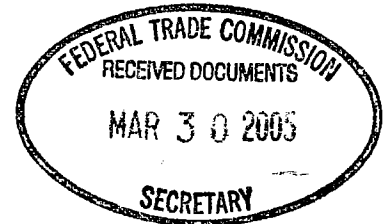


PUBLIC

UNITED STATES OF AMERICA  
BEFORE THE FEDERAL TRADE COMMISSION  
WASHINGTON D.C.



In the Matter of

UNION OIL COMPANY OF CALIFORNIA,  
a corporation.

Docket No. 9305

**RESPONDENT'S SUPPLEMENTAL ERRATA SHEET TO, AND CORRECTED  
PAGES OF, RESPONDENT'S PUBLIC POST TRIAL BRIEF AND PUBLIC POST  
TRIAL PROPOSED FINDINGS OF FACT**

**Corrections to Public Post-Trial Brief**

Page 12, line 5: Change RX 79 to RX 793  
Page 23, footnote 2: Change RX 338 to CX 870  
Page 25, footnote 3: Change both occurrences of RX 121 to RX 121A  
Page 39, line 9: Change CX 1718 to CX 1788  
Page 117, line 15: Change RX 774 to CX 774

**Corrections to Public Post-Trial Proposed Findings of Fact**

Page 66, line 2 (¶ 149): Remove CX 572  
Page 162, line 21 (¶ 537): Change RX 774 to CX 774  
Page 163, line 4 (¶ 537): Change RX 774 to CX 774  
Page 193, line 22 (¶ 649): Change RX 1247 to CX 1247  
Page 259, line 20 (¶ 876): Change CX 554 to CX 54  
Page 266, line 2 (¶ 900): Change CX 751 to RX 751  
Page 279, line 2 (¶ 951): Change RX 954 to CX 954  
Page 309, line 9 (¶ 1075): Change CX 1006 (Cunningham (Turner Mason) Aff.) to Cunningham, Tr.  
4149-51, 4155.  
Page 480, line 19 (¶ 1822): Remove RX 178; and capitalize *E.g.*,  
Page 521, line 25 (¶ 1962): Change RX 215A to RX 215

Dated: March 29, 2005.

Respectfully submitted,

ROBINS, KAPLAN, MILLER & CIRESI L.L.P.

By: 

Martin R. Lueck  
David W. Beehler  
Sara A. Poulos  
David P. Swenson  
Diane L. Simerson  
Bethany D. Krueger

2800 LaSalle Plaza  
800 LaSalle Avenue  
Minneapolis, Minnesota 55402-2015  
Phone: 612-349-8500  
Fax: 612-339-4181

and

GIBSON, DUNN & CRUTCHER, LLP  
Joseph Kattan, P.C.  
Chris Wood

1050 Connecticut Avenue, N.W.  
Washington, D.C. 20036-5306  
Phone: 202-55-8500  
Fax: 202-530-9558

ATTORNEYS FOR UNION OIL COMPANY OF  
CALIFORNIA

## CERTIFICATE OF SERVICE

I hereby certify that on March 29, 2005, I caused the original and two paper copies of Respondent's Supplemental Errata Sheet to, and Corrected Pages of, Respondent's Public Post Trial Brief and Public Post Trial Proposed Findings of Fact, together with a CD containing entire corrected versions of Respondent's Public Post Trial Brief and Respondent's Public Post Trial Proposed Findings of Fact to be delivered for filing via Federal Express to:

Donald S. Clark, Secretary  
Federal Trade Commission  
600 Pennsylvania Ave. NW, Rm. H-159  
Washington, DC 20580

I hereby certify that on March 29, 2005, I also caused an electronic copy of Respondent's Supplemental Errata Sheet to, and Corrected Pages of, Respondent's Public Post Trial Brief and Public Post Trial Proposed Findings of Fact, to be transmitted via email to:

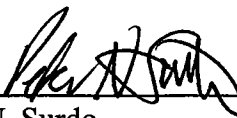
secretary@ftc.gov

I hereby certify that on March 29, 2005, I also caused two paper copies of Respondent's Supplemental Errata Sheet to, and Corrected Pages of, Respondent's Public Post Trial Brief and Public Post Trial Proposed Findings of Fact, together with a CD containing entire corrected versions of Respondent's Public Post Trial Brief and Respondent's Public Post Trial Proposed Findings of Fact to be delivered via Federal Express to:

