CERTIFIED FOR PARTIAL PUBLICATION*

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

FIFTH APPELLATE DISTRICT

ASSOCIATION OF IRRITATED RESIDENTS et al., Plaintiffs and Appellants, v. KERN COUNTY BOARD OF SUPERVISORS et al., Defendants and Respondents; ALON USA ENERGY, INC. et al., Real Parties in Interest and Respondents.	F073892 (Super. Ct. No. S-1500-CV-283166) **OPINION**

APPEAL from a judgment of the Superior Court of Kern County. Eric Bradshaw, Judge.

Earthjustice, Elizabeth B. Forsyth, Angela Johnson Meszaros and Oscar Espino-Padron for Plaintiffs and Appellants.

Mark L. Nations, Interim County Counsel, Charles F. Collins, Deputy County Counsel, for Defendants and Respondents.

Alston & Bird, Jocelyn Thompson, Roger A. Cerda and Maya L. Grasse for Real Parties in Interest and Respondents.

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* Pursuant to California Rules of Court, rules 8.1105(b) and 8.1110, this opinion is certified for publication with the exception of parts I., IV., and VI. of the Discussion.

Plaintiffs challenge the County of Kern's certification of an environmental impact report (EIR) and approval of a project to modify an oil refinery in Bakersfield so it can unload two unit trains (104 cars) of crude oil per day, equating to 150,000 barrels. The refinery is authorized to process 70,000 barrels of crude oil per day and the balance of unloaded crude (80,000 barrels per day) would be sent to other refineries by pipeline. A controversial aspect of the proposed project is the transportation of crude oil from the Bakken formation in North Dakota. Compared to heavier crudes, Bakken crude may be more volatile and likely to explode in the event of a rail accident.

Plaintiffs contend the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.[1]) was violated because the EIR (1) erroneously used the refinery's operational volume from 2007 as the baseline instead of the conditions existing in 2013 when the notice of preparation of the EIR was published; (2) incorrectly relied upon the refinery's participation in California's cap-and-trade program to conclude the project's greenhouse gas emissions would be less than significant; and (3) underestimated and failed to fully describe the project's rail transport impacts, including the risk of a rail accident causing a release of hazardous materials and the environmental impacts of off-site rail activity.

First, we conclude the EIR's choice of 2007 as the measure of an existing conditions baseline for an operating refinery (1) was supported by substantial evidence; (2) appropriately deviated from the normal baseline identified in Guidelines section 15125,[2] subdivision (a) because of the refinery's history of fluctuating operations; and (3) conformed to the principles set forth by the California Supreme Court in *Communities for*

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1 All unlabeled statutory references are to the Public Resources Code.

2 "Guidelines" refers to the regulations promulgated to implement CEQA, which are set forth in California Code of Regulations, title 14, section 15000 et seq. (§ 21083, subds. (a), (f) ["Office of Planning and Research shall prepare and develop proposed guidelines" and "Secretary of the Resources Agency shall certify and adopt guidelines"].)

a Better Environment v. South Coast Air Quality Management Dist. (2010) 48 Cal.4th 310 (*Communities for a Better Environment*), a case that addressed the appropriate baseline for an oil refinery. Thus, the baseline complies with CEQA.

Second, we interpret the reference in Guidelines section 15064.4, subdivision (b)(3) to "regulations ... adopted to implement a statewide ... plan for the reduction of mitigation of greenhouse gas emissions" to include California's cap-and-trade program. We also interpret Guidelines section 15064.4 as authorizing a lead agency to determine that a project's greenhouse gas emissions will have a less than significant effect on the environment based on the project's compliance with the cap-and-trade program. Accordingly, we conclude the EIR's discussion of greenhouse gas emissions contains no prejudicial error.

Third, the EIR contains factual error in its description of federal railroad safety data. It erroneously used the total number of "accident/incidents" reported for a 10-year period as the number of "train accidents" (both are terms of art under the federal regulation). This error tainted the EIR's calculations of the risk of a release of hazardous materials due to a mishap during the rail transportation of crude oil to the refinery. The error caused the EIR to underestimate the risk of a release by fivefold.

Fourth, the EIR erroneously stated federal law preempted *CEQA review* of certain environmental impacts of off-site rail activities. We conclude federal law did not prevent the EIR from disclosing and analyzing the reasonably foreseeable environmental impacts associated with off-site rail activities. Consequently, the EIR must be corrected to include a disclosure and analysis of those indirect effects of the project.

We therefore reverse the judgment and remand for further proceedings.

FACTS

Parties

Plaintiff Association of Irritated Residents alleges it is a California nonprofit corporation formed in 1991 and based in Kern County, where some of its members

reside. It alleges it was formed to advocate for clean air and environmental justice in San Joaquin Valley communities.

Plaintiff Center for Biological Diversity alleges it is a nonprofit corporation with offices throughout California and the United States. It alleges it is actively involved in environmental protection issues throughout North America and has 50,000 members, some of whom reside in Kern County.

Plaintiff Sierra Club alleges it is a national nonprofit organization of approximately 600,000 members. Sierra Club alleges it has approximately 600 members in Kern County and many more along the railway used to transport crude oil to the project site in Bakersfield.

Defendant Kern County Planning and Community Development Department is the lead agency that conducted the environmental review of the project. Defendant Kern County Board of Supervisors is the decision-making body that certified the EIR and approved the project. The defendants are referred to collectively as "County."

Real party in interest Alon USA Energy, Inc. is a Delaware corporation headquartered in Texas. It is an independent refiner and marketer of petroleum products and the parent company of real party in interest Paramount Petroleum Corporation, a Delaware corporation. Paramount Petroleum Corporation is the applicant for, and the recipient of, the approvals that are the subject of this litigation. The real parties in interest are referred to collectively as "Alon USA."

The Refinery

Alon USA named its proposal the "Alon Bakersfield Refinery Crude Flexibility Project" and its purpose is to allow greater flexibility for the existing refinery to process a variety of crude oils on-site. The refinery is located at 6451 Rosedale Highway, northwest of the City of Bakersfield. The site has been the location of a petroleum refinery since 1932. The refinery is capable of producing gas oil, gasoline, diesel fuel and petroleum coke. The existing refinery includes units for crude distillation, delayed

cooking, hydrocracking, catalytic reforming, and ancillary and support facilities. Those facilities include steam boilers, process heaters, cooling towers, storage tanks, interconnecting pipelines, and a terminal with truck and rail loading facilities.

The refinery has current environmental permits, including permits to operate from the San Joaquin Valley Air Pollution Control District (Air District). The refinery has a maximum rated crude processing capacity of 70,000 barrels per day. The proposed project would not increase that capacity.

Various companies have owned and operated the refinery since 1932. In the 1980's Texaco acquired the refinery and two neighboring facilities, integrated them into a single plant, and brought the refining capacity up to 70,000 barrels per day. In 2000, Shell Oil became the sole owner of the refinery. In November 2003, Shell Oil announced it planned to close the refinery. In March 2005, Shell Oil sold the plant to Flying J Inc., which operated the refinery through a subsidiary. As a result of financial issues unrelated to the refinery, Flying J Inc. and its subsidiary declared bankruptcy on December 21, 2008, and, a week later, the refinery was shut down.

In June 2010, Alon USA purchased the refinery through the bankruptcy. Twelve months later, Alon USA resumed some refining operations, processing gas oil transported via rail and truck from its refinery located in Paramount, California. When the Paramount refinery suspended production, the refinery in Bakersfield stopped its refining operations, but continued other operations and activities. Those continuing activities included managing inventory, blending and marketing fuels, and functioning as a terminal for crude oil and finished petroleum products. The foregoing history is relevant to the issue of the project's baseline and what level of refining operations, if any, may be included in the baseline used to analyze the project's environmental effects.

The Project

The project involves: (1) the expansion of existing rail, transfer and storage facilities; (2) the construction of process unit upgrades and modifications; (3) repurposing

existing storage tanks; and (4) the relocation and modernization of an existing liquid propane gas truck rack and upgrades to a sales rack. The expansion includes construction of a double rail loop from a new on-site spur connected to the BNSF Railway and the addition of up to three new boilers. The EIR estimates the construction phase of the project would last approximately 10 months.

The new unloading facilities would allow offloading of crude oil from rail cars. The new facilities would receive and unload two unit trains (104 cars) within a 24-hour period under normal operating conditions. Based on the maximum capacity for tank cars, the modified facility would be able to offload an average of 150,000 barrels per day. The crude oil delivered by unit train would be transferred into the refinery for processing (up to 70,000 barrels per day) or into the existing pipeline network for transfer to other refineries.

The expanded train facilities would increase the plant's potential to receive crude oil from the Bakken formation in northwestern North Dakota. Bakken crude oil generally is more volatile than other crude oils. The draft EIR described the safety concerns raised by transporting Bakken crude by rail and listed five major train accidents and derailments in the year preceding the release of the draft EIR.[3] The most notable accident involving Bakken crude oil occurred in Lac-Megantic, Quebec in July 2013, when 60 tank cars exploded and killed 47 people.

CEQA Review

On September 19, 2013, County published a notice of preparation of a draft EIR, which triggered a "scoping" process that involved soliciting the views of various public

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[3] Exhibit Q to plaintiffs' counsel's July 7, 2014, comment letter was an 18-page document titled "Oil by Rail Safety in California, Preliminary Findings and Recommendations," which was prepared by the State of California's Interagency Rail Safety Working Group and dated June 10, 2014. The document identified the Tehachapi Pass to Bakersfield as a high hazard area for derailment.

agencies about the scope and content of the environmental information relevant to each agency's statutory responsibilities. The notice also announced the date and location of a scoping meeting for responsible agencies and the public. County used the comments received during the review period in preparing the draft EIR. Normally, the physical environmental conditions existing when the notice is published constitute the project's baseline. (Guidelines, § 15125, subd. (a).)

County prepared a draft EIR and circulated it for public review from May 22 to July 7, 2014. In a letter dated July 7, 2014, counsel for plaintiff submitted written comments on the draft EIR. The letter was accompanied by 37 exhibits designated A through KK, which contained over 4,000 pages. After the comment period expired, County prepared written responses to the comments received from the public and responsible agencies. The written responses constitute Chapter 7 of the final EIR and were made available to County's board of supervisors in late August 2014.

On September 9, 2014, County's board of supervisors held a public hearing in connection with its consideration of the project and the EIR. The board of supervisors allocated 30 minutes for attendees who wished to speak in favor of the proposal and 30 minutes for those who wished to speak against it. At the end of the public hearing the board of supervisors unanimously passed a resolution approving the requested zoning modifications, adopting findings pursuant to CEQA and the Guidelines, and determining the EIR complied with CEQA and was complete and adequate in scope.

The day after the public hearing, County filed a notice of determination with the county clerk. The notice stated County had approved the project and certified the EIR. The filing of the notice and its posting by the county clerk commenced the running of a 30-day statute of limitations for filing a CEQA lawsuit. (§ 21167, subd. (e); Guidelines, § 15094, subd. (g).)

PROCEEDINGS

In October 2014, plaintiffs filed a verified petition for writ of mandate against County that alleged CEQA violations involving (1) the use of an improper baseline reflecting conditions in 2007, (2) an inaccurate project description, (3) a failure to adequately disclose the project's significant environmental effects, (4) a failure to provide information upon which conclusions were based, and (5) a failure to discuss and adopt mitigation measures. About a week later, plaintiffs filed a first amended petition for writ of mandate, which alleged the same five CEQA violations and which is the operative pleading in this appeal. The amended pleading referred to "Alon USA Energy, Inc." instead of "Alon U.S.A."

On December 18, 2015, and February 5, 2016, the trial court held hearings on the petition. On April 1, 2016, the court issued a minute order and ruling denying plaintiffs' petition. Later that month, a final judgment denying writ of mandate was entered. In June 2016, plaintiffs filed a notice of appeal.

DISCUSSION

I. STANDARD OF REVIEW*

Appellate review in a CEQA proceeding is governed by the abuse of discretion standard set forth in section 21168.5. Consequently, our "inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." (§ 21168.5.)

Under this abuse of discretion standard, we independently review claims that a public agency committed legal error (i.e., did not proceed in the manner required by law) in conducting the environmental review required by CEQA. (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 426-427.)

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* See footnote, *ante,* page 1.

As to claims that an agency committed factual errors, we apply the substantial evidence standard of review. (*Id.* at p. 426.)

II. BASELINE FOR PROJECT'S AIR POLLUTION IMPACTS

A. Contentions of the Parties

Plaintiffs contend County failed to proceed in the manner required by law when it chose 2007 as the baseline for the refinery's air pollution emissions instead of the conditions that existed in 2013 when County published the notice of preparation.[4] Plaintiffs rely on Guidelines section 15125, subdivision (a) and argue the physical conditions existing when the notice of preparation is published normally constitute the baseline and that norm should have been used in this case. Plaintiffs argue County's use of a 2007 baseline for air pollution emissions was gamesmanship designed to conceal or understate the project's air pollution emissions and did not improve the informational value of the EIR to decision makers and the public.

