

CERTIFIED FOR PUBLICATION

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

FIRST APPELLATE DISTRICT

DIVISION FOUR

COMMUNITIES FOR A BETTER
ENVIRONMENT et al.,

Plaintiffs and Respondents,

v.

CITY OF RICHMOND,

Defendant and Appellant;

CHEVRON PRODUCTS COMPANY
et al.,

Real Parties in Interest and
Appellants.

A125618

(Contra Costa County
Super. Ct. No. MSN08-1429)

I.

INTRODUCTION

On April 6, 2005, Chevron Products Company (Chevron) submitted an application to the City of Richmond (City) for the necessary permits to proceed with construction of the Chevron Energy and Hydrogen Renewal Project (the Project). The Project was designed to replace and upgrade certain manufacturing facilities at the Chevron Richmond Refinery (the Refinery), with the objective of improving the Refinery's ability to process a more varied mix of crude oil types from a wider variety of sources than it currently processes. Approximately three years later, on July 17, 2008, by a 5-to-4 vote, the Richmond City Council (City Council) issued Chevron the necessary permits to proceed with construction of the Project after finding that the final Environmental Impact

Report (EIR) had been completed in compliance with the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq. (CEQA)).¹

Communities for a Better Environment, West County Toxics Coalition, and the Asian Pacific Environmental Network (collectively, respondents) filed a petition for writ of mandate against the City and Chevron, arguing that the environmental review of the Project was flawed because the EIR failed to disclose, analyze and mitigate all the potential environmental impacts of the Project. The trial court granted the writ, holding that the EIR violated CEQA based on its failure to provide an adequate project description, its failure to consider the whole project, and its failure to define mitigation measures for greenhouse gas emissions. Chevron appeals, arguing the trial court’s decision was “based on erroneous factual assumptions regarding the nature of the Project, application of the incorrect standard of review, and clear legal error.” We affirm in part and reverse in part.²

II.

FACTS AND PROCEDURAL HISTORY

Chevron is an oil refiner based in California, whose parent corporation is Chevron Corporation, a Delaware corporation based in San Ramon, California. The Refinery is located on approximately 2,900 acres along the western edge of the City in Contra Costa County, occupying most of the Point San Pablo Peninsula. The Refinery is situated near a populated area—portions of five residential neighborhoods are within a one-mile radius of the Refinery. The Refinery processes crude oil into a variety of fuel and oil products, such as gasoline for passenger cars; jet fuel for aircraft; diesel fuel for trucks, trains and buses; and lubricating oils for motor vehicles and other uses.

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

² As might be expected, an environmental challenge to a project of this magnitude has created a voluminous record; numerous briefs raising complex, technical issues; and input from amici curiae. In order to organize this opinion in a comprehensive and logical manner, we will first present a general overview of the Project and CEQA’s requirements, and then focus on alleged deficiencies in the EIR that are before us on appeal.

This case involves a project proposed by Chevron which would allow the Refinery to increase production of gasoline by approximately 6 percent (300,000 gallons per day) that would meet California Air Resources Board (CARB) standards, and which could be sold in California. However, there would be an equivalent decrease in production of that portion of total Refinery gasoline that does not meet CARB standards. Therefore, the Project would not increase the Refinery's consumption of crude oil, although it is repeatedly acknowledged that the "upgrades would expand the Refinery's options for using a wider range of crude oils."

It was anticipated that the "future crude and gas oil supplies" to be processed in the post-Project Refinery would contain higher amounts of sulfur and associated contaminants. The sulfur content of incoming crude varies, with a typical content being around 1.7 percent. The Refinery currently can process a crude mix of approximately 2 percent sulfur with existing equipment. However, new equipment installed under the Project will increase this capability to 3 percent sulfur.

The record indicates that the "Project involves expenditure of hundreds of millions of dollars" There are four major components of the Project designed primarily to replace and upgrade existing equipment and units at the Refinery. They are (1) the Hydrogen Plant Replacement, (2) the Power Plant Replacement, (3) the Catalytic Reformer Replacement, and (4) the Hydrogen Purity Improvements. The Hydrogen Plant Replacement is identified as a "key element" of the Project which, when combined with the new Power Plant and Catalytic Reformer replacements, will allow Chevron to replace older, less efficient equipment with new equipment and facilities that provide improved reliability, energy efficiency, better environmental controls, and will enable "the production of a larger portion of clean California gasoline." Other components of the Project include replacing 10 existing tanks, constructing 8 new storage tanks, and constructing a new central control room and a new maintenance facility. The Project will also involve modifying, replacing, and installing refinery equipment including piping, heat exchangers, instrumentation, catalytic reactors, fractionation equipment, pumps, compressors, furnaces, and tanks. All of the new equipment and facilities will be located

within the boundaries of the existing Refinery, and will generally be placed among similar existing equipment.

On June 15, 2005, the City issued a Notice of Preparation (NOP) that an EIR would be prepared for the Project. The draft EIR was published on May 11, 2007, with a 45-day public review period. The draft EIR was reviewed by various governmental agencies, as well as numerous interested individuals and organizations. At the request of members of the public, the City extended the review period until July 9, 2007, for a total review period of 59 days. A public hearing was held on June 7, 2007, and 24 members of the public commented.

The final EIR, consisting of six volumes, was published on January 25, 2008.³ The EIR identified numerous significant or potentially significant impacts associated with the Project, including emission of pollutants, greenhouse gas emissions, noise levels during construction, and Project-generated increases in traffic. The EIR concluded that all impacts associated with the Project would be eliminated or reduced to less than significant level by mitigation measures that would be made a condition of Project approval.

On June 5, 2008, the Richmond Planning Commission (Planning Commission) certified that the final EIR was completed in compliance with CEQA. Respondents then appealed the Planning Commission's certification of the final EIR to the City Council. Chevron filed a separate appeal to the City Council challenging certain mitigation measures adopted by the Planning Commission.

The City Council heard public comment during a hearing beginning on July 15, 2008, and continuing into the early morning hours of July 17, 2008. On the first night of the hearing, Chevron presented the City with a "community benefits agreement," which was a \$61 million package to fund various civic improvements. In return, among other

³ On the court's own motion, the entire six-volume EIR prepared for the Project was transmitted to this court on December 7, 2009. (Cal. Rules of Court, rule 8.155(a)(1)(A).)

things, the City was obligated to create a fast track for additional future permitting for the Project, if it was approved.

On July 17, 2008, by a 5-to-4 vote, the necessary permits for the Project were approved by the City Council, subject to numerous conditions addressing Project construction, air quality, greenhouse gas emissions, refinery gases, and water quality. It was determined that all significant environmental effects due to the Project's approval "have been eliminated or substantially lessened where feasible." The City Council also certified that the final EIR for the Project had been completed in compliance with CEQA. Both Chevron's and respondents' appeals from the Planning Commission's decision were denied.

On September 4, 2008, respondents filed a petition for writ of mandate and complaint for injunctive relief requesting the superior court to set aside the City Council's certification of the EIR and approval of the Project permits. Primarily, respondents argued that the EIR was inadequate based on its alleged failure: (1) to disclose and analyze the likelihood that the Project would increase the Refinery's ability to process heavier, lower quality, and more contaminated crude; (2) to analyze and provide adequate mitigation for greenhouse gas emissions from the Project; (3) to include a proposed new pipeline for the transport and sale of excess hydrogen as part of the Project, thus improperly "piecemealing" the pipeline from the Project; and (4) to properly analyze cumulative impacts. In addition, respondents claimed the City should have revised and recirculated the EIR when significant new information arose during the approval process.

