From: Clinton Huey <clinthuey@gmail.com>
To: p66-railspur-comments@co.slo.ca.us
Date: 11/23/2014 09:41 PM
Subject: Phillips 66 Rail Terminal Expansion Project

To the Attention of Mr. Murry Wilson
SLO County Planning Department

I'm emailing you to express my strong opposition to the Phillips 66 rail terminal expansion project. I am a resident of San Leandro and live on the periphery of the identified blast zone. I am also a teacher in San Leandro, and several of our school campuses are within the blast zone through which the oil trains would travel. Therefore, I'm deeply concerned about the potential dangers associated with this entire project. HUC-01

Additionally, bringing tar sands oil to California will undermine our state's efforts to be a global leader addressing climate change, and these trains will put our communities directly in harm's way. HUC-02

Specifically, our emergency responders are not prepared to deal with potential accidents with these heavy, dangerous trains, and the current safety standards won't protect our people and property along the blast zones. My understanding is that the draft EIR doesn't fully inform our first responders because it inadequately assesses the risks of an oil train disaster in San Leandro. The EIR only evaluates rail-accident rates between 2003 and 2012 and the spill rates between 2005 and 2009, while omitting important data about accident frequency and magnitude in more recent years. This is troubling because we know that more crude spilled from trains in 2013 than during the past four decades combined. The EIR must look at recent data, which reflects the increased quantities of crude being transported in old and unsafe tank cars.

In my role as a public school teacher (middle school science) on a school campus in San Leandro Unified School District, I am not prepared, nor is our District Emergency Operations Procedure plan prepared, to address this threat to our school communities. School teachers, as public employees, become state mandated emergency workers when disaster strikes. This proposed project threatens school communities along the entire north to south California rail route planned for these oil shipments. HUC-03

The EIR's worst-case scenario estimates a spill of 180,000 gallons, or roughly six tank cars of crude. This has to be an error because most crude trains have 100 or more tank cars, carrying millions of gallons. Depending upon where an accident occurred, such a spill could devastate our scarce water resources, sensitive ecosystems, schools, homes, transit facilities and rail lines, businesses, and our local economy. In Alameda County, this rail route parallels major highways and urban areas in several cities, including (but not limited to) Berkeley, Oakland, San Lorenzo, and Hayward. In San Leandro, these trains would pass within less than a mile from our City Hall, Police Department, two BART Stations, and the tracks pass through the heart of our downtown.

Also, the toxic air emissions that will accompany this project pose an unacceptable risk to public health. In its latest environmental review Phillips 66 admits that its proposed oil train facility will create "significant and unavoidable" levels of air pollution along the rail route, with sulfur dioxide and other toxic chemicals leaked that increase risk of cancer, heart disease, respiratory disease and premature death. HUC-04

The EIR has yet to fully analyze the worst-case scenario of a spill near each of the many watersheds crossed en route to the Santa Maria refinery.

The proposed route brings oil trains through the San Francisco Bay-Delta watershed and along California's central coast. A derailment near a river, stream, reservoir or aquifer could contaminate drinking water for millions of Californians, an unacceptable risk anytime, made more severe in this time of extreme drought. HUC-05

The planning department must examine the cumulative impacts of the Santa Maria and Rodeo proposals as a single project -- not in isolation -- since the proposed terminal in Santa Maria is directly linked by pipeline to the Phillips 66 refinery in Rodeo. Phillips 66 is proposing to modify both facilities to allow it to refine the most toxic crude oil on Earth: Canadian tar sands. HUC-06

Phillips 66 must disclose crude-quality information so decision-makers fully understand the climate impacts of the proposed rail project. At every stage of the mining, transportation and refining process, Canadian tar sands are more carbon intensive than any other source of oil -- making this project simply incompatible with California's plans to be a climate leader.

