From: Myra Akel <myra.akel@gmail.com>
To: p66-railspur-comments@co.slo.ca.us
Date: 10/26/2014 07:14 PM
Subject: The Phillips REIR - Negligent Regarding The Impact Of Tar Sands

Dear Mr. Murry:

The Phillips 66 REIR's Executive Summary (on page ES-5) indicates that "The refinery feedstock definition excludes gaseous feeds, natural gas liquids, liquefied petroleum gas, finished refined products, and Bakken crude oil.

While it tells us what is excluded, it is extremely inadequate regarding the types of crude that would be arriving. Of particular omission is a discussion of the heavy crude commonly known and feared as "tar sands." Therefore, please take serious note of the following ...

1. The Arrival Of "Tar Sands" In SLO County: The Nipomo refinery's superintendent (Jim Anderson) has told us at their open house that with the Rail Terminal Project, there's a definite possibility (we think probability) they will ship in "tar sands" crude oil from Alberta, Canada. Tar sands (a "heavy" crude) has substantially higher concentrations of sulfur, copper, nickel, nitrogen, lead and benzene than are found in conventional crude.

2. Health Issue #1 - Higher Levels Of Sulfur Dioxide: The main danger to SLO County communities is that facilities that refine tar sands could emit significantly higher amounts of sulfur dioxide. And that could lead to chest tightness, asthma, reduced lung function, respiratory weakness and cardiovascular issues, as well as cancer. Sulfur dioxide is especially dangerous for people who have preexisting heart and lung conditions. AKE-01

3. Health Issue #2 - Increased Quantities Of Petroleum Coke: The refining of tar sands also yields a significantly higher amount of petroleum coke, known as "petcoke." Phillips' Nipomo refinery already produces petcoke. And it's left onsite as widespread, open hills of black granules and dust . This waste product can easily be blown into residential areas by onshore winds and breathed in by residents. Petcoke is linked to a potential increase in heart attacks and respiratory issues.

The proposed Rail Terminal Project calls for two NEW tracks for the loading of this coke product. And, In their "Summer 2014" flyer, Phillips announced three new hires. All three hires are for "COKE operators." It must therefore be assumed that Phillips intends to significantly increase its petcoke production at the SMR based on bringing in tars sands via rail ... but the REIR doesn't not address this increase at all.

4. Onsite Trains - Kicking Up Even More Coke Dust: Phillips proposes to now bring 520 trains in and out

of the Nipomo facility each year. Each of these 1.5 mile-long trains will pass through the petcoke fields. Therefore, coke dust (of which there will likely be even more due to the refining of tar sands) will be launched into the air by the passing tanker cars. And, it doesn't matter how fast the trains will be going, because petcoke is a very fine dust that can be lifted by the lightest of breezes. This dust will then be carried by the strong onshore winds into the multiple communities on the Mesa, and perhaps beyond.

5. Coke Dust Throughout The County: Additionally, the rail tanker cars are not going to be washed down onsite. So upon leaving the SMR they will be coated with petcoke dust and spewing it up and down the mainline, poisoning the air through SLO County. AKE-01

Mr. Murry, Phillips 66's Nipomo Mesa superintendent says the door is wide open for tar sands to be delivered to his facility if the crude-by-rail project is approved.

The ramifications of this must be fully taken into account in the EIR. But they aren't taken into account. Not to intimately examine its impact on the health of our citizens could lead to not only ultimately harming us, but it would be an extraordinary avoidance of SLO County's responsibility to its citizens.

Sincerely,

Myra Akel

968 Jacqueline Place,
Nipomo, CA 93444
805-219-0208

From: Myra Akel <myra.akel@gmail.com>
To: p66-railspur-comments@co.slo.ca.us
Date: 11/02/2014 02:29 PM
Subject: Phillips 66 REIR - Rail Tankers That Are Unsafe And Banned

Dear Mr. Murry:

RE: Phillips' 66 New Rail Cars - Not As Safe As They Claim; The REIR Bans Them!

In their February 2014, flyer to SLO County residents, Phillips stated that their "crude railcar fleet is one of the newest and are all DOT-111 cars ... including 2,000 that meet or exceed the Association of American Railroads safety standards."