The matter was argued on May 20, 2009. On July 1, 2009, the trial court entered a judgment in favor of respondents on three issues. The court found that the EIR was deficient because it was "unclear and inconsistent as to whether [the] [P]roject will or will not enable Chevron to process a heavier crude slate than it is currently processing." The court further held that the City had "improperly deferred the formulation of greenhouse gas mitigation measures" by allowing Chevron to prepare a mitigation plan for submission to City staff up to a year after the Project's approval. The court also

declared that Chevron had improperly “ ‘piece-mealed’ ” the Project, by failing to include and analyze a hydrogen pipeline as part of the Project. The court then concluded that it was not “necessary to reach the other issues . . . because the above violations require revision of the EIR.” Accordingly, the trial court entered judgment granting the writ and setting aside the Project’s EIR, invalidating all of the Project permits, and suspending all Project-related construction activities.

Chevron filed a notice of appeal on July 20, 2009. The City filed a separate appeal, raising no challenge to the trial court’s resolution of the issues, but requesting solely that this court decide the issues left undecided by the trial court. On August 4, 2009, this court granted Chevron’s motion for calendar preference and for an expedited briefing schedule. (Cal. Rules of Court, rule 8.240.)

III.

DISCUSSION

A. CEQA Overview

Among other requirements, an EIR must describe the proposed project and its environmental setting, state the objectives sought to be achieved, identify and analyze the significant effects on the environment, state how those impacts can be mitigated or avoided, and identify and analyze alternatives to the project. (§§ 21100, subd. (b), 21151; Cal. Code Regs., tit. 14, §§ 15124, 15125, 15126.6.)⁴ As our Supreme Court has recently emphasized, “The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR’s function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been taken into account. [Citation.] For the

⁴ All future references to Guidelines are to the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.) developed by the Governor’s Office of Planning and Research and adopted by the California Resources Agency. (§ 21083.) “[C]ourts should afford great weight to the Guidelines except when a provision is clearly unauthorized or erroneous under CEQA. [Citation.]” (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 391, fn. 2 (*Laurel Heights I*)).

EIR to serve these goals it must present information in such a manner that the foreseeable impacts of pursuing the project can actually be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449-450 (*Vineyard Area Citizens*).

In reviewing compliance with CEQA, we review the agency’s action, not the trial court’s decision. (*Vineyard Area Citizens, supra*, 40 Cal.4th at p. 427.) In doing so, our “inquiry ‘shall extend only to whether there was a prejudicial abuse of discretion.’ [Citation.]” 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.) Substantial evidence in this context means “enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached.” (Guidelines, § 15384, subd. (a).)

B. The Project Description Is Unclear and Inconsistent As To the Specific Gravity of the Crude Oil that Could Be Processed

A stated objective of the Project is “to improve the Refinery’s ability to process a more varied proportional mix of crude oil types than it currently processes, including crude oil with higher sulfur content.” (Fn. omitted.) Respondents argued, and the trial court found, that the EIR’s discussion of the types of crude that the Refinery currently processes, as compared to the types of crude the Refinery would be able to process after the Project was implemented, was so “unclear and inconsistent” that the EIR failed to provide an “accurate, stable, and finite project description.”

Crude is described in the EIR as “the basic feedstock for the Refinery.” It is a composite of oils that vary in weight and levels of contaminants. Refining crude involves, among other things, separating out the differing weighted oils and using hydrogen to remove contaminants such as sulfur. The heaviness of the crude (i.e., its specific gravity) is related to the abundance of the larger, heavier hydrocarbons it contains and is determined by the American Petroleum Institute (API) scale. API gravity

is on a reverse scale—the lower the density of crude oil, the higher the degree of API gravity and the greater the value. Crude oil ranges from “light” crude (above API 36) to “intermediate” crude (between API 18-36), to “heavy” crude (between API 1-18).

As the EIR explains, the Refinery does not and cannot process “heavy” crude (meaning crude with an API gravity of 18 or below) because it lacks an essential piece of equipment, a coker. There is no indication that Chevron has any plans to acquire a coker, which would allow the Refinery to process heavy crude. Instead, the Refinery is configured to process light-to-intermediate crude, and the EIR maintains “[i]t is reasonably foreseeable that” after the Project “Chevron would run a crude slate similar to that which is currently processed at the Refinery—but in a mixture that has higher sulfur levels.”

Throughout the environmental review process, respondents and others expressed concern that Chevron was obscuring the fact that the changes in Refinery equipment proposed by the Project, while not allowing the processing of heavy crude, would nevertheless significantly increase Chevron’s ability to process lower quality, heavier crude as compared with the crude the Refinery currently processes. They maintained that heavier, lower-quality crude requires more intensive processing and is inherently more polluting, creating serious public health risks, including increased releases of selenium, mercury, sulfur flare gas, greenhouse gases, particulate matter, and the greater likelihood of upsets, which lead to emergencies and flaring.

For example, the City’s mayor, Gayle McLaughlin, submitted a letter dated July 9, 2007, indicating her concern that the community would be adversely impacted if heavier crude were processed at the Refinery. She indicated that the “surrounding community to the [R]efinery already suffers from high rates of asthma and other respiratory diseases, as well as cancer.” She wrote, “Higher refining temperatures and a heavier crude slate will most definitely lead to poorer air quality and a greater risk of accidents that regularly impact our neighborhoods that are already overly and unjustly burdened with pollutants and risk.”

The final EIR dismisses these comments based on its conclusion that “a change to a substantially heavier crude slate . . . would not be a reasonably foreseeable consequence of the Proposed Project because the Proposed Project would not alter the Refinery’s current design for processing intermediate and light crudes.” Thus, while the EIR discloses that the Project will result in an increase in the sulfur content of the crude processed at the Refinery, it steadfastly denies that the Project will increase the Refinery’s ability to process heavier, lower quality, more contaminated crude which could potentially create serious environmental consequences. Consequently, the EIR does not address the public health or other environmental consequences of processing heavier crude, let alone analyze, quantify, or propose measures to mitigate those impacts.

As to this issue, respondents’ claim revolves around whether the EIR concealed, ignored, excluded, or simply failed to provide pertinent information on whether or not processing lower quality, heavier crude is a reasonably foreseeable consequence of the project. (*Laurel Heights I, supra*, 47 Cal.3d at p. 396 [a complete description of a project has to address not only the immediate environmental consequences of going forward with the project, but also all “*reasonably foreseeable* consequence[s] of the initial project”]; *Vineyard Area Citizens, supra*, 40 Cal.4th at p. 428 [same].) They claim the EIR’s conclusions are unsupported and unverifiable because the EIR has failed to quantify and analyze the crude slate the Refinery currently processes as compared with the Refinery’s ability to run a heavier crude slate once the Project is implemented.

Initially, we note that the parties vehemently disagree as to what standard of review is applicable to respondents’ claims, an important prologue issue to our analysis. Chevron characterizes respondents’ claims as challenging the evidence supporting the EIR’s determination that the Project would not result in the Refinery’s equipment being physically altered to allow the processing of heavier crude. Chevron argues that “[t]his is a quintessential factual dispute governed by the substantial evidence test.” Respondents, on the other hand, argue that when “a final EIR does not adequately apprise all interested parties of the true scope of the project,” the agency has failed to proceed in a manner required by law, and the final EIR is inadequate as a matter of law.

Our Supreme Court has counseled that “[i]n evaluating an EIR for CEQA compliance, . . . a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts.” (*Vineyard Area Citizens, supra*, 40 Cal.4th at p. 435.) The dispute on this issue centers on the question of whether pertinent information was omitted from the EIR.