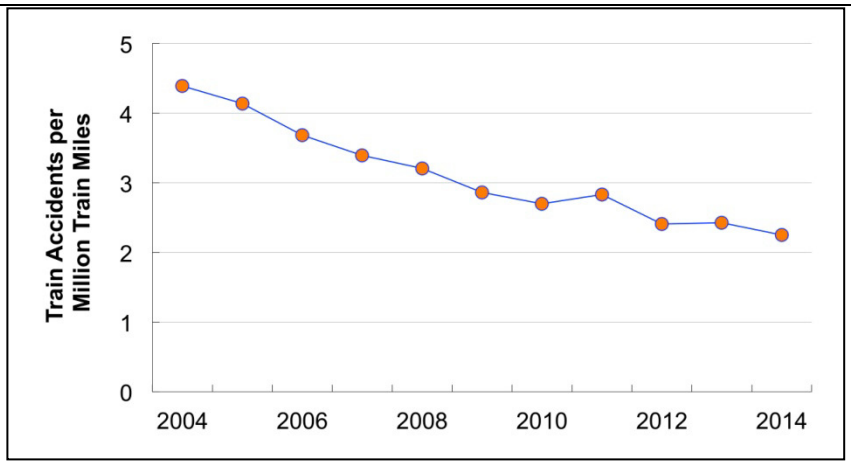
We don't live in a bubble, this proposed project that you are considering in Santa Maria will affect the health and well-being of millions of people along the train routes, as well as the dangers to our school communities, environment, water resources, local economies, and private property. HUC-07

For all these reasons, I urge the San Luis Obispo County Planning Commission and Board of Supervisors to soundly reject the Phillips 66 proposed rail spur.

Sincerely,
Clinton Huey
386 Beverly Ave
San Leandro, CA 94577

HUC-01	This comment does not identify a specific environmental analysis or CEQA issue relative to the EIR and compliance with CEQA. The commenter's concerns about the safety and environmental impacts of the project are included in the FEIR for the decision-makers' consideration as part of the County's deliberations on the proposed project.
HUC-02	The RDEIR states that GHG emissions associated with crude oil transportation by rail would produce significant and unavoidable impacts. Emissions can be offset through the use of emissions offsets, as are available from a number of different sources for GHG. However, as indicated in Section 4.3 (Air Quality and Greenhouse Gases) of the RDEIR, it is uncertain if Air Districts could require GHG offsets due to Federal preemption and the impacts associated with the GHG emissions would remain significant and unavoidable. The refining of the different crude slate associated with this project would not produce different GHG emissions at the SMR than the normal range of crude oils refined at the SMR. Note that some Canadian crude oils are currently being processed at the SMR, transported by rail to Bakersfield, then by truck to the SMPS. GHG emissions are attributable to removal of the heavier ends, such as at the SMR, and associated with the cracking and formulation of lighter ends, such as gasoline, at the Rodeo Refinery. These activities would be within the range of normal activities at each refinery. The main difference in GHG emissions occurs at the extraction point, where extracting the tar sands generally produces substantially higher GHG per bbl of crude oil than convention methods, depending on the level of associated gas and the use of that gas. Some fields in California for example, extract the crude oil and just burn the associated gas in flares, which actually can produce a higher GHG intensity than even Canadian Tar Sands crude oils. The additional GHG emissions associated with mining the tar sands would occur no matter the destination of the crude oil, whether the crude oil is destined for the SMR, or other locations within the U.S.
HUC-03	The historical accidental data used in the RDEIR is not limited to trains shipping crude oil in recent years, but the long term historical train accident data for all freight. The use of data from all freight train movements nationwide provides a very robust database for estimating rail accidents and derailments. Average U.S. train derailment rates over the 5-year period 2005 – 2009 have previously been estimated using data from the U.S. Department of Transportation, Federal Railroad Administration (FRA) Rail Equipment Accident (REA) database combined with traffic data from the rail industry (Liu et al, 2014). This dataset was used to develop detailed derailment rates as a function of three factors: FRA Track Class, traffic volume (which appears to be correlated with additional maintenance above basic federal requirements) and Method of Operation (i.e., signaled or non-signaled trackage). All three of these factors have a significant effect on freight train derailment rate. These factors were used to calculate segment-specific derailment rates thereby

