

Commitments for BNSF San Bernardino Railyard

The Air Resources Board (ARB) requests additional commitments from BNSF Railway (BNSF) to further reduce diesel particulate matter (PM) emissions at the BNSF San Bernardino Railyard between 2010 and 2020 ([hereinafter referred to as the 2010 Commitments](#)).

If BNSF fails to 1) achieve the Table 1 diesel PM emission reduction levels in 2011, 2013, 2015, 2017, or 2020; or 2) provide comprehensive or interim diesel PM emission inventories, air dispersion modeling, or emission reduction plans in compliance with the schedule in Table 2; ARB will initiate rulemakings as specified in Section 9. The commitments, and ARB oversight, will ensure that the BNSF San Bernardino Railyard diesel PM emission [reduction](#) levels are achieved, verifiable, and enforceable.

Summary of Commitments for the BNSF San Bernardino Railyard

BNSF commits to do the following at this railyard:

- Reduce 2005 diesel PM emissions from railyard operations by at least 45 percent by 2011, increasing the reductions to at least 85 percent by 2020, with intermediate commitments for emission reductions in calendar years 2013, 2015, and 2017 to ensure steady progress. BNSF is implementing existing U.S. Environmental Protection Agency (U.S. EPA) and ARB regulations and agreements and commits to initiate any additional actions needed to meet the diesel PM emission reduction levels on the stated schedule. This commitment shall be met irrespective of any increase in activity or growth at the BNSF San Bernardino Railyard through 2020, [consistent with the provisions of Section 13](#).
- As of 2005, BNSF had 14 older switch and medium horsepower locomotives assigned to the BNSF San Bernardino Railyard. Between acceptance of this commitment and December 31, 2015, BNSF plans to complete the replacement or repower of existing older switch and medium horsepower locomotives such that all switch and medium horsepower locomotives that operate within the railyard (more than 25 percent of annual hours or 25 percent of annual miles traveled or 25 percent of annual diesel fuel consumption) meet emission levels of 3.0 g/bhp-hr oxides of nitrogen (NOx) or less and emissions of 0.1 g/bhp-hr PM or less (over the U.S. EPA line-haul duty cycle).
- By December 31, 2011 and December 31, 2012, evaluate and provide recommendations, if any, for implementation of those changes in railyard operations that BNSF believes may significantly reduce railyard diesel PM emissions, or changes in the location of the railyard emission sources that ARB believes may reduce health risk, and that meet all other specified criteria articulated in Section 6.

Revised Draft 12/31/2010

- Beginning one month after BNSF's acceptance of these commitments, identify any non-preempted switch or medium horsepower locomotive that operates more than five consecutive calendar days within the railyard and subsequently report this information to ARB with BNSF's annual reports pursuant to the 1998 Locomotive NOx Fleet Average Agreement.
- Prepare and submit railyard diesel PM emission inventories, air dispersion modeling analyses, and emission reduction plans in each year specified in Table 2.
- Work collaboratively with ARB to provide ongoing communication of railyard diesel PM emission reduction progress to the public through local community meetings and fact sheets.

As part of a broader initiative, BNSF commits to:

- Between 2011 and December 31, 2015, work collaboratively with ARB to develop and implement a formal demonstration program for advanced locomotive engines or aftertreatment devices, or other mutually agreed upon technologies to reduce emissions within the railyard. The objective of the locomotive demonstration program will be to support separate, but potentially parallel, efforts to achieve ARB verification of one or more advanced locomotive engines or aftertreatment devices for ultra low emitting switch and medium horsepower locomotives to achieve emission levels that are equal to or less than U.S. EPA Tier 4 NOx and/or PM emission standards.
- Make available ~~Lean~~ two existing gen-set switch, ~~or~~ medium horsepower, or other locomotives annually through 2015 and provide any necessary technical assistance as BNSF's in-kind contribution to support the demonstration program. If the demonstration program is completed prior to 2015, BNSF's obligation to make these locomotives available would be satisfied as of the completion date.

ARB commits to:

- Install and operate one particulate matter (PM2.5) ambient air quality monitor to provide an indication of air quality in the communities near the BNSF San Bernardino Railyard, or to secure a commitment from the South Coast Air Quality Management District to do so, consistent with a siting and operation protocol supported by ARB.
- Prepare periodic health risk assessments (HRAs) as indicated in Table 3 for the railyard using the comprehensive railyard diesel PM emission inventories and air dispersion modeling analyses submitted by BNSF. Also to prepare periodic estimates of future health risks, through 2020, following BNSF's submittal of draft and final emission reduction plans.

Revised Draft 12/31/2010

- Review the emission inventories, air dispersion modeling, and emission reduction plans submitted by BNSF to determine the sufficiency of the information provided and notify BNSF of any deficiencies.
- Determine compliance with the diesel PM emission reduction levels for each of the years specified in Table 1, based on the comprehensive inventories submitted by BNSF and independent ARB verification through inspections, field surveys, and other mechanisms.
- Monitor BNSF's compliance with the commitments in this document, determine if BNSF has met its obligations, and if BNSF has failed to meet the commitments in specified sections, submit rulemakings for locomotives and railyards to the Board within four months from the date of any final determination of non-compliance, as specified in Section 9.
- Support BNSF's efforts to evaluate options for operational changes with technical assistance to evaluate the potential impacts of such changes on health risk for the railyard.