On appeal, “the existence of substantial evidence supporting the agency’s ultimate decision on a disputed issue is not relevant when one is assessing a violation of the information disclosure provisions of CEQA.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1392 (*Irrigated Residents*)). “If a final environmental impact report (EIR) does not ‘adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project,’ informed decisionmaking cannot occur under CEQA and the final EIR is inadequate as a matter of law. [Citation.]” (*RiverWatch v. Olivenhain Municipal Water Dist.* (2009) 170 Cal.App.4th 1186, 1201 (*RiverWatch*); *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197-1198; *Irrigated Residents, supra*, 107 Cal.App.4th at p. 1391; *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118 (*Save Our Peninsula*)).

Thus, we conclude that the claimed deficiencies in the EIR compel de novo review. (*Vineyard Area Citizens, supra*, 40 Cal.4th at p. 427.) As we explain, under this standard of review, we agree with the trial court that the EIR is inadequate as a matter of law because it does not adequately address the issue of whether the Project includes any equipment changes that would facilitate the future processing of heavier crudes at the Refinery. The EIR states in conclusory terms that the proposed Project will not result in an increased capacity to process lower quality heavier crude, and that Chevron seeks only the ability to refine crude with higher sulfur content. However, that statement is not adequately supported by facts and analysis contained in the EIR. Moreover, there was

conflicting information developed during the EIR process that casts serious doubt on these assertions.

Significantly, the EIR itself contains conflicting statements about the objectives of the Project. On one hand, the EIR states “[t]he Proposed Project does not include any process and equipment changes that would facilitate the processing of heavier crudes at the Chevron Richmond Refinery.” On the other hand, the EIR explains that “[r]efiners have had to adapt to a crude oil supply that is *increasingly heavier* and more-sour (higher sulfur content).” (Italics added.) “The supply of crude oil to California refineries has changed substantially during the last 10 years, with *light to intermediate crudes becoming less available*. . . . It is within the context of these *changes in crude oil supply* that the Renewal Project is proposed.” (Italics added.) Consequently, the EIR claims that the Project is designed to allow more flexibility in refining future crude supplies that the EIR describes as “increasingly heavier”; but on the other hand, denies that the Project will enable the Refinery to process heavier crude.

Furthermore, the Project that Chevron described in a filing with the United States Security and Exchange Commission (SEC), which was made under oath, differs considerably from the EIR’s project description. Chevron’s SEC Form 10-K for the fiscal year ending December 31, 2007, identifies the central purpose of the Project as enabling the processing of heavier (lower gravity) crude. Chevron’s 10-K filing included the following statement about the Refinery: “Design and engineering for a project to increase the flexibility to process lower API-gravity crude oils at the company’s Richmond, California refinery continued in 2007.” Mayor McLaughlin immediately grasped the significance of Chevron’s SEC disclosure: “So, we know that ‘lower API gravity’ means heavier crude oil. Chevron did not [tell their investors] that they would be increasing the flexibility to process higher sulfur content crude oil. They said lower API gravity crude oil.”

Moreover, in response to the EIR’s assurance that the Project would not facilitate the processing of a heavier crude mix at the Refinery, it was repeatedly suggested that the Project’s conditional use permit contain a provision ensuring that the Refinery would not

switch to a heavier crude slate; the so-called “crude cap.” California’s Attorney General was one of the most vocal advocates of imposing such a conditional use requirement. In correspondence to the City, the Attorney General noted that “[i]f this Project enables Chevron to use a different, dirtier crude mix with greater polluting potential, this fact is not disclosed” and the EIR “is legally deficient under CEQA on this issue.” In order to correct this potential “deficiency,” the Attorney General proposed “imposing a limitation on the conditional use permit precluding Chevron from altering its crude slate mix other than the 3% sulfur increase which has already been disclosed and analyzed” in the EIR.

This “crude cap” proposal was met with Chevron’s heated opposition, and was never implemented. When asked at a public hearing why Chevron would object to placing controls on processing a heavier crude slate if “you can’t do it anyway,” a Chevron official made a revealing statement: “[I]t’s an extremely fluid and complex process for identifying and selecting crudes to process at a given refinery, and depending on the operating scenario, the product demand, what’s available, . . . there is [*sic*] any number of combinations of crude oil that can come into the refinery. And the concern is that this selection of crude oil would be so far constrained that *we would not be able to take full advantage of the process capability of the refinery.*” (Italics added.) Clearly, a legitimate interpretation of this answer was that Chevron sought to preserve its operational flexibility to process a heavier range of crude than was currently being processed.

“By giving such conflicting signals to decision makers and the public about the nature and scope of the activity being proposed, the Project description was fundamentally inadequate and misleading.” (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 655-656, fn. omitted (*San Joaquin Raptor*)). Compounding this problem was the uninformative analysis of the crude oil issue in the EIR. In the final EIR, the City held fast to its position that Chevron was changing only the sulfur content of the crude, and not its heaviness. In the Master Response to public comments, the City insisted once again that “[t]he Proposed Project does not include any process and equipment changes that would facilitate the processing

of heavy crudes at the Refinery. The crude oils used would continue to be a mix of the intermediate and light crudes that the Refinery is designed to process.” However, it was explained that the implementation of the Project would result in “the ability to process a higher percentage of Middle Eastern crudes,” accordingly, the Refinery’s “crude gravity (lbs/barrel) may fluctuate up to 3%, which is within the range of gravities of crudes historically processed at the Refinery” This statement about the range of crude feedstock historically flowing into the Refinery was supported by a virtually unreadable chart entitled “Gravity (API) of Crude Oil Processed at Richmond from 1992 through 2007,” with no narrative explaining the data or providing any reference to source documents supporting its graphic conclusions.

Far from being an informative document, the EIR’s conclusions call for blind faith in vague subjective characterizations. (See *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.* (2001) 91 Cal.App.4th 1344, 1371 (*Berkeley Jets*) [“[t]he conclusory and evasive nature of the response to comments is pervasive, with the EIR failing to support its many conclusory statements by scientific or objective data”]; *San Joaquin Raptor, supra*, 149 Cal.App.4th at p. 659 [“decision makers and general public should not be forced to . . . ferret out the fundamental baseline assumptions that are being used for purposes of the environmental analysis”].) The problem with this type of analysis, as recognized by the trial court, is that it does not provide any objective quantification of the “continuing mix that [the] Refinery was ‘designed to process.’ ” Nor does it explain “whether the mix the [R]efinery is ‘designed’ to process is heavier than [the] mix [the] Refinery is currently processing.” As the trial court pointed out, unless the data as to crude slate currently processed at the Refinery (the environmental baseline) is divulged, the EIR’s conclusion that the future crude slate would be “similar to that which is currently processed” is meaningless.

As an example of what should have been done *before* the EIR became final, we note that after the final EIR was issued, three experts rendered their opinions on the pivotal question of whether or not the Project would result in changes in the refining process that would enable Chevron to process heavier crude oil. In some respects, this

expert input answered many of the site-specific questions left unaddressed and unanswered by the EIR. (See *Los Angeles Unified School Dist. v. City of Los Angeles* (1997) 58 Cal.App.4th 1019, 1030 [criticizing agency’s postponement of analysis of air quality impacts of specific plan when “authors of the EIR had sufficiently reliable data to permit preparation of a meaningful and accurate report on its impact.”]; see also *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1454-1455 [adoption of project limits as part of the certification of the EIR “was too little too late to adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences”].)

