

UNITED STATES OF AMERICA  
BEFORE THE FEDERAL TRADE COMMISSION

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In the Matter of )  
)

UNION OIL COMPANY OF )  
CALIFORNIA, )  
a corporation. )  
\_\_\_\_\_ )

DOCKET NO. 9305

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act, and by virtue of the authority vested in it by said Act, the Federal Trade Commission ("Commission"), having reason to believe that Union Oil Company of California (hereinafter, "Unocal" or "Respondent") has violated Section 5 of the Federal Trade Commission ("FTC") Act, as amended, 15 U.S.C. § 45, and it appearing to the Commission that a proceeding in respect thereof would be in the public interest, hereby issues its complaint, stating its charges as follows:

Nature of the Case

1. This case involves Unocal's subversion of state regulatory standard-setting proceedings relating to low emissions gasoline standards. To address California's serious air pollution problems, the California Air Resources Board ("CARB") initiated rulemaking proceedings in the late 1980s to determine "cost-effective" regulations and standards governing the composition of low emissions, reformulated gasoline ("RFG"). Unocal actively participated in the CARB RFG rulemaking proceedings and engaged in a pattern of bad-faith, deceptive conduct, exclusionary in nature, that enabled it to undermine competition and harm consumers. Through a pattern of anticompetitive acts and practices that continues even today, Unocal has illegally monopolized, attempted to monopolize, and otherwise engaged in unfair methods of competition in both the technology market for the production and supply of CARB-compliant "summer-time" RFG and the downstream CARB "summer-time" RFG product market.
2. During the RFG rulemaking proceedings in 1990-1994, Unocal made materially false and misleading statements including, but not limited to, the following:

- a. Representing to CARB and other participants that its emissions research results showing, *inter alia*, the directional relationships between certain gasoline properties (most notably the midpoint distillation temperature of gasoline or "T50") on automobile emissions were "nonproprietary," were in "the public domain," or otherwise were available to CARB, industry members, and the general public, without disclosing that Unocal intended to assert its proprietary interests (as manifested in pending patent claims) in these research results;
  - b. Representing to CARB that a "predictive model" -- *i.e.*, a mathematical model that predicts whether the resulting emissions from varying certain gasoline properties (including T50) in a fuel are equivalent to the emissions resulting from a specified and fixed fuel formulation -- would be "cost-effective" and "flexible," without disclosing that Unocal's assertion of its proprietary interests would undermine the cost-effectiveness and flexibility of such a model;
  - c. Making statements and comments to CARB and other industry participants relating to the cost-effectiveness and flexibility of the regulations that further reinforced the materially false and misleading impression that Unocal had relinquished or would not enforce any proprietary interests in its emissions research results.
3. Through its knowing and willful misrepresentations and other bad faith, deceptive conduct, Unocal created and maintained the materially false and misleading impression that it did not possess, or would not enforce, any relevant intellectual property rights that could undermine the cost-effectiveness and flexibility of the CARB RFG regulations.
  4. Although Unocal knew by July 1992 that most of the pending patent claims based on its emissions research had been allowed by the United States Patent and Trademark Office, Unocal concealed this material information from CARB and other participants in the CARB RFG proceedings. Until Unocal's public announcement of its RFG patent rights on January 31, 1995, Unocal continued to perpetuate the false and misleading impression that it did not possess, or would not enforce, any proprietary interests relating to RFG.
  5. But for Unocal's fraud, CARB would not have adopted RFG regulations that substantially overlapped with Unocal's concealed patent claims; the terms on which Unocal was later able to enforce its proprietary interests would have been substantially different; or both. Unocal's misrepresentations, on which CARB and other participants in the rulemaking process reasonably and detrimentally relied, have harmed competition and led directly to the acquisition of monopoly power for the technology to produce and supply California "summer-time" reformulated gasoline (mandated for up to eight months of the year, from approximately March through October). Unocal's "patent ambush" also has permitted it to undermine competition and harm consumers in the downstream product market for "summer-time" reformulated

gasoline in California.