1. What are the commitments to reduce diesel PM emissions?

BNSF shall meet the diesel PM emission reduction levels at the BNSF San Bernardino Railyard by the specified compliance deadlines as set forth in Table 1 irrespective of receipt of public incentive funds. BNSF may, however, use incentive funds, if available, to achieve the emission reduction levels. This includes funds under Proposition 1B to replace, repower, or retrofit locomotives. To meet the 85 percent reduction level, ARB staff estimates that the railyard diesel PM emissions of 22.2 tons per year in 2005 will need to be reduced to about 3.4 tons per year by 2020.

Typical emission sources within the railyard affected by the diesel PM emission reduction levels in Table 1 include interstate line haul locomotives, switch and medium horsepower locomotives, drayage trucks, cargo handling equipment such as cranes and yard hostlers, transport refrigeration units operated with drayage trucks or railcars, and stationary engines and maintenance equipment. Passenger locomotive emissions are excluded from the calculation of railyard diesel PM emissions and reductions used to determine compliance with Table 1.

**Table 1. BNSF San Bernardino Railyard
Diesel PM Emission Reduction Levels and Schedule**

| Compliance Deadline | <u>Percent Diesel PM Reductions from 2005 Baseline*</u> | <u>Tons per Year Diesel PM Reductions from 2005 Baseline**</u> |
|----------------------------|--|---|
| December 31, 2011 | 45 percent | <u>10.0</u> |
| December 31, 2013 | 50 percent | <u>11.1</u> |
| December 31, 2015 | 68 percent | <u>15.1</u> |
| December 31, 2017 | 73 percent | <u>16.2</u> |
| December 31, 2020 | 85 percent | <u>18.9</u> |

* If, after the effective date of this program, ARB reduces the stringency or extends the effective date of ARB regulations affecting non-locomotive diesel PM emission sources at railyards, or U.S. EPA reduces the stringency or extends the effective date of its locomotive PM emission standards, the diesel PM emission reduction levels will be adjusted by ARB accordingly.

** Tons subject to revision if ARB updates the 2005 Baseline number.

ARB staff will use the emissions inventory reported in the 2005 Health Risk Assessment as the 2005 baseline, together with the comprehensive emission inventory submittals for subsequent years, to determine compliance with the Table 1 emission reduction levels. If ARB revises the ARB Railyard Emission Inventory Methodology (2006), ARB staff will recalculate the 2005 Baseline and apply the percent diesel PM reduction listed in Table 1 to update the associated tons per year of diesel PM reductions required by each compliance deadline. ARB staff will validate the inventory information through a thorough technical review of the data, ongoing ARB railyard inspections, ARB field surveys, and ARB tracking of locomotive and railyard operations.

2. Does growth change the commitments to reduce diesel PM emissions?

No. BNSF commits to reducing diesel PM emissions from the BNSF San Bernardino Railyard by at least 85 percent by 2020 and meeting the intermediate levels in Table 1, regardless of the potential increases in railyard activity levels, such as the number of container lifts.

3. How can BNSF reduce railyard diesel PM emissions 85 percent by 2020?

ARB's supporting analysis for feasible emission reductions at the BNSF San Bernardino Railyard is located in a separate document entitled, *Basis for Proposed Commitments to Reduce Diesel Particulate Matter at the BNSF San Bernardino Railyard (Basis for Proposed Commitments: June 2010)*. This *Basis for Proposed Commitments* document describes possible options that could be implemented to achieve the Table 1 diesel PM emission reduction levels.

[Revised Draft 12/31/2010](#)

In 2005, the railyard generated an estimated 22.2 tons per year of diesel PM emissions from freight operations. ARB staff estimates that existing U.S. EPA and ARB regulations and agreements will reduce diesel PM emissions at the railyard down to 7.0 tons per year by 2020 (a 68 percent reduction). ARB staff estimates that BNSF can further cut the railyard diesel PM emissions by 3.4 ~~3.6~~ tons per year by 2020 (achieving an 85 percent reduction compared to 2005 levels).

4. What are the railroad commitments to prepare and submit emission inventories, air dispersion modeling, and emission reduction plans? What are the ARB commitments to publicly release the railroad documents and health risk assessments?

Table 2 shows the schedule for BNSF to submit the railyard diesel PM emission inventories, air dispersion modeling, and draft and final emission reduction plans. Table 3 identifies the dates by which ARB shall release the railyard diesel PM emission inventories, air dispersion modeling, health risk assessments, and the emission reduction plans for public review.