County contends its choice of the 2007 baseline is supported by substantial evidence and relevant case law. County argues it had to resolve the question of what the existing refinery contributed to the project's baseline. County asserts the 2007 baseline brings the project's impacts into focus and avoids confusing (1) the impacts resulting from the changes caused by the project with (2) impacts resulting from operating the existing refinery—operations that already are approved. In simplified terms, County contends: (1) the existing conditions include a refinery with a history of actual operations pursuant to governmental authorizations entitling it to process up to 70,000 barrels of

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[4] A notice of preparation is a brief notice sent by the lead agency to (1) notify responsible agencies that the lead agency plans to prepare an EIR for the project and (2) solicit guidance from those agencies as to the scope and content of environmental information included in the EIR. (Guidelines, § 15375; see Guidelines, § 15103 [response to notice of preparation].) The contents of a notice of preparation are described in Guidelines section 15082 and a sample notice is provided in Appendix I of the Guidelines.

crude oil per day; (2) the history of actual operations should be reflected in the baseline; and (3) the actual operations from 2007 provide a reasonable measurement of the refinery's historical operations. We agree with these contentions and conclude the baseline chosen did not violate CEQA.

B. Legal Principles

1. General Principles Relating to Baseline Selection

The purpose of an EIR is to identify the project's *significant* effects on the environment and indicate the manner in which those significant effects can be mitigated or avoided. (§ 21002.1, subd. (a).) CEQA considers this information to be part of the public disclosure intended to be "meaningful and useful to decisionmakers and to the public." (§ 21003, subd. (b); see § 21002.1, subd. (e).)

"To decide whether a given project's environmental effects are likely to be *significant*, the agency must use some measure of the environment's state absent the project, a measure sometimes referred to as the 'baseline' for environmental analysis." (*Communities for a Better Environment, supra*, 48 Cal.4th at p. 315, italics added.) The baseline used in an EIR "delineate[s] environmental conditions prevailing absent the project" and it is these conditions "against which predicted effects can be described and quantified." (*Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* (2013) 57 Cal.4th 439, 447 (*Neighbors for Smart Rail*).) More specifically, the potential physical changes to the environment generally are "identified by comparing *existing* physical conditions [(i.e., the baseline)] with the physical conditions that are predicted to exist at a later point in time, after the proposed activity has been implemented. [Citation.] The difference between these two sets of physical conditions is the relevant physical change" to the environment, part of which may be allocated to the project and part of which may be allocated to other causes. (*Wal-Mart Stores, Inc. v. City of Turlock* (2006) 138 Cal.App.4th 273, 289.) After the project's predicted environmental effects have been

quantified, the agency then determines whether those environmental effects are "significant" for purposes of CEQA. Thus, the baseline is a fundamental component of the analysis used to determine whether a proposed project may cause environmental effects and, if so, whether those effects are significant.

2. Specific Text of the Statute and Guidelines

CEQA does not use or define the term "baseline." Nevertheless, the idea of a baseline is embedded in CEQA's definition of the environment. "'Environment' means the *physical conditions which exist* within the area which will be affected by a proposed project." (§ 21060.5, italics added; see Guidelines, § 15360 [regulatory definition of "environment"].) The importance of existing physical conditions is repeated in CEQA provisions addressing the preparation of an EIR by state and local agencies. For instance, when such agencies prepare an EIR, "any significant effect on the environment *shall* be limited to substantial, or potentially substantial, adverse changes in *physical conditions which exist* within the area." (§§ 21100, subd. (d), 21151, subd. (b), italics added.) These references to physical conditions that exist provide the statutory foundation for the Guidelines provision that uses the term "baseline." Guidelines section 15125, subdivision (a) provides in part:

> "An EIR must include a description of the *physical environmental conditions* in the vicinity of the project, as they *exist* at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will *normally* constitute the *baseline* physical conditions by which a lead agency determines whether an impact is significant." (Italics added.)

In sum, the text of CEQA and the Guidelines identify *existing* conditions as the starting point (i.e., baseline) for determining and quantifying the proposed project's

changes to the environment. Furthermore, the Guidelines amplify the statutory text by specifying the point in time normally used to identify existing physical conditions.[5]

3. Baseline for a Petroleum Refinery

The application of the provisions from CEQA and the Guidelines relating to baselines is relatively simple in this case because the California Supreme Court has discussed the appropriate baseline for a project involving modification to a petroleum refinery. In *Communities for a Better Environment, supra*, 48 Cal.4th 310, ConocoPhillips proposed modifying the refinery to enable it to produce ultralow sulfur diesel fuel. (*Id.* at p. 316.) The plans "involved replacing or modifying hydrotreater reactors, a cooling tower, storage tank, and compressor; installing new pipelines and pumps; and substantially increasing operation of the existing cogeneration plant and four boilers, which provide steam for refinery operations." (*Id.* at p. 317.) ConocoPhillips had permits to operate the cogeneration plant and boiler and those permits specified the maximum rate of heat production for each piece of equipment. (*Id.* at pp. 317-318.)

ConocoPhillips applied to the regional air quality management district for a permit to construct the proposed modifications to its refinery. (*Communities for a Better Environment, supra*, 48 Cal.4th at p. 317.) The district approved the permits after concluding in a negative declaration that (1) the proposed project would cause increased operation of the steam generating equipment; (2) the increased steam generation and other new activities would create additional NOx emissions; and (3) the proposed project

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[5] The regulatory term "normally" and the point-in-time references are repeated in Guidelines section 15126.2, subdivision (a), which states: "In assessing the impact of a proposed project on the environment, the lead agency should *normally* limit its examination to changes in the existing *physical conditions* in the affected area as they *exist* at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced." (Italics added.) This regulatory text takes the mandatory phrase "shall be limited" used in sections 21100 and 21151 and changes it to "should normally limit" and adds point-in-time references that do not appear in CEQA. (See Guidelines, § 15005, subd. (b) [definition of "should"].)

could not have a significant effect on the environment because the increase in NOx emissions *from the increased operation of the existing steam generation equipment* were not attributable to the project because those operations did not exceed the maximum rate of heat production allowed under the existing permit. (*Id.* at p. 318.) Restated using the concept of a baseline, "the District treated any additional NOx emissions stemming from increased plant operations within previously permitted levels as part of the baseline measurement for environmental review, rather than as part of the proposed Diesel Project." (*Ibid.*)

The district's choice of the existing maximum permitted operations as the baseline was rejected by the Supreme Court. (*Communities for a Better Environment, supra*, 48 Cal.4th at p. 316 [district abused its discretion by comparing project's effects "to a baseline of maximum permitted capacity"].) The court relied on Guidelines section 15125 and CEQA case law for the principle that the baseline for an agency's primary environmental analysis under CEQA must ordinarily be the *actually* existing physical conditions rather than *hypothetical* conditions that could have existed under applicable permits or regulations. (*Communities for a Better Environment, supra*, at pp. 320–322.) Applying this principle, the court determined the air pollution effects of the proposal to modify the petroleum refinery's operations were to be measured against the existing emission levels, rather than against the levels that would have existed had all the refinery's boilers operated simultaneously at their maximum permitted capacities. (*Id.* at pp. 322–327.) Thus, the Supreme Court concluded the district used an erroneous baseline.

The Supreme Court did not take the further step of identifying the baseline that was required to be used. Instead, the court stated: "We leave for the District on remand, however, to resolve exactly how the existing physical conditions—assertedly subject to operational variation over time—should be measured." (*Communities for a Better Environment, supra,* 48 Cal.4th at p. 316.) The court reiterated that it would "not attempt

here to answer any technical questions as to how existing refinery operations should be measured for baseline purposes in this case or how similar baseline conditions should be measured in future cases." (*Id.* at p. 327.) Nevertheless, the court addressed the problem of defining an existing conditions baseline in circumstances where the existing conditions themselves change or fluctuate over time, as ConocoPhillip's refinery operations and emissions had. (*Id.* at pp. 327–328.) "A temporary lull or spike in operations that happens to occur at the time environmental review for a new project begins should not depress or elevate the baseline." (*Id.* at p. 328.) The court concluded that despite the Guidelines' reference to "the time the notice of preparation is published, or if no notice of preparation is published, ... the time environmental analysis is commenced" (Guidelines, § 15125, subd. (a)), "[n]either CEQA nor the CEQA Guidelines mandates a uniform, inflexible rule for determination of the existing conditions baseline. Rather, an agency enjoys the discretion to decide, in the first instance, exactly how the existing physical conditions without the project can most realistically be measured, subject to review, as with all CEQA factual determinations, for support by substantial evidence." (*Communities for a Better Environment, supra,* at p. 328.)

The foregoing sentence sets forth the legal principle applicable to the parties' dispute about how the existing physical conditions should be measured. Consequently, we consider whether substantial evidence supports County's finding that existing physical conditions are realistically measured by the volume the refinery processed in 2007.

4. EIR's Discussion of the Choice of Baseline

Section 3.3.2 of the EIR is labeled "Baseline/Existing Environmental Setting." That section provides a history of the refinery and its operations from 1932 to the present and then states:

> "Here, the refinery was established over 80 years ago, and environmental review has been conducted for numerous upgrades and modifications since

> the adoption of CEQA. The refinery has temporarily suspended most refining operations, but the new owner has consistently stated its intention to continue refining at the site. To bring the project impacts into clearest focus and avoid confusing the impacts of the project changes with the operation of the existing refinery, the baseline for purposes of environmental review is considered to be the physical environmental conditions as of 2013, adjusted where necessary to include refinery operations and related activities in 2007."

The EIR reiterates that it "generally uses a baseline consisting of the physical environmental conditions as of September 19, 2013, the date of the Notice of Preparation (NOP) was issued for the project, adjusted to the extent necessary to reflect an operating refinery." The operating refinery is represented in the EIR by data from 2007 (where available), which was the last full year of operations.

The draft EIR supports the choice of 2007 as representing the existing refinery operations by providing data for the refinery's throughput for 12 years (2001 to 2012, inclusive) in Table 3-3. Average barrels per calendar day were:

62,164 (2001);

67,426 (2002);

66,849 (2003);

65,144 (2004);

56,238 (2005);

51,842 (2006);

60,389 (2007);

57,900 (2008);

0 (2009);

0 (2010);

10,915 (2011); and

4,751 (2012).

These figures combine crude oil and other hydrocarbons. In 2011 and 2012, there was no crude oil refined at the existing refinery. The figures for those years reflect the further refining of gas oil received from the Paramount refinery.

The EIR states the refinery is capable of processing 70,000 barrels per day and asserts a baseline of the 60,389 average barrels per day from 2007 is conservative. The EIR also states it was reasonable to include the operating refinery in the baseline because many aspects of the refinery and its operations were reviewed in prior CEQA documents. Those CEQA documents were summarized in Table 3-4 of the EIR.

5. Substantial Evidence Supports the Choice of Baseline

Our analysis of County's treatment of the baseline question breaks the County's approach into two factual components. The first inquiry considers the basic question of whether County has a sufficient evidentiary basis for finding existing conditions included an *operating* refinery. If that finding is upheld, the second inquiry addresses whether substantial evidence supports County's choice of 2007 as a *realistic measure* of the baseline physical conditions created by the refinery's operations.

We conclude substantial evidence supports County's finding that existing physical conditions included an operating refinery, despite the fact the operations were shut down shortly after Flying J and its subsidiary filed bankruptcy in December 2008. First, the evidence establishes that refinery operations of up to 70,000 barrels per day have been approved by the issuance of permits or other entitlements that are still in effect. Second, information in the EIR, including Table 3-3, shows the refinery actually processed crude oil and other hydrocarbons until the bankruptcy filing of Flying J and its subsidiary in December 2008, and the processing of other hydrocarbons (i.e., gas oil) resumed in 2011 and continued in 2012. Third, as demonstrated by Table 3-4 in the EIR, the refinery operations have been subject to prior environmental reviews under CEQA. Fourth, the processing of crude oil at the refinery could begin again without the approval of the

project currently being proposed by Alon USA. These facts provide sufficient support for finding that existing conditions included an operating refinery and, therefore, an operating refinery was properly included in the project's baseline.

Our second factual inquiry considers whether County's choice of the figure from 2007 as the baseline is supported by substantial evidence. We conclude substantial evidence supports that choice. First, the 2007 figure reflects operations of the refinery that actually occurred. The figure is not hypothetical and it is not the maximum authorized by existing permits. Use of the maximum of 70,000 barrels per day would have been inappropriate because that level was not achieved in any of the years from 2001 through 2012 and *Communities for a Better Environment* rejected using the maximum permitted amounts in a baseline where that maximum was rarely, if ever, reached. Second, the evidence shows the 2007 figure was a reasonable representation of the operations actually performed at the refinery. Although the EIR does not calculate the average barrels per day for the period from 2001 through 2008 when crude oil was being refined, we calculate that average as 60,994 barrels per day, which is 605 barrels per day *more* than the 2007 figure. The comparison of this overall average to the 2007 figure leads us to conclude the 2007 figure was a reasonable estimate of the operations that actually existed. Furthermore, the EIR did not misrepresent the facts or mislead the public by stating its use of the 2007 figure was conservative because the 2007 figure is slightly less than the overall average.

The foregoing analysis and conclusions are compatible with *North County Advocates v. City of Carlsbad* (2015) 241 Cal.App.4th 94, a case addressing the appropriate baseline for the traffic analysis performed in connection with proposed renovations of a shopping center. (*Id.* at p. 97.) The project's EIR adopted a traffic baseline that treated a large retail store as being fully occupied, even though it was vacated in 2006 and had been only periodically occupied since. (*Ibid.*) The appellate court upheld the lead agency's determination of the traffic baseline, concluding

substantial evidence supported the determination because "it was based on recent historical use and was consistent with [project applicant's] right to fully occupy the [retail] space without further discretionary approvals." (*Ibid.*)

In summary, County did not abuse its discretion when it chose the operating volume from 2007 to measure for the existing physical conditions created by the operation of the refinery.