For example, on March 20, 2008, when the final EIR was before the City’s Planning Commission for approval, respondent Communities for a Better Environment submitted the opinion of their senior scientist, Gregory Karras. Karras concluded that “[t]he [final EIR] omits current process data and wrongly concludes that the Project will not significantly increase Refinery capacity for low quality feedstock.” (Fn. omitted.) Since it is generally acknowledged that the weight of the crude oil that can be refined is dictated by the specifications of the Refinery’s equipment, Karras explained, in copious detail, his theory of how the increased process flow through the Solvent Deasphalter (SDA) would enable the Refinery to process lower quality, heavier crude.⁵

On March 19, 2008, California’s Attorney General submitted the report of another refinery expert, Geoffrey E. Dolbear, Ph.D. Dr. Dolbear is described as a physical

⁵ It is unnecessary to recount all the facts included in Karras’s analysis. Briefly, the Project makes no changes to the SDA, and it is not mentioned in the EIR as being part of the Project. However, the Project does envision making changes that would expand the processing capacity of the Taylor Kinetic Cracker (TKC) from a current average of 42,700 barrels per day to a post-Project likely average of 80,000 barrels per day, “thus enabling the Refinery to import and process additional gas oils with higher sulfur content.” Karras explained that by increasing the capacity of the TKC unit into which the SDA feeds, the Project will in fact “debottleneck” the SDA, by allowing increased flow through both units. He believed this increased flow would enable the Refinery to handle a wider range of crude slates—i.e., a heavier mix containing not only more sulfur, but also more heavy metals and other contaminants.

chemist with more than 40 years of industrial experience developing improved refining processes. He indicated that “Chevron’s statements that it ‘will continue to run the same crude oil types as processed currently’ is incomplete at best, and misleading at worst.” He agreed with Karras that “[t]he increased SDA capacity will allow Chevron to process increased levels of heavier crudes, and, if it does so, the [R]efinery will likely increase its emissions of pollutants.” His report concludes with the admonition, “it is not possible to tell for certain what Chevron will do with the proposed increased capacity for the SDA, but undoubtedly Chevron will have the ability to process more heavy crude oil unless restrictions or permit conditions are imposed.”

On March 20, 2008, the Planning Commission held a public hearing to decide whether to certify the EIR and approve the Project. After hearing five hours of public testimony, the hearing was continued to determine whether a “crude cap” was needed to ensure the veracity of Chevron’s assertion that it had no intention or ability to run a heavier crude slate than was currently being processed.

As part of this post-EIR effort, in late March 2008, the City retained a private consultant concerning these issues, Dr. Ranajit Sahu. Dr. Sahu is described as having over 17 years of experience in the fields of environmental, mechanical, and chemical engineering. In his written report dated July 8, 2008, shortly before the Project received final approval from the City Council, Dr. Sahu tacitly gave credence to the expert analysis already received. He admitted “[s]ince the Renewal Project involves changes in the crude slate (i.e., to more sour or higher sulfur crudes, some of which may be ‘heavier’), the throughput in the SDA is pertinent to the project. Increasing the SDA throughput would allow more residuum to be processed, which *in turn means that heavier crude oils could be processed.*” (Italics added.) However, Dr. Sahu ultimately agreed with the EIR’s conclusion that, after the Project, the Refinery would not have greater capacity to process a crude slate different from that which is currently being processed. For purposes of this conclusion, Dr. Sahu indicated that “[d]uring the last decade or so, Chevron has processed blended crude oils with monthly-average API

gravity in the 29.7-34.4 degree range,” and he considered “heavier” crude to mean crude oils “outside the range the Refinery has processed in the last decade”

However, Dr. Sahu’s calculations and analysis were based, in part, on confidential data supplied by Chevron that was not made available to anyone else. Dr. Sahu described the confidential information that he reviewed as follows: “One document showed the Refinery’s SDA throughput level for the past 10 years. The other document was a spreadsheet containing data on the composition of crude oils used at the Refinery.”

Based on this confidential data, Dr. Sahu proposed a permit condition, Condition C12, which would limit the SDA throughput to an average of approximately 48,700 barrels a day on an annual 12-month rolling average, which Dr. Sahu claimed would “ensure that all future crude slates, including higher sulfur slates[,] will be consistent with the Renewal Project EIR project description.” He believed that Condition C12, in combination with other proposed conditions, made a “comprehensive crude cap” unnecessary. Condition C12, as proposed by Dr. Sahu, was adopted by the Planning Commission as part of its approval of the Project. However, when the Project was ultimately approved by the City Council, that body acquiesced to demands made by Chevron that the SDA throughput level should be changed to the maximum throughput level of the SDA—56,000 barrels per day—without any analysis by Dr. Sahu, or any expert, on the question of whether the SDA’s full production level, as authorized by this condition, materially altered, or at least was inconsistent with the then-extant Project description.

Chevron urges this court not to take sides in this “disagreement amongst experts,” insisting instead there was sufficient reliable information given by Dr. Sahu during the approval process so that the City Council could reject respondents’ “crude switch” theory, and make an informed decision to approve the EIR. Chevron then mounts a robust defense of Dr. Sahu’s analysis, explaining in painstaking detail why his opinion was more persuasive than the opinions rendered by the other experts. This, however, is beside the point. It is the adequacy of the EIR with which we are concerned, not the propriety of the subsequent decision to approve the Project. “[T]he ultimate decision of

whether to approve a project, be that decision right or wrong, is a nullity if based upon an EIR that does not provide the decision-makers, and the public, with the information about the project that is required by CEQA.” (*Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 829 (*Santiago*); *Vineyard Area Citizens, supra*, 40 Cal.4th at p. 443 [“That a party’s briefs to the court may explain or supplement matters that are obscure or incomplete in the EIR . . . is irrelevant, because the public and decision makers did not have the briefs available at the time the project was reviewed and approved.”].) Furthermore, the supplemental information provided by Dr. Sahu during the post-EIR “battle of the experts” is too little, and certainly too late, to satisfy CEQA’s requirements. (See *Save Our Peninsula, supra*, 87 Cal.App.4th at p. 124 [information about baseline “occurred at the very end of the environmental review process, thus avoiding public scrutiny and precluding the meaningful comparison of preproject and postproject conditions required by CEQA”].)

Even if this post-EIR information could somehow be used to cure the EIR’s shortcomings, Dr. Sahu’s reliance on undisclosed data from Chevron does not meet the “informational” goals of CEQA. CEQA requires full environmental disclosure, but Chevron apparently decided that the public and the decisionmakers did not need to see proprietary data given only to Dr. Sahu and relied on by this expert. On appeal, Chevron provides no explanation why this information was restricted to Dr. Sahu’s eyes only. An expert’s opinion “concerning matters within [his or her] expertise is of obvious value, but the public and decision-makers, for whom the EIR is prepared, should also have before them the basis for that opinion so as to enable them to make an independent, reasoned judgment.” (*Santiago, supra*, 118 Cal.App.3d at p. 831.) If Chevron’s position becomes the rule—that a project proponent can pick and choose who sees pertinent data—then a stake is driven into the “heart of CEQA” by preventing the information necessary for an informed decision from reaching the decisionmakers and the public. (See *Laurel Heights Improvement Assn. v. Regents of the University of California* (1993) 6 Cal.4th 1112, 1123 (*Laurel Heights II*).

For the foregoing reasons, we agree with the trial court that the EIR fails as an informational document because the EIR's project description is inconsistent and obscure as to whether the Project enables the Refinery to process heavier crude. Furthermore, the EIR completely fails to properly establish, analyze, and consider an environmental baseline. Establishing a baseline at the beginning of the CEQA process is a fundamental requirement so that changes brought about by a project can be seen in context and significant effects can be accurately identified. (*Save Our Peninsula, supra*, 87 Cal.App.4th at p. 125 [“baseline determination is the first rather than the last step in the environmental review process”].) When an EIR omits relevant baseline environmental information, the agency cannot make an informed assessment of the project's impacts. (*County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.) Due to these errors, the EIR failed its informational purpose under CEQA.