**Table 2. BNSF San Bernardino Railyard
Schedule for BNSF Submittal of Documents: Emission Inventories,
Air Dispersion Modeling, and Emission Reduction Plans**

| <u>Calendar Railyard Operations Year</u> | Emission Inventory ^a | Air Dispersion Modeling | Draft Emission Reduction Plan | Final Emission Reduction Plan |
|--|--|-------------------------|-------------------------------------|-------------------------------|
| 2009 | Sep 30, 2010(I) | ----- | Oct 15, 2010 | Dec 31, 2010 |
| 2010 | Apr 1, 2011 <u>TBD^b</u> (I) | ----- | TBD^b ----- | TBD ----- |
| 2011 | Apr 1, 2012 (C) | Jun 1, 2012 | Sep 1, 2012 | Dec 31, 2012 |
| 2012 | Apr 1, 2013 (I) | ----- | ----- | ----- |
| 2013 | Apr 1, 2014 (C) | Jun 1, 2014 | Sep 1, 2014 | Dec 31, 2014 |
| 2014 | Apr 1, 2015 (I) | ----- | ----- | ----- |
| 2015 | Apr 1, 2016 (C) | Jun 1, 2016 | Sep 1, 2016 | Dec 31, 2016 |
| 2016 | Apr 1, 2017 (I) | ----- | ----- | ----- |
| 2017 | Apr 1, 2018 (C) | Jun 1, 2018 | Sep 1, 2018 | Dec 31, 2018 |
| 2018 | Apr 1, 2019 (I) | ----- | ----- | ----- |
| 2019 | Apr 1, 2020 (I) | ----- | ----- | ----- |
| 2020 | Apr 1, 2021 (C) | ----- | ----- | ----- |

Revised Draft 12/31/2010

^a (C) = Comprehensive Emission Inventory. (I) = Interim Emission Inventory.

^b [If the 2010 Commitments become effective after \(TBD\), 2014, the schedule for these documents required for Calendar Year 2010 is extended by adding the number of days between \(TBD\) and the effective date.](#)

**Table 3. BNSF San Bernardino Railyard
Schedule for ARB Release of Documents: Emission Inventories, Air Dispersion Modeling, ARB Health Risk Assessments, and Emission Reduction Plans**

| <u>Calendar Railyard Operations Year</u> | <u>Railroad Emission Inventory^a</u> | <u>Railroad Air Dispersion Modeling</u> | <u>ARB Health Risk Assessment</u> | <u>Railroad Draft Emission Reduction Plan^b</u> | <u>Railroad Final Emission Reduction Plan^b</u> |
|--|--|---|-------------------------------------|---|---|
| 2009 | Oct 15, 2010 (I) | ----- | Nov 15, 2010^e | 31 Nov 1, 2010 | Jan 15, 2011 |
| 2010 | TBD Apr 15, 2011 ^c (I) | ----- | TBD^{c,d} | TBD^c | TBD |
| 2011 | Apr 15, 2012 (C) | Jun 15, 2012 | Oct 1, 2012 | Oct 1, 2012 | Jan 15, 2013 |
| 2012 | Apr 15, 2013 (I) | ----- | ----- | ----- | ----- |
| 2013 | Apr 15, 2014 (C) | Jun 15, 2014 | Oct 1, 2014 | Oct 1, 2014 | Jan 15, 2015 |
| 2014 | Apr 15, 2015 (I) | ----- | ----- | ----- | ----- |
| 2015 | Apr 15, 2016 (C) | Jun 15, 2016 | Oct 1, 2016 | Oct 1, 2016 | Jan 15, 2017 |
| 2016 | Apr 15, 2017 (I) | ----- | ----- | ----- | ----- |
| 2017 | Apr 15, 2018 (C) | Jun 15, 2018 | Oct 1, 2018 | Oct 1, 2018 | Jan 15, 2019 |
| 2018 | Apr 15, 2019 (I) | ----- | ----- | ----- | ----- |
| 2019 | Apr 15, 2020 (I) | ----- | ----- | ----- | ----- |
| 2020 | Apr 15, 2021 (C) | ----- | ----- | ----- | ----- |

^a (C) = Comprehensive Emission Inventory. (I) = Interim Emission Inventory.

^b Following submittal of the draft and final emission reduction plans, ARB staff will provide a brief supplemental document that estimates the associated health risk for future compliance years.

^c [If the 2010 Commitments become effective after \(TBD\), the schedule for these documents required for Calendar Year 2010 is extended by adding the number of days between \(TBD\) and the effective date.](#)

^{e,d} ARB will estimate the health risk for the ~~2009~~2010 calendar year based on the ~~2009~~2010 interim inventory and the 2005 Health Risk Assessment data.

a. Railyard Diesel PM Emission Inventories

i. Comprehensive Diesel PM Emission Inventories

BNSF commits to prepare the comprehensive diesel PM emission inventories for calendar years 2011, 2013, 2015, 2017, and 2020. BNSF shall prepare each comprehensive diesel PM emission inventory for the railyard in accordance with *ARB Railyard Emission Inventory Methodology* (2006) or its subsequent revisions, using data for the whole of ~~that the preceding~~ calendar year. The comprehensive diesel PM emission inventories will include, to the extent reasonably available, detailed activity information such as locomotive event recorder data, hours of operation for cargo handling equipment and transport refrigeration units, and drayage truck time in operation within the railyard. The comprehensive inventory will also identify activity and growth projections through 2020, and the basis for those projections.