6. Test for a Future Conditions Baseline Does Not Apply

Plaintiffs contend all deviations from CEQA's normal baseline—that is, existing conditions at the time the notice of preparation is published—must be supported by a demonstration in the EIR that analyzing project impacts under the normal baseline would be "misleading or without informational value." (*Neighbors for Smart Rail, supra*, 57 Cal.4th at p. 457.) Plaintiffs acknowledge that *Neighbors for Smart Rail* involved an agency's selection of environmental conditions *projected to occur in the future* and argue "the rationale and holding of the case are phrased broadly, and thus apply to all agency decisions to deviate from CEQA's normal existing conditions baseline." We disagree with plaintiffs' broad interpretation of *Neighbors for Smart Rail*. We interpret that case as applying only to baselines that use hypothetical future conditions. Consequently, we conclude its principles do not apply to an agency's decision about *how to measure existing conditions* when the activity creating those conditions has fluctuated.

In our view, the use of an existing conditions baseline is fundamentally different from the use of a hypothetical set of physical conditions that might exist in the future. Existing physical conditions are referred to in CEQA's statutory text. (§§ 21060.5, 21100, subd. (d), 21151, subd. (b).) In contrast, a comparison based on hypothetical future conditions is not mentioned in CEQA. Similarly, the Guidelines state existing physical conditions at the time the notice of preparation is published are the normal baseline and make no reference to the use of hypothetical future conditions. In light of

the statutory and regulatory text, it made sense for the Supreme Court to adopt a strict test for determining the propriety of deviating from an existing conditions baseline in favor of a baseline that uses hypothetical future conditions.

Furthermore, the court adopted language in *Neighbors for Smart Rail* that acknowledges this distinction:

> "Projected future conditions may be used as the sole baseline for impacts analysis if their use in place of measured existing conditions—a departure from the norm stated in Guidelines section 15125(a)—is justified by unusual aspects of the project or the surrounding conditions. That the future conditions analysis would be informative is insufficient, but an agency does have discretion to completely omit an analysis of impacts on existing conditions when inclusion of such an analysis would detract from an EIR's effectiveness as an informational document, either because an analysis based on existing conditions would be uninformative or because it would be misleading to decision makers and the public." (*Neighbors for Smart Rail, supra*, 57 Cal.4th at pp. 451-452.)

This quoted language clearly shows the court intended a *future conditions* baseline to be subject to a more rigorous judicial scrutiny than the scrutiny applied to the choice of measurement for an *existing conditions* baseline, a choice that is a factual finding reviewed under the substantial evidence standard. (*Communities for a Better Environment, supra*, 48 Cal.4th at p. 328.)

We note that there are two basic ways to deviate from the existing conditions baseline normally used. First, a future conditions baseline could be used. In that case, the standards set forth in *Neighbors for Smart Rail* must be satisfied. Second, an existing conditions baseline could deviate from the norm identified in Guidelines section 15125, subdivision (a) by measuring existing physical conditions *at a time other than when the notice of preparation is published.* This second deviation is easily distinguished from the first type because it still measures conditions that actually existed and does not utilize hypothetical conditions. In short, the stricter principles applied to future (i.e., hypothetical) conditions baselines are not needed when a baseline using actual conditions

at a time other than the publication of the notice of preparation is used to address "the problem of defining an existing conditions baseline in circumstances where the existing conditions themselves change or fluctuate over time." (*Neighbors for Smart Rail, supra*, 57 Cal.4th at p. 449.) In the latter situation, the principles set forth in *Communities for a Better Environment* establish the substantial evidence standard as the applicable standard of judicial review. If the Supreme Court had intended to change that aspect of its decision in *Communities for a Better Environment*, it would have stated it was modifying its earlier decision. Therefore, we reject plaintiffs' argument that the principles adopted in *Neighbors for Smart Rail* for future conditions baselines apply to County's choice of the 2007 figure to measure the refinery's existing conditions baseline.

III. GREENHOUSE GAS EMISSIONS

A. General Information about Greenhouse Gases

Greenhouse gases absorb infrared radiation and trap the heat in the Earth's atmosphere, rather than allowing the radiation to escape into space. The most prevalent greenhouse gases are water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The capacity of each gas to retain heat varies. To ease comparison, emissions of greenhouse gases are converted into a carbon dioxide equivalent (CO_2e),[6] which is the amount of carbon dioxide that would have the same global warming potential as the emissions of that particular greenhouse gas.

Fossil fuel combustion is the source of the vast majority of the United States' greenhouse gas emissions. In 2011, total greenhouse gas emissions in the United States were 6,702 million metric tons of CO_2e, which is down from the peak of 7,263 million metric tons in 2007. In 2010, California produced 452 million metric tons of CO_2e. The

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6 "CO_2e" is defined by regulation to mean "the number of metric tons of [carbon dioxide] emissions with the same global warming potential as one metric ton of another greenhouse gas." (Cal. Code Regs., tit. 17, § 95802, subd. (a).)

transportation sector was the largest contributor to California's greenhouse gas emissions, producing 38 percent of the state's total. Electrical generation produced 21 percent.

B. Regulatory Background

1. Supreme Court Decisions

Two recent decisions of the California Supreme Court provide overviews of California's regulatory scheme addressing greenhouse gas emissions for the purpose of slowing climate change. (*Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal.5th 497, 504-507 [part I] (*Cleveland*); *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 215-217 [part II.A.1] (*Center for Biological Diversity*).) Among other things, the overviews describe provisions of the California Global Warming Solutions Act of 2006 (Health & Saf. Code, § 38500 et seq.) and the climate change scoping plan prepared by the California State Air Resources Board (CARB). (*Cleveland*, *supra*, at p. 505; *Center for Biological Diversity*, *supra,* at pp. 215-216.)

In *Center for Biological Diversity*, the court explained some of the difficulties inherent in determining whether a project's greenhouse gas emissions will have a significant adverse effect on the environment. (*Center for Biological Diversity*, *supra*, 62 Cal.4th at p. 219.) "First, because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself. The challenge for CEQA purposes is to determine whether the impact of the project's emissions of greenhouse gases is *cumulatively* considerable, in the sense that 'the incremental effects of [the] individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.'" (*Ibid.*, quoting § 21083, subd. (b)(2).) "Second, the global scope of climate change and the fact that carbon dioxide and other greenhouse gases, once released into the atmosphere, are not contained in the local area of their emission means that the impacts to be evaluated

are also global rather than local." (*Center for Biological Diversity, supra,* at pp. 219–220.)

The principal statutory and regulatory provisions governing CEQA analysis of greenhouse gas emissions are section 21083.05 and Guidelines section 15064.4. (*Center for Biological Diversity*, *supra*, 62 Cal.4th at p. 219.) We take up the description of the regulatory scheme by quoting the text of those provisions and then summarize California's cap-and-trade program.

2. Section 21083.05

In 2007, the Legislature amended CEQA to address greenhouse gas emissions by requiring the preparation, adoption and periodic update of guidelines for mitigation of greenhouse gas impacts. (Stats. 2007, ch. 185, § 1, p. 2330, adding § 21083.05.) The present version of section 21083.05 provides in full:

> "The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by [CEQA], including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to [the California Global Warming Solutions Act of 2006]."

3. Guidelines Section 15064.4

In 2010, the Natural Resources Agency complied with the legislative directive and promulgated a guideline under CEQA for assessing the significance of greenhouse gas emissions impacts. (*Cleveland*, *supra*, 3 Cal.5th at p. 512.) Guidelines section 15064.4, subdivision (a) provides:

> "The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

"(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

"(2) Rely on a qualitative analysis or performance based standards."

Subdivision (b) of Guidelines section 15064.4 provides a nonexclusive list of factors a lead agency should consider when assessing the environmental significance of the project's impacts from greenhouse gas emissions:

"(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; [¶] (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; [¶] (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions."

The last factor listed is relevant in this case because County's assessment of the significance of the impacts of the project's greenhouse gas emissions relied on the project's compliance with the cap-and-trade program. We conclude the cap-and-trade program consists of "regulations ... adopted to implement a statewide ... plan for the reduction or mitigation of greenhouse gas emissions" as that phrase is used in Guidelines section 15064.4, subdivision (b)(3), and was properly considered by County in its evaluation, preparation, and approval of the EIR. (See Cal. Code Regs., tit. 17, §§ 95801-96022 [cap-and-trade program].)

4. Cap-and-Trade Regulations

As required by the California Global Warming Solutions Act of 2006, CARB pursued a number of strategies for reducing greenhouse gas emissions. One of those strategies was a cap-and-trade program, which CARB implemented by promulgating regulations in 2011. (Cal. Code Regs., tit. 17, §§ 95801-96022; see *Association of Irritated Residents v. State Air Resources Bd.* (2012) 206 Cal.App.4th 1487, 1498, fn. 6,

[summary of the cap-and-trade program].) The express regulatory purpose was "to reduce emissions of greenhouse gases associated with entities identified in this article through the establishment, administration, and enforcement of the California Greenhouse Gas Cap-and-Trade Program by applying an aggregate greenhouse gas allowance budget on covered entities and providing a trading mechanism for compliance instruments." (Cal. Code Regs., tit. 17, § 95801.)

"'Compliance Instrument'" is defined as an "allowance" or "offset" issued by CARB or by an external trading system to which California's cap-and-trade program has been linked pursuant to the regulations. (Cal. Code Regs., tit. 17, § 95802, subd. (a).) "'Allowance'" is a limited tradable authorization to emit up to one metric ton of CO_2e. (Cal. Code Regs., tit. 17, § 95802, subd. (a).) An "'Offset credit'" is a tradable compliance instrument issued by CARB that represents a greenhouse gas reduction or greenhouse gas removal enhancement of one metric ton of CO_2e. (Cal. Code Regs., tit. 17, § 95802, subd. (a).) The reduction or removal justifying an offset credit "must be real, additional, quantifiable, permanent, verifiable and enforceable." (*Ibid.*)[7]

The EIR described the cap-and-trade program by stating it established "a system of market-based declining annual aggregate emission limits for [greenhouse gas] emission sources, applicable from January 1, 2013, to December 31, 2020. The cap-and-trade program imposes enforceable [greenhouse gas] emission caps for covered facilities (refineries, electric power providers, cement production facilities, oil and gas production facilities, and other industrial facilities)." Both the refinery and its electrical power provider, Pacific Gas and Electric, are subject to California's cap-and-trade program.

Capped facilities are required to surrender greenhouse gas emission compliance instruments equal to their emissions at the end of each compliance period (i.e., 2013-

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7 The terms "'[a]dditional,'" "'[e]nforceable,'" "'[p]ermanent,'" "'[q]uantifiable,'" "'[r]eal,'" and "'[v]erifiable'" are defined by the cap-and-trade regulation. (Cal. Code Regs., tit. 17, § 95802, subd. (a).)

2014, 2015-2017, and 2018-2020). Over these periods, greenhouse gas emissions from capped facilities are expected to be 75 million metric tons per year less than baseline conditions, which would represent an 18 percent reduction from the statewide 1990 greenhouse gas emissions. Pursuant to the cap-and-trade program, in January 2013, CARB issued 29.3 million metric tons in free greenhouse gas allowances to California refineries, which represented 93 percent of the reported greenhouse gas emissions from those same facilities during 2011. Similarly, in September 2012, CARB distributed 97.7 million metric tons in free 2013-vintage greenhouse gas allowances to California electrical distribution utilities.

C. EIR's Discussion of Greenhouse Gas Emissions and Cap-and-Trade

The EIR addressed greenhouse gas emissions in section 4.5, which includes subsections on the regulatory setting[8] and the project's impacts. The EIR acknowledges that the refinery will produce greenhouse gas emissions and will be subject to the cap-and-trade program. Consequently, the EIR states Alon USA will be required to (1) reduce greenhouse gas emissions elsewhere in the refinery or (2) surrender greenhouse gas allowances, offset credits, or other compliance instruments to counterbalance those emissions. Similarly, the EIR states Pacific Gas and Electric will be required to reduce greenhouse gas emissions at its facilities or to surrender compliance instruments to counterbalance the emission increases associated with increased power usage.

1. Quantifying Emissions and Reductions/Offsets

The project's greenhouse gas emissions are categorized and quantified in Tables 4.5-2 and 4.5-3 of the EIR. The tables also show the application of compliance instruments to counterbalance the greenhouse gas emissions.

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8 The regulatory setting describes (1) federal legislation and regulations applicable to greenhouse gas emissions, (2) California legislation and a 2005 executive order from Governor Schwarzenegger, (3) guidance documents adopted by Air District, and (4) the Metropolitan Bakersfield General Plan.

Table 4.5-2 sets forth the estimated greenhouse gas emissions for the project, *excluding* emissions associated with main line rail activities. The emissions are divided into three categories: (1) construction activity, (2) permitted sources, and (3) non-permitted sources. Permitted sources are essentially the stationary parts of the refinery's operations. The two permitted source line items with table entries are existing heaters (40,439.3 metric tons per year of CO_2e) and new boilers (29,288.9 metric tons per year of CO_2e). The non-permitted sources include mobile sources, such as on-site rail transportation, truck transportation, and on-site vehicles and equipment. Non-permitted sources also include indirect greenhouse gas emissions from electrical power use (14,129.7 metric tons per year of CO_2e). The total annual greenhouse gas emissions for the project, excluding main line rail activities, are calculated as being 88,248.9 metric tons per year of CO_2e.