Office of Administrative Law Judges  
Federal Trade Commission  
600 Pennsylvania Ave. NW  
Washington, DC 20580  
Attention: The Honorable D. Michael Chappell

I hereby certify that on March 29, 2005, I also caused two paper copies of Respondent's Supplemental Errata Sheet to, and Corrected Pages of, Respondent's Public Post Trial Brief and Public Post Trial Proposed Findings of Fact, together with a CD containing entire corrected versions of Respondent's Public Post Trial Brief and Respondent's Public Post Trial Proposed Findings of Fact to be delivered via Federal Express to:

Geoffrey Oliver, Esq.  
Chong S. Park, Esq.  
Bureau of Competition  
Federal Trade Commission  
601 New Jersey Avenue NW, Drop 6264  
Washington, DC 20001

  
\_\_\_\_\_  
Peter N. Surdo

**CORRECTED PAGES OF  
RESPONDENT'S PUBLIC POST  
TRIAL BRIEF**

of money in its refineries, but that the regulations would not actually lead to cleaner air, and thus years down the road Unocal and others would have to reconfigure all over again. (Jessup, Tr. 1155).

The two scientists then conducted an in-house experiment running a total of 22 different fuels (15 of which were designed test fuels with the others being control and check fuels) through a 1988 Oldsmobile Regency 98. (Jessup, Tr. 1525-26; RX 793 at 016-018). By March of 1990, Drs. Jessup and Croudace had collected data from this “one-car study” and analyzed it to determine what properties of gasoline they could vary and what compositions could eventually be made that would produce lower emissions. (Jessup, Tr. 1155, 1158; Croudace, Tr. 634-36). The analysis that the two scientists conducted used the emissions data generated from combusting 15 different test fuels in the one-car study through use of a computer program known as SAS system. (RX 793 at 016). The computer program, however, did not dictate the analysis, rather the scientists were required to make numerous choices in how to analyze the data. (Jessup, Tr. 1526-30).

This one-car study led to many new discoveries, including a dramatic new understanding of which physical properties and compositional characteristics affected exhaust emissions for particular pollutants and which ones did not. (Jessup, Tr. 1159). The scientists developed equations from this one-car study predicting the amount of individual criteria pollutants, CO, HC, and NO<sub>x</sub> from gasoline. (Croudace, Tr. 445-46; RX 793 at 015). A patent would later issue to Unocal directed to compositions of motor gasoline based on this one-car study. (Croudace, Tr. 636; CX 617).

Following the one-car study, the scientists requested funding from their management to do additional research work. (Lamb, Tr. 2179). This project became known as the “5/14 project,” and included a ten-car test conducted at the Southwest Research Institute. (Jessup, Tr. 1160-61). Equations were also developed from the ten-car test and differed from those of the one-car study.

Unocal disclosed the concept of a predictive model to CARB staff at the June 1991 meeting without giving staff the numerical coefficients of the equations it had developed, since Unocal wanted CARB staff to assemble its own data and develop its own predictive model. (Jessup, Tr. 1508-09; Kulakowski, Tr. 4605-07). CARB staff later asked Unocal to disclose the equations with coefficients that Unocal had referenced at its June 20, 1991 meeting. By letter dated July 1, 1991, Unocal provided the equations to CARB and asked that CARB maintain their confidentiality. (CX 25 at 001). Unocal's letter also stated, however, that Unocal would consider making the equations and supporting data public if CARB were to pursue a meaningful dialogue on a predictive model approach to Phase 2 gasoline. (CX 25 at 001). Releasing confidentiality of information or data is necessary if CARB is going to rely on the information or data in promulgating regulations. (Venturini, Tr. 233; Fletcher, Tr. 6469).

In the meantime, CARB staff proceeded with plans to regulate T50, preparing draft regulations on July 21, 1991 that specified two T50 values based on the T50 values given to the staff by ARCO. (*See, e.g.* RX 184). These draft regulations sought to regulate gasoline composition by specifying limits for eight specific fuel properties, including T50. On August 1, 1991, CARB published draft regulations in which it specified a T50 value of 200° F. (RX 184 at 028). In a briefing paper prepared a week later, CARB's staff recognized a direct relationship between the T50 specification in the draft regulations and the T50 level of ARCO's EC-X gasoline, which the staff had learned had a T50 value of 201° F. (CX 803 at 002).<sup>2</sup>

---

<sup>2</sup> Subsequently, in response to ARCO lobbying, CARB raised the T50 specification in its proposed regulation to 210° F. (RX 73 at 001). The 210° F limit remained in the Phase 2 regulation as adopted. (RX 870).

