anticipated to increase the oil spill risk, the project would not be in compliance with this goal of the Land Use Element.

13. **Strategic Growth Goal 1: Objective 4. Agriculture & Land Use Goal 2:** This objective states that agricultural land for the production of food, fiber and other agricultural commodities is to be protected. This includes the protection and support of the rural economy and locally based commercial agriculture. The proposed rail spur project has the potential to result in oil spills or fires that could impact agricultural land along the mainline rail routes. An oil spill could result in significant impacts to agricultural commodities and soils within the County. Because of the increase in risk and potential for a spill which would directly impact agricultural resources the project is not consistent with this land use policy.
14. **Chapter 6: Environmentally Sensitive Habitats, Coastal Streams Policy 20:** Coastal streams and adjoining riparian vegetation are environmentally sensitive habitat areas and the natural hydrological systems and ecological functions of coastal streams shall be "protected and preserved". The proposed rail spur project has the potential to result in oil spills and fires that could impact coastal streams and riparian areas along the mainline rail routes. An oil spill could result in significant impacts to coastal streams and riparian vegetation which is discussed in section 4.4 (Biological Resources) of the FEIR. This project would allow for an increase of rail traffic which would increase the probability of a potential spill which could severely impact the County's riparian areas. Because of this, the project is not consistent with this Coastal Policy.
15. **Chapter 7: Agriculture Policy 1:** Policy 1 states that prime agricultural land shall be maintained and protected for agricultural uses. Similar to the strategic growth goals listed above related to agriculture, the Coastal Plan Policies also outlines requirements for protection of agricultural lands which would potentially be impacted severely as a result of an accident or spill of oil on agricultural resources or soils, which is discussed in section 4.2 Agricultural Resources in the FEIR. The proposed project would increase oil traffic via rail throughout the County and thereby increase the probability of an accident or spill. In the event of a spill or fire there could be significant impacts to agricultural resources as a result of this project. Therefore, the project is not in compliance with this policy.
16. **Chapter 12: Archaeology, Policy 1: Protection of Archaeological Resources:** This General Plan policy states that the County shall provide for the protection of both known and potential archaeological resources. All available measures shall be explored at the time of a development proposal to avoid development on important archaeological sites. While development is not proposed on or near an archaeological site, impacts to archaeological resources could occur as a result of an oil spill and associated clean up actions along the mainline rail routes. Impacts to archaeological resources could not be avoided if a spill were to occur within an area where these resources are located in proximity to the mainline rail within the County. Therefore, the project is not in compliance with this policy.

*South County Coastal Area Plan:*

17. **Land Use, Rural Area Land Use, Industrial:** The Area Plan states that for the existing Santa Maria Refinery (SMR), the refinery occupies only a portion of the total area, and the large vacant areas around the refinery provide a desirable buffer from adjacent uses and an area where wind-carried pollutants can be deposited onsite, thereby not affecting neighboring properties. This is particularly important to the agricultural uses in the vicinity of the project site. The Area Plan provides that any proposed modification or expansion of the refinery (e.g., the proposed rail spur project) should be subject to Development Plan approval covering the entire property to designate buildable and open space areas. The Area Plan continues by

stating offshore oil and gas lease sales may generate the need for onshore partial oil and gas processing facilities and that expansion of industrial uses in the vacant portion of the rail spur project site may be appropriate in the future to accommodate offshore oil and gas lease sales. However, the Plan does not envision expansion for other purposes such as the Project. The rail spur component of the Project would extend an approximate 200-foot wide swath of development and industrial use approximately 0.8 mile to the east beyond the currently industrialized portion of SMR, toward existing residences and Highway 1. From the eastern terminus of the proposed rail spur, the buffer would be reduced to approximately 0.5 mile to the eastern boundary of the project site. This would reduce the buffer area between the Project and the residential area to the east and would therefore result in the Project being inconsistent with this policy.

18. **Industrial Air Pollution Standards:** This requirement of the South County Area Plan requires that "any expansion or modification of existing petroleum processing or transportation facilities or the construction of new facilities shall meet San Luis Obispo County Air Pollution District (SLOCAPCD) standards." The Project does not comply with this requirement as it exceeds the minimum threshold for cancer risk of 10 in a million. Without full mitigation, the project would also exceed the SLOCAPCD threshold for DPM of 1.25 lbs per day onsite and due to federal preemption, the County cannot impose measures (e.g. Tier 4 locomotives) to fully mitigate this impact. The toxic air emissions including the DPM added to the basin as a result of this project is not in compliance with this requirement.