6. Unocal did not announce the existence of its proprietary interests and patent rights relating to RFG until shortly before CARB's Phase 2 regulations were to go into effect. By that time, the refining industry had spent billions of dollars in capital expenditures to modify their refineries to comply with the CARB Phase 2 RFG regulations. After CARB and the refiners had become locked into the Phase 2 regulations, however, Unocal commenced its patent enforcement efforts by publicly announcing its RFG patent rights and its intention to collect royalty payments and fees. Since Unocal's public announcement of the issuance of its first RFG patent on January 31, 1995, Unocal has obtained four additional patents and vigorously enforced its RFG patent rights through litigation and licensing activities.
7. The anticompetitive conduct by Unocal that is at issue in this action has materially caused or threatened to cause substantial harm to competition, and will in the future materially cause or threaten to cause further substantial injury to competition and to consumers.
8. The threatened or actual anticompetitive effects of Unocal's conduct include but are not limited to the following:
  - a. increased royalties (or other payments) associated with the use of technology to refine, produce, and supply low emissions, reformulated gasoline for the California market;
  - b. increases in the price of low emissions, reformulated gasoline in California;
  - c. reductions in the manufacture, output, and supply of low emissions, reformulated gasoline for the California market; and
  - d. decreased incentives, on the part of refiners, blenders, and importers, to produce and supply low emissions, reformulated gasoline to the California market.
9. Unocal's enforcement of its patent rights has resulted, *inter alia*, in a jury determination of a 5.75 cents per gallon royalty on gasoline produced by ARCO, Shell, Exxon, Mobil, Chevron, and Texaco that infringed the first of Unocal's five RFG patents – United States Patent No. 5,288,393 (the "393 patent"). These major refiners are still embroiled with Unocal in a pending accounting action to determine the total amount of infringement damages owed to Unocal for the period August 1996 through December 2000. Unocal also has sued Valero Energy Company ("Valero") seeking the imposition of a 5.75 cents per gallon royalty (and treble damages) on gasoline produced by Valero that infringes the '393 patent and the fourth of Unocal's five RFG patents – United States Patent No. 5,837,126 (the "126 patent"). Taken together, the major refiners and Valero comprise approximately 90 percent of the current refining capacity of CARB-compliant RFG in the California market. Unocal has publicly

announced that its “uniform” RFG licenses, with fees ranging from 1.2 to 3.4 cents per gallon, are available to “non-litigating” refiners.

10. Were Unocal to receive a 5.75 cents per gallon royalty on all gallons of “summer-time” CARB RFG produced annually for the California market, this would result in an estimated annual cost of more than \$500 million (assuming approximately 14.8 billion gallons per year California consumption, with up to 8 months of CARB summer-time gasoline requirements). Unocal’s own economic expert has testified under oath that 90 percent of any royalty would be passed through to consumers in the form of higher retail gasoline prices.

### **Respondent**

11. Union Oil Company of California is a public corporation organized, existing, and doing business under, and by virtue of, the laws of California. Its office and principal place of business is located at 2141 Rosecrans Avenue, Suite 4000, El Segundo, California 90245. Since 1985, Union Oil Company of California has done business under the name “Unocal.” Unocal is a wholly-owned, operating subsidiary of Unocal Corporation, a holding company incorporated in Delaware.
12. Unocal is, and at all relevant times has been, a corporation as “corporation” is defined by Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44; and at all times relevant herein, Unocal has been, and is now, engaged in commerce as “commerce” is defined in the same provision.
13. Prior to 1997, Unocal owned and operated refineries in California as a vertically integrated producer, refiner, and marketer of petroleum products. In March 1997, Unocal completed the sale of its west coast refining, marketing, and transportation assets to Tosco Corporation. Currently, Unocal’s primary business activities involve oil and gas exploration and production, as well as production of geothermal energy, ownership in proprietary and common carrier pipelines, natural gas storage facilities, and the marketing and trading of hydrocarbon commodities.
14. In its annual report for the year 2001 filed with the United States Securities and Exchange Commission, Form 10-K, Unocal lists as another of its key business activities: “[p]ursuing and negotiating licensing agreements for reformulated gasoline patents with refiners, blenders and importers.” Unocal has publicly announced that it expects to reap up to \$150 million in revenues a year from licensing its RFG patents.
15. Unocal is the owner, by assignment, of the following patents relating to low emissions, reformulated gasoline: United States Patent No. 5,288,393 (issued February 22, 1994); United States Patent No. 5,593,567 (issued January 14, 1997); United States Patent No.

