

**From:** Schultz, Shirley  
**To:** [Gerry Pade](#)  
**Cc:** [Erickson, Ryan](#); [Carole Cenci](#)  
**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive  
**Date:** Tuesday, December 20, 2016 10:31:39 AM  
**Attachments:** [image001.png](#)  
[image002.jpg](#)  
[image003.png](#)

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Hi, Gerry –

Our main concern would be a public safety impact, so I was most interested in hearing from Ryan and whether he would need any additional review.

Since Ryan has responded that he does not see a need for additional review, the City would concur that there are no other items that would warrant further study.

Thanks for checking in –

## Shirley Schultz

City of Tacoma | Development Services

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[shirley.schultz@cityoftacoma.org](mailto:shirley.schultz@cityoftacoma.org)

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**From:** Gerry Pade [mailto:[GerryP@pscleanair.org](mailto:GerryP@pscleanair.org)]  
**Sent:** Monday, December 19, 2016 9:10 AM  
**To:** Schultz, Shirley  
**Cc:** Erickson, Ryan; Carole Cenci  
**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Shirley Schultz  
City of Tacoma

Dear Ms. Schultz,

I need to know if you believe the previous SEPA determinations adequately addressed Targa's current proposal to bring in natural gasoline by rail, store it, and load it onto marine vessels.

The SEPA documents for railcar unloading/marine loading (SHR2013-40000203722) state that *"The MVCU [Marine Vapor Combustion Unit] will be used as a primary method of controlling volatile organic compound (VOC) emissions that occur during the marine loading of crude, petroleum products, and renewable fuels to vessels. These products include, but are not limited to, ethanol, gasoline, and crude oil..."* *"The modification of the rail unloading facility includes the installation of two pumps and associated piping, fixtures and associated electrical equipment to allow unloading of crude oil at all 36 spots simultaneously. Targa will also replace an existing ethanol pump with two new pumps."*

The SEPA documents for the connection to the Olympic Pipe Line and the new (northern) tank farm (SHR2011-40000162962) use the terms “fuel tanks” and “petroleum products” without reference to the specific products to be stored therein.

I’ve been working with Ryan Erickson at the Tacoma Fire Dept. in an attempt to develop restrictions on the chemical properties (vapor pressure, sulfur and benzene contents) of the natural gasoline that would be commensurate with the crude oil and gasoline previously reviewed. His primary concern has been the flammability classification. Since they’re all class IA flammable liquids under the IFC, he doesn’t see a need for additional environmental review.

The proposal represents approximately one unit train per week of natural gasoline (each carrying 107 railcars) and two barges per month. Similar (crude-by-rail) proposals elsewhere have garnered significant public interest and extensive environmental review, though the previous permits issued to Targa apparently did not.

Please let me know your thoughts so that I can continue processing the permit application.

Gerry Pade  
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**From:** Erickson, Ryan [<mailto:RErickso@ci.tacoma.wa.us>]  
**Sent:** Friday, December 16, 2016 4:15 PM  
**To:** Gerry Pade  
**Cc:** Schultz, Shirley  
**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Gerry,

Thanks for the excellent correspondence with me over this matter. Based on your assessment below, there is no initial trigger for TFD to request additional environmental review of shipping natural gasoline (NGL) by rail due to the similar flammability and material classification (Class IA) to the Bakken crude oil already reviewed for this site.

Best Regards,

**RYAN ERICKSON, P.E.**  
Fire Code Official

Tacoma Fire Department | Prevention Division  
901 Fawcett Avenue | Tacoma, WA 98402  
253.591.5739 | [rerickson@cityoftacoma.org](mailto:rerickson@cityoftacoma.org)



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**From:** Gerry Pade [<mailto:GerryP@psc Cleanair.org>]  
**Sent:** Tuesday, December 13, 2016 4:06 PM  
**To:** Erickson, Ryan  
**Subject:** FW: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Ryan Erickson  
Tacoma Fire Dept.

Dear Mr. Erickson,

**Bakken crude oil** has a flash point <73°F and an initial boiling point of 90-105°F (95°F typical), according to the N. Dakota Petroleum Council (<https://www.ndoil.org/resources/bkn/>). Per the 2015 IFC, it should be a IFC Class IA flammable liquid. Per DOT's hazmat classification system, it would be a Class 3 Packing Group 1 or 2 liquid. The N. Dakota Petrol Council report cites a Pipeline and Hazardous Materials Safety Administration report saying "*We conclude that while this product does not demonstrate the characteristics for a flammable gas, corrosive liquid or toxic material, it is more volatile than most other types of crude.*" The PHMSA claims that Bakken crude has "*higher gas content, lower flash point, lower boiling point and higher vapor pressure than other crude oils.*" See also a Congressional Research Service report on Crude Oil Properties Relevant to Rail Transport Safety (<https://www.hsdl.org/?view&did=751042>).