*Safety Element of the General Plan:*

19. **Safety Element of the General Plan, Fire Safety Goal S-4:** "Reduce the threat to life, structures and the environment caused by fire." There is the potential for fire and explosions along the mainline rail routes due to a train derailment, which could impact life, structures and the environment depending on the location of the accident. The County is likely preempted from implementing conditions or mitigation measures that could mitigate these impacts along the mainline rail route. There are significant impacts to the safety of the populations near the rail lines within the County and the project is not consistent with this policy of the General Plan.
20. **Safety Element of the General Plan, Fire Safety Policy S-14, Facilities, Equipment and Personnel:** "Ensure that adequate facilities, equipment and personnel are available to meet the demands of fire fighting in San Luis Obispo County based on the level of service set forth in the fire agency's master plan." It has come to the County's attention through numerous letters from jurisdictions along the mainline that there are not adequate resources through their respective fire agencies to respond to a derailment, spill or explosion as a result of a rail accident. In addition, the County may be preempted from implementing conditions or mitigation measures that could mitigate these impacts along the mainline rail routes, therefore the County can't ensure there will be adequate facilities, equipment and personnel available in the event of an accident. This is the case throughout the state as well as within San Luis Obispo County. Therefore, the project is not consistent with this policy of the General Plan.
21. **Safety Element of the General Plan, Hazardous Materials Policy S-26, Program S-68:** S-26 states: "Reduce the potential for exposure to humans and the environment by hazardous substances." S-68 states "Review commercial projects which use, store, or transport hazardous materials to ensure necessary measures are taken to protect public health and safety." Implementation measure Program S-68 states that commercial projects which use, store, or transport hazardous materials are to ensure necessary measures are taken to protect public health and safety. As the Applicant has stated, the County would not be able to mitigate or require conditions upon the project which would ensure the safety for citizens along the mainline rail routes, including the portions within the County, due to the County likely being preempted from requiring these types of measures. The project is not in compliance with this

policy because the County would not be able to ensure the safety of the residents of the County, or the state, as a result of the additional probability of a derailment, spill, fire or explosion because of the proposed project.

*Conservation and Open Space Element of the General Plan:*

- 22. Air Quality Policy AQ 3.2, Attain Air Quality Standards:** Policy AQ 3.2 states that the County will attain or exceed federal or state ambient air quality standards for measured criteria pollutants. San Luis Obispo County is in non-attainment for ozone standards as well as the state particulate matter standards. The Project would generate fugitive dust and DPM onsite that would contribute to PM<sub>10</sub> emissions within the County. It is unlikely that these fugitive dust and DPM emissions (i.e., PM<sub>10</sub> emissions) could be offset at the SMR due to a lack of available onsite emission reductions. The addition of these onsite PM<sub>10</sub> emissions would further exacerbate the ability for the County to attain the state particulate matter standards and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

The rail spur project would be generating NO<sub>x</sub> and ROG emissions along the mainline rail route that would lead to ozone increases and would generate DPM along the mainline rail routes that would contribute to PM<sub>10</sub> emissions within the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and DPM emissions. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions would further exacerbate the ability for the County to attain the state particulate matter and ozone standards. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions along the mainline rail route within the County would further exacerbate the ability for the County to attain the state particulate matter and ozone standards and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

- 23. Air Quality Policy AQ 3.3, Avoid Air Pollution Increases:** Policy AQ 3.3 states that the County will, "Avoid a net increase in criteria air pollutant emissions in planning areas certified as Level of Severity II or III for Air Quality by the County's Resource Management System (RMS)." The Nipomo Mesa area is in a level of severity II for Ozone, a level of severity III for PM<sub>2.5</sub>, and a level of severity III for PM<sub>10</sub>. The "PM" or particulate matter includes hazardous materials in the air that gets into the lungs and causes a variety of health effects. The PM<sub>2.5</sub> tends to be a greater health risk because the particles are smaller and can travel deeper into the lungs. Sources of particulate pollution include diesel exhaust, mineral extraction and production, combustion products from industry and motor vehicles, smoke, wind-blown dust and other sources (Source: County Resource Summary Report). The Project does not comply with this standard because it would add diesel exhaust from locomotives to an area which is currently in a level of severity of III. Even with implementation of mitigation measures the Project would exceed the threshold of cancer causing diesel particulate which is 10 in a million by creating a risk factor of about 13.6 in a million (for emissions occurring at the project site and along the mainline impacting the same receptors near the SMR). Without implementation of mitigation, the Project would create a risk factor of 26.5 in a million, both of which are exceeding the threshold. In addition, without full mitigation, the Project would exceed the 1.25 lbs per day threshold for DPM onsite. In addition, the most effective mitigation measure is likely not implementable due to federal preemption (i.e., requiring use of Tier 4 locomotives).