5,653,866 (issued August 5, 1997); United States Patent No. 5,837,126 (issued November 17, 1998); United States Patent No. 6,030,521 (issued February 29, 2000). These patents all arise from the same scientific discovery and are related in that they all claim priority based on patent application No. 07/628,488, filed on December 13, 1990. These patents share the identical specification.

### **California Air Resources Board (CARB)**

16. The California Air Resources Board is a department of the California Environmental Protection Agency. Established in 1967, CARB's mission is to protect the health, welfare, and ecological resources of California through the effective and efficient reduction of air pollutants, while recognizing and considering the effects of its actions on the California economy. CARB fulfills this mandate by, among other things, setting and enforcing standards for low emissions, reformulated gasoline.
17. California's Administrative Procedures Act governs CARB's rulemaking proceedings and requires, *inter alia*, notice of any proposed regulations, the development of an evidentiary basis for any proposed regulations, the solicitation of public comments, and the conduct of hearings. Given the scientific and technical nature of the issues involved, CARB relies on the accuracy of the data and information presented to it in the course of rulemaking proceedings.
18. All CARB regulations are subject to review by California's Office of Administrative Law to ensure that such regulations meet statutory standards of necessity, authority, clarity, consistency, reference and nonduplication. CARB's regulations are subject to judicial review to determine whether the agency acted within its delegated authority, whether the agency employed fair procedures, and whether the agency's action was arbitrary, capricious, or lacking in evidentiary support.

### **Reformulated Gasoline in California**

19. CARB's RFG regulations had their genesis in an effort by California to study the viability of alternative fuels for motor vehicles, such as methanol. In 1987, the California legislature passed AB 234, which resulted in the formation of a panel to study the environmental impact of alternative fuels and to develop a proposal to reduce emissions. This panel included representatives from the refining industry, including Roger Beach, a high level Unocal executive who later became the Chief Executive Officer and Chairman of the Board of Unocal.
20. Based in substantial part on the representations of oil industry executives that the oil industry could, and would, develop gasoline that would be cleaner-burning and cheaper than methanol, the AB 234 study panel eventually recommended exploring reformulated gasoline as an

alternative to methanol.

21. In late 1988, the California legislature amended the California Clean Air Act to require CARB to take actions to reduce harmful car emissions, and directed CARB to achieve this goal through the adoption of new standards for automobile fuels and low-emission vehicles. CARB's authority in conducting its Phase 2 RFG rulemaking proceedings was circumscribed by an express and limited delegation of authority by the legislature. CARB's specific legislative mandate, set forth in California Health and Safety Code Section 43018, provided, *inter alia*, that CARB undertake the following actions:
  - a. Take "necessary, cost-effective, and technologically feasible" actions to achieve "reduction in the actual emissions of reactive, organic gases of at least 55 percent, a reduction in emissions of oxides of nitrogen of at least 15 percent from motor vehicles" no later than December 31, 2000;
  - b. Take actions "to achieve the maximum feasible reduction in particulates, carbon monoxide, and toxic air contaminants from vehicular sources";
  - c. Adopt standards and regulations that would result in "the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuels" including the "specification of vehicular fuel composition."
22. Following the 1988 California Clean Air Act amendments, CARB embarked on two rulemaking proceedings relating to low emissions, reformulated gasoline. In these rulemaking proceedings – Phase 1 and Phase 2, respectively – CARB prescribed limits on specific gasoline properties.
23. The Phase 1 RFG proceedings resulted in the adoption of regulations in 1990 mandating a reduction in Reid Vapor Pressure ("RVP"), the elimination of leaded gasoline, and a requirement that deposit control additives be included in gasoline. The Phase 1 regulations did not require refiners to make large capital investments.
24. CARB's Phase 2 RFG proceedings represented an effort by CARB to develop stringent standards for low emissions, reformulated gasoline. Participants to the Phase 2 RFG proceedings understood that the CARB Phase 2 RFG regulations would require refiners to make substantial capital investments to reconfigure their refineries to produce compliant gasoline.
25. In its Phase 2 RFG proceedings, CARB did not conduct any independent studies of its own, but relied on industry to provide the needed research and resulting knowledge.