If the EIR is revised to address these deficiencies, we note that on March 15, 2010, our Supreme Court issued important guidance on what constitutes the proper project baseline against which significant environmental effects can be determined. In *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48Cal.4th 310, the project proponent, ConocoPhillips, argued that “the analytical baseline for a project employing existing equipment should be the maximum permitted operating capacity of the equipment, even if the equipment is operating below those levels at the time the environmental analysis is begun.” (*Id.* at p. 316.) The Supreme Court disagreed and unanimously held that CEQA requires that the baseline should reflect “ ‘established levels of a particular use,’ ” and not the “ ‘merely hypothetical conditions allowable’ under the permits. . . .” (*Id.* at p. 322, quoting *San Joaquin Raptor, supra*, 149 Cal.App.4th at p. 658.) In finding that the actual operational conditions must be reflected in the baseline, the Supreme Court stressed that the purpose of CEQA is to fully inform the public as to the environmental effects of a proposed project. The court stated that using hypothetical, allowable conditions as a baseline “will not inform decision makers and the public of the project's significant environmental impacts, as CEQA mandates.” (*Id.* at p. 328.)

C. Improper Deferral of Greenhouse Gas Mitigation Measures

In seeking writ relief, respondents complained that the final EIR provided only a perfunctory list of possible measures to mitigate the Project's significant contribution to greenhouse gas emissions and improperly deferred identification of these measures until *after* the CEQA process. The trial court agreed, finding that the EIR had improperly deferred an analysis of mitigation measures for the Project's greenhouse gas impacts to a future, post-EIR process. For this reason, the court found the City failed to proceed as required by law and had abused its discretion in certifying the EIR and approving the Project. (§ 21168.5.)⁶

It should first be pointed out that the formulation of greenhouse gas mitigation measures was delayed due to the City's reluctance to make a finding early in the EIR process that the greenhouse gas emissions generated by the Project would create a significant effect on the environment. The draft EIR concluded that "[w]hen considering the maximum potential emissions" created by the Project, it could result in "a net increase in CO₂ emissions of approximately 898,000 metric tons" per year.⁷ However, the draft EIR explicitly declined to "state conclusions about the extent of any impacts or potential mitigation."

After numerous objections to the City's treatment of the greenhouse gas issue, the final EIR acknowledged the environmental significance of greenhouse gas emissions and the effect of those emissions on global warming, but still avoided labeling the Project's

⁶ The Center for Biological Diversity, the Environmental Defense Center, and the Planning and Conservation League requested and were granted permission to file an amicus curiae brief in support of the trial court's ruling on this issue. (Cal. Rules of Court, rules 8.200(c)(1), 8.520(f)(1); Order, Ruvolo, P. J. (Sept. 28, 2009).)

⁷ While the City obviously did the calculations necessary to determine how much extra carbon dioxide would be emitted as a result of the Project, the EIR completely fails to discuss in any detail how these calculations came about. As consulting engineer and refinery expert Dr. Phyllis Fox pointed out in her comment letter, the EIR's numerical estimates of greenhouse gas emissions does not "disclose any of the underlying calculations, e.g., unit throughputs and capacities, emission factors, fuels, and citations to source data. Thus, it is not possible to evaluate their accuracy."

contribution to climate change as a significant effect on the environment. Instead, the Final EIR stated that making a significance determination for greenhouse gas impacts of the Project would be too “speculative.”

After issuance of the final EIR in January 2008, there was an outpouring of public comment arguing that the EIR had failed to provide a convincing and complete explanation as to why the increase of greenhouse gas emissions caused by the Project would not have a significant impact on the environment. Those commenting, including California’s Attorney General, submitted numerous scientific reports and studies regarding the relationship between climate change and greenhouse gas emissions and the expected impacts on the environment.

The proposition that climate-change impacts are significant environmental impacts requiring analysis under CEQA was bolstered by several ongoing developments. First, the Legislature enacted the Global Warming Solutions Act of 2006, which implements deep reductions in greenhouse gas emissions after recognizing that “[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. . . .” (Health & Saf. Code, § 38501, subd. (a).) Through this enactment, the Legislature has expressly acknowledged that greenhouse gases have a significant environmental effect. Also, in January 2008, a “white paper” was issued by the California Air Pollution Control Officers Association entitled *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emission from Projects Subject to the California Environmental Quality Act* <<http://www.capcoa.org/CEQA/CAPCOA%20White%20Paper.pdf>> (as of April 26, 2010). Among other topics, the paper discusses different approaches for making a determination whether a project’s greenhouse gas emissions would be significant or less-than-significant.

Based on the foregoing, the City belatedly issued a finding in a newly published volume of the EIR issued in May 2008, that it “now believes that the Proposed Project’s estimated new emissions of 898,000 metric tons per year of GHGs [greenhouse gases] prior to mitigation would most likely be a significant effect on the environment.” Having

recognized and acknowledged that incremental increases in greenhouses gases would result in significant adverse impacts to global warming, the EIR was now legally required to describe, evaluate and ultimately adopt feasible mitigation measures which would “mitigate or avoid” those impacts. (§ 21002.1, subd. (b); see also, Guidelines, §§ 15126.4, subd. (a)(1), 15091.) As amici point out, “[t]he quantity of emissions the EIR aims to mitigate is far from trivial. Mitigating the 898,000 tons of greenhouse gas emissions the [P]roject would generate is equivalent to taking 160,000 cars off the road.”⁸ (Fn. omitted.)

In response to this significance finding, the EIR puts forth some proposed mitigation measures to ensure that the Project’s operation “shall result in no net increase in GHG emissions over the Proposed Project baseline.” The centerpiece of the mitigation plan is Mitigation Measure 4.3-5(e), which was ultimately adopted by the City Council in approving the Project. Mitigation Measure 4.3-5(e) states: “No later than one (1) year after approval of this Conditional Use Permit, Chevron shall submit to the City, for approval by the City Council, a plan for achieving complete reduction of GHG emissions up to the maximum estimated Renewal Project GHG emissions increase over the baseline (898,000 metric tons per year)”

First, the mitigation plan requires Chevron, within one year of Project approval, to hire and fully fund “a qualified independent expert” to complete an inventory of greenhouse gas emissions and to identify potential emissions reduction opportunities. In preparing the mitigation plan, Chevron “shall consider implementation of measures that achieve GHG reductions including, *but not limited to*, the following measures:” (Italics added.) Mitigation Measure 4.3-5(e) then lists a handful of candidate mitigation measures. Among the mitigation measures proposed are “Add/improve heat exchangers”

⁸ Amici substantiate this proposition by pointing out that the United States Environmental Protection Agency (EPA) estimates that a typical passenger car generates 5.48 tons of CO₂eq emission per year. (See EPA, Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle (2005) <<http://www.epa.gov/otaq/climate/420f05004.htm>> as of April 22, 2010.)

and “Initiate carbon sequestration, capture and export.” Another mitigation measure proposes “Replac[ing] stationary, non-emergency diesel internal combustion engines,” while another proposes “Reduc[ing] mobile emission sources through ‘transportation smart’ development such as Greenprint.” Mitigation Measure 4.3-5(e) outlines the priority by which measures should be implemented, with first priority given to on-site mitigation at the Refinery before mitigation measures are to take place elsewhere.