Operation of the locomotives along the mainline rail routes would result in increase in NO<sub>x</sub> and ROG emissions that would lead to ozone increases. The locomotives would also generate diesel particulate matter emissions along the mainline rail routes, which would increase PM<sub>10</sub> emissions in the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and diesel particulate matter emissions. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions would result in air pollution

increases in the County and therefore the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

24. **Air Quality Policy AQ 3.4, Toxic Exposure:** Policy AQ 3.4 states that the County will, "Minimize public exposure to toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead." This Project does not comply with this Policy of the General Plan because it allows for an increase in hazardous emissions as a result of the project. Calculations in the FEIR have shown that this Project would exceed the cancer threshold, which is 10 in a million, by resulting in a cancer risk of about 26.5 in a million (with no mitigation), or about 13.6 in a million (with partial mitigation). This impact would exceed San Luis Obispo County Air Pollution Control District (APCD) health risk thresholds when factoring in the 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments.

The Project does not comply with this Policy of the General Plan because it allows for an increase in hazardous emissions as a result the locomotives operating on the mainline rail routes in the County. Calculations in the FEIR show that the Project would exceed the cancer threshold of 10 in a million for areas where trains speeds are limited to 30 miles per hour or less and thus impacting people in the county along the routes which will see the additional rail traffic as a result of this proposed project.

25. **Air Quality Policy AQ 3.5, Equitable Decision Making:** Policy AQ 3.5 states that the County will, "Ensure that land use decisions are equitable and protect all residents from the adverse health effects of air pollution." This policy is also consistent with the discussion above regarding air quality Policy AQ 3.3. The Project would bring locomotives (up to 5 trains per week, 10 round trips) to the site for unloading of heavy crude, and would depart the site empty. The additional diesel exhaust from these locomotives, upwind of many residences and sensitive receptors, would cause a significant impact to the air quality for these residences. In addition, a large onsite buffer between the residential neighborhoods and the facility would be reduced from over 7,600 feet to approximately 3,300 feet. This project application for a "Development Plan/Coastal Development Permit" is a discretionary land use permit with the discretion by the County to decide if this project complies with the General Plan including the health and safety of the County's residents. The Project imposes health risks which would be inconsistent with the health and safety requirements of the General Plan with regard to air quality from the property (increase in cancer causing thresholds). This project would not ensure that all residents are protected from the adverse health effects of air pollution as this policy requires.

26. **Air Quality Goal AQ 3: Implementation Strategy AQ 3.6.1, Identify Health Risks to Sensitive Receptors:** This implementation strategy of the General Plan states that health risks are to be mitigated consistent with Air Pollution Control District standards. This is generally applicable to projects for which construction would occur near a freeway or rail line and mitigation would be required to reduce the air quality hazards to "sensitive receptors" or citizens which are sensitive to these pollutants. However, this project would increase the amount of toxic emissions as an increase in rail traffic would occur as a result of the proposed project. Toxic emissions from the locomotives operating on the mainline rail routes would exceed the cancer risk thresholds for areas where speeds are limited to 30 miles per hour or less and thus impacting people in the county along the routes which will see the additional rail traffic as a result of this proposed project. Therefore, the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

27. **Biological Resources Policy 1.2, Limit Development Impacts:** This policy calls for the regulation and minimization of proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, coastal and riparian

habitats, and wildlife habitat and movement corridors as necessary to ensure the continued health and survival of these species and protection of sensitive areas. The Project would result in the extension of refinery infrastructure (i.e., rail spur, unloading facility, pipelines, and emergency vehicle access road) into a dune habitat system. Approximately 20 acres of various project features would be constructed within dune vegetation that is considered sensitive habitat as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition and is also considered Unmapped ESHA; therefore, the Project does not comply with this policy.