				CAR146.DAT					
		B2	0.08	4.07	0.03	511.1	17.95	17.80	
		B3	0.18	2.14	0.35	413.7	22.25	21.85	
		FTP	0.20	3.62	0.25	475.9	19.27	18.70	
146-ES	8/23/90	E	B1	0.49	4.96	0.55	494.3	18.45	21.10
			B2	0.05	2.82	0.03	514.4	17.90	19.92
			B3	0.19	2.97	0.30	427.5	21.47	20.55
			FTP	0.18	3.31	0.21	486.4	18.88	20.24
146-F	7/30/90	F	B1	0.38	3.62	0.86	457.7	17.39	17.39
			B2	0.08	3.31	0.12	483.7	16.51	17.89
			B3	0.14	1.35	0.80	398.3	20.15	20.83
			FTP	0.16	2.83	0.46	454.9	17.57	18.43
146-FS	8/24/90	F	B1	0.40	4.47	0.96	466.7	17.00	24.14
			B2	0.07	2.85	0.09	475.7	16.81	14.84
			B3	0.16	1.52	0.70	396.8	20.21	17.67
			FTP	0.17	2.82	0.44	452.2	17.67	16.91
146-G	8/01/90	G	B1	0.38	2.94	0.65	476.8	17.79	17.69
			B2	0.04	2.71	0.01	493.6	17.24	17.54
			B3	0.10	1.10	0.44	404.1	21.14	21.63
			FTP	0.13	2.31	0.26	465.5	18.28	18.42
146-GS	8/27/90	G	B1	0.45	4.48	0.59	482.2	17.50	.
			B2	0.05	3.00	0.03	493.1	17.24	.
			B3	0.18	1.32	0.83	406.2	21.00	.
			FTP	0.17	2.84	0.36	467.1	18.18	.
146-GS	9/26/90	G	B1	0.44	2.85	0.62	473.4	17.91	17.57
			B2	0.02	1.91	0.03	492.2	17.33	17.31
			B3	0.17	0.98	0.39	408.1	20.93	21.34
			FTP	0.15	1.85	0.25	465.3	18.32	18.20
146-H	8/02/90	H	B1	0.47	2.34	0.50	460.0	17.64	17.39
			B2	0.08	3.27	0.12	482.1	16.83	16.84
			B3	0.12	1.49	0.52	408.1	19.97	20.44
			FTP	0.17	2.59	0.31	457.4	17.76	17.68
146-HS	8/28/90	H	B1	0.39	3.50	0.75	467.6	17.30	15.63
			B2	0.06	2.68	0.09	480.2	16.93	17.70
			B3	0.12	0.87	0.53	398.1	20.52	21.64
			FTP	0.15	2.36	0.35	455.2	17.86	18.20

CARB staff did not consider this data at any time before the conclusion of rulemaking.<sup>3</sup>

CARB was required to place on the rulemaking record all data and information on which it relied

---

<sup>3</sup> After its receipt of the disk containing the data, CARB sent the disk to the State of California's Teale Data Center to be loaded onto a central computer. (RX 121A at 001-002). A file containing Unocal's data was allegedly created at the Teale Data Center on August 2, 1991, a day after CARB published its regulation proposing to limit T50 to 200° F. (RX 121A at 002). There is no evidence that any CARB employee attempted to use the data at any time before the conclusion of the rulemaking.

protected from public disclosure by patent law. (Boyd, Tr. 6908, 6834; Lamb, Tr. 2260; Beach, Tr. 1769).<sup>6</sup> Like many companies—including a number of the other California refiners—Unocal’s internal policy was to keep patent applications confidential. (Jessup, Tr. 1473-74; CX 450; CX 7075 (Wood, Dep. at 12-13, 16-20, 28-29); CX 7067 (Toman, Dep. at 29-30)). As just seen, CARB never adopted a policy regarding patent disclosure and never asked anyone about patents (or applications). At the time of the Phase 2 rulemaking, moreover, Unocal could not have known whether its application would be granted and, if so, what claims would be allowed. (Linck, 1761-65). The only Patent and Trademark Office (“PTO”) action with respect to the application prior to the November 1991 Board meeting was a notice of the rejection of all of Unocal’s patent claims. (CX 1788 at 215; Wirzbicki, Tr. 1108-10). Unocal received its first patent based on that application, U.S. patent 5,288,393 (“the ‘393 patent”), in February 1994.