Table 4.5-2 of the EIR also includes four line items under the heading for greenhouse gas emission reductions: (1) offsets of the permitted source greenhouse gas increases through cap-and-trade, (2) displaced truck trips from refineries in the San Francisco Bay Area to Fresno, (3) greenhouse gas reductions realized by on-site rail by using diesel fuel that complies with the federal biomass-based diesel fuel requirements, and (4) offsets of electric utility greenhouse gas emissions increases through cap-and-trade. These four items totaled 88,737.7 metric tons of CO_2e per year, which exceed the project's greenhouse gas emissions by 488.9 metric tons of CO_2e per year. As a result, the EIR concluded the greenhouse gas emissions after application of emission reductions equal a negative 488.9 metric tons of CO_2e per year and states greenhouse gas emissions are reduced by 100.6 percent.

Table 4.5-3 of the EIR sets forth the estimated greenhouse gas emissions for the project *including* the emissions associated with main line rail activities, which it lists as 49,638.0 metric tons of CO_2e per year. This addition causes the total greenhouse gas emissions to equal 137,886.9 metric tons of CO_2e per year. The main line rail activities

also changed the total greenhouse gas emission reductions, which rose slightly to 89,358.4 metric tons of CO_2e per year. As a result, the greenhouse gas emissions after application of emission reductions equal 48,528.5 metric tons of CO_2e per year. The EIR states the emission reductions are 64.8 percent of the project's annual greenhouse gas emissions. The EIR characterizes this reduction as meeting the threshold of significance defined as 29 percent greenhouse gas mitigation compared to business as usual.[9]

2. Thresholds of Significance

The EIR stated County had not developed a quantitative threshold of significance for greenhouse gas emissions. It also stated a project is presumed to have a less-than-significant greenhouse gas emission impact if the project is found (1) to contribute to a net decrease in greenhouse gas emissions and (2) to be consistent with the adopted implementation of CARB's climate change scoping plan.

The EIR stated the Air District adopted guidance documents for assessing and mitigating greenhouse gas emissions impacts on global climate change. Air District did not establish specific numeric thresholds of significance, but utilized performance based standards to assess cumulative impacts on global climate change. Under Air District's May 2012 draft *Guidance for Assessing and Mitigating Air Quality Impacts*, a project is deemed to have a less than significant individual and cumulative impact for greenhouse gas emissions if (1) it complies with a statewide, regional, or local plan for reducing or mitigating greenhouse gas emissions; (2) it implements Air District's best performance standards; or (3) it achieves a 29 percent reduction in greenhouse gas emissions compared to business as usual, which is the target established by CARB for implementation of the Global Warming Solutions Act of 2006.

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9 A "'business-as-usual'" projection "assumes no conservation or regulatory efforts beyond what was in place when the forecast was made." (*Center for Biological Diversity, supra*, 62 Cal.4th at p. 216.)

The EIR stated the project's greenhouse gas emissions were anticipated to be less than significant because (1) the project is consistent with CARB's climate change scoping plan and the cap-and-trade program and (2) greenhouse gas emissions reductions achieved under cap-and-trade, federal renewable fuels standard, and displacement of fuel transport trucks exceed the 29 percent greenhouse gas emissions reductions target recommended in Air District's May 2012 draft *Guidance for Assessing and Mitigating Air Quality Impacts*. The same conclusions regarding significance were reached regardless of whether the main rail line activities were included or excluded from the calculation of the project's greenhouse gas emissions.

3. CEQA Findings

The board of supervisors certified the EIR and relied on it to make findings in accordance with Guidelines section 15091 about the project's environmental effects. As to greenhouse gas emissions, the board of supervisors found the project (1) would not generate emissions, either directly or indirectly, that may have a significant impact on the environment and (2) would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases. It also found the "project's greenhouse gas emissions are determined to have a less than cumulatively significant impact on global climate change."

D. Contentions of the Parties

Plaintiffs contend the EIR made an erroneous legal conclusion regarding the effect of California's cap-and-trade regulation, which resulted in the additional erroneous legal conclusion that compliance with the cap-and-trade regulation would reduce the project's greenhouse gas emissions to zero. In plaintiffs' view, compliance with California's cap-and-trade regulation will not actually reduce greenhouse gas emissions because allowances are authorizations to emit greenhouse gases. Plaintiffs further argue the EIR failed to accurately disclose and analyze greenhouse gas emissions (i.e., is misleading),

which violated CEQA by precluding informed decision-making and informed participation by the public.

In response, County argues:

> "It is true that much of the [greenhouse gas] reductions associated with the Project will come from the Refinery's participation in the Cap-and-Trade program. [Citation.] But [plaintiffs] mischaracterize the Cap-and-Trade program and goals, and fail to understand how the program works to reduce [greenhouse gas] emissions within California." (Fn. omitted.)

County also argues that plaintiffs have cited no authority that shows the EIR's methodology for analyzing the project's participation in the cap-and-trade program is not valid.

E. Framing the Issues

1. Misleading Disclosure?

The first issue we consider is whether the EIR's discussion of greenhouse gas emissions is misleading. Plaintiffs have argued the discussion is misleading without citing section 21083.05 or Guidelines section 15064.4—"the principal statutory and regulatory provisions governing CEQA analysis of greenhouse gas emissions." (*Center for Biological Diversity, supra,* 62 Cal.4th at p. 219.) Consequently, our analysis of this issue is based on CEQA general requirements for EIR's and is separate from our consideration of the related issue about whether the EIR is inaccurate (and thus misleading) because of the erroneous application of the cap-and-trade program.

2. Applying Cap-and-Trade

The second issue presented by the contentions of the parties can be framed as follows: When determining the significance of a project's greenhouse gas emissions, can the volume of the project's estimated emissions be decreased to reflect the use of compliance instruments (both allowances and offset credits) under the cap-and-trade program? The following three points provide context for this issue. First, this issue has not been decided in a published opinion and, therefore, presents a question of first

impression. Second, the issue is predominantly a question of correct procedure and, therefore, it is a legal question subject to de novo review. (*Center for Biological Diversity*, *supra*, 62 Cal.4th at p. 219.) Third, the cap-and-trade program is a statewide regulation designed to reduce greenhouse gas emissions and, therefore, whether County properly applied Guidelines section 15064.4, subdivision (b)(3) is relevant to whether County committed legal error. (See pt. III.B.3, *ante*.)

F. Greenhouse Gas Analysis in EIR is Not Misleading

1. Basic Principles

Guidelines section 15140 requires EIR's to "be written in plain language" and allows them to "use appropriate graphics so decisionmakers and the public can rapidly understand the documents." Guidelines section 15144 recognizes that drafting an EIR necessarily involves some degree of forecasting and that foreseeing the unforeseeable is not possible. Despite this limitation on forecasting, the section still requires a lead agency to "use its best effort to find out and disclose all that it reasonably can." (Guidelines, § 15144.)

Guidelines section 15064.4, subdivision (a) states an "agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." The reference to a "good-faith effort" also appears in Guidelines sections 15003 and 15151. For instance, "CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure." (Guidelines, § 15003, subd. (i).)

2. The Disclosure Was Adequate

Applying the foregoing principles to the EIR's description of the project's greenhouse gas emissions, we conclude the EIR's disclosure was not misleading or

deceptive, but adequately describes the method, data and conclusions reached about greenhouse gas emissions and the impact on global climate warming.

We recognize that the EIR refers to "emission reductions" and "offsets" through cap-and-trade in a way that could be read as suggesting the project's compliance with the cap-and-trade program actually would cause the number of greenhouse gas molecules emitted *by the project* to be reduced. For example, Tables 4.5-2 and 4.5-3 each contain headings referring to greenhouse gas "Emission Reductions" and "Emissions After Application of Emission Reductions."

However, under a standard of objective reasonableness, when the tables are considered along with the related narrative provided by the EIR, it is clear that (1) the reductions and offsets listed in the EIR's tables and referred to in the text include the use of "allowances" and (2) allowances authorize the refinery to emit greenhouse gases, rather than requiring the refinery to eliminate those emissions. The EIR informs the reader that the use of an allowance means the allowance is surrendered under the cap-and-trade program to authorize emissions by the project. Consequently, the reader is informed the surrender of an allowance does not mean the project will emit fewer molecules of greenhouse gas than it would have emitted if the allowance had not been surrendered. Rather, it means the project has complied with the cap-and-trade program by establishing its emissions are authorized by the compliance instrument.

Accordingly, an objectively reasonable person who has reviewed the tables and read the related narrative would understand the references to reductions and offsets did not mean fewer molecules of greenhouse gas are being emitted by the project. Instead, that person would understand the references meant that the project's greenhouse gas emissions would *comply* with the cap-and-trade program because those emissions would be counterbalanced by the surrender of compliance instruments. In sum, the disclosure in the EIR provided an adequate and complete description of how allowances and offset credits were used to comply with the cap-and-trade program and, therefore, was not

misleading about the actual consequences of the refinery's compliance with the cap-and-trade program. (See Guidelines, §§ 15003, subd. (i), 15151.)

The conclusion that the EIR was adequate and not misleading in its description of greenhouse gas emissions is not undermined by the fact that the EIR could have been drafted in a way that used the words "reductions" and "offset" with more precision and accuracy. CEQA does not demand an EIR be perfect. (See Guidelines, §§ 15003, subd. (i), 15151.) Under the circumstances presented in this case, neither the decision makers nor the public would be better informed about the consequences of the refinery's compliance with the cap-and-trade program if a writ of mandate was issued requiring the EIR to substitute other words in place of its references to reductions and offsets. Thus, requiring an additional disclosure would accomplish little.

G. Application of Cap-and-Trade Program to Significance Determination

Here, the EIR based its determination that the project's greenhouse gas emissions would be less than significant based on the volume of those emissions *after* the application of compliance instruments (both allowances and offset credits) under the cap-and-trade program. The question of law presented is whether this application of the cap-and-trade program violated CEQA. We conclude it did not violate CEQA. Our conclusion is based on Guidelines section 15064.4.

1. Estimated Emissions

County complied with the provision stating "[a] lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." (Guidelines, § 15064.4, subd. (a).) Tables 4.5-2 and 4.5-3 in the EIR clearly set forth the proposed project's total annual greenhouse gas emissions, excluding and including main line rail operations. The proposed project's total annual greenhouse gas emissions, excluding main line rail operations, were calculated to be 88,248.9 metric tons of CO_2e

per year. When main line rail operations were included, the amount was 137,886.9 metric tons of CO_2e per year. We conclude these disclosures constitute "a good-faith effort ... to describe, calculate or estimate the amount of greenhouse gas emissions resulting from [the] project" in accordance with Guidelines section 15064.4, subdivision (a). Plaintiffs do not argue the EIR's estimates of the amount of greenhouse gas emissions failed to meet this standard. Instead, plaintiffs challenge the EIR's use and description of compliance instruments to counterbalance the estimated emissions.

2. Cap-And-Trade is a Statewide Plan

The text of Guidelines section 15064.4 also presents the question of whether California's cap-and-trade program constitutes "regulations or requirements adopted to implement a statewide ... plan for the reduction of mitigation of greenhouse gas emissions." (Guidelines, § 15064.4, subd. (b)(3).) As described in part III.B.4, *ante*, the cap-and-trade program is set forth in regulations promulgated by CARB for all of California for the purpose of addressing greenhouse gas emissions. (See Cal. Code Regs., tit. 17, §§ 95801-96022 [cap-and-trade program].) In addition, the cap-and-trade program was implemented by the adoption of *regulations* and, therefore, need not comply with the criteria in the second sentence of Guidelines section 15064.4, subdivision (b)(3), which applies to *requirements* and omits any reference to *regulations*.[10] Consequently, we conclude Guidelines section 15064.4, subdivision (b)(3) directed County to consider the project's compliance with the cap-and-trade program in assessing the significance of environmental impacts from the project's greenhouse gas emissions. The EIR complied with this direction.

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[10] The sentence provides: "Such *requirements* must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions." (Guidelines, § 15064.4, subd. (b)(3), italics added.)

3. County's Reliance on the Cap-And-Trade Program was Appropriate

The next question involving the interpretation and application of the Guidelines section 15064.4 is whether its directive to consider the project's compliance with the cap-and-trade program "when assessing the significance of impacts from the greenhouse gas emissions on the environment" allows County to determine the environmental impacts of the project's greenhouse gas emissions were less than significant based on the project's compliance with the program. (Guidelines, § 15064.4, subd. (b)(3).) We interpret Guidelines section 15064.4, subdivision (b)(3) as authorizing County to determine a project's greenhouse gas emissions will have a less than significant effect on the environment based on the project's compliance with the cap-and-trade program. Compliance was a factor to be considered and, in the circumstances presented, is part of the substantial evidence supporting the finding that the impact of the emissions was less than significant.

The importance of the overall effect of a statewide plan, rather than the plan's specific effect on the particular project's emissions was illustrated in *Center for Biological Diversity*. There, our Supreme Court stated the significance of the environmental impact of greenhouse gases does not depend on *where* they are emitted because of the global scope of the climate change impact. (*Center for Biological Diversity*, *supra*, 62 Cal.4th at pp. 219-220.) Thus, examining the amount and location of the refinery's emissions is too narrow of an inquiry when the ultimate question is *global* climate change. The Supreme Court also stated:

> "For projects, like the present residential and commercial development, which are designed to accommodate long-term growth in California's population and economic activity, this fact gives rise to an argument that a certain amount of greenhouse gas emissions is as inevitable as population growth. Under this view, a significance criterion framed in terms of efficiency is superior to a simple numerical threshold because CEQA is not intended as a population control measure." (*Id.* at p. 220.)