26. CARB's Phase 2 RFG proceedings were quasi-adjudicative in nature. In the course of these proceedings, CARB adhered to the procedures set forth in the California Administrative Procedures Act. CARB provided notice of proposed regulations; provided the language of these proposed regulations and a statement of reasons; solicited and accepted written comments from the public; and conducted lengthy hearings at which oral testimony was received. CARB also issued written findings on the results of its rulemaking proceedings. Following adoption of the regulations, several parties sought judicial review of the CARB Phase 2 RFG regulations that provided small refiners with a two-year exemption for compliance with the regulations.
27. Unocal management and employees understood that information and data relating to the potential costs of complying with, or relating to the cost-effectiveness of, the Phase 2 regulations were material to CARB's RFG rulemaking proceedings.

### Unocal's RFG Research

28. By 1989, Unocal management knew that CARB intended to achieve significant emissions reductions by regulating the chemical and physical properties of gasoline sold in California. Unocal scientists from the company's Science and Technology Division began to design experiments to determine how controlling various properties of gasoline affected automobile emissions. In January 1990, Unocal scientists conducted in-house emissions testing of various gasoline fuels in a single car to determine which gasoline properties had the greatest emissions impact.
29. On May 14, 1990, Unocal scientists Michael Croudace and Peter Jessup presented the preliminary results of the emissions research program to the highest levels of Unocal's management to obtain approval and funding for additional, confirmatory research. These research results were presented to the members of Unocal's Executive Committee, including Richard Stegemeier, the Chief Executive Officer and Chairman of the Board of Unocal. Unocal management approved funding for additional emissions testing, and this project became known as the "5/14 Project."
30. Unocal management approved the filing of a patent application covering the invention and discovery that sprang from the "5/14 Project," specifically the Unocal scientists' purportedly novel discovery of the directional relationships between eight fuel properties – RVP, T10 (the temperature at which 10 percent of a fuel evaporates), T50 (the temperature at which 50 percent of a fuel evaporates), T90 (the temperature at which 90 percent of a fuel evaporates), olefin content, aromatic content, paraffin content, and octane – and three types of tailpipe emissions – *i.e.*, incompletely burned or unburned hydrocarbons ("HC"), carbon monoxide ("CO"), and nitrogen oxides ("NOx").

31. Unocal management made prosecution of the patent application a high priority. Unocal's chief patent counsel, Gregory Wirzbicki, personally undertook the task of prosecuting the patent application.
32. On December 13, 1990, Unocal filed with the United States Patent and Trademark Office a patent application, No. 07/628,488. This application presented Unocal's emissions research results, including the regression equations and underlying data; detailed the directional relationships between the fuel properties and emissions studied in the "5/14 Project;" and set forth composition and method claims relating to low emissions, reformulated gasoline. All five Unocal RFG patents referred to in paragraph 15 are the progeny of the '488 application.