(And as of October 22, 2014, the company had bought or ordered 3,200 railcars, and planned to boost its fleet to 3,700. http://www.reuters.com/article/2014/10/23/crude-freight-unloading-idUSL2N0SI03D20141023)

However, Phillips fails to tell us that it's the DOT-111 tank cars that have been involved in most or all of the previous derailments, explosions, fires and oil spills. While those cars may be state-of-the-art, the state-of-the-art has proven beyond doubt that it's not good enough.

• A May, 2013 Phillips press release reported on their new cars "During the first quarter (of 2013), the company took delivery of 400 railcars, which will transport crude to its refineries on the East and West Coasts."

• Yet, two months later, U.S. Senator Charles Schumer warned - "DOT-111 tank cars are tragically flawed, causing potential damage & catastrophic loss of hazardous materials during derailments." He called for the "Feds to require a phase-out plan of DOT-111 cars carrying oil. The DOT-111 tank car has proven particularly prone to spills, tears and fires in the event of a derailment, and it's simply unacceptable." AKE-02

• On Feb. 26, 2014 National Transportation Safety Board member Robert Sumwalt told a House Transportation subcommittee that rail tank cars being used to ship crude oil (DOT-111s) are an "unacceptable public risk. Even cars voluntarily upgraded by the industry may not be sufficient."

• A February '14 AP article quoted Ed Hamberger, the president and CEO of the Association of American Railroads, who said the industry has strongly urged the government to set new tank car standards. He said - "We believe there needs to be a safer tank car." (This was stated well after Phillips had taken possession of their DOT 111 cars!)

So despite Phillips' desire for SLO County residents and officials to believe their new DOT-111 cars are a non-issue, they are and remain a state-of-the art safety risk.

Indeed, on July 23, 2014, U.S. Federal regulators determined that oil companies and railroads were dead wrong in their huge escalation of crude-by-rail, using outmoded DOT-111 tank cars. The Department of

Transportation (DOT) decided it would now require shippers to use cars with "increased shielding and better thermal protection, and would have to be fitted with more crash-resistant valves."

• The serious deficiencies of the DOT-111 are therefore taken into account in the REIR. It states (4.7-69; page 489) -- "Only rail cars designed to Option 1: PHMSA (Pipeline and Hazardous Materials Safety Administration) and FRA (Federal Railroad Administration) Designed Tank Car as listed in Table 4.7.6 (on page 447), shall be allowed to unload crude oil at the Santa Maria Refinery."

• When we look at REIR Table 4.7.6 we see the DOT's "Proposed Regulatory Requirements for High-Hazard Flammable Trains (HHFT)." The only option that the REIR states is acceptable is referred to as ...

• "Require new tank cars constructed after October 1, 2015 (that are used to transport flammable liquids as part of a HHFT) to meet criteria for a selected option, including specific design requirements or performance criteria (e.g., thermal, top fittings, and bottom outlet protection; tank head and shell puncture resistance). PHMSA is requesting comment on the following three options for the DOT Specification 117."

AKE-02 cont

Clearly, the DOT will be requiring an entirely new model of tanker – the DOT-117. And just as clearly, these are not the tankers Phillips intends to use to ship its crude oil to SLO County. They will attempt to use what will be outdated DOT-111 tankers that have proven to be failure-prone.

And, regardless of if and when tank cars are made safer, it will not stop trains from derailing. When tank cars traveling at speed topple over, regardless of their construction, it's likely there will be explosions, spills and the long-term, undesirable aftermath that comes with such crashes. The only way to prevent this from happening in association with Phillips' Santa Maria refinery, is to prevent crude-by-rail from ever taking root there. No Rail Terminal equals 520, 1.5 mile-long crude oil trains that will not be entering and leaving SLO County each year.

http://www.reuters.com/article/2014/10/23/crude-freight-unloading-idUSL2N0SI03D20141023
http://www.schumer.senate.gov/record.cfm?id=345384&
http://oilprice.com/Energy/Crude-Oil/DOT-111-Safety-Major-Issue-in-Crude-By-Rail-Debate.html
http://bigstory.ap.org/article/rail-cars-used-ship-oil-called-unacceptable
http://abcnews.go.com/Business/wireStory/buffett-rail-tank-cars-upgrades-oil-22749202

Sincerely,
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Phillips 66 Washington crude-by-rail facility to open in November

Wed, Oct 22 2014

By Rory Carroll

SAN FRANCISCO, Oct 22 (Reuters) - Phillips 66 on Wednesday said that it expects its facility capable of unloading 30,000 barrels of crude oil per day from trains at its Ferndale refinery in Washington state to be operational in November.