**Natural gasoline** has a flash point <73°F but its initial boiling point varies widely (58-275°F according to CAMEO – Computer-Aided Management of Emergency Ops). An RVP of 14.7 psi should correspond to a boiling point of 100°F, so natural gasoline with a higher RVP should classify as an IFC Class IA flammable liquid and any with a lower RVP should classify as Class IB. A safety data sheet from UEP Buckeye provided with Targa's permit application showed an RVP of 11.8 psi. However, I don't believe Targa wants to be limited to that particular company's product.

I was thinking of limiting the RVP of the natural gasoline to <16 psi in order to keep its true vapor pressure below 11 at actual storage temperature (EPA regs limit it to <11.1 psia at the maximum monthly average storage temperature). If the TFD wants a lower limit on the RVP, I would certainly consider that. Methods for determining the true vapor pressure from the Reid Vapor Pressure (RVP) are available (<http://www.jmcampbell.com/tip-of-the-month/2016/02/correlations-for-conversion-between-true-and-reid-vapor-pressures-tpv-and-rvp/>). I used equations 1b through 3b and the parameters in Table 1 to calculate an RVP equivalent of 16.8 for natural gasoline with a true vapor pressure of 11.1 psia @71.1°F. Natural gasoline with an RVP <16.6 should have a true vapor pressure <11 psia.

Another other aspect of natural gasoline that distinguishes it from Bakken crude is its sulfur content. Bakken crude is "sweet", meaning it has a sulfur content <0.5% by weight. The ND Petroleum Council report above shows a sulfur content <0.2% and H2S content <10 ppm – typically <1 ppm.) Like crude oil, natural gasoline can be sweet or sour. A spill of sour natural gasoline could present exposure/inhalation

hazards. I was thinking restricting Targa to sweet natural gasoline only. According to Targa, their contract will limit worker exposure (presumably from storage tanks) to <10 ppm H2S, which is the NIOSH REL (10-min) and the WISHA PEL (TWA); WISHA's STEL is 15 ppm (see WAC 296-841-20025). Notwithstanding, it's possible that spill exposures would be higher than those found downwind of a storage tank.

Please let me know your thoughts on this. Thanks.

Gerry Pade  
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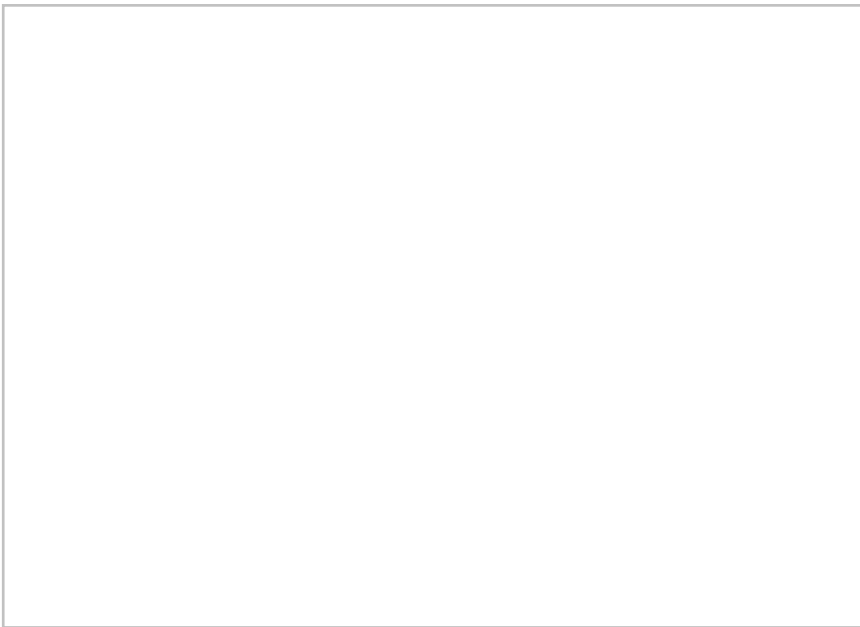
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**From:** Erickson, Ryan [<mailto:RErickso@ci.tacoma.wa.us>]  
**Sent:** Tuesday, December 13, 2016 12:01 PM  
**To:** Gerry Pade  
**Cc:** Carole Cenci; Schultz, Shirley  
**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Hi Gerry,

It was great talking with you today.