By comparison, the modification of the refinery is designed to accommodate long-term growth in California's population and economic activity that expresses itself in increased demand for petroleum products. This increased demand will exist whether or not the project is approved. Therefore, an inquiry into significance that is based on compliance with a program that sets limits and requirements for California's petroleum refining industry as a whole is a rational approach to regulating that industry's contribution to global climate change.

The idea underlying the cap-and-trade program is not that capped facilities relying on *allowances* will decrease their greenhouse gas emissions and help the state achieve its target, but that the limited allocation and use of allowances means they are not available for use elsewhere, which affects California's refining industry as a whole. Specifically, the use or expenditure of allowances will diminish the supply of allowances, which will cause their price to rise and incentivize investment in technologies and equipment that reduce greenhouse gas emissions. Consequently, the overall (i.e., cumulative) impact of the cap-and-trade program cannot be judged by whether a particular project uses allowances, offset credits, or reduces its emissions. Rather, the significance of the cumulative impact should be assessed based on the program as a whole. Under the cap-and-trade program, the allowances issued for each compliance period decrease and this decrease provides the mechanism for meeting the targets for reduced greenhouse gas emissions in California. Based on this industry-wide perspective, we conclude it is appropriate for a lead agency to conclude a project compliance with the cap-and-trade program provides a sufficient basis for determining the impact of the project's greenhouse gas emissions will be less than significant.

Our conclusion about compliance with the cap-and-trade program is consistent with the diagram of the process for determining the significance of greenhouse gas emissions set forth in Figure 7 of Air District's May 2012 draft *Guidance for Assessing and Mitigating Air Quality Impacts*. The diagram "provides for a tiered approach in

assessing significance of project specific [greenhouse gas] emission increases." The first tier addresses whether project is exempt from CEQA. If it is, no further analysis is required. If the project is not exempt, the lead agency proceeds to the second tier and considers whether the project complies with an adopted, statewide, regional or local plan for reduction or mitigation of greenhouse gas emissions. If the answer is "yes," then the inquiry is completed with the agency concluding the impact of those emissions is less than significant. Our interpretation and application of Guidelines section 15064.4, subdivision (b)(3) is consistent with the second tier in Air District's guidance.

H. Displaced Truck Trips as an Emissions Reduction

1. EIR's Contents

One of the line items in Tables 4.5-2 and 4.5-3 under the heading for greenhouse gas emission reductions referred to displaced truck trips (San Francisco Bay Area to Fresno). The metric tons of CO_2e per year for this line item was given as a negative 4,875.3. The EIR explained this decrease in truck trips and emissions by stating Alon USA anticipated that it would more than double shipments of diesel and gasoline to the Fresno market by pipeline, which would mean a smaller amount of these fuels would need to be delivered by truck from refineries located in the San Francisco Bay Area. The EIR estimated the increased volume of fuel delivered by pipeline as approximately 3,750,000 barrels per year, which would replace 7,400 transport truck trips per year.

The EIR relied on a December 2013 Air Quality/Global Climate Change Analysis prepared by Ashworth Leininger Group, which was attached to the EIR as Appendix B. That document (1) stated Alon USA expects to ship by pipeline a total of 19,000 barrels per day of diesel and gasoline from the refinery to the Fresno market; (2) compared this amount to a baseline figure of 8,736 barrels per day; and (3) concluded approximately 10,300 fewer barrels per day would need to be delivered to the Fresno area by truck from San Francisco Bay Area refineries. When the figure of 10,300 barrels per day is

multiplied by 365 days per year, the total is 3,759,500 barrels per year, which supports the EIR's estimate of 3,750,000 fewer barrels of fuel needing to be delivered to Fresno by truck each year. The document also stated: "Emissions reductions associated with these displaced truck trips were calculated using EMFAC2011 emission factors, based on estimated round trip distance between San Francisco Bay Area refineries and Fresno."

2. Plaintiffs' Contentions

Plaintiffs contend the EIR's reliance on emissions reduction from displaced truck trips is speculative and unsupported. In plaintiffs' view, the EIR does not support its claimed reduction of 4,875 metric tons of CO_2e per year from third-party truck trips hundreds of miles away with any data or analysis and, therefore, the claim is not supported by substantial evidence. Plaintiffs argue facts are missing from the information presented and, as a result, it is mere speculation that Bay Area trucks (1) will stop driving to Fresno and (2) will not deliver the fuel that would have gone to Fresno to locations a similar distance from the Bay Area.

3. No Prejudicial Error Shown

Based on our earlier conclusion that County correctly relied on compliance with the cap-and-trade program to conclude the environmental impact of the project's greenhouse gas emissions was less than significant, it follows that an erroneous determination about reductions from displaced delivery truck trips could not have resulted in prejudice because that information *need not have been disclosed* for County to have reached its determination about significance. Thus, the information plaintiffs contend is missing from the EIR or its supporting documents is insubstantial and not grounds for relief. (*Neighbors for Smart Rail, supra*, 57 Cal.4th at p. 463; see § 21005, subd. (b) [prejudice is not presumed].)

Alternatively, the analysis presented by Ashworth Leininger Group constitutes substantial evidence in the record from which County, in its role as trier of fact,

reasonably could infer that the number of truck trips from the Bay Area to Fresno would decrease as a result of the delivery of fuel from the refinery to the Fresno market by pipeline. We recognize conflicting inferences could be drawn from the evidence presented, but the substantial evidence standard only requires sufficient evidence from which any reasonable trier of fact could find the fact in question. (See *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 639 [under substantial evidence standard, plaintiffs have burden of showing lead agency could not have reasonably made the factual determination challenged].) Here, that deferential standard is met.

IV. RAIL TRANSPORT SAFETY*

A. Contentions of the Parties

Plaintiffs assert the project will dramatically increase the amount of crude oil shipped into California by rail, a type of transport that involves significant risks. Plaintiffs contend the EIR erroneously understated the risk of a rail accident involving the release of hazardous materials and relied on the understatement in finding the risk was not significant. Plaintiffs also contend the EIR erroneously failed to describe all of the project's rail impacts, such as air pollution emitted by the diesel locomotives, based on the mistaken legal conclusion that federal law prevented it from doing so.

In response, County contends the EIR adequately disclosed and analyzed the project's rail transport impacts, including the probability and impact of a train accident. County argues it did not abuse its discretion in calculating the probability of a rail accident—a risk the EIR concluded was low. County also argues the board of supervisors considered plaintiffs' position about the probability of a train accident resulting in the release of crude oil and the underlying statistical information, which was set forth in the administrative record. Thus, County concludes the decision makers and

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* See footnote, *ante*, page 1.

the public were not misled about the various ways to interpret the federal data for accidents and incidents. Furthermore, County argues the EIR evaluated the environmental consequences of a rail incident, determined the impacts were "significant and unavoidable," and imposed several mitigation measures to reduce the potential impacts.

B. The Erroneous Calculation of Risk

1. Overview of Federal Regulations and Reporting

Plaintiffs' claim of error challenges the EIR's use of federal data relating to railroad safety. The data is reported by railroads to the Federal Railroad Administration, which compiles the information and discloses it to the public. To place the railroad safety data in context, we begin with a brief overview of the federal regulatory program managed by the Federal Railroad Administration.

"The Federal Railroad Administration is an administration in the Department of Transportation." (49 U.S.C. § 103, subd. (a).) Congress has directed it to "consider the assignment and maintenance of safety as the highest priority." (49 U.S.C. § 103, subd. (c).) The consideration of safety is addressed in part by part 225 of title 49 of the Code of Federal Regulations, which requires the reporting of railroad accidents and incidents to the Federal Railroad Administration. The part's purpose "is to provide the Federal Railroad Administration with accurate information concerning the hazards and risks that exist on the Nation's railroads." (49 C.F.R. § 225.1.) The agency needs this information to effectively carry out the regulatory responsibilities assigned to it by Congress. (*Ibid.*) The agency also "uses this information for determining comparative trends of railroad safety and to develop hazard elimination and risk reduction programs that focus on preventing railroad injuries and accidents." (*Ibid.*)

The regulations require railroads to submit monthly reports of all railroad accidents and incidents to the Federal Railroad Administration. (49 C.F.R. § 225.11,

subd. (a).) Railroad accidents and incidents are divided into three major groups for reporting purposes—train accidents, highway-rail grade crossing incidents, and other incidents involving death, injury or occupational illness. (*Ibid.*; 49 C.F.R. § 225.19, subd. (a) [primary groups of accidents/incidents].)

"Train accidents" is the term used in the EIR and administrative record to designate safety-related events involving on-track equipment resulting in monetary damage to the rail equipment and track above a prescribed amount. (49 C.F.R. § 225.19, subd. (c) [the amount was $9,900 for 2013 and $10,500 for 2014].) The federal regulations use the term "rail equipment accident/incident," not "train accident,"[11] and these events are reported on Form FRA F 6180.54, Rail Equipment Accident/Incident Report. (49 C.F.R. § 225.21, subd. (a).)

Highway-rail grade crossing accidents/incidents are any impact between a rail and highway user at a designated crossing site and are reported on Form FRA F 6180.57, Highway-Rail Crossing Grade Accident/Incident Report. (49 C.F.R. § 225.19, subd. (b).) The regulations address the possibility that the impact between a rail and a highway user results in damages to on-track equipment exceeding the threshold defining a train accident. "[W]henever a highway-rail grade crossing accident/incident results in damages greater than the current reporting threshold to railroad on-track equipment ... that accident/incident shall be reported" on the form used for train accidents—that is, Form FRA F 6180.54. (49 C.F.R. § 225.19, subd. (b).) Thus, the first two groups overlap, and an accident/incident that satisfies both definitions is reported as a train accident.

The third group—other incidents—covers any death, injury, or occupational illness of a railroad employee that is not the result of a train accident or highway-rail incident. (49 C.F.R. § 225.19, subd. (d).) Other incidents, which are about three times

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11 This opinion uses the term "train accident" rather than the regulatory phrase.

more frequent than either train accidents or highway-rail incidents, are reported on Form FRA F 6180.55a, Railroad Injury and Illness Summary. (49 C.F.R. § 225.19, subd. (d).)

2. Safety Data in the Administrative Record

The Federal Railroad Administration compiles the reports submitted by railroads and makes the data available to the public. The EIR lists the website where the data can be found. The administrative record contains the data in a Federal Railroad Administration document titled "1.12 – TEN YEAR ACCIDENT / INCIDENT OVERVIEW [¶] BY CALENDAR YEAR (January-December)," which covers the period from 2003 through 2012. For that period, the total number of train accidents was given as 25,434; highway-rail incidents as 25,307; and *other* accidents/incidents as 78,556. The federal document combines the three groups and gives the *total* number of accident/incidents for the 10-year period as 129,297. It also lists the number of hazardous material releases for each year, which ranged from a low of 21 to a high of 46. The total number of releases over the 10-year period was reported as 287.

Other information provided in the federal document included total train miles for each year and for the 10-year period. Total train mileage for the period was over 7 billion—specifically, 7,505,663,265. When this total is divided by the number of releases of hazardous material for the period (i.e., 287), it produces an average of 26,152,137 train miles per hazardous material release.

In September 2014, one of the plaintiffs sent an email to the United States Department of Transportation with questions about the Federal Railroad Administration's online safety data. Judy H. Cox of the department's Office of Safety sent a responding email later that month. According to Cox's email, the term "Accident/Incident" is "used to describe the entire list of reportable events" and "[a]ccidents/incidents are divided into three major groups for reporting purposes." Cox listed the groups as "[t]rain accidents,"

"[h]ighway-rail grade crossing incidents," and "[o]ther incidents."[12] Cox also identified the reporting form used for each group, which corresponded with the form name and number set forth in the Code of Federal Regulations. (See pt. IV.B.1, *ante*.) Cox's email also stated, with the three groups in mind, "the information that we capture for Hazmat releases is done with the information for 'Train Accidents.'"[13]

For purposes of this appeal, we summarize three points about the federal data. First, "accidents/incidents" is a broad term that refers to all reportable events. Second, the term "accidents/incidents" and the term "train accidents" have different meanings, with "train accidents" being a specific type of reportable event that is a subset of "accidents/incidents." Third, hazardous material releases are reported under "train accidents."

3. EIR's Contents

Chapter 4.6 of the EIR addresses hazards and hazardous materials. The potential impacts discussed included hazards "to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment." (Boldface omitted.) The EIR separately discussed the potential release of hazardous materials associated with (1) construction activities, (2) operations of the modified refinery, and (3) rail transport. As to the latter, the EIR stated the "project will increase the transport of crude by rail and increase the potential hazards

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12 Consistent with Cox's explanation, the EIR contains a footnote stating: "Total accident/incidents include train accidents, highway-rail accidents, and other incidents."

13 Cox described the *reportable* releases of hazardous materials by stating, "We do not capture ALL hazmat accidents, only those that hit the dollar threshold. Hence, the number of hazmat accidents [provided in our data] are those that are reportable to the F[ederal Railroad Administration]." For purposes of this opinion, we refer to releases of hazardous materials as including only *reportable* accidents, which is the approach used by the EIR.

associated with crude rail transport." The transportation hazards were identified as fire, explosions and hazardous material releases.

The Federal Railroad Administration's data about train accidents, highway-rail incidents and other incidents for the 10-year period from January 2003 to December 2012 were summarized in Table 4.6-3 and also described in the EIR's text. Table 4.6-3 provided yearly information, but did not include totals or averages for the 10-year period. Table 4.6-3 accurately described the difference between "Total Accidents/Incidents" and "Train Accidents." (See fn. 11, *ante*.)