The fourth-largest U.S. refiner is building the offloading facility adjacent to its 100,000 barrel-per-day (bpd) Phillips 66 Ferndale Refinery, which is located on Puget Sound. The facility will be capable of unloading 54 railcars simultaneously.

Last month the company said it was buying more railcars to eventually move up to 185,000 bpd of North American crude, including output from North Dakota's Bakken shale and Canada, to its refineries on the East and West coasts.

Chief Executive Officer Greg Garland at the time said the company had already bought, or had on order, 3,200 railcars and planned to boost its fleet to 3,700 railcars.

The company's 238,000-bpd Bayway refinery in Linden, New Jersey, received its first crude-only trains at that plant's expanded unloading system in August.

That facility is capable of unloading 120 railcars simultaneously, with a crude-unloading capacity of 75,000 bpd.

The company is still trying to win approval for a rail offloading project at its refinery in Santa Maria, California, which would serve its Rodeo, California, refinery.

(Reporting by Rory Carroll; Editing by Leslie Adler)

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FOR IMMEDIATE RELEASE: July 22, 2013

SCHUMER CALLS ON FEDS TO REQUIRE PHASE-OUT PLAN OF DOT- 111 CARS CARRYING OIL INTO ALBANY – QUEBEC DERAILMENT & WARNINGS FROM SAFETY EXPERTS SHOW THAT CARS MUST BE TAKEN OFFLINE TO PROTECT CAPITAL REGION COMMUNITIES

Over 100 DOT-111 Cars Come into Albany Each Day; The NTSB - Fed Transportation Safety Watchdog – Has Warned That Car Design Must Be Changed So That Derailments Don't Cause Explosions, Environmental Spills in Capital Region Communities Along Rail Line

Schumer Highlights That DOT-111 Tank Cars Are Tragically Flawed, Causing Potential Damage & Catastrophic Loss of Hazardous Materials During Derailments – Schumer Calls on Fed Dept. of Transportation To Require Plan to Retrofit or Replace all DOT-111 Cars Coming Into Albany

Schumer: Increased Traffic Must Be Met With Increased Safety Along Rail Lines Throughout New York

Today, standing at the Leo O'Brien Building in Albany, U.S. Senator Charles E. Schumer urged the federal Department of Transportation (DOT) to require freight rail carriers to create a plan to retrofit or phase-out DOT-111 tank cars, which have proven to be flawed, out-of-date, and a factor in hazardous material spills during derailments. The recent freight rail derailment in the Canadian city of Lac–Megantic, Quebec, which involved DOT-111 cars, in combination with the increased shipments of crude oil along New York railways to the Port of Albany, leads Schumer to urge a corresponding increase in safety measures for New York freight rail, which must be implemented through the Federal Railroad Administration (FRA) and the Pipeline and Hazardous Materials Safety Administration (PHMSA) regulatory process later this year.

The National Transportation Safety Board (NTSB) has cited the design of the DOT-111 model tank car as a major factor in the 2009 Cherry Valley, Illinois freight rail accident and hazardous materials release, and has recommended either a redesign or replacement of DOT-111 model cars. Currently,

the Port of Albany handles over 100 DOT-111 cars of crude oil a day, and Schumer therefore called on the federal DOT to impose requirements on freight rail carriers to phase-out these cars and avoid potential explosions, environmental spills or other dangerous occurrences in Capital Region communities along the rail line in a federal rulemaking later this year.

"The recent crash in Lac-Megantic and the increased number of trains carrying oil and other hazardous material into the Port of Albany has led me to urge the federal Department of Transportation to start phasing out older tank cars, particularly because they are thought to increase the damage that ensues after a derailment. The DOT-111 tank car has proven particularly prone to spills, tears and fires in the event of a derailment, and it's simply unacceptable for New York's communities to face that risk when we know thicker, tougher cars could keep us safer," said Schumer. "This is not to demonize freight rail or the significant economic activity the increased shipments mean for the Port of Albany and New York rail, but we have to protect that investment by limiting the risk for major damage in the event of a derailment. Simply put, the increased traffic of rail cars carrying crude oil into the Port of Albany warrants increased safety measures—and that begins with putting the safest, most up-to-date tank cars on the tracks from Buffalo to Syracuse to Albany and beyond."

