11-22-14

To: Mr. Wilson, San Luis Obispo Planning Department

I understand that you have to make a difficult decision on the Phillips 66 Rail Terminal Expansion Project. My wife and I are writing this letter as your decision will impact the security and safety of our home and family in Oakland, California.

Should you approve the expansion project our community will see a massive increase in weekly transportation of dangerously explosive materials through Oakland. I am a retired teacher and the tracks that will be used to move the hundreds of tank cars of oil adjacent to many schools Oakland. Our community has struggled to become more prepared for earthquakes, but it is not prepared for the kind of fires and explosions created by massive oil spills. Your decision will make you responsible for this increase in danger to our home and the many schools and families that will be within the blast zone of the tanker car traffic Phillips wants you to approve.

Over the past year, with a huge increase in the volume of oil being transported by rail, we have seen many folks die from tanker car accidents. You are probably well aware of these accidents and I have no doubt that you don't wish these outcomes. Unfortunately you are being asked to take responsibility for approving a rolling "blast zone" that will imperil many far beyond your own boundaries and your responsibilities must include folks beyond your county alone. MCL-01

I understand the importance of jobs and not over-regulating some industries, but the oil industry and the transportation of their products have given us great reason to pause. Their safety record is intolerable as there is never a reason to take human life for the soul purpose of getting cheap and dirty resources to a refinery. This is exactly what they are asking you to agree to; they want your approval to jeopardize many to make more money. The oil companies are flush with profits and the restriction of their business due to their lack of safety in transportation of their product is not a danger to the jobs I'm sure you want to protect.

There are other things to reflect on before deciding:

The refining of products from Canadian Tar Sands are not only dangerous explosion and fire hazards to the safety of our communities but vastly increase the production of greenhouse gases. This is a real issue to all California communities presently struggling during our drought. MCL-02

The EIR information given by Phillips 66 is “cooked” designed to minimize the appearance of safety issues in the transportation of the crude product. The most recent year shows a clear and dangerous trend of larger and more life-threatening spills.

The EIR information given by Phillips suggests an example of a six car spill when the most recent experience we have is that many more cars have spilled in derailments. The potential fire and explosion from these tank car trains is far greater than presented in the Phillips EIR.

Phillips is putting your planning commission in a position where you can do great harm or great good to areas that extend throughout California and beyond. By refusing this permit you will substantially have created a safer community for your own citizens and for those, like my wife and I, who live beyond your immediate area of concern. MCL-03

I walked the main tracks that the Phillips oil would transit yesterday and as I traveled I saw all the schools, homes and businesses that would face the horrifying risk associated with the oil trains Phillips would need if you approve their permit. The potential blast created by these trains is not worth the incremental increase in immense profits gathered by the oil companies, Phillips included. This permit creates a very real risk and I’m sure you would not want the responsibility of trying to explain to folks in Oakland why you allowed this transport should a catastrophe occur.

Thank you for your time and consideration.

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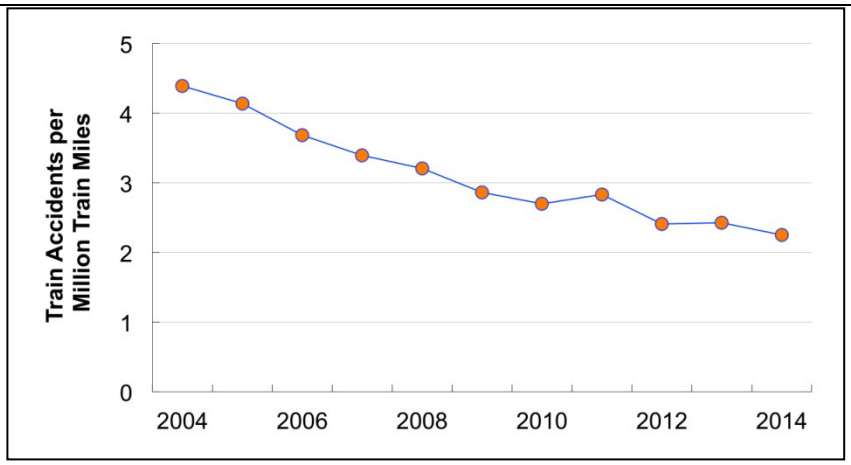
MCL-01	This comment does not identify a specific environmental analysis or CEQA issue relative to the EIR and compliance with CEQA. The commenter's concerns about the safety and environmental impacts of the project are included in the FEIR for the decision-makers' consideration as part of the County's deliberations on the proposed project.
MCL-02	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.
MCL-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.

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. As noted in the RDEIR, the current DOT-111 tank cars have serious safety deficiencies that can lead to an unacceptable spill rate in the event of a train derailment. As a result, the RDEIR specifically included mitigation measure HM-2a, which requires only rail cars designed to 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. Even with the improved rail cars, the RDEIR found that the risk of a crude oil train accident and spill was considered a Significant and Unavoidable (Class I) impact. The potential consequences of a potential accident also need to be taken into account; specifically the distance from the rail line where adverse impacts would be possible. The worst-case thermal hazard zone associated with the catastrophic tank car failure and fire was approximately 500 meters. Within this distance, there is the possibility that individuals could experience thermal injuries. Beyond 500 meters, potential injuries would not likely occur. Likewise, the potential for fatalities is limited to 300 meters from the rail line. However, the potential impacts of a train derailment, oil spill and potential fires and explosions would be substantial. Therefore, the RDEIR found that the risk of a crude oil train accident and spill was considered a Significant and Unavoidable (Class I) impact.