**28. Biological Resources, Policy BR 1.15: Restrict Disturbance in Sensitive Habitats during Nesting Seasons:** This General Plan policy states that projects are to avoid impacts to sensitive riparian corridors, wetlands and coastal areas in order to protect bird-nesting activities. In addition to the impacts discussed above related to Coastal Streams in Coastal Plan Policies, impacts as a result of a spill along the mainline would negatively impact nesting birds which is in conflict with this General Plan policy. This project would increase the risk of a spill or fire which would remove and damage nesting habitats. Therefore, the project would not be in compliance with this General Plan policy of the Conservation and Open Space Element.

**29. Energy, Goal E 7: Design, siting, and operation of non-renewable energy facilities:** Implementation Strategy E 7.1.1 states that new facilities will not be located in a manner which will impact the health and safety of human populations with special attention to disabled and elderly populations as they require additional resources for evacuation in the event of an emergency. The risk analysis for the mainline rail routes found that significant hazards would exist to the public in the vicinity of the mainline rail routes in the event of a derailment and release of crude oil that could lead to a fire or explosion. This proposed project would increase crude oil rail traffic which could have potential for catastrophic impacts in the event of a derailment or explosion and would be in direct conflict with this General Plan policy as it relates to the health and safety of the citizens around the mainline within San Luis Obispo County.

**30. Non-Renewable Energy Facility Siting Policy E 7.1:** Energy Goal 7 states that, "Design, Siting, and Operation of Non-renewable energy facilities will be environmentally appropriate." In addition the related Policy E 7.1 for Non-Renewable Energy Facility Siting, "Energy fossil fuel, and related facilities will be sited, constructed, and operated in a manner to protect the public from potential hazards and significant environmental impacts." The implementation Strategy related to Goal 7 and Policy 7.1 requires facility design, siting and operational standards: There are 30 of these outlined for energy projects and the pertinent policies for the rail spur project are listed here (numbers correspond to the numbers in the Conservation and Open Space Element Energy Policy E 7.1):

3) Continue to maintain, operate, monitor, and repair the facility so that it does not constitute a public safety hazard or an environmental threat.

The Project does not comply with this component of the goal due to air toxic emissions from the operation of the Project that would exceed the acceptable levels determined by the SLOCAPCD for both cancer risk and diesel particulate matter. The Project, while located within and adjacent to an existing facility, would increase the intensity of rail activity and change the use of the site to allow for crude to be brought in via rail. The addition of up to five trains per week would increase toxic air emissions which would impact neighboring residences to the east and north of the project site.

4) Employ the best reasonably achievable techniques available to prohibit disruption of environmentally sensitive areas such as wetlands, animal or bird refuges,

or habitat of species of special concern. Avoid impacts to habitat of rare, threatened, or endangered species.

The Project does not comply with this component of the policy because construction of the Project would impact about 20 acres of sensitive habitat as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition and an area of the project site considered Unmapped ESHA.

**B. The proposed project does not satisfy all applicable provisions of Title 23 of the County Code because:**

31. **Section 23.07.170 of the Coastal Zone Land Use Ordinance Environmentally Sensitive Habitats:** The Project is located within dune habitat containing sensitive vegetative communities as classified by the California Department of Fish and Wildlife (CDFW) under the National Vegetation Classification system described in A Manual of California Vegetation, Second Edition (i.e., Silver dune lupine – mock heather scrub). The Project will extend within this habitat area, and there are no alternatives around disturbance or removal of this habitat area in order for the project, or project alternative, to proceed. This is in direct conflict with this standard which states, "All development and land divisions within or adjacent to an Environmentally Sensitive Habitat Area shall be designed and located in a manner which avoids any significant disruption or degradation of habitat values. This standard requires that any project which has the potential to cause significant adverse impacts to an ESHA be redesigned or relocated so as to avoid the impact, or reduce the impact to a less than significant level where complete avoidance is not possible." The extension of the rail spur adjacent to the Santa Maria Refinery is located within a dune habitat area which also acts as a spatial buffer between the refinery and the residences to the east.

**C. The establishment and subsequent operation or conduct of the use will, because of the circumstances and conditions applied in the particular case, be detrimental to the health, safety or welfare of the general public or persons residing or working in the neighborhood of the use, and will be detrimental or injurious to property or improvements in the vicinity of the use because:**

