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North County Watch
Looking Out Today For Tomorrow

Jan. 27, 2013

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Department of Planning and Building
976 Osos Street, Room 300
San Luis Obispo, CA 93408-2040

RE: DRC2012-00095 - SANTA MARIA REFINERY RAIL SPUR EXTENSION DEIR

Dear Mr. Wilson,

Following are the comments of the Santa Lucia Chapter of the Sierra Club on behalf of Sierra Club members in San Luis Obispo County, the Los Padres Chapter of the Sierra Club on behalf of Sierra Club members in Santa Barbara and Ventura Counties, and North County Watch on behalf of its members in northern San Luis Obispo County, on the Draft Environmental Impact Report for the proposed project.

The evaluation of the project's potential impacts is impermissibly narrow

The cumulative analysis of the Rail Spur Project improperly confines itself to "the proposed rail spur unloading facilities, where worst-case hazards would not extend beyond the SMF property." The DEIR fails to contemplate the risk involved in hauling crude oil into California via trains that will traverse some of the most challenging mountain passes in the U.S.[1] The DEIR's limitation of analysis of impacts to the geographical area of the County omits any review of the environmental impacts in the Sierra Nevada and other sensitive areas and population centers in every other California county through which the oil trains would travel, areas that would not otherwise be impacted but for the construction of the rail spur and resulting train transport of crude oil into the state for processing at the Santa Maria refinery. These potential impacts have not been analyzed, avoided or mitigated. SCSL-1

The DEIR's discussion of the environmental impacts that would result from a fire as the result of a spill is limited to the geographical area constituting the assumed maximum circumference of a fire. The Lac-Megantic fire burned for four days. The FEIR must analyze the impacts to air, water and land resources from a fire based on likely duration, not just area.

The project is piecemealed and cumulative impacts are omitted relative to past projects

As defined in CEQA Guidelines Section 15355, a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. The cumulative impacts from several projects are the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. SCSL-2

The seriousness of the deficiency caused by the piecemealing of the environmental review of the

Throughput Increase and Rail Spur projects can be best seen in a comparison of the Hazardous Materials analysis in the Rail Spur project DEIR to the section "Public Safety and Hazardous Materials - Transportation of Hazardous Materials on Roadways" in the 2012 Throughput Increase FEIR, which states:

> *Crude oil and solid sulfur are not acutely hazardous materials.... If crude oil was spilled, fire could occur along the transportation route at the accident location. Given the properties of crude oil, the likelihood of an explosion is virtually non-existent and consequently explosion scenarios are not addressed further in this document. Fire thermal impacts would be limited to the immediately vicinity of the spill site. Risk levels would be minimal due to the properties of crude oil and impacts would be associated primarily with environmental issues.*
>
> -Phillips Santa Maria Refinery Throughput Increase FEIR 4.2-30, October 2012.

Certification of the Throughput Increase EIR was granted on the applicant's representation that "risk levels would be minimal due to the properties of crude oil," and that the increased throughput volume permitted would consist of a substance for which "the likelihood of an explosion is virtually non-existent," the justification for the decision not to address explosion scenarios in that document.

By way of contrast, the Hazardous Materials section of the DEIR for the Rail Spur project paints a different picture of the properties of crude oil and the explosive potential thereof:

SCSL-2

> *Since the release streams are flammable, releases could potentially result in thermal radiation exposure from a fire, and also present an overpressure hazard due to explosions from flammable vapor clouds or boiling liquid expanding vapor explosions.*
>
> - Phillips SMR Rail Project Public Draft EIR, 4.7-17, November 2013.

Despite this admission, the discussion of the Lac-Megantic disaster in the Hazards and Materials section of the DEIR makes no mention of the nature of the crude oil the train was carrying, nor that it is the same type that this project is proposed to accommodate, nor provide any analysis of the heightened volatility and potential for explosion of Bakken shale crude oil.