Here is the definition of a FLAMMABLE LIQUID in the adopted 2015 International Fire Code (IFC). There are Class IA, IB and IC classifications:



Regards,

**RYAN ERICKSON, P.E.**

Fire Code Official

Tacoma Fire Department | Prevention Division

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**From:** Schultz, Shirley

**Sent:** Monday, December 12, 2016 1:43 PM

**To:** Gerry Pade

**Cc:** Erickson, Ryan; Carole Cenci

**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Hi, Gerry –

We let this one slide. I'm so sorry! Ryan and I are going to chat this week – if we get back to you by Thursday (ish) would that be okay?

And, Hi, Carole!

**Shirley Schultz**

City of Tacoma | Development Services

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**From:** Gerry Pade [<mailto:GerryP@psc Cleanair.org>]  
**Sent:** Monday, December 12, 2016 11:00 AM  
**To:** Schultz, Shirley  
**Cc:** Erickson, Ryan; Carole Cenci  
**Subject:** FW: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Hi Shirley,

Just thought I'd follow-up on this.

Gerry Pade  
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**From:** Gerry Pade  
**Sent:** Monday, November 21, 2016 11:45 AM  
**To:** 'Schultz, Shirley'  
**Cc:** 'Erickson, Ryan'  
**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Hi Shirley,

By law (40 CFR Part 60, Subpart Kb), these tanks could not store products with a true vapor pressure >0.5 psia without a floating roof. At the time (3 years ago), the only such products being discussed were crude oil, gasoline, and denatured ethanol. Now they are looking at isooctane and 'natural gasoline'. Natural gasoline is a condensate from natural gas wells (or associated gas field extraction processes) and can be more volatile than gasoline or crude oil. The PSCAA permit will likely require the natural gasoline to have an RVP<16, which will keep the true vapor pressure <11.1 psia (the highest allowed by for storage in a floating roof tank).

Targa built facilities for offloading crude oil and ethanol from railcars and for loading crude oil, ethanol, and gasoline onto marine vessels. The City was lead agency for those projects. Targa hasn't had any customers for that service yet. They are presently courting customers interested offloading isooctane and natural gasoline from railcars for shipment by marine vessels. The proposed natural gasoline throughput of 151,500,000 gal/yr represents approximately one unit train per week (each carrying 107 railcars) and two ocean-going barges per month. Crude oil shipments by rail have garnered significant public interest. Ecology and Skagit County prepared an EIS for the Shell crude by rail unloading facility (<http://www.ecy.wa.gov/geographic/anacortes/shelloil.html>). EFSEC prepared an EIS for the Tesoro

marine crude export terminal (<http://www.efsec.wa.gov/Tesoro-Savage.shtml>).

I'm asking if you believe the City's previous SEPA determinations (attached) adequately addressed the current proposal.

Gerry Pade  
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**From:** Schultz, Shirley [<mailto:shirley.schultz@ci.tacoma.wa.us>]  
**Sent:** Monday, November 21, 2016 10:48 AM  
**To:** Gerry Pade; Erickson, Ryan  
**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Hi, Gerry –

Thanks again for the phone call this morning and the reminder to respond to this. Upon reviewing the file and the associated SEPA, we reviewed the permits for unloading crude oil (which Targa was already doing) and capturing vapors on the dock when loading ships/barges. The vapor control unit did reference "petroleum products" but the rail car facility was described as crude.

The other reference to "natural gasoline" is oblique in the tank roof description:



The differing fuels were noted in the 2012 SEPA for the tank farm expansion, but the assumption was that they'd arrive via pipeline and not by rail or truck.

In the end, I don't think our SEPA addressed – at least not adequately – the potential for a more volatile

substance at the rail unloading facility. To that end, I've copied Ryan Erickson in our Fire Department on this email for his input – he is well-versed in petroleum product hazards. He may have additional input as to whether the City has any permitting authority in this case, or whether PSCAA needs to require additional environmental review.

Thanks again – I'll discuss with Ryan and we'll probably have more on this topic.

## Shirley Schultz

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**From:** Gerry Pade [<mailto:GerryP@psc Cleanair.org>]

**Sent:** Friday, November 04, 2016 3:55 PM

**To:** Schultz, Shirley

**Subject:** RE: City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Shirley Schultz

City of Tacoma Development Services

Dear Ms. Schultz,

I'm reviewing a proposal from Targa Sound Terminal (4130 E 11<sup>th</sup> St, also 2628 Marine View Dr) to receive "natural gasoline" by railcar, store it in one of four existing tanks (to be modified with floating roofs), and load it onto marine vessels. "Natural gasoline" is a condensate from natural gas wells (or associated gas field extraction processes) and is more volatile than gasoline or crude oil. It's commonly used as a denaturant for fuel-grade ethanol but can also be added in higher amounts to produce E85. It's otherwise unsuitable for motor vehicles.