ii. Interim Diesel PM Emission Inventories

BNSF commits to prepare interim diesel PM emission inventories for the railyard for calendar years ~~2009~~, 2010, 2012, 2014, 2016, 2018, and 2019, using data for the whole of the calendar year. The interim emission inventories will identify and utilize updates on locomotive usage, other equipment changes, and activity levels (e.g., number of lifts, drayage truck activities, locomotive shop releases, if applicable) to quantify changes to the last comprehensive diesel PM emission inventory. [The interim inventory for calendar year 2010 will quantify changes to the comprehensive 2005 diesel PM emission inventory.](#) ARB staff will use the interim emission inventories to consider if there are any potential issues with BNSF continuing to make sufficient progress in order to meet the railyard diesel PM emission levels specified in Table 1.

b. Air Dispersion Modeling

BNSF commits to prepare air dispersion modeling based on the schedule in Table 2. Air dispersion modeling is to be performed in accordance with *ARB Health Risk Assessment Guidance for Railyard and Intermodal Facilities* (2006) or its subsequent revisions. BNSF also commits to provide source apportionment data for receptors defined in the air dispersion model and a source contribution analysis. BNSF also commits to analyze the impacts on the modeled air concentrations from significant updates to the modeling methodology, such as the current version of AERMOD model from U.S. EPA, the availability of updated meteorological data, or any other modeling parameters or inputs which could substantively affect the modeling estimations.

c. Health Risk Assessments

ARB staff commits to prepare health risk assessments using the comprehensive diesel PM emission inventories and air dispersion modeling results. The risk assessments are to be prepared in accordance with *ARB Health Risk Assessment Guidance for Railyard and Intermodal Facilities* (2006) or its subsequent revisions. The updated risk

assessments will provide detailed information comparing excess cancer risks and non-cancer health effects with the estimates in the 2005 Health Risk Assessment. ARB staff will compare 2005 railyard emissions and associated health effects with risk assessment results for later years using the same or similar methodology, and also include a separate analysis for any subsequent changes in future year methodologies. ARB staff shall complete the health risk assessment reports for the railyard according to the schedule provided in Table 3.

Following BNSF's submittal of the draft and final emission reduction plans, ARB also commits to provide a brief supplemental document to the public that estimates the associated health risk for future compliance years. If ARB's health risk estimates for the draft emission reduction plan do not project that health risk will continue to be reduced, ARB shall include that information in its written comments to BNSF on BNSF's draft emission reduction plan.

d. Emission Reduction Plans

BNSF commits to submit draft and final emission reduction plans according to the schedule in Table 2. The emission reduction plans are to be based on the most recent railyard diesel PM emission inventories. The purpose of the plans is for BNSF to detail the actions it will take to reduce railyard emissions down to the levels shown in Table 1 for the next compliance deadline, and the range of potential actions it intends to pursue for subsequent compliance deadlines. The emission reductions plans will document existing and projected railyard diesel PM emissions through 2020 (accounting for growth), describe changes in source category activities, identify existing and future actions to cut emissions and provide specific implementation schedules for these actions.

e. ARB Review

i. Diesel PM Emission Inventories and Air Dispersion Modeling

Within 20 calendar days of receipt of a railyard comprehensive or interim diesel PM emission inventory, or air dispersion modeling, ARB shall review the submission for completeness and accuracy and will notify BNSF of its findings. If ARB determines that the submission is not complete and accurate, it will, within the above 20-day time period, notify BNSF in writing of any deficiency and the reasons therefore, and make such written notification publicly available.

Upon receipt of a notice of deficiency from ARB, BNSF will within 15 calendar days correct the deficiencies and resubmit the submission to ARB. Within 10 calendar days, ARB will notify BNSF as to whether the submission is complete and accurate. If not, ARB will make a preliminary determination of non-compliance following the procedures set forth in Section 9.b.c.ii below.

ii. Emission Reduction Plans

Within 30 calendar days of receipt of a draft railyard emission reduction plan, ARB shall review the plan for completeness and accuracy and shall notify BNSF of its findings. If ARB determines that the draft plan is not complete and accurate, or that the draft plan, in the ARB staff's opinion, cannot reasonably achieve the diesel PM reductions required by the next compliance deadline as set forth in Table 1, ARB shall, within the above 30-day time period, notify BNSF in writing of any deficiency and the reasons therefor, and make such written notification publicly available.