### **Unocal's Conduct Before CARB**

33. Prior to and after the filing of the patent application on December 13, 1990, Unocal employees and management discussed and considered the potential competitive advantage and corporate profit that could be extracted through effectuating an overlap between the CARB regulations and Unocal's patent claims.
34. During the same time that Unocal participated in the CARB RFG rulemaking proceedings, specific discussions took place within the company concerning how to induce the regulators to use information supplied by Unocal so that Unocal could realize the huge licensing income potential of its pending patent claims.
35. Beginning in 1990, and continuing throughout the CARB Phase 2 RFG rulemaking process, Unocal provided information to CARB for the purpose of obtaining competitive advantage. Unocal gave CARB this information in private meetings with CARB, through participation in CARB's public workshops and hearings, as well as by participating in industry groups that also were providing input into the CARB regulations. This information was materially misleading in light of Unocal's suppression of facts relating to its proprietary interests in its emissions research results and Unocal's active prosecution of patents based on these research results.
36. On June 11, 1991, CARB held a public workshop regarding the Phase 2 RFG regulations. This workshop included discussions of CARB staff's proposed gasoline specifications – *i.e.*, the levels at which certain gasoline properties should be set – to reduce the emissions from gasoline-fueled vehicles. The set of specifications proposed by CARB for discussion at this public workshop did not include a T50 specification.
37. On June 20, 1991, Unocal presented to CARB staff the results of its "5/14 Project" to show CARB that "cost-effective" regulations could be achieved through adoption of a "predictive



model” and to convince CARB of the importance of T50. Unocal’s pending patent application contained numerous claims that included T50 as a critical limitation, in addition to other fuel properties that CARB proposed to regulate.

38. Prior to the presentation to CARB, Unocal management decided not to disclose Unocal’s pending ’393 patent application to CARB staff.
39. On July 1, 1991, Unocal provided CARB with the actual emissions prediction equations developed in the “5/14 Project.” Unocal requested that CARB “hold these equations confidential, as we feel that they may represent a competitive advantage in the production of gasoline.” But Unocal went on to state:

If CARB pursues a meaningful dialogue on a predictive model approach to Phase 2 gasoline, Unocal will consider making the equations and underlying data public as required to assist in the development of a predictive model.

40. Following CARB’s agreement to develop a predictive model, Unocal made its emissions research results, including the test data and equations underlying its “5/14 Project,” publicly available.
41. On August 27, 1991, Unocal unequivocally stated in a letter to CARB that its emissions research data were “nonproprietary.” Specifically, Unocal stated:

Please be advised that Unocal now considers this data to be non-proprietary and available to CARB, environmental interest groups, other members of the petroleum industry, and the general public upon request.

42. At the time Unocal submitted its August 27, 1991 letter to CARB, it did not disclose to CARB its proprietary interests in the “5/14 Project” data and equations, its prosecution of a patent application, or its intent to enforce its proprietary interests to obtain licensing income. Read separately or in conjunction with Unocal’s July 1, 1991 letter, the August 27, 1991 letter created the materially false and misleading impression that Unocal agreed to give up any “competitive advantage” it may have had relating to its purported invention and arising from its emissions research results.
43. In reasonable reliance on Unocal’s representation that the information was no longer proprietary, CARB used Unocal’s equations in setting a T50 specification. Subsequently, in October 1991, CARB published Unocal’s equations in public documents supporting the proposed Phase 2 RFG regulations.