In the writ proceeding below, respondents argued that the City failed in not submitting a plan to mitigate greenhouse gas emissions during the environmental review process, but instead proceeding by preparing a menu of potential mitigation measures, with the specific measures to be selected by Chevron and approved by the City Council a year after Project approval. The superior court agreed with petitioners that the “City has improperly deferred formulation of greenhouse gas mitigation measures, by simply requiring Chevron to prepare a mitigation plan and submit it to City staff up to a year later after approval of conditional use permit.”

“Formulation of mitigation measures should not be deferred until some future time.” (Guidelines, § 15126.4(a)(1)(b).) An EIR is inadequate if “[t]he success or failure of mitigation efforts . . . may largely depend upon management plans that have not yet been formulated, and have not been subject to analysis and review within the EIR.” (*San Joaquin Raptor, supra*, 149 Cal.App.4th at p. 670.) “A study conducted after approval of a project will inevitably have a diminished influence on decisionmaking. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA. [Citations.]” (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307 (*Sundstrom*).

Numerous cases illustrate that reliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA’s goals of full disclosure and informed decision making; and consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment. (See, e.g., *Gentry v. Murrieta* (1995) 36 Cal.App.4th 1359, 1396 (*Gentry*)

[conditioning a permit on “recommendations of a report that had yet to be performed” constituted improper deferral of mitigation]; *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275 [deferral is impermissible when the agency “simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report”]; *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794 [“mitigation measure [that] does no more than require a report be prepared and followed, . . . without setting any standards” found improper deferral]; *Sundstrom, supra*, 202 Cal.App.3d at p. 306 [future study of hydrology and sewer disposal problems held impermissible]; *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1605, fn. 4 [city is prohibited from relying on “postapproval mitigation measures adopted during the subsequent design review process”].)

This mitigation plan for greenhouse gases is similarly deficient. Here, the final EIR merely proposes a generalized goal of no net increase in greenhouse gas emissions and then sets out a handful of cursorily described mitigation measures for future consideration that might serve to mitigate the 898,000 tons of emissions resulting from the Project. No effort is made to calculate what, if any, reductions in the Project’s anticipated greenhouse gas emissions would result from each of these vaguely described future mitigation measures. Indeed, the perfunctory listing of possible mitigation measures set out in Mitigation Measure 4.3-5(e) are nonexclusive, undefined, untested and of unknown efficacy. The only criteria for “success” of the ultimate mitigation plan adopted is the subjective judgment of the City Council, which presumably will make its decision outside of any public process a year after the Project has been approved. Fundamentally, the development of mitigation measures, as envisioned by CEQA, is not meant to be a bilateral negotiation between a project proponent and the lead agency after project approval; but rather, an open process that also involves other interested agencies and the public.

We find this proposal is no different than the deferred mitigation rejected by the appellate court in *San Joaquin Raptor, supra*, 149 Cal.App.4th 645. There, the EIR

required “a management plan” to be prepared “by a qualified biologist to ‘maintain the integrity and mosaic of the vernal pool habitat.’ ” (*Id.* at p. 669.) The court held that this measure was deficient because it merely included a “generalized goal of maintaining the integrity of the vernal pool habitats,” placing the onus of mitigation to the future plan and leaving the public “in the dark about what land management steps will be taken, or what specific criteria or performance standard will be met” (*Id.* at p. 670.)

In defending the greenhouse gas mitigation plan, Chevron emphasizes that CEQA does not always require the details of mitigation measures to be laid out prior to project approval, and in some cases, the best method for mitigating an impact will not be known until after project construction begins. (See Guidelines, § 15126.4.) Deferred selection of mitigation measures is permissible under the following circumstances: “[F]or kinds of impacts for which mitigation is known to be feasible, but where practical considerations prohibit devising such measures early in the planning process . . . , the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval. Where future action to carry a project forward is contingent on devising means to satisfy such criteria, the agency should be able to rely on its commitment as evidence that significant impacts will in fact be mitigated.’ . . . [Citation.]” (*Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1028-1029 (SOCA).) In summary, for kinds of impacts for which mitigation is known to be feasible, the EIR may give the lead agency a choice of which measure to adopt, so long as the measures are coupled with specific and mandatory performance standards to ensure that the measures, as implemented, will be effective.

Chevron argues that this is a case in which CEQA allows the EIR to specify “performance standards” rather than choose the specific mitigation methods in advance. Chevron states that “the EIR concludes the Project’s GHG emissions will have a potentially significant environmental effect on climate change. The EIR adopts a strict numeric performance standard (‘net-zero,’ which is a 100% reduction) To enforce this performance standard, the EIR provides a list of potential mitigation strategies” Chevron contends that the mitigation strategy employed in this case is similar to the

mitigation plans upheld in *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603 (*CNPS*) and in *SOCA, supra*, 229 Cal.App.3d 1011.

In *CNPS, supra*, 172 Cal.App.4th 603, during the environmental review process it was determined that the proposed project would significantly impact vernal pools, wetlands, and associated animal species. The lead agency in *CNPS* then identified and formulated a specific measure to mitigate these impacts—“preservation or creation of replacement habitat offsite in a specific ratio to the habitat lost as a result of the [p]roject.” (*Id.* at p. 622.) The court concluded that “the [c]ity here did not have to identify exactly where . . . any offsite mitigation site would be located.” (*Ibid.*) The court stated that it was appropriate to defer such analysis where there was nothing in the record that suggested “the offsite mitigation measures the [c]ity proposed were not feasible or that the [c]ity had not fully committed to implementing those measures.” (*Id.* at pp. 622-623.)

In *SOCA, supra*, 229 Cal.App.3d 1011, the city prepared an EIR which identified potentially significant traffic and parking impacts resulting from the proposed project, the expansion of a downtown convention center and the construction of a nearby office building. (*Id.* at p. 1015.) The draft EIR discussed many options for mitigating the parking impacts, including plans for redesigning the project to provide onsite parking and construction of new garages in the project area. (*Id.* at p. 1029) The draft EIR also contained specific performance criteria which required that “ ‘the overall level of parking utilization in the study area should not exceed 90 percent.’ . . .” (*Id.* at p. 1022.) The court found that it was not feasible to select the exact mitigation measures to be implemented prior to project approval because the city had provided funding for a “major study of downtown transportation” that would help in defining the final mitigation plan. (*Id.* at p. 1029.)

Consequently, the appellate courts in *CNPS* and *SOCA* permitted the lead agency to defer the formulation of specific mitigation measures after the lead agency:

- (1) undertook a complete analysis of the significance of the environmental impact,
- (2) proposed potential mitigation measures early in the planning process, and

(3) articulated specific performance criteria that would ensure that adequate mitigation measures were eventually implemented. In contrast to the situations profiled in *CNPS* and *SOCA*, the lead agency in our case delayed making a significance finding until late in the CEQA process, divulged little or no information about how it quantified the Project's greenhouse gas emissions, offered no assurance that the plan for how the Project's greenhouse gas emissions would be mitigated to a net-zero standard was both feasible and efficacious, and created no objective criteria for measuring success.

For the foregoing reasons, we agree with the trial court that the City's decision to approve the Project, after giving the City Council final approval over a mitigation plan that Chevron formulates a year later outside the EIR process, does not satisfy CEQA's requirements. We emphasize once again that the time to analyze the impacts of the Project and to formulate mitigation measures to minimize or avoid those impacts was during the EIR process, *before* the Project was brought to the Planning Commission and City Council for final approval. Because the City belatedly acknowledged at the very end of the EIR process that the Project's greenhouse gas emissions would constitute a significant impact on the environment, the City was obviously unable to gather sufficient information during the EIR process itself to develop specific mitigation measures. The solution was not to defer the specification and adoption of mitigation measures until a year after Project approval; but, rather, to defer approval of the Project until proposed mitigation measures were fully developed, clearly defined, and made available to the public and interested agencies for review and comment.