The EIR stated that the yearly train accident rate over the 10-year period varied between 2.3 and 4.4 accidents per million miles and averaged 3.4 accidents per million miles traveled. It also stated: "Of the train accidents reported during the 10-year period (a total of 128,974), about one percent ... resulted in a release of hazardous materials (287/128,974 = 0.0022 or 0.22%)."[14] The EIR then took the 10-year average of 3.4 accidents per million miles and multiplied it by the estimate of the proposed project's yearly rail miles (874,553). This multiplication resulted in the prediction of 2.97 accidents per year associated with the project. The 2.97 accidents per year were multiplied by 0.0022 (0.22%)—the alleged probability that a train accident would result in a release of hazardous materials—which generated an answer of 0.0065 accidents per year. The EIR described 0.0065 accidents per year as "the estimated probability of hazardous material releases associated with rail transportation of materials to/from the refinery." The EIR converted this figure into the estimate that once every 150 years a

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14 As explained below, this sentence is not accurate because the correct number of "train accidents" for the period was 25,434, not 128,974. The latter number corresponds to the "total accidents/incidents," which the Federal Railroad Administration document reports as 129,297.

As to the discrepancy between 128,974 and 129,297, it appears to be the result of the EIR's use of numbers for the years 2009 through 2012 that are slightly different from those stated in the Federal Railroad Administration document.

release of hazardous material would occur as the result of the rail transport associated with the project. The EIR also stated: "The life time of the rail facilities is considered to be 30 years, therefore, a rail accident resulting in a release is not expected to occur within the life time of the facilities. The hazards associated with rail transport are expected to be less than significant."

4. Plaintiffs' Allegation of Error

Plaintiffs contend that when the correct data is plugged into the formula (i.e., methodology) used in the EIR, the resulting estimate of the probability of a release of hazardous materials from a train accident results in the conclusion that such a release is likely to occur during the project's lifetime. Plaintiffs' brief sets forth the formula and plugs in what plaintiffs contend are the correct figures. Plaintiffs then set forth the figures the EIR used in the formula and highlight the differences between those figures and what they contend are the correct figures.

In plaintiffs' view, 25,434 is the correct number of *train accidents* for the 10-year period and the EIR erroneously used 128,974, which is the *total accidents/incidents* for the period. Plaintiffs further contend the EIR's division of 287, the total number of hazardous material releases reported, by 128,974 instead of 25,434 produced an erroneously low estimate of the probability of a hazardous material release from a train accident. Consequently, plaintiffs claim the EIR's estimate of 0.22 percent as the probability of a train accident resulting in the release of hazardous materials was too low.

As explained below, plaintiffs have identified an erroneous use of the federal data relating to train accidents and reportable events. The correct number of train accidents for the 10-year period was 25,434, not the 128,974 given in the EIR. The EIR's misstatement inflated the number of train accidents about fivefold, which caused the estimate of the probability of a hazardous material release per accident to be about one fifth of the correct probability.

5. Confirmation of Alleged Errors

The EIR stated: "Of the *train accidents* reported during the 10-year period (a total of *128,974*), about one percent ... resulted in the release of hazardous materials (287/*128,974* = 0.0022 or 0.22%)." (Italics added.) This statement gives the wrong number for the train accidents reported during the 10-year period. A Federal Railroad Administration document shows that (1) the *train accidents* reported for the 10-year period totaled 25,434 and (2) the *total accident/incidents* reported for the 10-year period was 129,297.

We rely on the information contained in the Federal Railroad Administration document because County does not argue that information is incorrect. Furthermore, County does not cite other evidence in the administrative record showing train accidents for the period actually were the 128,974 given in the EIR and not the 25,434 stated in the Federal Railroad Administration document. Therefore, we conclude the EIR's use of the 128,974 figure as the number of train accidents for the 10-year period was a factual error. In other words, the EIR's statement that the total number of train accidents for the period was 128,974 is not supported by any evidence, much less substantial evidence. Thus, the use of 128,974 as the total number of train accidents constitutes an abuse of discretion pursuant to section 21168.5.

Furthermore, the factual error about the number of train accidents infected the EIR's calculation of the historical average of the hazardous materials releases per train accident for the 10-year period. This historical average was used as an estimate of the probability of a hazardous materials release from a train carrying crude oil to the project. Consequently, the estimated probability also was tainted by the error in calculating the historical average. Also, the reciprocal of the estimated probability was used to predict the frequency with which the project's rail traffic would result in a train accident that releases hazardous materials. It necessarily follows that the predicted frequency also was tainted by the error. In sum, the EIR misstated the federal data when it stated "about one

percent of the train accidents resulted in a release of hazardous materials (287/128,974 = 0.0022 or 0.22%)" and perpetuated the error by using the figure of 0.22 percent to calculate the proposed project's probability of causing a hazardous material release.

To further explain the error, we describe two ways to correct the EIR's erroneous presentation of the federal data. First, the EIR's use of the term "train accidents" could be changed to "total accidents/incidents" or its equivalent, "reportable events." With that textual change, the calculation of 0.22 percent would have accurately stated the rate at which accidents/incidents resulted in the release of hazardous materials and that rate would have been an adequate estimate of that probability that a future accident/incident would result in a release.

Second and alternatively, the error in the EIR could have been corrected by using the correct number of *train accidents*, which would have led to an accurate calculation of the probability that a *train accident* would result in the release of hazardous materials. Such a calculation would have divided the number of releases (287) by the number of train accidents (25,434), not by the total accidents/incidents (129,297). A calculation using the correct figures would have estimated the probability that a train accident resulted in a release of hazardous materials at 1.13 percent, which is about five times higher than the erroneous estimate of 0.22 percent stated in the EIR.

Assuming the second type of correction had been made, the EIR's erroneous estimate of the probability of a hazardous material release associated with rail transportation to and from the refinery as 0.0065 (0.65%) per year would have been corrected as follows. Using 874,553 as the project's annual rail miles traveled and a train accident rate of 3.4 accidents per million miles traveled produces an estimate that the trains going to and from the project would experience about 2.97 accidents per year. Plaintiffs do not contest this calculation and, therefore, we conclude the EIR properly estimated the project would result in about 2.97 train accidents per year. Multiplying the 2.97 accidents per year by the correct estimate of the probability a train accident would

result in the release of hazardous material (1.13%) yields an estimate that the probability of a hazardous material release is 0.0336 (3.36%) per year, not the 0.0065 (0.65%) stated in the EIR.

The EIR's errors tainted its statement that the project would increase the frequency of a rail accident resulting in a hazardous materials release to once every 150 years. Using the proper estimate of the probability of a hazardous material release, the EIR should have stated the frequency was increased to once every 29.7 years, which is one year divided by the probability of 0.0336 accidents per year.

6. Checking the Answer Using a Simplified Approach to the Data

At an early age, math students are taught to check their work. One way is simply to redo the calculations a second time. Another way—a way that is encouraged because it reduces the chances of repeating an earlier error—is to check the result by adopting a different mathematical route to arrive at the answer. When the same answer is reached by two different routes, the confidence that the answer is correct is higher than when the same answer is obtained by retracing the original calculations. Here, we check our answers by employing a different mathematical route and see if the answers generated by each approach are the same. The mathematical formula used in the EIR is more complicated than necessary, which means we can check our answers using a simpler approach—that is, a shorter route for arriving at an estimate of the probability the project will result in the release of hazardous materials.

The simplest formula for estimating the likelihood the project will result in a hazardous material release focuses on total releases and total mileage. The formula includes the following steps:

> *Step One*. Identify the total number of hazardous material releases over the 10-year period. That number is 287 releases.
>
> *Step Two*. Identify the total number of rail miles logged in the United States for the 10-year period. That number is 7,505,663,265 miles.

Step Three. Calculate the number of miles per release for the period by dividing the total miles (7,505,663,265) by the total number of releases (287). The result is 26,152,137 miles per release. This number means that, on average over the 10-year period, slightly over 26 million rail miles were traveled for each hazardous material release.

Step Four. Identify the number of rail miles per year associated with the proposed project. That number is 874,553 miles per year.

Step Five. Assume the likelihood of a release from the trains delivering crude oil to the refinery is the same as the historical average calculated in Step Three. Compare that average to the 874,553 miles of rail traffic associated with the project for one year. There are two ways to make this comparison.

One way divides the average of 26,152,137 miles per release by the project's 874,553 miles per year. The miles cancel out and the answer of 29.9 is expressed in years per release. In other words, the project is predicted to result in one release of hazardous materials every 29.9 years.

A second way to make the comparison is to switch the dividend and divisor—that is, divide 874,553 miles per year by 26,152,137 miles per release. Again, the miles cancel out. The answer of 0.0334 is expressed in releases per year. This answer estimates that an average of 0.0334 releases will occur per year, which is the same as stating there is a 3.34 percent chance of a release in a given year.

We performed these alternate calculations to check the figures generated when we plugged the correct numbers into the formulas used in the EIR. Our calculations under the EIR's approach estimated the probability of a hazardous material release from the rail traffic associated with the project at 0.0336 (3.36%) releases per year or 29.7 years per release. (See pt. IV.B.5, *ante*.) The slight difference in the answers produced by the simplified approach and answers generated by plugging the correct numbers into the EIR's approach is due to rounding off numbers. Therefore, the simplified formula confirms the results we achieved by plugging the correct numbers into County's formula and, thus, corroborates our conclusion that the EIR contains factual error.

C. County's Attempts to Justify Its Calculations

1. Methodology

County's appellate brief boldly asserts: "There is no math error, just a difference in methodology." County contends the issue is one of factual interpretation and it interprets the federal data to mean "any potential reportable event (*i.e.*, 'Accident/Incident') has the potential to result in a hazmat release—not just 'Train Accidents.'" (RB 61:3-4; 61, last sentence of 1st full ¶)!

County's argument has a number of flaws that render it unconvincing. First, the assertion of fact that any reportable event has the potential to result in a release of hazardous materials is not supported by a citation to evidence. Ordinarily, a factual assertion set forth in an appellate brief is supported "by a citation to the volume and page number of the record where the matter appears." (Cal. Rules of Court, rule 8.204(a)(1)(C); see *Sky River LLC v. County of Kern* (2013) 214 Cal.App.4th 720, 741, [rule applies to matters referenced at any point in the brief, not just the brief's statement of facts].) This court cannot treat such alternative facts as true simply because a party's brief has asserted those facts were true. Such an expectation is not only illogical, but contrary to the rules of appellate practice that govern this court. "Contentions based on factual assertions that are not supported by references to the record violate rule 8.204(a)(1)(C) of the California Rules of Court and may be disregarded." (*In re Marriage of Ruelas* (2007) 154 Cal.App.4th 339, 344.)

Second, the assertion of fact is contradicted by evidence in the record. The Cox email of September 2014 explained the federal data by stating "the information that we capture for Hazmat releases is done with the information for 'Train Accidents.'" Thus, County's statement that any reportable event has the potential to result in a release of hazardous materials, even if possible in some abstract sense, is not how hazardous material releases are actually reported to the Federal Railroad Administration and is not

how the data is presented to the public.[15] Consequently, the EIR attempts to use the data in a way that contradicts how it was compiled and published.

Third and most important, County fails to recognize that the error in the EIR involved the *mislabeling* of federal data. The mislabeling is not addressed by its factual claim that any reportable event could result in a hazardous material release. If reportable events actually provided the best foundation for analyzing the probability of a hazardous material release, then the EIR could have correctly labeled the figure of 128,974 as the number of reportable events and then calculated hazardous material releases *per reportable event*, rather than per *train accident*. Next the EIR could have calculated the *reportable events* that were likely to occur as a result of the rail mileage associated with the project and multiplied that number by the estimate of releases per reportable event. Such an approach would have used the data in an internally consistent manner—that is, it would have made comparisons of apples to apples. Instead, the EIR erroneously applied the label "train accidents" to the number of reportable events, which tainted its subsequent calculations probabilities and risks related to train accidents.

In summary, we reject the argument that the EIR contains no math error and the difference is one of methodology. The EIR clearly misstated the federal data when it stated (1) "the train accidents reported during the 10-year period [was] a total of 128,974" and (2) the percentage of train accidents resulting in a release of hazardous materials could be calculated by dividing 287 releases by 128,974. A properly labeled, internally consistent use of the federal data would have stated the "accidents/incidents" (i.e., reportable events) for the 10-year period totaled 129,297 and calculated the percentage of

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15 An additional flaw in the statement is that County offers no rationale for including "other incidents" with the events that might cause a hazardous materials release. In particular, County offers no evidence showing a death, injury or occupational illness of a railroad employee that is *not* the result of the train accident or a highway-rail incident could have been caused by a release of hazardous materials.

accidents/incidents resulting in a release of hazardous material by dividing 287 by 129,297. To apply the result of this calculation to the project in a logically consistent way, the EIR should have calculated the accident rate for the project using data about the "accidents/incidents" (i.e., reportable events) rather than the 3.4 "train accidents" per million rail miles.[16]

2. Full Disclosure to the Decision Makers

County asserts all of the statistical information on which it and plaintiffs based their calculations and each side's method of calculation were presented and became part of the administrative record. Based on this view of the facts, County argues the decision makers and public were not misled by the EIR and all interested parties were fully informed of plaintiffs' interpretation of the data before the board of supervisors certified the EIR and approved the project.

County makes these assertions of fact and arguments without citing any provision in CEQA or the Guidelines or any principle adopted in the case law. (See Cal. Rules of Court, rule 8.204(a)(1)(B) [brief must support each point, if possible, by citation of authority].) However, the arguments were made to support County's broader position that the EIR adequately analyzed and disclosed the probability and impact of a train accident. Thus, it appears County is contending the EIR complied with the standard for adequacy set forth in Guidelines section 15151, which states courts look "for adequacy, completeness, and a good faith effort at full disclosure." Guidelines section 15151 also states the "EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences." It also states "the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible."