32. The Rail Spur Project would modify and expand the existing industrial uses and activities at the Santa Maria Refinery (SMR) by delivering crude oil to the refinery by rail. The onsite activities associated with the rail spur project would result in cancer risk from air toxics and increased DPM that would both exceed Air Pollution Control District CEQA thresholds. These significant air quality impacts would directly impact neighboring residences, employees, and populations in the vicinity of the Santa Maria Refinery. The Project would generate toxic air emissions that exceed San Luis Obispo County APCD (SLOCAPCD) health risk thresholds when factoring in the most recent 2012 California Office of Environmental Health Hazard Assessment (OEHHA) childhood exposure and breathing rate adjustments. The SLOCAPCD cancer risk CEQA threshold is 10 in a million for toxic emissions and with this proposed project (with partial mitigation) there would be a risk of 13.6 in a million, which exceeds these thresholds. Onsite operation of the locomotives would exceed the SLOCAPCD CEQA threshold of 1.25 lbs per day of diesel particulate matter even with partial mitigation. These are both considered a significant and unavoidable environmental impact.

Operation of the locomotives along the mainline rail routes would result in increase in NO<sub>x</sub> and ROG emissions that would lead to ozone increases both in the County and in other parts of the State. Operational activities of trains along the mainline rail route outside of San Luis Obispo County associated with the Project would generate criteria pollutant emissions that exceed thresholds of 15 air districts other than SLOCAPCD. For three of these districts

impacts cannot be mitigated to less than significant levels. Mitigation has been recommended that includes use of Tier 4 locomotives and the purchase of emission credits. For the mainline rail emissions it is possible that contractually the Applicant could require the use of lower emission locomotives such as Tier 4 locomotives. However, since these are operated by UPRR on UPRR tracks, a requirement that the Applicant enter into this type of contractual provision would likely be preempted by Federal law and therefore unenforceable. The County may also be preempted by Federal law from requiring emission reduction credits for mainline rail emissions. Since these mitigation measures may not be implementable and it is uncertain if the other Air Districts could require emission reduction credits, the impacts associated with the mainline rail operation would remain significant.

The locomotives would also generate diesel particulate matter emissions along the mainline rail routes, which would increase PM<sub>10</sub> emissions in the County. Due to Federal preemption, the County may not be able to require emissions reduction credits for the mainline rail NO<sub>x</sub>, ROG, and diesel particulate matter emissions. The addition of these NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions would result in significant and unavoidable air quality impacts.

This proposed project would increase rail traffic by importing heavy crude via rail into the Santa Maria Refinery. A risk assessment was conducted for the mainline rail routes to the Santa Maria Refinery. The risk along the mainline rail routes that were evaluated was found to be significant in the event of a rail accident that occurred near populated areas. The EIR identified mitigation measures to reduce the potential for release of crude oil in the event of an accident. However, the County may be preempted by Federal law from applying these mitigations to the project. Furthermore it has been communicated to the County through numerous letters from outside jurisdictions that many of the jurisdictions do not have the necessary personnel, equipment or training in order to provide appropriate emergency response to an oil train derailment or explosion within their areas. This proposed project will create a significantly hazardous and potentially dangerous situation within many areas along the mainline not only in San Luis Obispo County, but to other jurisdictions along the main rail lines and therefore, the project is inconsistent with this policy.

**D. The proposed project or use will be inconsistent with the character of the immediate neighborhood or contrary to its orderly development because:**

33. The proposed rail spur project will expand the existing industrial uses of the Santa Maria Refinery onto a currently vacant portion of the refinery property which acts as a buffer between the residential areas to the east and the refinery operations. The South County Coastal Area Plan specifically identifies the undeveloped areas of the project site as providing a desirable buffer from the heavy industrial activities and more sensitive adjacent land uses. The rail spur extension would extend a total of approximately 1.3 miles (6,915 feet), including approximately 0.5 mile (2,445 feet) within the exiting industrial coke area. This would result in an extension of industrial uses approximately 0.85 mile into the undeveloped area in the eastern portions of the project site. The buffer between residential and recreational uses east of State Route 1 would be reduced from approximately 1.4 miles to 0.6 mile. The rail spur extension would similarly reduce existing buffers between the industrial structures and agricultural crops located northeast and southeast of the project site.

This important buffer is what allows these incompatible land uses (refinery and residential) to coexist as neighbors, however this project will greatly reduce this buffer. The rail spur will be incompatible with the residential and agricultural resources that surround the spur and will bring additional toxic air contaminants and PM<sub>10</sub> closer to the residential and agricultural land uses. Therefore, the proposed extension of the industrial activities by allowing the railroad spur would be incompatible with surrounding uses and would therefore not comply with the character of the immediate neighborhood and will be contrary to its orderly development.