	enabling a fine grained calculation of derailment probability for any particular route. As discussed below, the overall accident rate has declined since this data was recorded and analyzed, thereby resulting in an overestimate of the present-day risk, and future risk. For example the average accident rate for the five-year period 2010-2014 was 27% lower than the average for the five-year period from 2005-2009, and the preliminary estimate of the accident rate for 2014 was 35% lower than the five-year period from 2010-2014. The reason data from 2005-2009 was used is because that dataset contained additional information that allowed for the estimated effect of FRA Track Class, Traffic Density and Method of Operation (Signaled or Unsignaled) on derailment rate. This additional granularity is needed for more precise segment-specific accident rate used in the analysis. The derailment rates calculated were based on 1,420 Class 1 railroad mainline derailments. Inclusion of a few more crude oil train derailments in recent years would have virtually no effect on the estimated rates. The suggestion that because these recent accidents were not included in our dataset somehow invalidates the results reflects a lack of understanding of the analytical technique and how it was used. The data needed for this analysis are less complete than for overall accident rate but all other things being equal, there is no reason to believe that crude oil trains derail at a rate different than other freight trains. Using what data are available and making certain assumptions, the EIR consultant conducted an analysis in 2014 and observed no significant difference in the derailment rate for crude oil trains then for other freight trains. The railroad accident rate has been steadily trending downward for over a decade. The accident rates in the past few years were the lowest since the FRA started recording the data in the mid-1970s. In the period from 2004 to 2014 the rate declined by 49% (almost half) (see Figure 1 below). Most derailments receive little or no attention from the public or media. Railroads are required by regulation to report all accidents that exceed a certain monetary threshold in damage to track, signals and rolling stock (currently $9,600). Proper estimation of train accident rates involves analysis of all accidents, divided by the total amount of traffic. The reason that some perceive an increase in the railroad petroleum crude oil accident rate is because of the more than 50-fold increase in this traffic since 2009. Estimates are that 233,698 tank cars of crude oil were moved by rail in 2012. This increased to over 435,000 tank cars moved by rail in 2013 (the full year of data is not yet available for 2014). With this increase in crude by rail traffic, the derailment and spill probability data would suggest that multiple crude by rail accidents would happen each year. Figure 1. Railroad Accident Rate 2004 – 2014



Data Source: US DOT Federal Railroad Administration http://safetydata.fra.dot.gov/officeofsafety/publicsite/summary.aspx

(Data for 2014 include January through November)

Using the accident and spill probability data from the RDEIR the DEIR would have estimated that between 2012 and 2013 there would have been two to five derailments that had spills of 100 gallons or more in the U.S. Based upon the United States Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) incident data base, there were three crude oil train derailments with spills of 100 gallons or more.

This does not contain the accident and spills that have occurred in Canada over this period since the accident and spill probability data is for mainline rails within the United States only.

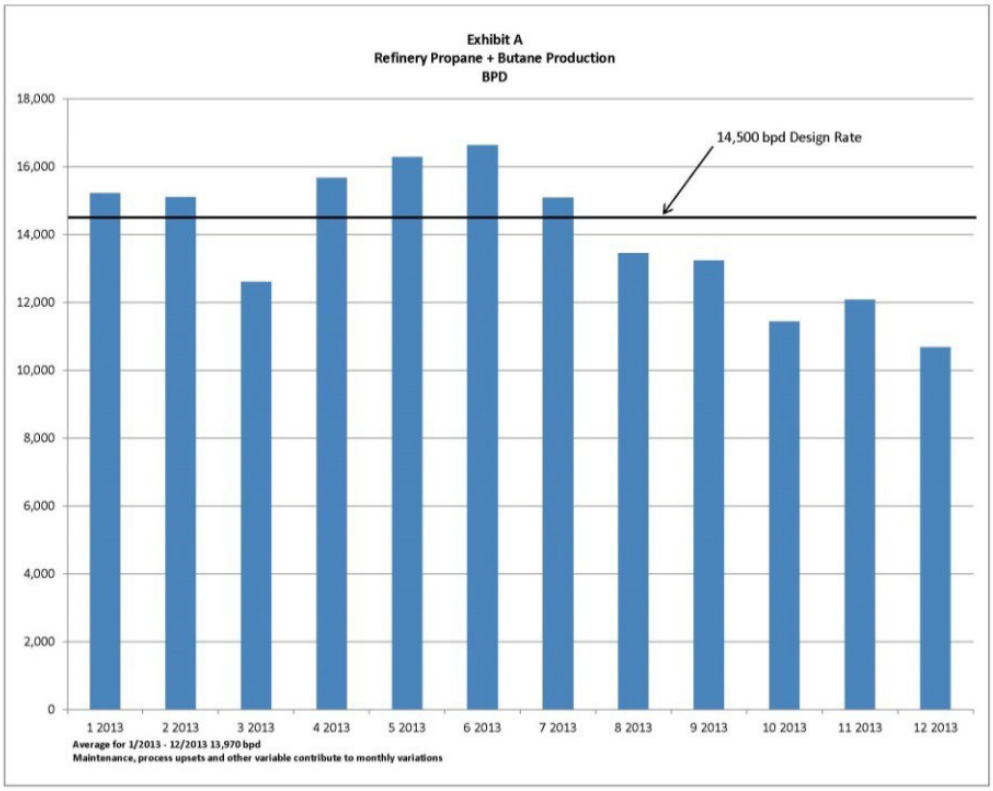
The methodology for estimating crude oil unit train accidents and spill probabilities is also consistent with the methodology outlined by the American Institute of Chemical Engineers, Center for Chemical Process Safety (AIChE CCPS) document Guidelines for Chemical Transportation Risk Analysis (CCPS, 1995), which is the definitive reference on the methodology for estimating hazardous materials transportation risk.