44. On November 22, 1991, the CARB Board adopted Phase 2 RFG regulations that set particular standards for the composition of low emissions, reformulated gasoline. These regulations specified limits for eight gasoline properties: RVP, benzene, sulfur, aromatics, olefins, oxygen, T50, and T90. Unocal's pending patent claims recited limits for five of the eight properties specified by the regulations: T50, T90, olefins, aromatics, and RVP.
45. Unocal's misrepresentations and materially false and misleading statements caused CARB to adopt Phase 2 RFG regulations that substantially overlapped with Unocal's concealed patent claims. Specifically, for example, CARB included a specification for T50 in its Phase 2 RFG regulations and eventually adopted a "predictive model" that included T50 as one of the parameters.
46. Prior to the final approval of the CARB Phase 2 RFG regulations in November 1992, Unocal submitted comments and presented testimony to CARB opposing CARB's proposal to grant small refiners a two-year exemption for complying with the regulations. Unocal vigorously opposed this proposed exemption on the grounds that it would increase the costs of compliance and undermine the cost-effectiveness of the CARB Phase 2 RFG regulations. In making these statements, Unocal again failed to disclose that it had proprietary rights that would materially increase the cost and reduce the cost-effectiveness and flexibility of the regulations that CARB had adopted in reasonable reliance on Unocal's representations.
47. CARB amended the Phase 2 regulations in June 1994 to include a predictive model as an alternative method of complying with the regulations that was intended to provide refiners with additional flexibility. At the urging of numerous companies, including Unocal, this "predictive model" permits a refiner to comply with the RFG regulations by producing fuel that is predicted – based on its composition and the levels of the eight properties – to have equivalent emissions to a fuel that meets the strict gasoline property limits set forth in the regulations.
48. During the development of the predictive model, Unocal continued to meet with CARB, providing testimony and information. Unocal submitted comments to CARB touting the predictive model as offering "flexibility" and furthering CARB's mandate of "cost-effective" regulations. These statements were materially false and misleading because Unocal suppressed the material fact that assertion of its proprietary rights would materially increase the cost and reduce the flexibility of the proposed regulations.
49. On February 22, 1994, the United States Patent Office issued the '393 patent. CARB first became aware of Unocal's '393 patent shortly after Unocal's issuance of a press release on January 31, 1995.

### Unocal's Participation in Industry Groups

50. During the CARB RFG rulemaking, Unocal actively participated in the Auto/Oil Air Quality Improvement Research Program ("Auto/Oil" or the "Program"), a cooperative, joint research program between the automobile and oil industries. By agreement dated October 14, 1989, the big three domestic automobile manufacturers – General Motors, Ford, and Chrysler – and representatives from fourteen oil companies, including Unocal, entered into a joint research agreement in accordance with the National Cooperative Research Act of 1984 ("Auto/Oil Agreement").
51. The stated objective of the Auto/Oil joint research venture was to plan and carry out research and tests designed to measure and evaluate automobile emissions and the potential improvements in air quality achievable through the use of reformulated gasolines, methanol, and other alternative fuels, and to evaluate the relative cost-effectiveness of these various improvements.
52. The Auto/Oil Agreement provided that "[t]he results of research and testing of the Program will be disclosed to government agencies, the Congress and the public, and otherwise placed in the public domain." This agreement specifically provided for the following dedication of any and all intellectual property rights to the public:

No proprietary rights will be sought nor patent applications prosecuted on the basis of the work of the Program unless required for the purpose of ensuring that the results of the research by the Program will be freely available, without royalty, in the public domain.
53. While the Auto/Oil Agreement permitted participating companies to conduct independent research, and further permitted them to withhold the fruits of such independent research from the Auto/Oil Group, once data and information were in fact presented to the Auto/Oil Group, they became the "work of the Program."
54. Unocal viewed its participation in industry groups, such as Auto/Oil, as an integral part of its strategy of deception for the purpose of obtaining a competitive advantage therefrom. On September 26, 1991, Unocal presented to Auto/Oil the results of Unocal's emissions research, including the test data, equations, and corresponding directional relationships between fuel properties and emissions derived from the "5/14 Project." Unocal management authorized this presentation, which was substantially similar to that made to CARB on June 20, 1991. Unocal informed Auto/Oil participants that the data had been made available to CARB and were in the public domain. Unocal also represented that the data would be made available to Auto/Oil participants. Unocal's 5/14 work thus became part of the "work" of the Auto/Oil Program.