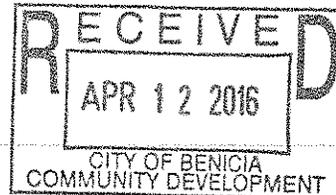
**E. Coastal Access:**

34. Coastal access was addressed in a previously approved permit (Throughput DRC2008-00146), which included a condition of approval requiring Phillips 66 to construct coastal access improvements associated with the vertical public access within "□ 10 years of the effective date of this permit (including any required Coastal Development Permit to authorize such construction) or at the time of any subsequent use permit approved at the project site, whichever occurs first." Because the proposed rail spur project (DRC2012-00095) is recommended for denial, the previous condition of approval from the Throughput project will remain in place and effective. Phillips 66 will be required to uphold the previous coastal access condition of approval from DRC2008-00146 as adopted. Denial of the proposed rail spur project will not impact Coastal Access.

## Amy Million

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**From:** Teresa Olson  
**Sent:** Monday, April 11, 2016 2:38 PM  
**To:** Amy Million  
**Subject:** FW: Public Comment re: Valero Crude by Rail Project - Appeal Application No. 16PLN-00009



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**From:** Richard Gray [mailto:richardgraysart@gmail.com]  
**Sent:** Monday, April 11, 2016 9:19 AM  
**To:** Teresa Olson  
**Subject:** Public Comment re: Valero Crude by Rail Project - Appeal Application No. 16PLN-00009

Dear Council Members,

I'm writing to urge you to reject the Valero Appeal of the Planning Commission denial of their application to bring Crude By Rail to Benicia. I suggest that you cannot possibly in good conscience certify an EIR which claims there are no significant, indeed life-threatening, impacts of this project, which obviously puts not only Benicia residents at serious risk but also up-line cities and communities. The suggestion that the Benicia City Council does not have the authority to protect it's own citizens and their best interests is a corporate challenge to local self-control and democracy itself, which must be rejected.

It is also clear to me that developing more infrastructure for the distribution of Tar Sands Crude will put our bay and coastal lands at greater risk. I think the science of climate change is now settled and it is clear that our society as a whole, and Benicia in particular, is at great risk from sea level rise this century, that will not be possible to mitigate. A frequent definition of madness is to keep repeating the same mistakes and expect a different outcome. We must quickly transition to renewable energy sources and stop building new infrastructure for refining dangerous fossil fuels which will hasten our self-destruction.

You are in a position to make a real difference for the protection of this community. I urge you to muster the courage to stand up for our children's and grandchildren's future. Please make this important decision to protect the future of Benicia, California and the Earth on which we all depend for survival.

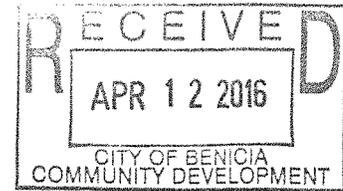
Richard Gray  
350 Bay Area

## MEMORANDUM

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**DATE:** April 11, 2016  
**TO:** Benicia Mayor and City Council  
**REGARDING:** Valero Crude by Rail Project  
**FROM:** Bob Berman  
250 West K Street  
Benicia, CA 94510

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### **MESSAGE:**

Dear Mayor and City Council Members

I am writing to the Benicia City Council to urge you to DENY the Use Permit for the Valero Crude by Rail Project.

As you are aware, the Final EIR for the Valero project identified 11 significant and unavoidable impacts either directly or indirectly related to the proposed project. These impacts are related to air quality, biological resources, greenhouse gas emissions, plus hazards and hazardous materials. Several of these significant and unavoidable impacts will directly affect Benicia residents, individuals working in Benicia, or individuals passing through Benicia.

Contrary to the staff report prepared for the Benicia Planning Commission, I believe that these impacts would result in a project inconsistent with several goals of the City's General Plan, including Goals 2.5, 4.8, and 4.9. For example, I believe that the direct and indirect impacts of the proposed project will not maintain the City's health, safety, and quality of life. Thus in conflict with Goal 2.5.

I also believe that the City Council cannot make the necessary findings to support the Use Permit. Section 17.104.060 of the Benicia Municipal Code states that the City cannot approve a project that will be detrimental to the public health, safety, or welfare of persons residing or working in or adjacent to the neighborhood of such use, nor detrimental to properties or improvements in the vicinity or to the general welfare of the city. I believe that based on the documented direct and indirect impacts of the proposed project the necessary finding required by section 17.104.060 cannot be made.