Standing at the Leo O'Brien Building in Albany, Schumer highlighted an NTSB report, which found that the specifications of the DOT-111 tank cars were a factor in the hazardous materials release in a 2009 crash in Cherry Valley. The train in Cherry Valley was carrying 2 million gallons of ethanol when it derailed. Out of the 15 cars that piled up in the accident, the structure of 13 failed and sparked a massive fire. In a 2006 ethanol train derailment and fire in New Brighton, Pa., 20 of 23 derailed cars released ethanol. The cars that derailed in Lac-Megantic were DOT-111 cars.

In the report following the 2009 crash, the NTSB released a series of recommendations, including to the Pipeline and Hazmat Safety Administration to require all service tank cars carrying fuel ethanol and crude oil to have protections and

features that far exceed the DOT-111 design requirements. The NTSB report concluded that had the DOT-111 cars been thicker and tougher, the spill and resulting fire would not have been as damaging, and the only way to avoid such problems in the future would be to retrofit or phase-out the older tanks cars. However, Schumer noted that the NTSB's warnings have fallen on deaf ears, and many catastrophic rail derailments have occurred since involving these cars.

Therefore, Schumer is urging the federal Dept. of Transportation to issue a requirement during the regulatory process later this year to either retrofit or phase out the DOT-111 cars entirely. DOT-111 cars are not pressurized, unlike pressurized DOT-105 or DOT-112 which have thicker shells and heads and are much less prone to breaching during a derailment. The NTSB found that the heads and shells of DOT-111 cars can almost always be expected to breach in derailments that involve pile-ups or multiple car-to-cart accidents. The FRA and PHMSA would carry out the new plan, and Schumer also wrote the Association of American Railroads, the industry's trade association, to urge their cooperation in retrofitting or phasing-out the DOT-111.

This year, there will be more trains carrying crude across North America than ever before: nearly 1,400 carloads a day. In 2009, there were just 31 carloads a day. The Port of Albany alone handles over 100 DOT-111 cars of crude oil a day, and over 395 million barrels of crude a year. The Port has petitioned the State Dept. of Environment Conservation (DEC) to double the number of annual crude barrels allowed through the Port. In addition, the *Times Union* reports that Buckeye Partners, one of two major carriers of crude out of the Port, wants to increase the amount of ethanol shipped through the port to 780 million barrels per year. The CP Rail line and CSX line, which move freight rail carrying crude oil from extractors in the Midwest to the Port of Albany, pass through cities and towns like Buffalo, Rochester, Syracuse, Dunkirk, Plattsburgh, Whitehall, Saratoga, Mechanicville, and Watervilet on their way to Albany.

Schumer explained that the increased movement of crude through the Port was of benefit to the city, region, and state's economy, but that the risk of a catastrophe like Lac-Megantic must be minimized. The NTSB report and a history of

evidence linking the DOT-111 tanks cars to structural failure during derailments led Schumer to push for the new DOT requirement, which would make freight rail safer throughout New York and the country.

A copy of Senator Schumer's letter to the FRA and PHSMA appears below:

Dear Administrator Szabo and Administrator Quarterman,

I write to urge that you include a plan to retrofit or phase-out existing DOT-111 tank cars used to transport crude oil or fuel ethanol in your proposed rule to establish new standards for the safe transportation of crude oil and fuel ethanol (RIN 2137-AE85). A recent tragedy in the town of Lac-Megantic, near Montreal, Canada where a train derailed and killed 47 people and incinerated over 30 buildings in the town's center shows the need for stronger rail cars and improved safety standards. The flaws in DOT-111 cars, which represent 69% of the national tank fleet carrying crude oil and ethanol, are well known and the NTSB has noted that "DOT-111 tank cars have a high incidence of tank failures during accidents". We have known about these DOT-111 tank car flaws for a very long time, and the PHMSA and FRA must act on the NTSB's March 2012 recommendations in order to prevent another derailment that could lead to another explosion or fire which could unnecessarily endanger lives and cause significant environmental damage.