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16 There were 17.2 *accidents/incidents* per million rail miles (129,297 reportable events divided by 7,505.6 million rail miles).

(Guidelines, § 15151.) "Feasible" is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." (Guidelines, § 15364.)

To the extent that County is arguing the EIR is adequate, complete and represents a good faith effort by County at full disclosure and, therefore, has complied with CEQA and Guidelines section 15151, we reject that argument. First, there is no evidence in the record showing it was not "reasonably feasible" for the EIR to use the federal safety data in a consistent manner when calculating the probability the rail traffic associated with the project would result in a release of hazardous materials. To the contrary, the federal safety data was contained in the administrative record and was summarized in Table 4.6-3 of the EIR. Thus, the data was readily available and no apparent economic, environmental, legal, social, or technological factors justified misstating the total number of reportable events as the total number of train accidents. (See Guidelines, §§ 15151, 15364.)

Second, the discussion in the EIR that incorrectly presented 128,974 as the total number of train accidents cannot be said "to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences." (Guidelines, § 15151.) Rather, this goal is accomplished by providing accurate information in the EIR and the misstatement of data undercuts the EIR's effectiveness as an informational document. This is particularly true when the decision makers adopt a statement of overriding considerations, effectively finding that the benefits of the project outweigh the adverse environmental consequences. When an EIR understates an environmental risk by fivefold, it has provided skewed information directly relevant to the balancing of the benefits of the project against its risks. As a result, that balancing process was tainted by EIR's erroneous statement of the project's risks. Consequently, the approval of the project also was tainted by the factual error.

More generally, County's argument about full disclosure *in the administrative record* implies that the EIR is not what's important for purposes of CEQA, but it is the administrative record that determines whether the decision makers were adequately informed. This implication is contrary to CEQA principles and, therefore, we reject County's argument. The central role of the EIR (not the administrative record) is evident from many principles adopted under CEQA. For instance, Guidelines section 15003 expresses the policy that the EIR (1) is the heart of CEQA, (2) serves to protect the environment and to demonstrate to the public that it is being protected, (3) informs other governmental agencies and the public generally of the environmental impact of a proposed project, and (4) demonstrates to the public to the citizenry that the agency actually analyzed and considered the ecological implications of approving the project. (Guidelines, § 15003, subds. (a)-(d).) These policies support the view that the EIR should provide correct information and are contrary to the view that errors in the EIR are unimportant so long as the administrative record shows all sides of the issue were addressed at some point in the record.

In addition, County's argument fails to consider the consequences of its decision to certify the EIR without correcting its factual errors. Guidelines section 15090, subdivision (a)(3) states that prior to approving a project the lead agency shall certify that "[t]he final EIR reflects the lead agency's independent judgment and analysis." Accordingly, when a draft EIR contains errors, those errors should be corrected in the final EIR. If they are not corrected, the lead agency's certification of the final EIR is the equivalent of the lead agency adopting the errors as its own. County's argument that there is no CEQA problem with errors in the final EIR so long as the arguments about the existence of the errors have been presented to the decision makers fails to appreciate (1) the various functions performed by a final EIR and (2) the inference that the decision makers believed no error exists because they have certified the final EIR without correcting the error. In short, the fact the decision makers certified the EIR demonstrates

they were misled and incorrectly believed there was no error. Accordingly, we reject County's position that the EIR was adequate and the decision makers were not misled.

V. FEDERAL PREEMPTION AND OFF-SITE RAIL IMPACTS

A. Contentions of the Parties

Plaintiffs contend the EIR erroneously excluded an analysis of some (but not all) of the environmental impacts resulting from the off-site main line rail operations that will deliver crude oil to the refinery. Plaintiffs argue this omission was caused by the incorrect legal conclusion that Interstate Commerce Commission Termination Act of 1995 (ICCTA; 49 U.S.C. § 10101 et seq.) preempted CEQA review. In plaintiffs' view, federal law does not preempt an *analysis* of the environmental impacts of the project's rail transport aspects and does not bar *all* mitigation measures that might address the off-site rail impacts to the environment.

As to mitigation measures that affect train movement on the railroad's main line, County argues the ICCTA prevents it from adopting that type of mitigation. As to CEQA review, County presents two arguments. First, County contends "the EIR disclosed and analyzed the impacts associated with mainline rail activities." Second, County contends "the information disclosure aspect of CEQA may be preempted by ICCTA."[17]

Plaintiffs' reply acknowledges the "ICCTA may preempt the County's ability to impose certain mitigation measures on mainline rail operations," but argues federal law

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17 County supports this contention by citing *Assn. of American Railroads v. South Coast Air Quality Management Dist.* (9th Cir. 2010) 622 F.3d 1094. In that case, the court concluded the ICCTA preempted the regional agency's rules that attempted to reduce air pollution emitted by idling trains, imposed reporting requirements, and listed penalties for noncompliant railyard operators. (*Assn. of American Railroads, supra,* at p. 1096.) We conclude a rule that imposes a reporting requirement *on rail carriers* is distinguishable from a CEQA requirement that a nonrailroad disclose and analyze indirect environmental impacts of a project, such as the impacts of increased rail traffic. Preparing a document that completes a CEQA review would not interfere with the rail carrier or its operations.

does not prevent or excuse the EIR from disclosing and assessing the significance of impacts caused by the rail activities associated with the project. Plaintiffs note that the project proponent, Alon USA, is not a rail carrier and requiring Alon USA to acknowledge the impacts of the rail operations and evaluate the significance of those impacts would not interfere with the federal regulation of rail carriers.

B. Legal Principles

1. Overview of the ICCTA

In 1995, Congress enacted the ICCTA and established the Surface Transportation Board (the successor to the Interstate Commerce Commission) to administer the federal regulatory scheme. A recent decision of the California Supreme Court addresses whether the ICCTA preempted application of CEQA to a railroad project undertaken by a state public entity. (*Friends of Eel River v. North Coast Railroad Authority* (2017) 3 Cal.5th 677, 690-691 (*Eel River*).) Here, the off-site rail activity will be undertaken by a private railroad (BNSF Railway), not a public entity.[18] Consequently, *Eel River* is not directly controlling in this appeal, but does provide useful insights and principles. For instance, our Supreme Court set forth "the text of the ICCTA preemption provision, the overall function of the ICCTA, and the unifying and deregulatory purpose disclosed by legislative history of the federal law" in part II.C of its opinion. (*Eel River*, 3 Cal.5th at pp. 702, 706-711 [pt. II.C].) Moreover, the court addressed the preemptive effect of the ICCTA on state regulation, particularly its effect on CEQA, in part II.D of the opinion. (*Eel River*, *supra,* at pp. 711-720.)

Generally speaking, the ICCTA requires rail carriers to establish reasonable rates, rules, and practices related to transportation or services; prohibits discriminatory pricing; and establishes common carrier obligations requiring provision of transportation or

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18 A project undertaken directly by a public entity is distinguishable from a project undertaken by a private party after receiving the approval of a state or local agency. (§ 21065, subds. (a), (c).)

services on reasonable request. (49 U.S.C. §§ 10702, 10741, 11101.) Also, the ICCTA prohibits rail carriers from improper obstruction of through traffic or freight, and prohibits state or local tax discrimination against rail property. (49 U.S.C. §§ 10744, 11501.)

The ICCTA assigns administrative and regulatory duties to the Surface Transportation Board. (49 U.S.C. §§ 1301- 1302.) A variety of transactions require its approval, such as railroad construction and operations, the abandonment of a rail line, or the discontinuation of service. (49 U.S.C. §§ 10901, 10903.) The Surface Transportation Board also has authority to prescribe routes and certain rates and to adjudicate claims of unreasonable rates arising from market dominance. (49 U.S.C. §§ 10705, 10707.)

The statutory provisions most relevant to the preemption arguments presented in this appeal explicitly address the Surface Transportation Board's jurisdiction and preemption. The Surface Transportation Board has exclusive jurisdiction over transportation by rail carriers and the construction and operation of tracks, yards and other facilities. (49 U.S.C. § 10501(b).) As to federal preemption, the ICCTA provides: "Except as otherwise provided in this part ..., the remedies provided under this part ... with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law." (49 U.S.C. § 10501(b)(2).)

The scope of (1) the ICCTA's preemption of state regulations and (2) the Surface Transportation Board's exclusive jurisdiction is determined in part by the definitions of "rail carrier" and "transportation." The term "rail carrier" means a person providing common carrier rail transportation. (49 U.S.C. § 10102(5).) The term "transportation" includes services related to the movement of goods, including the delivery, handling and interchange of goods. (49 U.S.C. § 10102(9).)[19] Our Supreme Court summarized the

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[19] Under these definitions, BNSF Railway is a "rail carrier" and its delivery of tank cars containing crude oil to the refinery constitutes "transportation" for purposes of the

jurisdiction and preemption provisions by stating that "under 49 U.S.C. section 10501, the [Surface Transportation Board] has exclusive jurisdiction over transportation by rail carrier, including the movement of goods and all services related to that movement. Its remedies are exclusive and expressly preempt state remedies 'with respect to regulation of rail transportation.' (*Id.*, § 10501(b).)" (*Eel River*, *supra,* 3 Cal.5th at p. 711.)

2. Categorical Preemption

In *Eel River*, the Supreme Court's discussion of the relationship between the ICCTA's preemption provision and CEQA identified two types of preempted state actions or regulations. (*Eel River*, *supra*, 3 Cal.5th at pp. 714-720 [pt. II.D.2].) The first type refers to state actions and regulations that are facially (*i.e.*, categorically) preempted. (*Id.* at p. 716.) Categorical preemption is subdivided into two kinds. The first is any form of state or local *permitting or preclearance* that, by its nature, could be used to deny a rail carrier the ability to conduct some part of its operations or to proceed with activities authorized by the Surface Transportation Board. (*Id.* at pp. 716-717.) The second kind of categorical preemption invalidates state or local regulation of matters *directly regulated* by the Surface Transportation Board, such as the construction and operation of rail lines and the railroad's rates and service. (*Id.* at p. 717.) A state action or regulation of this type is invalid as a per se unreasonable interference with interstate commerce. (*Ibid.*) Thus, both kinds of categorical preemption address the state action or regulation *itself* and the reasonableness of the state action or regulation is irrelevant. (*Ibid.*)

3. As Applied Preemption

The second type of federal preemption covers state actions and regulations on an "as applied" basis. (*Eel River*, *supra*, 3 Cal.5th at p. 717.) Whether a particular state action or regulation is preempted depends on the degree of interference the action or

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ICCTA. In contrast, Alon USA is not a rail carrier and the refinery's operations are not subject to the jurisdiction of the Surface Transportation Board.

regulation has on railroad operations. (*Ibid.*) Thus, this type of preemption analysis requires an assessment of whether the state or local action, regulation or remedy would have the effect of preventing or unreasonably interfering with railroad transportation. (*Ibid.*) The phrase "preventing or unreasonably interfering with" is equated with having "'the effect of foreclosing or unduly restricting a railroad's ability to conduct any part of its operations or otherwise unreasonably burdening interstate commerce.'" (*New Orleans & Gulf Coast Ry. Co. v. Barrois* (5th Cir. 2008) 533 F.3d 321, 332.) More specifically, the ICCTA preempts state and local environmental regulation requiring private railroad companies to acquire permits or preclearance *as a condition to operating the railroad*, as well as remedies that would prohibit the conduct of railroad business pending compliance with environmental requirements imposed by state or local agencies pursuant to CEQA. (*Eel River*, *supra*, 3 Cal.5th at p. 717.)

4. ICCTA Preemption and CEQA Review

Here, we are concerned with how the foregoing principles governing federal preemption under the ICCTA apply to the requirements of CEQA. In *Eel River*, our Supreme Court tangentially addressed preemption of CEQA's information provisions (which we regard as distinct from CEQA provisions addressing the adoption of mitigation measures or feasible alternatives) by stating:

> "The [Surface Transportation Board] has recognized, too, that a state law simply requiring, for example, the development of information concerning a railroad project would not *necessarily* be preempted. In *Boston & Maine*, for example, the [Surface Transportation Board] stated, 'While a locality cannot require permits prior to construction, . . . a railroad can be required to notify the local government "when it is undertaking an activity for which another entity would require a permit" and to furnish its site plan to the local government' (*Boston & Maine* [*Corp. and Town of Ayer, MA, Petition* (STB, Apr. 30, 2001, No. FD 33971)], 2001 WL 458685, p. * 5), adding that '[l]ike any citizen or business, railroads have some responsibility to work with communities to seek ways to address local concerns in a way that makes sense and protects the public health and safety' with pragmatic solutions. (*Id.*, p. * 7.) 'Examples of solutions that appear . . . reasonable

include conditions requiring railroads to (1) share their plans with the community, when they are undertaking an activity for which another entity would require a permit, (2) use state or local best management practices when they construct railroad facilities; (3) implement appropriate precautionary measures . . . ; (4) provide representatives to meet periodically with citizen groups or local government entities to seek mutually acceptable ways to address local concerns; and (5) submit environmental monitoring or testing information to local government entities for an appropriate period of time after operations begin.' (*Ibid.*, fns. omitted.)" (*Eel River*, *supra*, 3 Cal.5th at p. 722.)