I understand that City staff relies on the legal concept of "federal preemption" in stating that the City is precluded from conditioning or regulating the operation of the railroad. Furthermore, City staff contends that potential impacts resulting from operation of the railroad that are identified in the EIR, shall not bear on the City's decision making with respect to certification of the EIR or consideration of the Use Permit.

To me this type of thinking does not pass the straight face test. We are going to acknowledge significant and unavoidable impacts, including those that could pose a significant hazard to the public, but we are going to ignore them in the review of the proposed project.

I maintain that the identified significant and unavoidable impacts identified in the Final EIR are either direct or indirect impacts of the proposed Valero Crude by Rail Project. As direct or indirect impacts of the proposed project these impacts need to be taken into consideration when the City Council considers consistency with the City's General Plan or making the necessary findings for the issuance of a Use Permit. When taken into account the City Council has only one option - deny the Use Permit.

**Amy Million**

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**From:** KnowWho Services <noreply@knowwho.services>  
**Sent:** Wednesday, April 06, 2016 4:20 PM  
**To:** Amy Million  
**Subject:** Public Comment re Valero Crude by Rail Project - Appeal Application No. 16PLN-00009

Dear Benicia City Council,

I'm writing to urge the Benicia City Council to back the Planning Commission's unanimous decision to reject Valero's proposal to transport explosive crude oil by rail through California communities to its refinery in Benicia, and to reject Valero's attempts to delay a final decision on this project.

The Planning Commission rightfully rejected this dangerous project because it "would be detrimental to the public health, safety, or welfare" of Benicians and communities along the oil train routes. The project's impacts include increased air pollution from refinery emissions (which could disproportionately affect low-income communities and communities of color) and oil spills during the offloading process (which could harm the Sulphur Springs Creek riparian corridor).

Furthermore, increases in the transportation of crude by rail has corresponded with an alarming increase in the number of derailments, spills, and explosions. More than five million Californians live in the blast zones of oil train routes, and this project would significantly increase the number of unsafe oil trains rolling through our communities.

As Attorney General Kamala Harris pointed out, the U.S. Department of Transportation found that rail shipments of highly volatile crude oil represent an "imminent hazard," such that a "substantial likelihood that death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment may occur." I agree with regulators, elected officials, local residents, nurses, and the the many thousands of Californians who have sounded the alarm about the unacceptable risks posed by this project.

For these reasons, I again urge the City Council to reject Valero's oil train project, as well as its attempts to delay resolution of this issue.

Thank you for your consideration.

Sincerely,

Sally Picciotto  
5940 Chabot Rd  
Oakland, CA 94618-  
sallypicciotto@yahoo.com  
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## City Council Meeting April 18, 2016

### **SPEAKERS LIST FOR CONTINUED PUBLIC HEARING TO RECEIVE PUBLIC COMMENT ON THE APPEAL OF THE VALERO CRUDE BY RAIL PROJECT**

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The public comment portion of the hearing for the appeal of the Planning Commission's decision to not certify the Final Environmental Impact Report and to deny the use permit for the Valero Crude by Rail Project and consideration of Valero's request for continuance was opened at the April 4, 2016 City Council meeting, continued to the April 6, 2016 City Council meeting and continued again to the April 18, 2016 City Council meeting. Based on the 25 speaker cards remaining from previous meetings, it appears that public comment will be completed on April 18, 2016. It is recommended that the public be prepared to speak on April 18<sup>th</sup> or submit written comments prior to April 18<sup>th</sup> if they wish to be heard on this project.

Below are two lists of individuals divided between those who filled out a comment card, but have not had an opportunity to speak and will be called on during the April 18, 2016 meeting, and those who already had a turn to speak during the April 4<sup>th</sup> or April 6<sup>th</sup> meetings, and will not be eligible to speak again.

#### **Comment Card Submitted – Public Comment NOT Provided: (The following individuals will be called on to speak on April 18, 2016)**

- |                     |                       |                      |
|---------------------|-----------------------|----------------------|
| 1. Charles Davidson | 10. Donna Wapner      | 19. Nick Despota     |
| 2. Jack Fleck       | 11. Richard Gray      | 20. Richard Crawford |
| 3. Roman LoBianco   | 12. Karen Jacques     | 21. Walt Quillin     |
| 4. Monica Brown     | 13. Richard Lentz     | 22. Dean R Lloyd     |
| 5. Ron Write        | 14. JoAnn Fuller      | 23. Patrick Costello |
| 6. Doug LeMoine     | 15. Daniel Adel       | 24. Heather MacLeod  |
| 7. Anina Hutchinson | 16. Simone Cardona    | 25. Mike Reagan      |
| 8. Steve McClure    | 17. Elizabeth Crowley |                      |
| 9. Susie Wong       | 18. Larry Fullington  |                      |