In the first half of this year, U.S. railroads moved 178,000 carloads of crude oil. That's double the number of the same period last year and 3 times more than the same period of 2009. Rail shipments from the Bakken region of North Dakota alone have increased from 500 carloads to more than 13,000 carloads, and volume is expected to grow to 70,000 annually. There will also be an increasing need for tank cars to transport fuel ethanol due to the mandated tripling of the amount of ethanol blended into the nation's fuel supply by 2022. This boom in transportation of energy by rail can have a positive economic impact, but it also must bring increased scrutiny and meaningful improvements in rail car safety to prevent failures during a derailment.

The NTSB investigation into a number of incidents involving DOT-111 cars, which were also those in service in the recent Lac-Megantic derailment, has revealed that when trains do

derail these cars fail at a high rate. In 2009, a train carrying 2 million gallons of ethanol through Cherry Valley, Illinois derailed. Of the 15 cars that piled up, 13 failed and caused a highly dangerous fire and loss of life. Prior to that, a 2006 derailment and fire in New Brighton, Pennsylvania showed that 20 of 23 derailed DOT-111 tank cars released ethanol. The NTSB's investigation into the Cherry Valley derailment found that DOT-111 cars have a high incident of failure during accidents.

DOT-111 cars are not pressurized, unlike pressurized DOT-105 or DOT-112 which have thicker shells and heads and are much less prone to breaching during a derailment. The NTSB found that the heads and shells of DOT-111 cars can almost always be expected to breach in derailments that involve pile-ups or multiple car-to-cart accidents. The NTSB concluded that if enhanced tank head and shell puncture resistance systems and increased shell thickness had been features of the DOT-11 cars involved in the Cherry Valley accident, the release of hazardous materials likely would have been significantly reduced, mitigating the severity of the accident. I believe the same could be said of the DOT-111 cars involved in the Lac-Megantic disaster.

In a March 2, 2012 letter you received from NTSB Chairman Deborah A.P. Hersman made the following recommendations to the PHMSA:

- Require that existing general service tank cars authorized for transportation of denatured fuel ethanol and crude oil have enhanced tank head and shell puncture resistance systems and top fittings protection that exceed existing design requirements for DOT-111 tank cars.
- Require that all bottom outlet valves used on existing non-pressure tank cars (DOT-111 cars are not pressurized) are designed to remain closed during accidents in which the valve and operating handle are subjected to impact forces.
- Require that all existing tank cars authorized for transportation of hazardous materials have center sill or draft sill attachment designs that conform to the revised American Association of Railroads' design requirements adopted as a result of safety recommendation R-12-9. (R-12-7).

While industry and the PHMSA have made very positive progress with regard to new tank cars, it has not included retrofits to existing cars or a phase out plan for those in service in its rulemaking. The boom in transportation of crude oil and ethanol by oil can certainly bring economic benefits to communities, but such a substantial increase in

the transportation of hazardous materials must also include meaningful safety improvements. I ask that in your proposed rule, you move to include NTSB Administrator Hersman's recommendations. Thank you for your attention to this matter and all of the work you do in ensuring the safe transportation of goods through rail in this country. Should you have any questions, please feel free to contact me or my staff.

Sincerely,

Charles E. Schumer
U.S. Senator

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DOT-111 Safety Major Issue in Crude-By-Rail Debate

By Rory Johnston | Tue, 14 January 2014 23:14 | 0

Benefit From the Latest Energy Trends and Investment Opportunities ***before the mainstream media and investing public are aware they even exist.*** The Free Oilprice.com Energy Intelligence Report gives you this and much more. Click here to find out more.

Experts from the Canadian rail industry, regulators, and representatives from all levels of government met in Ottawa on Monday to discuss the increasing number of tank car derailments and subsequent explosions that now seem to be almost a regular occurrence. At the top of the agenda was the safety of DOT-111 tank cars, which represent the majority of tank cars operating in North America. This meeting comes just days after a CN train derailed and exploded outside Plaster Rock, New Brunswick.

DOT-111 tank cars are non-pressurized, cylindrical railcars designed to transport a variety of liquids. They are also the most common tank cars in service, representing eighty percent of the Canadian fleet and sixty-nine percent of the American fleet. Of a total 320,000 total tank cars operating in 2013, 265,000 of them were classified as DOT-111. The bulk of these railcars are produced by five large US manufacturers, which turn out between 20,000 and 25,000 per year. However, the demand for these cars far exceeds production and there is currently a backlog of at least 40,000 cars.

