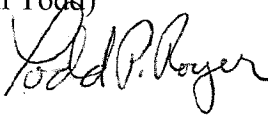


Memorandum

Date: June 21, 2017
To: Glenn Price (Frost Brown Todd)
From: Todd Royer (AECOM) 
Subject: *California TRU Emissions Requirements*

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AECOM was requested to document the emissions standards applicable to Transportation Refrigeration Units (TRUs) in California effective on January 11, 2016. This information is of interest because the JBS/Swift Conditional Use Permit for the Cabel Street Lot requires, beginning July 11, 2017, that all TRUs operating on the lot meet California standards for diesel fuel emissions that were in effect as of January 11, 2016. This memo briefly explains the requirements of the California TRU regulation and the compliance method that JBS/Swift may use to comply with this Conditional Use Permit requirement.

California TRU Regulation Summary

The California regulations for TRUs have not changed since January 2016 and are reflected in California Code of Regulations, Title 13, Division 3, Chapter 9, Article 8 Section 2477. Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate. (https://www.arb.ca.gov/diesel/tru/documents/fro_10-16-12.pdf)

The California TRU rules require that, over time, all TRU engines meet “ultra-low emissions” performance standards equivalent to the Federal Tier IV standards. TRU diesel engines beginning with the 2013 model year and newer are already required by Federal US EPA regulations to meet ultra-low emissions Tier IV performance. The California regulations add a requirement that, over time, engines with model years older than 2013 must either be phased out of service or be retrofitted with ultra-low emissions controls. The California TRU regulation compliance schedule requires that engines older than 2013 be upgraded or taken out of service no later than the end of the seventh year after their model year. For example, model year 2009 TRU engines must have been upgraded by the end of 2016 (Dec. 31, 2016), and model year 2010 must be upgraded by the end of 2017, etc. A copy of the compliance schedule for the California regulation is attached to this memo as Attachment A. The regulation also has some other compliance options, such as use of hybrid or electric TRUs which are less likely to be applicable to JBS/Swift’s Louisville operation.

JBS/Swift Compliance Plan

The most straightforward method for JBS/Swift to comply with these California TRU regulations (beginning on July 11, 2017) is to require that transporters using the Cabel Street Lot only use TRU engines that either:

- a) Already have ultra-low emissions engines (i.e., 2013 or newer model years) or
- b) The TRUs are new enough that they are not yet required by the California TRU rule compliance schedule to have been upgraded/retrofitted (i.e., not older than seven years).

This method of compliance (a or b) requires that carriers using the Cabel Street Lot verify their use of appropriately recent model year engines. The below table summarizes the engine model years that would comply with the California TRU requirements for each of the next several years.

| Calendar Year | Engine Model Years that Comply with California TRU regulation (without further upgrade/retrofit) |
|----------------------|---|
| 2017 | 2010 or newer |
| 2018 | 2011 or newer |
| 2019 | 2012 or newer |
| 2020 and afterward | 2013 or newer |

Using the above table, JBS/Swift carriers using the Cabel Street Lot can comply with the conditional use permit by verifying the engine model years of their TRUs used. The TRU engine model year is provided on a label on most engines (Unit Serial Number Label, Engine Model and Power Rating Label, or Engine Emissions Label) or can be determined based on the engine's serial number. (e.g.: https://www.arb.ca.gov/arber/documents/trudocs/carrier-unit&engine_labels.pdf)

Older TRU engines could be used if they have been retrofitted with ultra-low emissions controls. However, because only California requires emissions retrofits for TRU units, it is unlikely that many engines operating this far from California will have been upgraded. Likewise, certain other alternative technologies (hybrid, electric, etc.) would meet the California requirements but very few, if any, such TRUs are believed to be in general service in this region.

If you have any additional questions about this information, feel free to call me at 502-217-1511 or email at todd.royer@aecom.com

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Attachment A

Compliance Schedule for TRU regulation from California Air Resources Board (CARB) website.

Compliance Schedule

| | |
|-------------------|---|
| July 31, 2009 | All California-based TRUs must be registered with ARB. Initial Operator Report must also be submitted by this date. |
| August 2009 | ARB staff began field enforcement for registration of all California-based TRUs. |
| December 31, 2009 | Model year (MY) 2001 and older and MY 2002 engines must meet the Low-Emission TRU (LETRU) In-Use Performance Standard. |
| January 2010 | In-Use Performance Standard enforcement began. |
| December 31, 2010 | MY 2003 engines must meet either LETRU or the Ultra-Low-Emission TRU (ULETRU) In-Use Standard (Enforcement begins March 31, 2011) |
| December 31, 2011 | MY 2004 engines less than 25 hp must meet LETRU or ULETRU. MY 2004 engines 25 hp and greater must meet ULETRU |
| December 31, 2012 | MY 2005 engines must meet ULETRU. |
| December 31, 2013 | MY 2006 engines must meet ULETRU. |
| December 31, 2014 | MY 2007 engines must meet ULETRU. |
| December 31, 2015 | MY 2008 engines must meet ULETRU. MY 2001 & older engines that met LETRU by the end of 2008 or 2009 must meet ULETRU |
| December 31, 2016 | MY 2009 engines must meet ULETRU. MY 2002 engines that met LETRU by the end by 2009 must meet ULETRU |
| December 31, 2017 | MY 2010 engines must meet ULETRU. MY 2003 engines that met LETRU by the end of 2010 must meet ULETRU |
| December 31, 2018 | MY 2011 engines must meet ULETRU. MY 2004 less than 25 hp engines that met LETRU in 2011 must meet ULETRU |
| December 31, 2019 | MY 2012 engines must meet ULETRU. |
| End of each year | Must meet ULETRU by the end of the 7th year after the engine model year if new engine standard doesn't meet ULETRU. |

Source of above table:

<https://www.arb.ca.gov/diesel/tru/tru.htm>

Copy of the full California TRU regulation.

https://www.arb.ca.gov/diesel/tru/documents/fro_10-16-12.pdf

Example Engine Labeling showing where to obtain engine Model year.

https://www.arb.ca.gov/arber/documents/trudocs/carrier-unit&engine_labels.pdf

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