A Quantitative Risk Analysis (QRA) was conducted as part of the RDEIR and is documented in the Hazards and Hazardous Materials Section (see Section 4.7 and Appendix H). The rail routes were divided up into distinct segments to account for differing population levels along the rail routes. Each segment was assigned a population density reflecting the unique populations along the rail route. Segments where facilities and/or events might attract temporary high population levels were assigned a population that reflected the larger temporary population, and did not correct for seasonal or diurnal variation, thus slightly overestimating the risk for the segment. The fact that every possible landmark along the proposed rail routes is not explicitly mentioned does not mean that it was omitted. The population assigned for each segment characterizes the

	potential residential, commercial, industrial, and venue population that is, or could be temporarily, present along the segment. In the event of a train derailment and accident, only a limited number of rail cars actually derail and spill oil. In no case has a rail accident resulted in all rail cars derailing and failing. The median number of cars derailed per FRA-reportable, freight-train derailment on Class I mainlines was six (Liu et al., 2013). In this analysis, we assumed that all derailed cars were crude oil tank cars. The conditional probability of release (CPR) represents tank car safety performance in accidents and was estimated based on the latest statistics developed by the Railway Supply Institute (RSI) – Association of American Railroads (AAR) Railroad Tank Car Safety Research and Test Project. The RSI-AAR Tank Car Project analysis accounts for tank car safety design features and accident characteristics. The RSI-AAR Project has also calculated a similar statistic, CPR(>100), which is the conditional probability of release of more than 100 gallons from an individual tank car involved in an FRA-reportable accident. Releases smaller than this amount are not believed to pose a substantial threat, so this is the principal metric being used by the rail and tank car industries in their consideration of different tank car safety designs. CPR(>100) is used in the risk analysis described here to be consistent with other documents related to this subject. Please note that trains associated with the Phillips 66 Project would generally have 80 tank cars due based on the space available for the new rail spur.
HUC-04	The RDEIR addresses the potential impacts and recommends mitigation measures for the proposed Project consistent with the requirements of CEQA. Section 4.3 (Air Quality and Greenhouse Gases) addresses GHG emissions, criteria air emissions and health risks.
HUC-05	Potential worst-case water quality impacts related to a rail accident has been addressed in Impact WR.3. Individual waterways that could be affected are shown on Figures 4.13-4 through 4.13-9 and in Tables 4.13-1 and 4.13-2. This includes the San Francisco Bay-Delta watershed. Water quality impacts from and oil spill along the mainline rail route were concluded to be significant and unavoidable (Class I).
HUC-06	Operations at the Rodeo Refinery are not anticipated to change with the processing of Rail Spur Project crude oil. The refinery currently handles heavy crude oil and the characteristics of the Rail Spur Project crude oil are similar to current heavy crude oils. Section 4.3, Table 4.3.13 summaries the different characteristics of the crude oils. BTEX levels may increase (although some tar sands crude oils have lower percentages of BTEX than the heavy crudes currently being processed. The SMR refinery ships naphtha and gas oils via pipeline to the Rodeo Refinery. Both of these are semi-refined products. The composition of these two products is not expected to change with the Rail Spur Project.