Typical DOT-111 Tank Car

The main concern with these tank cars is their tendency to puncture in the event of a crash. This is particularly problematic when these types of tank cars are used to transport crude oil from American shale, which has been proven to be more explosive than traditional crude. Transport Canada has recently announced plans to alter DOT-111 regulations, requiring that all new cars be built with thicker steel, include a reinforced top fitting, and a head protection shield to lessen the risk of puncture.

Related article: Canadian Oil and Gas Train Derails, Catches Fire

While this regulatory shift is a step in the right direction, the proposed regulation does not require that older tank cars be retrofitted to come into line with new regulations, although it does hint that this may be a next step. Malcolm Cairns, consultant with the Canadian Transportation Research Forum, prepared a report on DOT-111 tank cars outlining these safety concerns. According Cairns, approximately, 45,000 tanker cars require retrofitting—a proposal that would take years, remove many tank cars from an already tight market, and cost in excess of $1 billion.

The American railroad industry has expressed support for stricter tank car regulations, but it should be known that railroad companies own fewer than 700 of these tank cars. The vast majority (more than 99%) of the tank car fleet is owned by a wide array of mainly petrochemical shipping firms, which lease the tank cars to rail companies. This is why opposition to regulation will come from companies that, until now, will sound foreign to the discussion surrounding oil transportation. The crude-by-rail debate is more complicated than many believe, involving a host of silent actors that have thus far avoided serious public criticism.

As stated at the outset of this article, stories of exploding trains are becoming far too common. Government and industry must come together in order to lessen the risk of both environmental contamination and harm to human life. This is going to cost money and take time, but the crude-by-rail phenomenon took the industry by storm and regulators are only now beginning to catch up with reality.

By. Rory Johnston

Rail cars used to ship oil called 'unacceptable'

By **JOAN LOWY**

Feb. 26, 2014 7:44 PM EST

FILE - In this Dec. 30, 2013 file photo, a fireball goes up at the site of an oil train derailment... Read more

WASHINGTON (AP) — Rail tank cars being used to ship crude oil from North Dakota's Bakken region are an "unacceptable public risk," and even cars voluntarily upgraded by the industry may not be sufficient, a member of the National Transportation Safety Board said Wednesday.

The cars, known as DOT-111s, were involved in derailments of oil trains in Casselton, N.D., and Lac-Megantic, Quebec, just across the U.S. border, NTSB member Robert Sumwalt told a House Transportation subcommittee hearing.

Forty-seven people were killed and 30 buildings destroyed in the blaze ignited by the Lac-Megantic accident. The Casselton accident, which occurred half a mile outside the town, created a massive fire that burned for more than 24 hours.

The NTSB has been urging replacing or retrofitting the tank cars since 1991, but the most recent federal effort to write tougher regulations for new cars didn't get underway until 2011. An initial public comment period closed in December, and regulators are currently at work writing proposed new standards, Cynthia Quarterman, head of the Transportation Department's Pipeline and Hazardous Materials Safety Administration, told the panel. She said she expects her agency to propose new tank car standards before the end of this year, but refused to be pinned down under questioning by lawmakers on when those rules might become final.

"Right now, there is so much uncertainty that people aren't going to make investments in safer cars and they're going to keep running these crummy cars and killing people," Rep. Peter DeFazio, D-Ore., complained.

Quarterman said she expected her staff to finish writing proposed rules "very soon." All major regulations go to the White House before they are issued to ensure the safety benefits outweigh the cost to industry. It often takes months to years between when new rules are proposed and when they become final.

Ed Hamberger, president and CEO of the Association of American Railroads, said the industry has strongly urged the government to set new tank car standards.

"We believe there needs to be a safer tank car," he said.

At least one major freight railroad has given up waiting. Last week, BNSF invited bids from manufacturers for 5,000 new tank cars made to new specifications that the company has developed. The aim is to make these latest tank cars safer than the voluntarily upgraded tank cars that the NTSB has questioned as possibly not safe enough.

The NTSB has said vulnerabilities with the DOT-111s means they are easily ruptured during accidents, releasing crude oil or other hazardous liquids like ethanol that then ignites.

U.S. crude oil production is forecast to reach 8.5 million barrels a day by the end of 2014, up from 5 million barrels a day in 2008. The increase is

overwhelmingly due to the fracking boom in the Bakken region, which is mainly in North Dakota, but also extends into parts of Montana and Canada.

U.S. freight railroads transported about 415,000 carloads of crude in 2013, up from just 9,500 in 2008, according to government and industry figures.