55. Unocal's 5/14 work also became part of the Auto/Oil Program through the subsequent testing – as part of the Program – of the 5/14 fuel property relationships.
56. During the CARB Phase 2 RFG rulemaking proceedings, Unocal also actively participated in the Western States Petroleum Association (“WSPA”), an oil industry trade association that represents companies accounting for the bulk of petroleum exploration, production, refining, transportation and marketing in the western United States. WSPA, as a group, actively participated in the CARB RFG rulemaking process. WSPA commissioned, and submitted to CARB, three cost studies in connection with the CARB Phase 2 RFG rulemaking.
57. One cost study commissioned by WSPA incorporated information relating to process royalty rates associated with non-Unocal patents and was used by CARB to determine the cost-effectiveness of the proposed CARB Phase 2 RFG standards. This WSPA cost study estimated the costs of the proposed regulations on a cents-per-gallon basis and estimated the incremental costs associated with regulating specific gasoline properties. This WSPA study could have incorporated costs associated with potential royalties flowing from Unocal's pending patent rights.
58. On September 10, 1991, Unocal presented its “5/14 Project” emissions research results to WSPA. Unocal management authorized the presentation of the research results to WSPA. This Unocal presentation created the materially false and misleading impression that Unocal's emissions research results, including the data and equations, were nonproprietary and could be used by WSPA or its individual members without concern for the existence or enforcement of any intellectual property rights.
59. None of the participants in the WSPA or Auto/Oil groups knew of the existence of Unocal's proprietary interests and/or pending patent rights at any time prior to the issuance of the '393 patent in February 1994, by which time most, if not all, of the oil company participants to these groups had made substantial progress in their capital investment and refinery modification plans for compliance with the CARB Phase 2 RFG regulations.

#### **Unocal's Patent Prosecution and Enforcement**

60. Following the November 1991 adoption of CARB Phase 2 RFG specifications, Unocal amended its patent claims in March 1992 to ensure that the patent claims more closely matched the regulations. In some cases, Unocal's patent claims were narrowed to resemble the regulations.
61. On or about July 1, 1992, Unocal received an office action from the U.S. Patent and Trademark Office indicating that most of Unocal's pending patent claims had been allowed. Unocal did not

disclose this information to CARB or other participants to the CARB Phase 2 RFG rulemaking.

62. Subsequently, after the submission of additional amendments, Unocal received a notice of allowance from the U.S. Patent and Trademark Office for all of its pending claims in February 1993. Unocal did not disclose this information to CARB or other participants to the CARB Phase 2 RFG rulemaking.
63. In June 1993, Unocal filed a divisional application (No. 08/77,243) of its original patent application that allowed Unocal to pursue additional patents based on the discoveries of the "5/14 Project."
64. The U.S. Patent and Trademark Office issued the '393 patent to Unocal on February 22, 1994. Unocal waited until January 31, 1995, to issue a press release announcing issuance of the '393 patent. The Unocal press release stated that the '393 patent "covers many of the possible fuel compositions that refiners would find practical to manufacture and still comply with the strict California Air Resources Board (CARB) Phase 2 requirements."
65. In March 1995, Unocal met separately with California Governor Pete Wilson and CARB and made assurances that Unocal would not enjoin or otherwise impair the ability of refiners to produce and supply to the California market gasoline that complied with the CARB Phase 2 RFG regulations. In or about the same time period, CARB expressed its own concern to Unocal about the coverage of the patent and even sought and received from Unocal a license to use the '393 patent in making and using test fuels.
66. On March 22, 1995, five days after meeting with CARB staff, Unocal filed a continuation patent application (No. 08/409,074) claiming priority to the original December 1990 application. Unocal did not inform CARB or Governor Wilson that it intended to obtain additional RFG patents.
67. Unocal subsequently filed additional continuation patent applications on June 5, 1995 (No. 08/464,544), August 1, 1997 (No. 08/904,594), and November 13, 1998 (No. 08/191,924), all claiming priority based on Unocal's original December 13, 1990 patent application.
68. On April 13, 1995, ARCO, Exxon, Mobil, Chevron, Texaco, and Shell filed suit in the United States District Court for the Central District of California seeking to invalidate Unocal's '393 patent. Unocal filed a counterclaim for patent infringement of the '393 patent. The jury in this private litigation determined that Unocal's '393 patent was valid and infringed, and found that the refiners must pay a royalty rate of 5.75 cents per gallon for the period from March through July 1996 for sales of infringing gasoline in California.