	As discussed in the Project Description (Chapter 2.0) the SMR currently processes a range of crude oils from different sources, and the crudes vary from time to time. In addition, the refinery often blends crudes from multiple sources prior to processing. A comparison of crude oils and their characteristics demonstrates that the crudes likely to be received by unit train would be comparable to those currently or recently processed at the SMR. The SMR is not requesting any changes or modifications to its crude unit or other processing units that would allow it to process any crude types that it can't be process currently. The only proposed change to the Rodeo Refinery is the Propane Recovery Project. The Rodeo Refinery (SFR) produces gases as a byproduct of the refining process, and these gases are used as fuel in various refinery processes (referred to as "refinery fuel gas" or "RFG"). Currently, the propane and part of the butane generated at the SFR is used as RFG. Instead of using the propane and butane as fuel at the SFR, the Propane Recovery Project will allow Phillips 66 to recover, store, and ship propane and additional butane via rail to outside customers. Therefore, the primary project objective is to recover liquid petroleum gases ("LPGs"– i.e., propane and butane) that already exist in the RFG. The Propane Recovery Project will not cause or require an increase in the amount of recoverable LPG present in the RFG; it will simply allow recovery of the LPGs that already are present in the RFG. The Propane Recovery Project is designed to remove up to 14,500 barrels of LPGs per day. Data regarding actual LPG content of the RFG is consistent with the design basis for the project. The figure below shows that, for the twelve month period from January through December 2013, the average LPGs in the Rodeo RFG was 13,970 barrels per day. The equipment design is a limiting factor on the amount of propane and butane that can be captured and stored, regardless of how much propane and butane can be produced by the SFR in the future or what type of crude oil is processed. Phillips 66 specified this design basis in the application to the Bay Area Air Quality Management District for an authority to construct the Propane Recovery Project, and it has been translated into an enforceable condition included in the draft permit prepared by the air district. Therefore, the amount of propane and butane to be extracted once the Propane Recovery Project is operational will be constrained by the physical design of the equipment and the permit limits. Most of the LPG produced at the SFR does not arrive as propane and butane in crude oil or in the semi-refined products received from the Santa Maria Refinery (SMR). Rather, the vast majority of LPG produced at the SFR is created through the refining process itself. As explained above, the design capacity of the Rodeo Propane Recovery Project was sized to recover LPGs that are currently being produced and burned as part of the refinery fuel gas at

the SFR. No changes in the crude delivery system, type of crude or operations at the SMR are needed in order to fully utilize the propane recovery unit in Rodeo.



The commenter's have overlooked the fact that the refining process at the SFR itself accounts for 90% of the propane and butane currently produced and proposed to be recovered by the Rodeo Propane Recovery Project. As described at pages 3-8 to 3-9 of the Recirculated Draft Environmental Impact Report for the Propane Recovery Project, the refining process incorporates four primary functions: separation, conversion, purification and blending. Crude oil and other incoming feed streams contain mixtures of various hydrocarbon compounds that can be separated using distillation and fractionation in the first step of the refining process. At the SFR, a small amount of butane and propane is separated from the crude oil in these first stage processes. However, butane and propane are also created from other hydrocarbon compounds during the conversion phase of the refining process. Overall approximately ten percent of the LPG (combined butane and propane) arrives as identifiable fractions of the crude oil, and the balance of approximately ninety percent is created in the refining processes (cracking units).

Since LPG in the crude oil accounts for only a very small fraction

	(approximately ten percent) of the total LPG produced at the SFR, a change in crude oil LPG content in Santa Maria or in Rodeo would have very little effect on the volume of LPG available for recovery at Rodeo. As discussed in the Recirculated Draft Environmental Impact Report for the Propane Recovery Project Section 3.4.2.1, and shown in Figure 3-7, the proposed Project's design basis was derived from data taken at the Refinery in August, 2011. In the same section, the RDEIR for the Propane Recovery Project also provides an update to substantiate this 2011 design basis with the most recent full year (2013) of RFG data from the Refinery in Figure 3-8. This figure shows that for 2013 an average of 13,970 barrels per day (BPD) of propane and butane were available and that monthly this quantity of propane and butane varies. Note that between the 2011 design basis and the 2013 data, no change to crude feedstock, such as those of concern to commenter's, had been made. These data provide the substantial evidence to support the "independent utility" of this Project and further support that the EIR has not inappropriately piecemealed or segmented this Project.
HUC-07	The RDEIR addresses the potential impacts and recommends mitigation measures for the proposed Project consistent with the requirements of CEQA. Section 4.3 (Air Quality and Greenhouse Gases) addresses GHG emissions, criteria air emissions and health risks. The commenter's statement about air issues are included in the FEIR for the decision-makers' consideration as part of the County's deliberations on the proposed project. Also, see Response to HUC-02