Chevron justifies the vagueness of the proposed mitigation measures by emphasizing that it was difficult to make a firm commitment to take any specific action when the scientific information about greenhouse gas emissions was constantly expanding during the years that the Project was being environmentally reviewed. We recognize the ever-changing nature of this complex scientific field. For example, it was only during the pendency of this appeal that the EPA made an official finding that greenhouse gases are endangering people's health and must be regulated <<http://www.epa.gov/climatechange/endangerment.html>> (as of April 26, 2010).

However, the difficulties caused by evolving technologies and scientific protocols do not justify a lead agency's failure to meet its responsibilities under CEQA by not even attempting to formulate a legally adequate mitigation plan. (See Remy et al., Guide to the California Environmental Quality Act (11th ed. 2007) p. 552 [when "a mitigation measure embodies nothing more than the hope that the agency or applicant, with more effort or analysis, can somehow find a solution to a thorny environmental problem, an agency may violate CEQA"].)

In our opinion, the novelty of greenhouse gas mitigation measures is one of the most important reasons "that mitigation measures timely be set forth, that environmental information be complete and relevant, and that environmental decisions be made in an accountable arena. [Citation.]" (*Oro Fino Gold Mining Corp v. County of El Dorado* (1990) 225 Cal.App.3d 872, 885.) To that end, "[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can." (Guidelines, § 15144; see also, *Vineyard Area Citizens, supra*, 40 Cal.4th at p. 428.)

In light of our conclusion that the EIR is inadequate on another, even more fundamental ground, and must be revised, the revised EIR should take advantage of any pertinent new information in analyzing the Project's potential greenhouse gas emissions and their cumulative impact on climate change, as well as defining legally adequate mitigation measures to avoid those impacts. (See, e.g., newly enacted Guidelines § 15064.4 [determining significance of project's greenhouse gas emissions]; § 15183.5 [tiering analysis].) Moreover, once mitigation measures are publicly reviewed and identified, nothing prevents the City from incorporating guidelines to continue utilizing new scientific information as it becomes available. (See, e.g., *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 358 [assuming a valid reason, nothing "establish[es] that a particular mitigation measure, once adopted, is a commitment that may never be modified or deleted"].)

D. Hydrogen Pipeline Project is not Part of the Proposed Project

Also at issue in this writ proceeding was respondents' allegation that the City unlawfully segmented its environmental review of the Project by failing to analyze, as part of the Project itself, a proposed hydrogen pipeline that would transport excess hydrogen to other hydrogen consumers, such as other Bay Area refineries. The EIR treated the hydrogen pipeline as a separate project; however, the EIR identified the potentially significant cumulative impacts to which the hydrogen pipeline project would contribute. The trial court concluded that the City improperly "piece-mealed" the Project by failing to include and analyze the hydrogen pipeline as part of the Project. We disagree with the trial court's conclusion, finding instead that there was no improper segmentation of a larger project here.

As noted, one of the four main components of the Project was replacing the existing hydrogen plant, which began operating in 1965, with a new hydrogen plant (the Hydrogen Plant Replacement). The Refinery uses substantial amounts of hydrogen for a variety of purposes, including the hydro-treating process (the use of heat, hydrogen, and catalyst to remove impurities such as sulfur) to produce the clean fuels that conform to California standards. The Hydrogen Plant Replacement is fully described and analyzed in the EIR.

While the new Hydrogen Plant Replacement will be located on the Refinery's property, it will be constructed, owned and operated by Praxair, a third-party industrial gas company. Praxair has considerable experience in operating hydrogen plants—it has built 18 hydrogen plants throughout the world. The Hydrogen Plant Replacement's design will allow Praxair to produce additional hydrogen, if it chooses to do so, beyond that needed by Chevron at the Refinery. Any excess hydrogen generated must be exported, as the Refinery does not have the capability to store it.

In February 2007, Praxair filed an application with Contra Costa County for a conditional use permit for a proposed hydrogen pipeline to transport and sell any excess hydrogen to other hydrogen users in the Bay Area besides Chevron. The route of the approximately 21.5 mile proposed hydrogen pipeline would start at the new Hydrogen

Plant Replacement at the Refinery and then span a number of jurisdictions, although it would be located entirely within Contra Costa County.

While the hydrogen pipeline project was not considered to be part of the Project reviewed here, there is no dispute that the project is being environmentally reviewed under CEQA in a different EIR with Contra Costa County identified as the CEQA Lead Agency with the responsibility of preparing the EIR.⁹ The City is identified as a responsible agency for approvals relating to the smaller portion of the pipeline that is within the City's jurisdiction. Regarding this distinction, “ ‘the lead agency is responsible for considering all environmental impacts of the project before approving it, a responsible agency has a more specific charge: to consider only those aspects of a project that are subject to the responsible agency's jurisdiction. [Citations.]’ [Citation.]” (*RiverWatch, supra*, 170 Cal.App.4th at pp. 1205-1206.)

In the EIR prepared for the Project, the City set out the reason why the hydrogen pipeline project was treated as a separate, stand-alone project: “The Contra Costa Pipeline Project is not a crucial or functional element of the Chevron Renewal Project. The Chevron Renewal Project does not depend on the Contra Costa Pipeline Project in order to proceed, and would be implemented with or without a pipeline being constructed by Praxair. The scope of the remainder of the Chevron Renewal Project is not dependent upon, and would not change if the pipeline is, or is not, constructed. Rather, the Contra Costa Pipeline Project's purpose would be to serve Bay Area hydrogen consumers and producers in addition to Chevron.”

“There is no dispute that CEQA forbids ‘piecemeal’ review of the significant environmental impacts of a project.” (*Berkeley Jets, supra*, 91 Cal.App.4th at p. 1358.) Rather, CEQA mandates “that environmental considerations do not become submerged by chopping a large project into many little ones—each with a minimal potential impact on the environment—which cumulatively may have disastrous consequences.” (*Bozung*

⁹ On August 31, 2009, this court took judicial notice, without a determination of relevance, of the draft EIR that was issued for the pipeline project.

v. Local Agency Formation Com. (1975) 13 Cal.3d 263, 283-284.) Thus, the Guidelines define “project” broadly as “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (Guidelines, § 15378, subd. (a).) The question of which acts constitute the “whole of an action” for purposes of CEQA is one of law which we review de novo based on the undisputed facts in the record. (*Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1224 (*Tuolumne County*).)

In the seminal case of *Laurel Heights I, supra*, 47 Cal.3d 376, the California Supreme Court set aside an EIR for failing to analyze the impacts of the reasonably foreseeable second phase of a multi-phased project. That case involved a plan by the University of California, San Francisco (UCSF) to move its School of Pharmacy basic science research units to a new building, of which only about one-third was initially available to UCSF. (*Id.* at p. 393.) Although the EIR acknowledged that UCSF would eventually occupy the remainder of the building once that space became available, the EIR only discussed the environmental effects relating to the initial move. (*Id.* at p. 396.) The court concluded that the EIR should have analyzed both phases and was deficient for omitting the expansion plans. (*Id.* at p. 399.) In so holding, the court announced the following test: “[A]n EIR must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects.” (*Id.* at p. 396.)