69. The United States Court of Appeals for the Federal Circuit subsequently affirmed the trial court's judgment. The United States Supreme Court denied the refiner-defendants' petition for a writ of certiorari. The refiner-defendants have made payments totaling \$91 million to Unocal for damages, costs, and attorneys' fees.
70. An accounting action is still ongoing in the United States District Court for the Central District of California to determine damages for infringement of the '393 patent by the refiners for the period from August 1, 1996, through December 31, 2000. The court ruled in August 2002 that the 5.75 cents per gallon royalty fee awarded by the jury would apply to all infringing gasoline produced and/or supplied in California.
71. On January 23, 2002, Unocal sued Valero Energy Company in the Central District of California for willful infringement of both the '393 patent and the '126 patent (see Paragraph 9). In its complaint, Unocal seeks damages at the rate of 5.75 cents per gallon for all infringing gallons, and treble damages for willful infringement.
72. Unocal also has enforced its patent claims through licensing activities. To date, Unocal has entered into license agreements with eight refiners, blenders and/or importers covering the use of all five RFG patents. The terms of these license agreements are confidential. Unocal has announced that these license agreements feature a "uniform" licensing schedule that specifies a range from 1.2 to 3.4 cents per gallon depending on the volume of gasoline falling within the scope of the patents. As a licensee practices under the license more frequently, the licensing fee per gallon is reduced.

#### **Relevant Product and Geographic Markets**

73. Unocal has obtained and exercised market power and/or monopoly power in two relevant product markets.
74. One relevant product market consists of the technology claimed in patent application No. 07/628,488 (filed on December 13, 1990) and Unocal's issued RFG patents, and any alternative technologies that enable firms to refine, produce, and supply CARB-compliant "summer-time" RFG for sale in California at comparable or lower cost, and comparable or higher effectiveness, without practicing the Unocal technology. The relevant geographic market for such technology is worldwide.
75. Another relevant market consists of CARB-compliant "summer-time" RFG produced and supplied for sale in California. The relevant geographic market is California.

**Unocal's Materially False and Misleading Statements**  
**During CARB's RFG Proceedings Led to its Market Power**

76. By engaging in fraudulent conduct in connection with the CARB rulemaking proceedings, Unocal unlawfully obtained market power. Unocal obtained unlawful market power through affirmative misrepresentations, materially false and misleading statements, and other bad-faith, deceptive conduct that caused CARB to enact regulations that overlapped almost entirely with Unocal's pending patent rights.
77. Unocal, through its management and authorized employees, made knowing and willful misrepresentations to CARB by making materially false and misleading statements and/or by suppressing facts while giving information of other facts that were likely to mislead for want of communication of the suppressed facts. Unocal's statements were materially false and misleading in that they failed to disclose Unocal's proprietary interests in its emissions research data, and/or Unocal's intention and efforts to obtain competitive advantage and corporate profit through enforcement of its intellectual property rights.
78. Unocal's knowing and willful misrepresentations to CARB include, but are not limited to, the following:
- a. Unocal presented its emissions research results to CARB on June 20, 1991, for the purpose, *inter alia*, of showing CARB the relationship between T50 and automobile exhaust emissions; and it represented that a predictive model that included T50 would be "cost effective" and flexible without disclosing that the assertion of its proprietary rights would materially increase the cost and reduce the flexibility of such a model. Unocal represented that these data and equations were confidential to Unocal, and "may represent a competitive advantage" to Unocal.
  - b. Having previously asserted that its equations might provide it with a competitive advantage, Unocal informed CARB by letter, dated August 27, 1991, that its emissions research data thereafter would be "nonproprietary" and available to CARB, industry members, and the general public. By this representation, Unocal created the materially false and misleading impression that Unocal had relinquished or would not enforce any proprietary interests in its emissions research results.
  - c. On numerous occasions after August 27, 1991, Unocal made statements and comments to CARB relating to the "cost effectiveness" of CARB Phase 2 regulations, and the "flexibility" offered by the implementation of a predictive