Despite the discussion of the Lac-Megantic disaster and the 47 victims who perished in the explosion and fire caused by a derailed oil train, the DEIR makes this claim:

> *As rail traffic would occur regardless of whether additional crude oil cars were added to the train, the transportation of crude oil would not increase the accident/trauma-related injuries and fatalities associated with rail accidents (4.7-28).*

This is clearly not the case. The DEIR states that it continues to rely on the Phillips SMR Throughput Increase Project FEIR for its assessment of Transportation Risk (4.7-38). The SMR Throughput Increase FEIR is clearly out of date and its assumptions contradicted by the Lac-Megantic disaster and subsequent derailments and explosions of oil unit trains carrying Bakken crude shale oil.

In a 2012 investigation of tanker car explosions, the National Transportation Safety Board concluded that such an accident involving oil unit trains could be exponentially bigger than a derailment involving one

tanker car, due to the amount of crude oil involved. The NTSB internal report warned that with the "increasing number of unit train shipments" happening in North America, "the risks are greater because of high concentrations of hazardous materials," and "existing standards and regulations [are] insufficient."

An EIR that relies on those standards and regulations is likewise insufficient.

The DEIR claims:

> *Accidents that generate spills of hazardous materials that could impact public receptors along roadways produce the risks associated with transportation. These risks are associated with the transportation of solid petroleum coke and recovered solidified sulfur. (4.7-38)*
>
> *Risk levels associated with transportation would be minimal due to the properties of crude oil, sulfur, and coke and impacts would primarily affect environmental resources.*

SCSL-2

These claims are contradicted by the facts of the Lac-Megantic disaster and the findings of geologists that Bakken shale oil causes severe erosion of tank cars and is so flammable it can ignite at temperature as low as 20 C. Geologists have warned since 2010 of increased concentrations of hydrogen sulfide in Bakken crude, with increased corrosion and health and environmental risks.[3] The FEIR must incorporate this analysis.

The requirements of CEQA were not met by the Throughput Increase FEIR's Cumulative Analysis at 4.7.5, which restricted its analysis of the Refinery Throughput Increase to the release of hazardous materials from the project site, without reference to the impacts due to that project's facilitation of the Rail Spur Project.

The information that the applicant intended to refine highly volatile Bakken shale crude oil, a fact of which decision makers and the public were not informed during review of the Throughput Increase EIR and which was brought forward only in the current project, sixty days after the prior project's environmental review was certified, constitutes a gross violation of the intent and purpose of CEQA.

The project is piecemealed and cumulative impacts are omitted relative to reasonably forseeable future projects

At a December 12, 2013, public workshop held in Arroyo Grande, a DEIR consultant stated that the refinery is capable of processing a small amount of Bakken crude oil at this time, and that extensive retrofits would be necessary to increase the amount of Bakken crude processed by the refinery relative to current levels of standard crude oil volume.[2]

As California's conventional crude oil production is declining and the production of Bakken shale oil is increasing – so much so that it is outstripping pipeline capacity and necessitating the increasing rail transport of crude oil, the basis for this project -- the rail spur project appears to be the prelude to the refinery retrofits necessary to shift the refinery's production from declining levels of conventional crude oil to increasing levels of Bakken crude. Having piecemealed the environmental review of the throughput increase separately from the review of this project's impacts, the applicant should not be allowed to further piecemeal the analysis of this project's impacts separately from a readily forseeable retrofit project to facilitate the refining of increasing quantities of Bakken crude oil, facilitated by this project. The incremental impact of these past, present, and reasonably foreseeable future projects is likely to be cumulatively considerable, as per CEQA 15130(a)(1), and must be analyzed in the EIR's discussion of cumulative impacts.

SCSL-3

The FEIR must also reconcile the statement by the project consultant at the December 12 public workshop with the EIR's statement that "the most likely sources [of crude oil] would be the Bakken field in North Dakota or Canada" (ES-3). This assertion is at odds with the consultant's implication that the amount Bakken crude oil shipped would be insignificant because "the refinery is capable of processing a small amount of Bakken crude oil at this time." Taken together, the two statements further indicate the readily forseeable intent of the applicant to come back at a future date with an application for another permit for the necessary "extensive retrofits" of the refinery. The FEIR should state the portion of total refinery throughput projected to consist of Bakken shale oil and not seek to downplay and minimize the risk of the transport of two million gallons of highly volatile Bakken crude oil, 250 times a year, as "a small amount." SCSL-3

The likelihood that the throughput increase and rail spur projects combined will drive the creation of an additional pipeline from the Santa Maria refinery to the applicant's Rodeo refinery - either in parallel or a twin or replacement – and the cumulative environmental impacts that would result is not addressed in the DEIR, contrary to CEQA 15355.