#### **Public Comment Provided:**

*Please note: If your name is listed below then you provided oral comment at the April 4 or April 6, 2016 meeting and will not be allowed to provide it again during the April 18, 2016 meeting. If you would like to submit additional comments in writing, please feel free to do so.*

- |   |                            |                          |
|---|----------------------------|--------------------------|
| 1. Don Saylor                               | 32. Rick Stierwalt         | 65. Erik Ferry           |
| 2. Matt Jones                               | 33. Michael Wolf           | 66. Charles Coleman      |
| 3. Eric Lee                                 | 34. David Jenkins          | 67. Elly Benson          |
| 4. Alex Pader for Sen. Wolk                 | 35. Kathy Kerridge         | 68. Ethan Buckner        |
| 5. Alejandro Soto-Vigil                     | 36. Deborah Tallyn         | 69. George Gwynn Jr.     |
| 6. Jesse Arrequin                           | 37. Rodney Robinson        | 70. Judith Sullivan      |
| 7. Linda Maio                               | 38. June Mejias            | 71. Jack Ruzsel          |
| 8. Ellen Cochrane                           | 39. Pat Toth-Smith         | 72. Daniel Smith         |
| 9. Marilyn Bardet /<br>Andres Soto for BSHC | 40. Dan Broadwater         | 73. Michele Rowe-Shields |
| 10. Chris Brown                             | 41. Bob Livesay            | 74. Phyllis Ingerson     |
| 11. Maura Metz                              | 42. Bill Parnell           | 75. Roger Straw          |
| 12. Jean Jackman                            | 43. Eliza Best             | 76. Greg Karras          |
| 13. Maria Cornejo-Gutierrez                 | 44. Helmut Sass            | 77. Jan Cox Golovich     |
| 14. Laurie Litman                           | 45. Greg Yuhas             | 78. Lori Mathews         |
| 15. JoEllen Arnold                          | 46. Katherine Black        | 79. Joseph Miesch        |
| 16. Jan Rein                                | 47. Don Mooney             | 80. Barbara Pillsbury    |
| 17. Rob Lang                                | 48. Samantha McCarthy      | 81. Hadieh Elias         |
| 18. Estevan Hernandez                       | 49. Madeline Koster        | 82. Amir Firouz          |
| 19. Kathleen Williams-<br>Fossdahl          | 50. Leann Cawley           | 83. Rob Yarbrough        |
| 20. Jaime Gonzalez                          | 51. Bill Pinkham           | 84. Janette Wolf         |
| 21. Carol Warren                            | 52. Valerie Love           | 85. Tom Ruzsel           |
| 22. Richard McChesney                       | 53. Alan C Miller          | 86. Ed Ruzsel            |
| 23. Theresa Ritts                           | 54. Nanci Finley           | 87. Kali Stanger         |
| 24. Stephen Hallett                         | 55. Steve Young            | 88. Roger Lin            |
| 25. Carol Thompson                          | 56. Ron Write              | 89. Rebekah Ramos        |
| 26. Frances Burke                           | 57. Doug LeMoine           | 90. Diane Bailey         |
| 27. Bart Sullivan                           | 58. Constance Beutel       | 91. Rachael Koss         |
| 28. Jasmin Powell                           | 59. Giovanna Sensi-Isolani | 92. Lisa Reinertson      |
| 29. Elizabeth Lasensky                      | 60. Dona Rose              | 93. Steve Jones          |
| 30. Lynne Nittler                           | 61. Sheila Clyatt          | 94. Ruby Wallis          |
| 31. Berman Obaldia                          | 62. Chris Howe             |                          |
|   | 63. Larnie Fox             |                          |
|   | 64. Craig Snider           |                          |

**No Public Comment Provided, No Card Submitted:**

*If you did not speak during the April 4 or April 6, 2016 meeting and did not fill out a speaker card, you may fill out a card to speak at the April 18, 2016 continued public hearing.*

Written Public Comment may be provided by the following:

**Email:** [amillion@ci.benicia.ca.us](mailto:amillion@ci.benicia.ca.us)

**Fax:** 707-747-1637

**Mail:** Amy Million  
Community Development Department  
250 East L Street  
Benicia, CA 94510