**N. CARB’s and the Refiners’ Reaction to Unocal’s Patent Grant**

The major refiners that participated in the Phase 2 rulemaking learned of the issuance of the ‘393 patent at various points during 1994. Both Mobil (Eizember, Tr. 3249-50, 3252-54) and Texaco (CX 7047 (Hancock, Dep. at 239)) learned of the patent no later than one month after it issued. Chevron also learned of the patent at some point in 1994. (Ingham, Tr. 2728-29). Exxon learned of the patent at least by early May 1994. (Eizember, Tr. 3249-50; RX 145 at 084). But even after the refiners learned that the ‘393 patent had been granted, they did not inform CARB of the patent’s existence until over a year had passed since its issuance. (Eizember, Tr. 3257-58, 3269-72; CX 7047

---

<sup>6</sup> In 1991, all patent applications were deemed confidential throughout the application process.

At least three refiners asked CARB to “flatten” the T50 response curve, to more closely resemble the EPA complex model. (Eizember, Tr. 3280-81; { ██████████ ██████████ }, *in camera*). Unocal had argued unsuccessfully to WSPA in favor of the EPA model. (Kulakowski, Tr. 4642).

And, of course, Unocal opposed all caps in the predictive model. Although Unocal was strongly in favor of a predictive model, Unocal opposed a model with caps on fuel parameters. Unocal expressed this concern in June 1991 to CARB staff. (Lamb, Tr. 2222-23 (Unocal told CARB it opposed unnecessary minimums and maximums in the model)). In November 1991, Unocal told the Board that caps in the predictive model “could eliminate the model as a viable alternative.” (CX 33 at 006; Lamb, Tr. 2295-96; Beach, Tr. 1775). After the November hearing, Unocal continued to oppose the inclusion of caps in a predictive model. (Lamb, Tr. 2311-14; CX 42 at 005). And even after the '393 patent issued Unocal argued in favor of an unbounded predictive model. (RX 159 at 037; Jessup, Tr. 1485-93).

In addition, Unocal advocated repeatedly to CARB that the regulations should not go into effect until at least four years from the date on which a predictive model was adopted. (CX 774 at 020-022 (Dennis Lamb testifying on behalf of Unocal)). For every month in delaying the development of the model, Unocal requested that the compliance date for the Phase 2 regulations should be deferred by one month. (CX 33 at 002, 006; Lamb, Tr. 2294; Beach, Tr. 1774). CARB’s Executive Officer, James Boyd, recalled that Unocal continued to draw attention to the need for delay in the implementation of the Phase 2 regulations until a predictive model was adopted. (Boyd, Tr. 6774, 6787).

**CORRECTED PAGES OF  
RESPONDENT'S PUBLIC POST  
TRIAL PROPOSED FINDINGS OF  
FACT**

149. The actual testing for the 5/14 project began in July of 1990 and was conducted by the Southwest Research Institute (“SWRI”). (Jessup, Tr. 1160-61; CX 573 at 001).

150. While the results of the 10-car study confirmed some of the discoveries of the one-car test (CX 24 at 015), they also suggested that an additional property, aromatics, should be increased to reduce a certain criteria pollutant. (CX 24 at 022-023). Aromatics is not a variable used in the ’393 patent claims. (CX 617 at 021-025; Wirzbicki, Tr. 963-64).

151. After the 10-car test, Drs. Jessup and Croudace also conducted a 13-car test, the purpose of which was to test the fuels made at Unocal’s refineries, using the inventions that they already had discovered, and compare those fuels to those of other companies. (Jessup, Tr. 1162).

152. The 13-car study was conducted in part at SWRI, like the 10-car test, but Unocal split up the work and also used the National Institute of Petroleum and Energy Research (“NIPER”) to handle some of the work. (Jessup, Tr. at 1221).

153. At the time Mr. Kulakowski worked for Unocal, he thought the work that Dr. Jessup and Dr. Croudace did in the emissions field was good work and sound science, and continues to believe that it is sound science to this day. (Kulakowski, Tr. 4569).