The hazard calculations understate risk and substitute probability for actual analysis of impacts

In its discussion of higher safety standards proposed for new tank cars, the DEIR states that "Nearly 25 percent of the DOT-111 fleet carrying crude today meets the higher design standards" (4.7-25). The "25 percent" figure appears to be overstated, per statistics furnished by the Association of American Railroads that only 14,000 of the 98,000 tank cars in service meet the voluntary standards for new tank cars. Even if the percentage cited by the DEIR were correct, there is no discussion of the potential impacts from the obvious inference to be drawn from it, that 75 percent of tank cars do not meet the higher design standards, nor does the DEIR mention that, per the National Transportation Safety Board, a train that mixes new and old tank cars will nullify any increased safety factor and will be no safer than a train with no tank cars that meet the new standards.

2013 saw a 37-fold increase in the number of rail oil shipments over 2007. Train derailments are a daily occurrence in the U.S. There were 100 oil tank car spills in 2012, per the Pipeline and Hazardous Material Safety Administration. The DEIR's Hazards Analysis focuses on historical figures for rail accidents and derailments, and does not appear to take into account the fact that risk rises as traffic volume increases. The DEIR's statement that the rail route in San Luis Obispo County was evaluated to determine accident rates and spill probabilities along the route points to the deficiency of both 1) restricting analysis to only San Luis Obispo County and 2) a probability analysis based on historic accident rates, which is not predictive of likely accident rates at a significantly increased current and future level of rail traffic consisting of oil unit trains. The Hazards Analysis in the FEIR should analyze the probability of accident based on the project's proposed addition of up to five unit trains per week of 80 cars each, totaling approximately 250 trains per year, to the state's current level of rail traffic. The FEIR should also calculate the severity of the accidents statistically likely to occur based on the proportion of tank cars proposed to transport volatile Bakken shale crude oil. SCSL-4

The EIR should analyze the potential impact of a spill on the magnitude of the Lac-Megantic disaster (1.5 million gallons).

The project cannot justify the risk

The DEIR does not take account of the knowledge of the heightened risks of rail transport of crude oil that has resulted from increased public scrutiny since the Lac-Megantic disaster and a rapid series of subsequent derailments, explosions and fires. These risks include the routine improper classification of oil for shipment: SCSL-5

"In a June 19 letter to the American Petroleum Institute, the [Federal Railroad Administration] made the remarkable admission that its investigative tools are so limited it 'can only speculate' about the number of hazardous crude shipments that were improperly shipped.'... Railways and shippers have no better idea of the volatility of the oil they are shipping by rail today than they did before Lac-Megantic."[3]

The DEIR does not analyze the risk of explosion even when the regulatory system functions properly:

Even if the oil is tested and determined to be safe, the risk of explosion can be further compounded in transit when exposed to a hot sun [said US DOT rail accident investigator Alan] Roberts. 'You get down the road and the sample could be entirely different,' he said. 'Why? Because the materials will stratify.' In such cases, the lighter ends rise to the top and vaporize faster, creating an explosion risk.[3]

SCLC-5

The DEIR does not acknowledge the opinion of the National Transportation Safety Board:

In the wake of the January 1, 2014, derailment, explosion and fire of a train transporting Bakken shale crude oil in Casselton, North Dakota, the National Transportation Safety Board called the level of threat to the public "unacceptable."[4]

In light of the above, we urge adoption of the No Project Alternative.

Thank you for the opportunity to comment,

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[1] "California getting more of its oil by rail," *Los Angeles Times*, Sept. 26, 2013.
[2] "Phillips 66 rail spur critics speak out at workshop," *San Luis Obispo New Times*, Dec. 26, 2013.
[3] "The deadly secret behind the Lac-Megantic inferno," *The Globe and Mail*, Dec. 3, 2013.
[4] "Concern Over Safety Grows as More Oil Rides the Rails," *New York Times*, Jan. 2, 2014.