The oil trains, some of which are 100 cars long, pass through or near scores of cities and towns.

Sen. Chuck Schumer, D-N.Y, called on the freight rail industry and the Transportation Department to amend a voluntary agreement reached last week to address oil train safety concerns. He said the agreement should be changed to require industry to develop a plan no later than July 1 to phase out or retrofit the DOT-111s.

"Each week seems to come with another freight train derailment, and it is imperative we undertake every measure necessary to ensure the safety of our nation's communities through which these crude oil tank cars pass," he said in a statement.

Kevin Thompson, spokesman for the Federal Railroad Administration, said the agreement was just one step in ongoing efforts to improve the safety of crude oil shipments by rail.

"All communities will see a reduced risk of derailments because of increased track and mechanical inspections and the use of enhanced braking technology" under the safety agreement, Thompson said.

AKE-01	The refinery already treats a wide variety of crude oil from different sources, many of which are of similar quality to tar sands. The refinery is specifically designed to treat heavy, low quality crude oil. The RDEIR examined changes in emissions associated with a change of slate, as indicated in Section 4.3.4.2, Air Quality and Greenhouse Gases, which sates " For the SMR, key crude slate parameters that could impact air emissions include the percent of BTEX, vacuum resid, sulfur and metals in the crude oil. " The BTEX was analyzed in the health risk assessment to determine the increased health risk. Increased sulfur was assessed as to the increased sulfur truck trips that would be required. None of the other components would alter the emissions at the refinery as the heavy metals would not be emitted into the air from the SMR. Note that as the API gravity would be similar, the emissions of volatile components (ROG) from fugitive emissions would be similar with the change in crude slate. BTEX levels of Canadian tar sands crude oil are similar to other heavy crude oil processed by the SMR and the RDEIR demonstrates that any increases in BTEX would generate a nominal increase in health risk. See Response to CBE-21 and CBE-23. The metals in the tar sands oil would not be volatilized at the SMR or along transportation routes and would therefore not contribute to increases in air-based health risk. The Canadian tar sands are not as "explosive" as Bakken crude oil and present similar risks to the rail transportation of heavy crudes that currently occur within California and through SLOC. The use of higher sulfur crude oils would increase the amount of sulfur produced at the SMR. This increase in sulfur and the associated truck trips are addressed in the RDEIR in Section 4.3, Air Quality and Greenhouse Gases. Emissions of sulfur dioxide are not anticipated to increase as most of the sulfur in the crude is removed as elemental sulfur and trucked from the site and the SLOCAPCD has limits on the emissions of sulfur dioxide from the refinery processing equipment. As the SMR already processes heavy crude oils, and the tar sands crude oils would have a similar proportion of heavier materials, the production of coke is not expected to change with the project. Additional information on the make up the projected crudes compared with the current crude slate at the SMR is provided in Chapter 2.0, Project Description. The increased levels of nickel, vanadium, lead and copper do not affect air emissions as none of the crude oil is combusted and none of the metals are carried over in the fuel gas. The metals would remain in the coke. Sulfur production would increase producing potentially more sulfur trucks trips, as discussed in the RDEIR in Section 4.12, Transportation and Circulation.

	A study performed by the SLOCAPCD, the South County Phase 2 Particulate Study, evaluated whether impacts from off-road vehicle activities at the Oceano Dunes State Vehicle Recreational Area (SVRA), the Phillips Refinery coke piles, and adjacent agricultural fields were contributing to the particulate problems on the Nipomo Mesa (SLOC APCD 2010). The Phase 2 portion of the study concluded that off-road vehicle activity in the SVRA is a major contributing factor to the PM concentrations observed on the Nipomo Mesa and that neither the petroleum coke piles at the Phillips facility nor agricultural fields or activities in and around the area are a significant source of ambient PM on the Nipomo Mesa. The composition of the particulates is predominately natural crustal particles. The SLOCAPCD has determined that the dune complex along the coast of the Five Cities area is the source of the high particulate matter levels measured at the South Coast stations (SLOCAPCD Annual Emissions Report, 2013). The SMR has a coke dust plan to reduce coke dust and it does involve watering. However, the proposed Project is not anticipated to increase coke handling or contribute to dust particulate levels in the area. Air quality violations on the mesa a primarily associated with natural crustal particulates.
AKE-02	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.