No physical changes would be made to the 36 existing railcar unloading stations or to the marine loading facility. The railcar unloading facility capacity is already limited to the extent that offloading natural gasoline means reducing the amount of crude oil, ethanol, or isooctane that can be offloaded. Crude oil represents the worst case scenario for a spill cleanup but "natural gasoline" might be even more likely to ignite. The permit will limit its volatility sufficient to enable storage in floating roof tanks but it would still be more volatile than the crude oil. The proposed throughput of 151,500,000 gal/yr represents one unit train per week (each carrying 107 railcars) and two ocean-going barges per month.

The City of Tacoma issued an MDNS on 3/20/12 by for the new tank farm (which includes the tanks to be modified with floating roofs) and a DNS on 12/5/13 for the railcar unloading facility and the equipment for marine loading of light products (see attachments). Do you think they adequately addressed this new



proposal?

Gerry Pade  
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**From:** Schultz, Shirley [<mailto:shirley.schultz@ci.tacoma.wa.us>]  
**Sent:** Thursday, December 05, 2013 9:55 AM  
**To:** 'Butorac, Diane (ECY)' ([dbut461@ecy.wa.gov](mailto:dbut461@ecy.wa.gov)); SEPA Unit ([sepaunit@ecy.wa.gov](mailto:sepaunit@ecy.wa.gov)); [pehl461@ecy.wa.gov](mailto:pehl461@ecy.wa.gov); Jennifer Dold; SEPA Review Notices; Carole Cenci; 'LaSpina, Jim (UTC)' ([JLaSpina@utc.wa.gov](mailto:JLaSpina@utc.wa.gov)); [jkeiser@targaresources.com](mailto:jkeiser@targaresources.com); Kolata, Matthew ([mkolata@targaresources.com](mailto:mkolata@targaresources.com)); Ranes, Justin M ([jranes@targaresources.com](mailto:jranes@targaresources.com)); OConnell, Keith ([keith.oconnell@urs.com](mailto:keith.oconnell@urs.com)); [larose@healthybay.org](mailto:larose@healthybay.org); Warfield, Tony; Gretchen Kaehler ([gretchen.kaehler@dahp.wa.gov](mailto:gretchen.kaehler@dahp.wa.gov)); Adams, Monica (Pierce Transit); Darci Brandvold ([dbrandv@co.pierce.wa.us](mailto:dbrandv@co.pierce.wa.us)); [sepacenter@dnr.wa.gov](mailto:sepacenter@dnr.wa.gov)  
**Cc:** McKnight, Reuben; Boudet, Brian; Huffman, Peter; SWRO Alex Callender ([acal461@ecy.wa.gov](mailto:acal461@ecy.wa.gov))  
**Subject:** City of Tacoma Notice of Decision - SHR2013-40000203722 - Targa Sound Terminal - 2628 Marine View Drive

Good morning all,

Attached please find the Shoreline Substantial Development Permit and SEPA DNS for Targa Sound Terminal. The file can also be found at [www.tacomapermits.org](http://www.tacomapermits.org) under “message board”.

**Proposal:**

The applicant is requesting a Shoreline Substantial Development Permit and critical areas review for modification to a rail car unloading facility at Taylor Way, as well as tank installation and installation of a Marine Vapor Combustion Unit that has an associated Dock Safety Unit (DSU) to be installed on the existing marine loading dock on Marine View Drive. The site is located within the “S-10” Shoreline District – Port Industrial and the “PMI” Port Maritime Industrial District.

**LOCATION:**

2628 Marine View Drive and 1515 (1601) Taylor Way  
Parcel Nos. 0321264046, 0321264073, 2275200211, 0321264048, 0321262062, 0321263048 and 0321263030

**DECISION:**

The requested permits are **Approved** subject to conditions.

**NOTE:** Last day to request reconsideration **December 19, 2013.**

This decision will be final on **December 20, 2013** and will be transmitted to the Department of Ecology at that time, provided no requests for reconsideration are timely filed as identified in APPEAL PROCEDURES

of this Report and Decision. Upon receipt by Department of Ecology, a 21-day appeal period will begin.

Additional materials referenced – including all exhibits and supplemental materials – are available upon request. I can provide materials in electronic format (preferred) or in paper copies.

**Shirley Schultz**

City of Tacoma | Development Services

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