Within 30 calendar days of receipt of the final plan, ARB shall notify BNSF as to whether the plan is complete, accurate, and can reasonably achieve the diesel PM emission reductions required by the next compliance deadline as set forth in Table 1, and make sure such written notification is publicly available. If not, ARB shall make a preliminary determination of non-compliance as set forth in Section 9.~~b~~c.ii below. Subsequently, if the administrative appeals panel fully or partially affirms the finding of -ARB staff, BNSF will have 30 calendar days to submit to -ARB a revised final plan for the next compliance deadline to cure any deficiencies upheld by the panel. If BNSF fails to submit a revised final plan or if -ARB staff determines the revised final plan is still deficient, -ARB may immediately commence the rulemaking process outlined in the opening paragraphs of Section 9.

f. Commitment to Follow Through on Final Emission Reduction Plans

BNSF shall take the necessary actions identified in the final emission reduction plan in accordance with the plan's implementation schedules to meet the diesel PM emission reduction levels for the next compliance deadline as set forth in Table 1. If BNSF determines that alternative actions not identified in its most recent plan should be implemented to achieve the emission reduction levels for the next compliance deadline, and the alternative actions materially alter the pathway for achieving the emission reductions in the plan, BNSF will within 15 days of its determination notify ARB of the alternative actions and the reasons for the changes.

5. What is the commitment for public meetings and outreach?

BNSF and ARB commits to hold a public meeting no later than 30 days following the release of the BNSF draft emission reduction plan in 2011, and December 15 of ~~2010,~~ 2012, 2014, 2016, and 2018, with members of the surrounding community following the release of the most current ARB health risk assessment and BNSF draft emission reduction plan as specified in the Table 3 schedule. At the public meeting, BNSF and ARB staff will seek public input on the available documents prior to ARB's final determination on the emission reduction plan.

6. What is the commitment to evaluate options for operational changes?

BNSF commits to evaluate and provide recommendations, if any, for the implementation of those changes in railyard operations that BNSF believes may significantly reduce railyard diesel PM emissions or changes in the location of the railyard emission sources that ARB believes may reduce health risk. BNSF shall evaluate potential changes at the BNSF San Bernardino Railyard according to the following schedule, including:

- By December 31, 2011:
 - Electric infrastructure to support operation of rail mounted gantry cranes and stationary transport refrigeration units.

- By December 31, 2012:
 - Relocation of the truck gate (assessment has been prepared as part of the BNSF San Bernardino Railyard mitigation plan process in 2008).
 - Relocation of diesel-fueled yard tractors.
 - Relocation and reduction in hours of operation of diesel-fueled transport refrigeration units.

BNSF will conduct this one-time operational review considering, among other things, the potential diesel PM emissions reductions that could be achieved, the technical feasibility of such actions, the operational impacts on the railyard's throughput velocity and fluidity, safety, the availability of land and access, the costs and cost-effectiveness of such actions, and any railyard-specific factors at the BNSF San Bernardino Railyard. Each operational option shall be analyzed, and recommendations, if any, for implementation will be completed as soon as possible for this railyard, but in any case not later than December 31, 2012. BNSF shall provide the assessment and any recommendations for implementation of operational changes to ARB, and ARB will make them publicly available.

ARB commits to support these efforts with technical assistance and to evaluate the impacts of each potential operational change on the maximum individual cancer risk for the railyard. ARB will make the results of this evaluation publicly available.

7. Will BNSF be able to access incentive funding to support these commitments?

BNSF, to the extent feasible, will compete for federal, state, local, and private incentive funding to supplement its capital expenditures, and to accelerate further diesel PM and NOx emission reductions at this railyard.

Consistent with State law and Board policies, ARB staff will support efforts by BNSF to seek a mix of federal, state, and local incentive funding to accelerate BNSF's ability to meet the diesel PM emission reduction levels for the railyard.

Revised Draft 12/31/2010

8. What are the provisions for BNSF and ARB to meet and confer ~~by 2018~~?

BNSF agrees to meet and confer with ARB in 2013 regarding the progress being made by locomotive engine manufacturers to produce Tier 4 interstate line haul locomotives and the potential for interstate testing of prototype locomotives to include California.

BNSF agrees to meet and confer with ARB by 2018 to evaluate and explore opportunities for further diesel PM emission reductions by 2020 and beyond.

9. What are the mechanisms for ARB to enforce these commitments? What would trigger ARB to initiate regulatory action?

a. Potential ARB Actions to Enforce the 2010 Commitments

Upon a final determination of the ARB Executive Officer, or if appealed, of the administrative appeals panel that BNSF has failed to meet its commitments set forth herein at Sections 1, 2, 4, 5, and 6, ARB commits to submit to the Board within four months from the date of the determined failure the following locomotive and railyard rulemakings:

- A regulation of switch and medium horsepower locomotives that are not preempted under federal law (e.g., locomotives that primarily operate in California and that were manufactured prior to 1973 or that exceed 133 percent of their useful life since original manufacture or last remanufacture, whichever is later).
- A designated railyard regulation that requires risk reduction audits and plans to achieve targeted emission reduction levels.

~~Nothing in this agreement precludes ARB from developing regulations within its authority as required to achieve the goals of the State Implementation Plan and Climate Change Scoping Plan.~~

ARB will also consider the following actions:

- Pursue federal legislation to expand ARB authority to adopt regulations for in-use locomotives.
- Petition U.S. EPA to strengthen existing federal locomotive regulations.