We interpret our Supreme Court's statement that the development of information concerning such a railroad project[20] would not necessarily be preempted to mean the development of information pursuant to CEQA is not preempted categorically, but might be preempted on an as applied basis. Extending this interpretation to a refinery project serviced by a rail carrier, we conclude the development of information pursuant to CEQA is not preempted categorically, but is subject to scrutiny under the rules for as-applied preemption.

C. Analysis

Our analysis of the preemption questions presented begins by describing what the EIR said about federal preemption and then separately addresses the federal preemption of (1) CEQA's informational requirements and (2) CEQA's requirements relating to the adoption of mitigation measures.

1. Contents of the EIR

Chapter 3 of the EIR described the project. Section 3.4.1 of the EIR addressed the proposed improvements to on-site rail facilities, the off-site train movements, and the transport of Bakken crude oil. The EIR reported that the operation of unit trains to and

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20 The project in *Eel River* involved the resumption of freight service on a state-owned rail line between Lombard and Willits by Northwestern Pacific Railroad Company, a private entity that entered an agreement and lease with the state designating it as the state's franchisee. (*Eel River*, *supra*, 3 Cal.5th at pp. 691, 692, 694.)

from the project site would be performed by BNSF Railway on its property using BNSF trains operated by BNSF employees. The EIR addressed preemption by stating:

> "The movements of those trains within Kern County, to and from the project site, while described in this section of the EIR, *may be preempted* from local and state environmental regulations by federal law under the [ICCTA]. [¶] While the potential impacts of those train movements along the BNSF mainline within Kern County are described in appropriate chapters of this EIR, the County as CEQA Lead Agency, and other state and local responsible agencies *could be preempted* from imposing mitigation measures, conditions or regulations to regulate or mitigate potential impacts of BNSF train movements on the mainline." (Italics added.)

The EIR then stated the activities involving the expanded rail facilities at the project site were not protected by federal preemption because those activities would not occur on BNSF property and would not be performed by BNSF employees. Therefore, the EIR concluded County and the responsible agencies had the authority to impose mitigation measures or conditions to reduce potential impacts within the project site.

Section 4.1 of the EIR, Air Quality, included a more definitive statement about preemption as it related to off-site rail activity. That statement did not use the indecisive phrases "may be" and "could be" preempted. Instead, it asserted "the ICCTA specifically preempts CEQA review of unit train movements to and from the proposed ... project." This interpretation of the ICCTA was used to justify the EIR's omission of an analysis of criteria pollutant emissions from the unit train locomotives operating off-site on the main lines. However, the EIR stated unit train locomotive emissions were presented in one of the attachments to the Air Quality/Global Climate Change Analysis prepared by Ashworth Leininger Group. The document and its attachments were designated Appendix B of the EIR.

2. CEQA Disclosure and Analysis

First, we consider whether the EIR was correct in its legal conclusion that the ICCTA preempts CEQA review (*i.e.*, disclosure and analysis) of the unit train

movements to and from the project site. In our view, this legal conclusion about preemption was wrong. The two types of preemption, categorical and as-applied, do not preclude CEQA review of the project's reasonably foreseeable indirect physical changes to the environment caused by the movement of unit trains to and from the project site.

Previously, we interpreted *Eel River* to mean CEQA's informational requirements were not categorically preempted. (See pt. V.B.4, *ante*.) As an alternative to that broad legal conclusion, we will consider whether categorical preemption applies to the specific circumstances of this case.

The first kind of categorical preemption involves state permitting and preclearance regulations that would have the effect of delaying or preventing railroad operations. (*Eel River*, *supra*, 3 Cal.5th at pp. 703, 716.) We conclude the completion of a CEQA review that includes an analysis of the significance of indirect environmental effects arising from the train activity on the main line would impose no permitting or preclearance by a state or local agency upon the delivery of crude oil to the project site by a rail carrier. Thus, CEQA review could not be used to deny a rail carrier the ability to conduct operations and transport crude oil to the refinery. Therefore, the first kind of categorical preemption that invalidates permitting and preclearance does not apply in this case. As a result, that kind of categorical preemption does not justify the EIR's omission of a description and analysis of environmental effects associated with off-site rail activity such as the emission of criteria pollutants by train locomotives.

The second kind of categorical preemption invalidates state and local regulation of matters *directly* regulated by the Surface Transportation Board, such as the operation of rail lines or railroad rates. (*Eel River*, *supra*, 3 Cal.5th at p. 717.) Here, a CEQA environmental review of Alon USA's proposed project and its indirect environmental effects would not control or influence matters directly regulated under federal law. As a result, conducting a CEQA review would not create the possibility of a rail carrier being subject to state or locally imposed requirements that address a matter within the Surface

Transportation Board's exclusive jurisdiction. Therefore, we conclude the second kind of categorical preemption does not preclude CEQA review of the environmental effects of off-site rail activities.

The as-applied type of preemption is "based on the degree of interference the particular state action has on railroad operations" and requires a factual assessment of whether the effect of the state action would be to prevent or unreasonably interfere with railroad operations. (*Eel River*, *supra*, 3 Cal.5th at p. 717.) Here, the preparation and publication of an EIR that discloses and analyzes the environmental impacts of off-site rail activities would not prevent, burden or interfere with BNSF Railway's operation. The words set down in an EIR would have no actual effect on the actions taken by a rail carrier or how or when those actions were taken. Therefore, we conclude as-applied preemption does not preclude CEQA review of the reasonably foreseeable environmental effects that may be caused by the off-site rail activities associated with the project.

3. CEQA Mitigation Measures

Plaintiffs acknowledge the "ICCTA may preempt the County's ability to impose certain mitigation measures on mainline rail operations." Taking a more emphatic view, County asserts it "is preempted by the [ICCTA] from imposing mitigation measures to reduce potential impacts of train movements on the mainline." We agree with the parties' assertions to the extent that they overlap—that is, we conclude some mitigation measures that address the environmental impacts of mainline rail operations may be preempted by federal law.

Under CEQA, a public agency is required to mitigate or avoid significant environmental effects of a project if it is feasible to do so. (§ 21002.1, subd. (b).) Mitigation measures adopted by the agency must be "fully enforceable." (§ 21081.6, subd. (b).) A mitigation measure that is preempted by federal law is not "fully enforceable" and, in addition, it is not "feasible" because the concept of feasibility takes

account of legal factors when assessing whether a particular mitigation measure is "capable of being accomplished in a successful manner." (Guidelines, § 15364 [definition of feasible].) Federal preemption is a legal factor affecting feasibility.

The procedural posture of this case does not allow us to provide a definitive statement about which mitigation measures will or will not be preempted. For example, plaintiffs contend preemption would not apply to a voluntary emission reduction agreement requiring Alon USA to pay an emission reduction fee to Air District. Plaintiffs argue the ICCTA did not prevent the use of such an agreement to mitigate on-site rail emissions and, therefore, the ICCTA would not preempt an agreement requiring Alon USA to mitigate the 240 tons of smog-causing pollution resulting each year from off-site rail operations. We, however, cannot conclude that requiring a project proponent who is not a rail carrier to pay a fee would *never* amount to an unreasonable burden on interstate commerce. Instead, County must decide in the first instance whether a particular mitigation measure is or is not feasible, a decision that includes determining whether the ICCTA preempts the imposition of such a measure because the burden, imposed on a rail carrier's customer, indirectly imposes an unreasonable burden on or interference with rail transportation. As stated in *Eel River*, whether an action unreasonably interferes with railroad transportation requires a factual assessment. (*Eel River*, *supra*, 3 Cal.5th at p. 717.) The tests for the different kinds of preemption are discussed in parts V.B.2. and V.B.3., *ante*. Those tests should be used by County on remand when it determines whether a particular mitigation measure is preempted by the ICCTA.

4. Conclusion

The EIR incorrectly stated "the ICCTA specifically preempts CEQA review of unit train movements to and from the proposed ... Project." This error prejudicially affected the contents of the EIR and its adequacy as an informational document. In

particular, the EIR did not disclose and analyze the significance of the criteria air pollutants emitted by the off-site rail activities associated with the project. If any impacts are found to be significant, then the EIR must address the feasibility of mitigating any significant impacts. (§ 21100, subd. (b)(3).) "An EIR that incorrectly disclaims the power and duty to mitigate identified environmental effects based on erroneous legal assumptions is not sufficient as an informative document." (*City of Marina v. Board of Trustees of California State University* (2006) 39 Cal.4th 341, 356.)

In addition, the omission from CEQA review of the reasonably foreseeable physical changes to the environment, caused by emission of air pollutants associated with the movement of unit trains to and from the project site, rendered statements in the EIR about the project's environmental impact incomplete and thus inadequate. For example, the EIR addressed project's criteria pollutant emissions (Table 4.1-13) without including the emissions resulting from increased off-site rail traffic. Thus, the forecast that the project will *reduce* annual emissions of reactive organic gases (ROG), nitrogen oxides (NOx), carbon monoxide, sulfur dioxide, and particulate matter does not account for all of the project's direct and indirect air quality impacts. As a result, the information provided in the EIR is misleading.

The EIR's erroneous legal conclusions regarding federal preemption must be corrected. Also, County must correct the EIR's failure to disclose and analyze the reasonably foreseeable environmental effects resulting from the off-site rail activities associated with the project.

VI. FORMULATING APPELLATE RELIEF*

A. Requests of the Parties

Plaintiffs' opening brief asked this court to reverse the judgment and direct the issuance of a writ of mandate requiring "County to set aside the EIR and enjoin any

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* See footnote, *ante,* page 1.

Project activity unless and until the EIR is revised to comply with CEQA." In response, County assumed it would prevail on all the issues raised and, as a result, simply requested us to affirm the trial court's decision to deny the petition for writ of mandate. Plaintiffs' reply brief slightly modified their request, asking us to "reverse the superior court's judgment and remand this case with directions to issue a peremptory writ of mandate ordering the County to set aside its certification of the EIR and its approval of the Project pending full compliance with CEQA." Plaintiffs did not repeat the request for project activity to be enjoined.

B. Statutory Provisions

Section 21168.9 requires courts to issue a writ of mandate to remedy a failure to comply with CEQA. (*POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 756-757 (*POET I*).) The writ of mandate must include one or more of the types of relief identified in subparagraphs (1) through (3) of subdivision (a) of section 21168.9. Specifically, the court may direct the lead agency (1) to void, in whole or in part, a determination, finding or decision, (2) to "'suspend any or all specific project activity or activities'" if certain statutory conditions are met, or (3) to take specific action necessary to bring the determination, finding or decision tainted by the CEQA violation into compliance with CEQA. (*POET I, supra,* at p. 757.)

C. Relief Typically Granted

"In most cases, when a court finds an agency has violated CEQA in approving a project, it issues a writ of mandate requiring the agency to set aside its CEQA determination, to set aside the project approvals, and to take specific corrective action before it considers reapproving the project." (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act (Cont.Ed.Bar 2d ed. 2017) § 23.124, p. 23–140 (rev. 3/15).) For example, in *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, the First District determined an EIR's analysis of the project's energy

impacts was inadequate. The First District's disposition instructed the trial court "to grant [the] petition for a writ of mandate directing the city to set aside its certification of the final EIR and approval of the project and to bring the energy section of the EIR into compliance with CEQA before redetermining whether to approve the project." (*Id.* at p. 267; cf. *Chawanakee Unified School Dist. v. County of Madera* (2011) 196 Cal.App.4th 1016, 1029; *Nelson v. County of Kern* (2010) 190 Cal.App.4th 252, 285; *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 673.)

County has not argued it would be inappropriate to grant the appellate relief typically implemented when an EIR fails to comply with CEQA. Accordingly, pursuant to section 21168.9, subdivision (a)(1), we will direct the trial court to issue a writ of mandate instructing County to set aside (i.e., vacate) its certification of the final EIR and its approval of the project. Also, in the event that Alon USA seeks reapproval of the project, County shall not consider such a reapproval until the EIR has been brought into compliance with CEQA. (§ 21168.9, subd. (a)(3).)

D. Enjoining Project Activity

Plaintiffs' opening brief requested that we enjoin any project activity until the EIR is revised to comply with CEQA. This request was not reiterated in plaintiffs' reply brief. The initial request to enjoin project activity appears to be a request that this court exercise the discretionary authority set forth in subdivision (a)(2) of section 21168.9 to "mandate that the public agency and any real parties in interest suspend any or all specific project activity ... until the public agency has taken any actions that may be necessary to bring [the project approval] into compliance with [CEQA]."

We will not exercise this discretionary authority because plaintiffs have not addressed and established the two statutory conditions that must be satisfied before any project activity is suspended. Under the statute, suspension is authorized only if (1) there has been a finding "that a specific project activity or activities will prejudice the

consideration or implementation of particular mitigation measures or alternatives to the project" (§ 21168.9, subd. (a)(2)) and (2) the suspension is limited to project activity "that could result in an adverse change or alteration to the physical environment." (*Ibid.*) If plaintiffs intend to request the suspension of project activity on remand, the trial court has the authority to consider and decide the appropriateness of that type of relief in the first instance, after the parties have had an opportunity to present argument and evidence.

DISPOSITION

The judgment is reversed and the matter remanded for further proceedings. The superior court is directed (1) to vacate the order denying the petition for writ of mandate and (2) to enter a new order granting the petition for writ of mandate. The superior court shall issue a peremptory writ of mandate compelling County (1) to set aside its certification of the final EIR and its approval of the project and (2) to bring the EIR into compliance with CEQA before taking any action relying upon the EIR, such as adopting another resolution approving the project.

Plaintiffs shall recover their costs on appeal.

FRANSON, J.

WE CONCUR:

GOMES, Acting P.J.

PEÑA, J.