Since the planned expansion was a key component of the project reviewed in *Laurel Heights I*, and the successive phases were really part and parcel of the same project, it is easy to see how the court found that the planned expansion was a reasonably foreseeable consequence of the initial project. By contrast, the projects at issue here, the hydrogen pipeline and the Refinery upgrade, are independently justified, separate projects with different project proponents—not piecemealed components of the same project. At

the same time, the City saw that the hydrogen pipeline project was related to the Refinery upgrade, so the pipeline's cumulative contribution to the Project's environmental impacts was included in the EIR.

Some courts have concluded a proposed project is part of a larger project for CEQA purposes if the proposed project is a crucial functional element of the larger project such that, without it, the larger project could not proceed. For example, in *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, the court concluded the description of a residential development project in an EIR was inadequate because it failed to include expansion of the sewer system, even though the developer recognized sewer expansion would be necessary for the project to proceed. (*Id.* at pp. 729-731.) Because the construction of additional sewer capacity was a “required” or “crucial element[]” without which the proposed development project could not go forward, the EIR for the project had to consider the environmental impacts from such construction. (*Id.* at pp. 731-732.)

More recently, in *Tuolumne County, supra*, 155 Cal.App.4th 1214, the court held that a proposed Lowe's home improvement center and a planned realignment of the adjacent Old Wards Ferry Road were improperly segmented as two separate projects in light of the dispositive fact that the road realignment was included by the City of Sonoma as a condition of approval for the Lowe's project. (*Id.* at p. 1220.) The court held that this was really one project, not two, because “[t]heir independence was brought to an end when the road realignment was added as a condition to the approval of the home improvement center project. [Citation.]” (*Id.* at 1231.)

Other courts have used a similar analysis to reach the opposite result. In *National Parks & Conservation Assn. v. County of Riverside* (1996) 42 Cal.App.4th 1505 (*National Parks*), an environmental advocacy group contended an EIR's project description for a proposed landfill was inadequate because it failed to discuss potential impacts from several “materials recovery facilities” (MRFs) that would be constructed offsite and used to process solid waste before the waste material was transported to the landfill. The proposed landfill would only accept wastes that had been processed through

the MRFs, and the trial court observed the landfill could not operate without the MRFs. (*Id.* at pp. 1517-1518.) However, because the exact location of the MRFs was not yet known, the landfill’s EIR did not attempt to discuss any site-specific impacts they could be expected to generate. (*Id.* at pp. 1518-1519.) While recognizing the MRFs were “in some respects a support facility for the landfill,” the court observed such facilities would have to be built and “located somewhere, whether or not this [landfill] project is completed” (*Id.* at p. 1518.) Because the MRFs were needed to process waste, regardless of the existence of the landfill project, the court concluded they were not “crucial elements” of the landfill project, and thus an environmental review of their impacts could be deferred. (*Id.* at p. 1519.)

In *Christward Ministry v. County of San Diego* (1993) 13 Cal.App.4th 31, the court considered an expansion proposal for a landfill site. Petitioners contended that other waste management projects in the area should have been included in the project description and evaluated in the EIR as part of the project. The court disagreed, finding that even though there were a number of separate waste management projects occurring at the same time, there was “no record reflecting a contemplated larger project” (*Id.* at p. 46.) Consequently, treating the landfill project as an independent project in the EIR could not be equated to the “ ‘chopping up’ ” of a larger project into smaller parts to evade environmental review. (*Ibid.*) Furthermore, the court noted the other projects were addressed in the cumulative impacts analysis of the EIR in accordance with CEQA requirements. (*Id.* at p. 47.)

Similarly, in *Berkeley Jets*, the court rejected an argument that the project description in an EIR for an airport development plan (ADP) should have included long-range plans for potential runway expansions. (*Berkeley Jets, supra*, 91 Cal.App.4th at pp. 1361-1362.) The runway expansion projects were not functionally linked to the ADP; and because the airport’s existing runways were expected to continue operating below capacity for several years, the runway projects were unnecessary for completion of the ADP. The court noted, “the ADP does not depend on a new runway and would be built whether or not runway capacity is ever expanded.” (*Id.* at p. 1362.) Because

runway expansion was not a crucial element of the ADP or a reasonably foreseeable consequence of the ADP, the court concluded the EIR's project description was adequate and did not violate the policy against piecemealing. (*Ibid.*)

This case presents a similar scenario to that considered in *National Parks, Christward Ministry*, and *Berkeley Jets*. The Project at issue here and the hydrogen pipeline project, are not interdependent. In fact, they perform entirely different, unrelated functions. The principal purpose for the Project is to allow Chevron to modify and/or replace existing Refinery equipment in order to “improve the Refinery’s ability to process crude oil and other feed stocks from around the world and to direct more of current gasoline production capacity to the California market.” The principal purpose of the hydrogen pipeline project is to provide a way for Praxair to transport excess hydrogen that is not required for Chevron’s operations to other hydrogen consumers in the Bay Area. Because Chevron’s efforts to process a larger percentage of California fuel at the Refinery does not “depend on” construction of the hydrogen pipeline, the City’s treatment of the hydrogen pipeline as a separate project does not constitute illegal piecemealing. (See *Berkeley Jets, supra*, 91 Cal.App.4th at p. 1362.) Accordingly, the trial court should have rejected respondents’ piecemealing contention.

E. Unaddressed Issues

As noted, the City has also filed an appeal requesting only that this court “finally decide the outstanding issues in this case” that were left unaddressed by the trial court. Because we have concluded that the EIR must be revised to provide critical information about the crude slate processed at the Refinery and greenhouse gas emissions, respondents’ claim that the City, before approving the Project, was required to revise and recirculate the EIR in light of “significant new information” is undeniably moot. (See § 21092.1; see also Guidelines, § 15088.5, subd. (a)(1).)

We also follow the trial court’s approach and decline to address respondents’ contention that the “EIR provides only a superficial treatment of the cumulative impacts of the Project” It is entirely foreseeable that the information developed on these important topics in the revised EIR will result in new or increased impacts being

identified, which would require that the cumulative impacts analysis also be revised. Therefore, like the trial court, we are reluctant to address claims about the current EIR's cumulative impact analysis that may be rendered moot by any subsequent CEQA review. (See *Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 920 [§ 21005, subd. (c) does not require appellate court to address additional alleged deficiencies that may be addressed in a "completely different and more comprehensive manner" upon subsequent CEQA review following remand]; *Berkeley Jets, supra*, 91 Cal.App.4th at p. 1383, fn. 24.)

IV.
DISPOSITION

The judgment is reversed. The trial court is instructed to enter, consistent with this opinion, a new and different judgment granting in part and denying in part the petition for writ of mandate. The parties shall bear their own costs on appeal. (Cal. Rules of Court, rule 8.278(a).)

RUVOLO, P. J.

We concur:

REARDON, J.

SEPULVEDA, J.

Trial Court: Contra Costa County Superior Court

Trial Judge: Hon. Barbara A. Zuniga

Counsel for Appellants: Pillsbury Winthrop Shaw Pittman,
Ronald E. Van Buskirk, Kevin M. Fong,
Todd W. Smith for Chevron Products Company
and Chevron Corporation

Randy E. Riddle, City Attorney
K. Scott Dickey, Chief Deputy City Attorney;
Shute, Mihaly & Weinberger, Ellen J. Garber,
Jeannette M. MacMillan, Kristin B. Burford for
City of Richmond

Counsel for Respondents: Communities for a Better Environment,
Adrienne L. Bloch, Shana Lazerow;
Earthjustice, William B. Rostov, Deborah S.
Reames

Center for Biological Diversity, Matthew Vespa
for Center for Biological Diversity,
Environmental Defense Center and the Planning
& Conservation League as Amici Curiae
on behalf of Respondents