ARB is designated as the agency responsible for enforcement of the BNSF commitments. The enforcement authorities specified herein may only be exercised by ARB. BNSF may, at any time, initiate informal consultations with ARB to identify and resolve concerns or other issues regarding compliance with its commitments herein.

Revised Draft 12/31/2010

In determining whether BNSF has met its commitments, [ARB and BNSF \(for purposes of this section, individually referred to as “a party” and collectively referred to as “the parties”\)](#) agree to the following exclusive process.

ab. ARB Verification of Railyard Diesel PM Emission Reduction Levels

To determine whether BNSF has met the BNSF San Bernardino Railyard diesel PM emission reduction levels specified in Table 1, ARB will review the comprehensive emission inventories and interim emission inventories in relation to information collected by ARB staff. ARB will conduct semi-annual railyard inspections, which will also be augmented by ARB photographic tracking and field surveys of railyard switch and medium horsepower locomotives. In addition, ARB staff will use the annual BNSF locomotive NOx fleet average agreement submittals to verify the number and tier of interstate line haul locomotives operating within the South Coast Air Basin. ARB staff will also randomly conduct inspections of BNSF interstate line haul locomotives entering and exiting the South Coast Air Basin to help assess compliance with the Table 1 diesel PM emission reduction levels.

b.c. Preliminary Determination of Non-Compliance

i. Failure to Comply with the Railyard Diesel PM Emission Reduction Levels

Within 30 working days of receipt of the comprehensive railyard diesel PM emission inventories, ARB shall make a written preliminary determination notifying BNSF as to whether BNSF met or failed to meet the diesel PM emission reduction levels specified in Table 1 for the previous year. If ARB determines that BNSF has failed to meet its emission reduction levels, ARB shall within the same 30 working days provide BNSF with its written preliminary determination, which will set forth the reasons for its findings. ARB will, with the greatest precision possible based on data submitted by BNSF, calculate the difference between the railyard diesel PM emission reduction level reported by BNSF and the levels required in Table 1. ARB and BNSF shall use their respective best efforts to expedite submission and review of the reports. The time periods provided for ARB to make a preliminary compliance determination may be extended by written agreement between ARB and BNSF.

Within 15 calendar days of receipt of ARB's preliminary determination that BNSF has failed to meet the emission reduction levels, BNSF may request to meet and confer with ARB and/or provide ARB with such information and analysis as BNSF believes appropriate to demonstrate its compliance with the Table 1 diesel PM emission reduction levels. If a meet and confer is requested, the parties shall meet within 10 working days of the request. Within 15 calendar days after receipt of BNSF's response or after meeting and conferring with ARB, ARB shall review and consider the information provided by BNSF and make a final determination, in writing, as to whether BNSF has failed to meet the Table 1 diesel PM emission reduction levels. ARB will make such final written determination publicly available.

For the Table 1 compliance deadlines in 2011, 2013, 2015, 2017, or 2020, if ARB staff determines that BNSF missed its percentage target for the BNSF San Bernardino Railyard by not more than 2 percent (e.g., reaching a 53 percent compliance level where 55 percent was required), BNSF will be given the opportunity to cure this deficiency by the next calendar year, provided it demonstrates the new compliance level by conducting a full inventory analysis. Failure to conduct the analysis or failure to cure the deficiency in the following calendar year shall constitute a failure to meet the appropriate targets in Table 1.

ii. Failure to Comply with Other Railyard Commitments

If ARB makes a preliminary determination that BNSF has failed to meet any other of its commitments set forth herein, ARB shall notify BNSF, in writing, of its findings. Within 15 calendar days, BNSF may request to meet and confer with ARB and/or provide ARB with such information and analysis as BNSF believes appropriate to demonstrate its compliance. If a meet and confer is requested, the parties shall meet within 10 working days of the request.

Within 15 calendar days after receipt of BNSF's response or after meeting and conferring with ARB, ARB will review and consider the information provided by BNSF and make a final determination, in writing, as to whether BNSF has failed to meet any of its non-emission reduction-related commitments. ARB will make such final written determination publicly available.

c.d. Final Determination by ARB of Non-Compliance

A final determination of non-compliance shall specifically identify the reasons why ARB has found BNSF not to be in compliance with agreed-upon commitments. A final determination of non-compliance for failure to meet the emission reduction levels set forth in Table 1 will provide ARB's final calculations of the emission reduction levels of the BNSF San Bernardino Railyard. Findings of BNSF's failure to meet other commitments shall set forth in detail ARB's determination of why the commitments have not been met. ARB will publicly post its final determination notice of non-compliance on its website and make available such notice on a list serve that will be established for notifying the public about compliance with the railyard emission reduction commitments.

b.e. Dispute Resolution

In the event of a dispute concerning an ARB final determination of non-compliance or any [dispute arising between ARB and BNSF concerning their of the parties'](#) respective commitments, the party asserting the dispute shall provide notice to the other party and set forth the issues underlying the dispute. The parties shall meet and confer regarding the identified issues within 15 working days after receipt of notification, and if they cannot reach agreement within 15 working days after such consultation, shall submit their respective positions to an administrative appeals panel, which shall consider the matter as expeditiously as possible. Except for confidential trade secret information,