154. Mobil Research and Development Corporation did an analysis of Unocal’s 10-car emissions test data dated October 16, 1991. (Jessup, Tr. 1578-79). Dr. Jessup explained that the Mobil analysis was flawed because it included 22 fuels, which means Mobil incorporated the check fuels and control fuel in its analysis. (Jessup, Tr. 1579-80). Unocal’s 10-car study was designed to use only the 15 test fuels as part of the experimental design. (Jessup, Tr. 1579). By doing the analysis the way Mobil did, and not following Dr. Jessup’s experimental design, “In a case like this you would undoubtedly get a different result.” (Jessup, Tr. 1579-80; CX 1693 at 005).

press release that if the strict gasoline specifications were not adopted, then the state would need to find another way to clean up the air. (Clossey, Tr. 5515).

535. In the press release, Mr. Babikian refutes the argument that the higher cost for stricter requirements would create more economic hardship in California by stating, “If clean air standards aren’t met by reformulated gasoline, then the financial burden would be borne by stationary sources, including many small business that would have to submit to stricter regulations. This ultimately would be much more detrimental to the state’s economy.” (Clossey, Tr. 5514, CX 1591 at 002). The clean air standards to which Mr. Babikian was referring included both federal and state laws. (Clossey, Tr. 5514-15).

536. According to Chevron’s records of the meeting, ARCO “strongly urged the Board to reject staff’s revised proposal and instead adopt the original formula;” WSPA “attempted to cast doubt on the cost-effectiveness of the proposal and to point out the probable economic impacts,” and “[i]ndividual companies (Chevron, Unocal, Texaco) testified in support of the WSPA arguments and placed focus on items of particular concern.” (RX 528 at 001-002).

**c. At the Board Meeting, Unocal Made Oral Comments Against the Proposed Regulations, and Advocated for a Predictive Model**

537. At the Board meeting, Mr. Dennis Lamb presented Unocal’s views on the Phase 2 regulations to the CARB Board. (Lamb, Tr. 2292). Mr. Lamb expressed Unocal’s desire that CARB adopt a predictive model. (CX 774 at 020-021; CX 34 at 005 (submission accompanying oral comments)). In Unocal’s view, a predictive model was needed by the industry for compliance flexibility in order to deliver the same benefits while minimizing capital investment costs. (CX 774 at 020-022). Unocal expressed disappointment that the predictive model had not been completed by the time of the November 1991 Board meeting and asked that the compliance date for Phase 2

gasoline regulations be linked to the adoption of a predictive model. (CX 774 at 021-022; Lamb, Tr. 2299-300; Venturini, Tr. 809). Mr. Lamb urged CARB to develop it as soon as practicable and to delay implementation of the regulations until at least four years from the date on which a predictive model was adopted. (CX 774 at 020-022 (Mr. Lamb testifying on behalf of Unocal)).

538. In his oral comments, Mr. Lamb also addressed certain of the proposed parameter specifications. (CX 774 at 023; Lamb, Tr. 2300-07). He told CARB that Unocal supported the WSPA analysis identifying the most cost-effective levels of control for each fuel parameter. (CX 774 at 023; Lamb, Tr. 2301-02). This was a reference to the presentation made the previous day by Mr. Cunningham on behalf of WSPA. (Lamb, Tr. 2302). The previous day, Mr. Cunningham had recommended that CARB eliminate T50 from its regulation. (Lamb, Tr. 2303-04; CX 773 at 228).

539. During Mr. Lamb's statements, Chairwoman Sharpless asked him about T50, to which he replied, "I don't disagree with what was said here. There's very limited things you can do to change T50 . . . [w]e don't see the spec for T50 as necessary." (CX 774 at 045; Venturini, Tr. 809-10). Mr. Lamb told the CARB Board that Unocal agreed with Mr. Cunningham's recommendation that T50 be eliminated: (Lamb, Tr. 2304-06; CX 774 at 045).

540. Chairwoman Sharpless also asked Mr. Lamb whether Unocal would tell CARB what Unocal anticipated its costs for CARB gasoline would be. (Lamb, Tr. 2307; Venturini, Tr. 810-11; CX 774 at 047-048). Unocal was also asked if it knew what it would have to charge for reformulated gasoline. (Lamb; Tr. 2307, CX 774 at 048). Unocal did not give CARB a number for either what its anticipated costs were or for the potential prices it thought it would charge for CARB 2 gasoline. (Lamb, Tr. 2307; Venturini, Tr. 811). Mr. Lamb believed that the question about what Unocal might