ARB will publicly post on its website and make available by the aforementioned list serve all documents submitted by the parties to the administrative hearing panel. ARB will also post and make available a notice that interested persons may submit written statements of position and supporting documentation to the administrative appeals panel that will be made part of the record of the hearing.

i. Composition of Administrative Appeals Panel

The panel shall be comprised of one member selected by ARB, one member selected by BNSF, and a third member selected by the initial two members from a list of five or more persons that the parties shall agree to within 120 calendar days of ~~the~~the parties' exchange of commitment letters. The list shall include persons qualified to hear matters that are likely to be heard by the dispute resolution panel. From the list of five or more persons, the parties shall select the person most readily available to hear the matter within 30 calendar days (or as soon thereafter as possible) from the date that the person is contacted by either the ARB or BNSF panel member. If no person from the previously selected list is available to hear the matter within 45 calendar days of being notified, the ARB and BNSF panel members shall contact an arbitration referral service, identify the matter(s) at issue and accept from the service a list of five persons who are qualified to hear the matter(s) at issue and are readily available. The two panel members selected by the parties may mutually agree on one of the five persons to serve on the panel, but if they cannot agree, each panel member will alternatively strike one person from the list until just one person remains. The two panel members selected by the parties will serve as technical advisors to the third panel member, who shall serve as the presiding member of the panel and who shall be solely responsible for making the final decision on behalf of the panel.

ii. Administrative Appeals Panel Process

Unless otherwise determined that the matter(s) at issue require oral testimony, the panel shall make its decision based upon the written submissions of ARB and BNSF and any written statements submitted by interested persons (see below)~~the parties~~. If a hearing to take testimony is determined to be necessary, the hearing shall be public. The panel shall determine the time and place of the hearing, and will set forth the procedures to be followed at the hearing. The panel will take all precautions necessary to preserve the confidentiality of trade secret or other confidential information, and will consider such evidence in a closed meeting.

iii. Public Comments to Administrative Appeals Panel

Interested persons may submit written statements and supporting documentation to the panel regarding the matter(s) at issue before the matter(s) are taken under submission, however, only ARB and BNSF shall be parties to the dispute resolution process.

iv. Final Decision by Administrative Appeals Panel

The panel presiding member shall issue his or her final decision on behalf of the panel within 30 calendar days from the date that the matter is submitted to the panel. While either party receiving an adverse decision from the panel may seek expedited review of the decision in the Superior Court for the County of Sacramento, if the panel's decision upholds the Executive Officer's final determination of non-compliance, ARB may immediately commence the rulemaking process outlined in the opening paragraphs of this section. If judicial review is not sought, then the decision of the panel will be binding on ARB and BNSF, as well as any interested person or Intended Beneficiary of the 2010 Commitments (see below)the parties.

v. Costs and Fees

Each party to the proceedings outlined above will bear its own costs and fees, with the exception that the parties agree to split all costs and fees arising from the employment of the third panel member.

10. What are the rights of residents near railyards to enforce ARB's 2010 Commitments?

a. Rights of Persons Other Than ARB and BNSF

Residents living within two miles of the BNSF San Bernardino Railyard are the intended beneficiaries (Intended Beneficiaries) of these 2010 Commitments and are entitled to bring an action in mandamus in the Superior Court of Sacramento against ARB to ensure that ARB meets its commitments under the 2010 Commitments.

The Intended Beneficiaries will be bound by the outcomes of all dispute resolution processes engaged in by ARB and BNSF. If BNSF fails to meet its commitments under the 2010 Commitments, only ARB has the right to exercise the provisions of Section 9, which are the exclusive remedies provided under the 2010 Commitments for non-compliance by BNSF. Except as provided in Section 10, the 2010 Commitments do not create any new rights, including the right of enforcement, for any person (including Intended Beneficiaries) or entity other than ARB or BNSF.

b. Notice and Opportunity to Cure

To provide ARB with an opportunity to cure or otherwise address an alleged failure by ARB to meet one of its commitments under the 2010 Commitments, Intended Beneficiaries shall provide ARB with at least 45 days written notice of its intent to seek an order of mandamus from the Superior Court of Sacramento. The notice shall identify the alleged failure, the harm caused by the alleged failure, and the factual basis supporting the allegation. If ARB receives such a notice, ARB shall forward a complete copy to BNSF and Union Pacific Railroad (UP) within five working days and shall within a reasonable period of time thereafter notify BNSF, UP, and the Intended Beneficiaries

Revised Draft 12/31/2010

who provided ARB with notice of the pending action as to whether ARB has been able to cure (or is in the process of curing) the alleged failure or whether the alleged failure is incurable in ARB's view.

If ARB fails to cure or to take reasonable steps towards promptly curing the alleged failure within 45 days after receiving notice, the Intended Beneficiaries may proceed to file above-referenced mandamus action in the Superior Court of Sacramento.

11. How will BNSF handle the disposition of any Pre-Tier 0 locomotive formerly based in the BNSF San Bernardino Railyard?

BNSF shall not reassign any Pre-Tier 0 locomotive formerly based in the BNSF San Bernardino Railyard to another railyard in California.

12. What are the requirements if BNSF is considering withdrawal from these 2010 Commitments?

The parties are pledged to successful implementation of the 2010 Commitments. BNSF will meet and confer with ARB prior to any action to withdraw from these 2010 Commitments. BNSF and ARB may mutually elect to amend the 2010 Commitments to withdraw or modify specific provisions. If a reasonable resolution cannot be achieved, BNSF may withdraw from the 2010 Commitments as specifically provided below.

a. ARB Action Prior to Meeting the Requirements of Section 9

If ARB proceeds with the rulemakings or other actions identified in Section 9.a. prior to a final determination of BNSF non-compliance with the 2010 Commitments, BNSF may withdraw from these Commitments.

b. Other Reasons

If either of the following actions occurs, BNSF may also withdraw from the 2010 Commitments, but BNSF shall continue to comply with Section 13 to maintain progress through December 31, 2020:

- ARB invokes its remedies under Section 9.a. according to the process prescribed in Section 9.
- An agency of the federal government, the State of California (other than ARB), or a local subdivision of the State of California enacts, mandates, or requires BNSF to perform an action at the BSNF San Bernardino Railyard or affecting this Railyard that is identical or substantially similar to actions required to meet these 2010 Commitments. However, actions taken by the City of Los Angeles Harbor Department, the City of Long Beach (acting by and through its Board of Harbor Commissioners), or the Intermodal Container Transfer Facility – Joint Powers Authority related to implementation of the San Pedro Bay Ports Clean Air Action

Revised Draft 12/31/2010

Plan or approval of a new railyard or expansion of an existing railyard do not constitute grounds for BNSF to withdraw from these 2010 Commitments.

13. How will BNSF maintain the progress already made at the BNSF San Bernardino Railyard if BNSF withdraws from these 2010 Commitments?

BNSF agrees to do all of the following in the event that BNSF withdraws from these 2010 Commitments at the BNSF San Bernardino Railyard for any reason other than that specified in Section 12.a.:

- Through December 31, 2020, substantially maintain the emission reductions required by Table 1 that were achieved by implementation of these 2010 Commitments at the BNSF San Bernardino Railyard through the last compliance deadline. From the date that Section 13 is triggered, subsequent growth in railroad operations is excluded from this provision.
- Through December 31, 2020, provide a report to ARB for the BNSF San Bernardino Railyard that demonstrates maintenance of progress as described above. BNSF shall provide this report every other year, beginning two years following the date of withdrawal.

14. What are the general meet and confer provisions?

In order to assure successful implementation of these 2010 Commitments, BNSF and ARB may at any time meet and confer to review accomplishments, to assess any implementation issues, or to determine if any changes are necessary to improve the overall effectiveness of the 2010 Commitments.

15. What are the rights of ARB and BNSF notwithstanding these 2010 Commitments?

Nothing in this agreement precludes ARB from developing regulations within its authority as required to achieve the goals of the State Implementation Plan and Climate Change Scoping Plan.

BNSF is implementing its commitments notwithstanding the preemptive effect of the federal Interstate Commerce Commission Termination Act ("ICCTA"), the Clean Air Act, the Commerce Clause and other federal law. BNSF and ARB recognize that railroads are to a significant degree regulated by federal law, and that aspects of state and local authority to regulate railroads, rail operations, and locomotives are preempted. By executing and performing the 2010 Commitments, BNSF and ARB agree that there is no waiver or modification of any aspect of federal preemption or setting of any precedent as to preemption, reservation of rights or voluntary compliance with other commitments, rules or agreements.

Revised Draft 12/31/2010

If ARB proceeds with the rulemaking or other actions identified in Section 9.a., BNSF reserves all legal and procedural rights to contest said rulemakings or actions.

16. What constitutes the full understanding of the Parties?

This document constitutes the full understanding and agreement of ARB and BNSF with respect to the BNSF San Bernardino Railyard regarding the subject matter of the 2010 Commitments. ARB and BNSF have voluntarily entered into the 2010 Commitments, and nothing in the 2010 Commitments affects the scope of ARB's regulatory authority or the scope of preemption under federal law. ARB and BNSF agree that no amendment to the 2010 Commitments shall be binding unless in writing and signed by authorized representatives of ARB and BNSF.

These 2010 Commitments do not revoke, reduce, amend, or modify the undertakings of BNSF in any previous agreements which remain in effect on the date of this document.

17. What are the effective dates of these 2010 Commitments?

These 2010 Commitments shall take effect upon execution by both parties and remain in effect until December 31, 2020 unless amended by ARB and BNSF.

IN WITNESS WHEREOF, the parties have executed these 2010 Commitments.

CALIFORNIA AIR RESOURCES BOARD,
an agency of the State of California

THE BNSF RAILWAY COMPANY, a
Delaware corporation

James N. Goldstene
Executive Officer

(tbd)
Executive Vice President, Operations

Date

Date

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