

IN THE MATTER OF
PHONE PROGRAMS, INC.

CONSENT ORDER, ETC., IN REGARD TO ALLEGED VIOLATION OF
SEC. 5 OF THE FEDERAL TRADE COMMISSION ACT

Docket 9247. Complaint, May 7, 1991--Decision, December 10, 1992

This consent order prohibits, among other things, a New York corporation from misrepresenting the ease with which a premium is obtainable and the content of any telephone information service message to children aged twelve and under. In addition, the respondent is required to include a clear statement at the beginning of each children's message giving the child a chance to hang up without charge, and is required to provide a means for parents to prevent, or not be charged for, unauthorized calls by their children.

Appearances

For the Commission: *Richard L. Cleland, Joel Winston, and Robert C. Cheek.*

For the respondent: *Eric L. Chase, Hannock Weisman, Roseland, N.J.*

COMPLAINT

The Federal Trade Commission, having reason to believe that Phone Programs Incorporated, a corporation, has violated the provisions of the Federal Trade Commission Act, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, alleges:

PARAGRAPH 1. Respondent Phone Programs Incorporated is a New York corporation with its office and principal place of business located at 919 Third Avenue, New York, New York.

PAR. 2. Respondent has advertised, offered for sale and has sold information services to consumers, including children. Accessed by the telephone through a "900" number exchange, respondent's information services for children ordinarily consist of recorded

stories featuring animated or fictional characters (such as Popeye and P.J. Funny Bunny) along with recorded promotional messages. Advertisements designed to induce consumers to purchase these services have been broadcast on television across state lines.

PAR. 3. As alleged in this complaint, the acts and practices of the respondent have been in or affecting commerce, as "commerce" is defined in Section 4 of the Federal Trade Commission Act.

PAR. 4. Respondent has disseminated, or has caused to be disseminated, advertisements and telephone messages for various information services for children. Typical of respondent's advertisements and telephone messages, but not necessarily all-inclusive thereof, are the advertisements and telephone messages attached hereto as Exhibits A through D. Specifically, the aforesaid contain the following statements and depictions:

1. "Plus, every bunny that calls will receive a special Funny Bunny present!" (Audio, Complaint Exhibit A)
2. "Plus every caller gets a special gift." (Audio) "Every Caller Gets a Gift." (Video) (Complaint Exhibit B)
3. "Call now and celebrate Popeye's birthday." (Audio) (Complaint Exhibit B)
4. "It's Popeye's birthday, but you get the present." (Audio). [Video depicts a large birthday cake with Popeye and his friends seated on the cake] (Complaint Exhibit B)
5. "And wuld youse like to call again tomorra fer some more surprisques -- and some news about a special boithday party?" [telephone message] (Complaint Exhibit C)
6. "And I'll be in da soup, boys and goils, if you don't comes back tomorra -- fer some news about me comin' boithday party -- and anudder story" [telephone message] (Complaint Exhibit C)

PAR. 5. Through the use of the statements and depictions contained in the attached advertisements and in others not specifically set forth herein, respondent has represented, directly or by implication, that children who complete a call to respondent's information service will readily and easily obtain the premium specified in the advertisement.

PAR. 6. In truth and in fact children who complete a call to respondent's information service will not readily and easily obtain the premium specified in the advertisement, because the child must: (1)

complete a call to the information service; (2) record an address, given once at the end of the recorded message announcement, to which a request must be sent to the item; (3) obtain a copy of the telephone bill which contains the call to the information service; and (4) send a copy of the bill to the respondent at the proper address. This ordering information is given in a rapid and difficult to follow manner during the course of the recorded message.

Therefore, the representation set forth in paragraph five was, and is, false and misleading.

PAR. 7. Through the combined use of the statements and depictions contained in the attached advertisements and telephone messages and in others not specifically set forth herein, respondent has represented, directly or by implication, that children who call the "Popeye" information service will in most cases hear information about Popeye's birthday.

PAR. 8. In truth and in fact, children who call the "Popeye" information service will not in most cases hear information about Popeye's birthday, because only one of the 29 episodes in the series of "Popeye" messages contained information about Popeye's birthday. Therefore, the representation set forth in paragraph seven was, and is, false and misleading.

PAR. 9. In its advertising for its information services for children, respondent has represented, directly or by implication, that children could easily obtain a premium by making a call to the information service. Said advertisements failed to disclose that there are material terms and conditions for obtaining the premium, including but not limited to, the need for a writing implement to transcribe the ordering information. These terms and conditions would be material to the caller in deciding whether to purchase the service. Respondent's failure to disclose these terms and conditions was, and is, a deceptive practice.

PAR. 10. In the course of advertising, promoting, and selling its information services for children, respondent has induced children to call its story service and thereby incur charges, without providing any reasonable means for persons responsible for payment of these charges to exercise control over the transaction. This practice has caused such persons to pay these charges. Respondent's conduct as set forth above has caused substantial injury to consumers that is not

outweighed by any countervailing benefits to consumers or competition and is not reasonably avoidable by consumers. This conduct was, and is, an unfair act or practice.

PAR. 11. The acts and practices of the respondent as alleged in this complaint constitute unfair or deceptive acts or practices in or affecting commerce in violation of Section 5(a) of the Federal Trade Commission Act.

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Complaint

EXHIBIT A

VMS
VIDEO MONITORING SERVICES OF AMERICA, INC.
 330 WEST 42ND STREET,
 NEW YORK, NEW YORK 10036
 (212) 736-2010
 A **BUNNIES** Affiliates

PRODUCT: P.J. FUNNY BUNNY PHONE LINE
LENGTH: :30
MARKET: NEW YORK
DATE: 03/22/89
PROGRAM: BEWITCHED
CODE #: 0389-3221
STATION: WNYW
TIME: 2:00 PM

Complaint Exhi
A



(BKG MUSIC)
P.J. FUNNY BUNNY: Hey, boys and girls!



I'm P.J. Funny Bunny.



and I've got exciting news for you! Dial this number now.



and my friends and I will tell you all about our terrifically



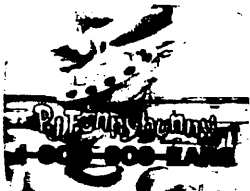
Funny Bunny adventures!



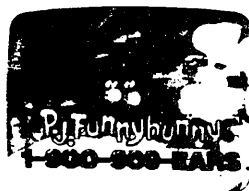
Plus, every bunny that calls



will receive a special Funny Bunny present!



So join us on our magically fun adventures.



and become a part of the Funny Bunny family, too! Don't wait! Call now!



We're hoppin' to hear from you! (GIGGLES)



FEMALE ANNCR: \$2.00 for first minute, 45 cents each additional minute.



Children, get your parents' permission before you dial. (MUSIC ENDS)

NEW YORK • LOS ANGELES • CHICAGO • PHILADELPHIA • SAN FRANCISCO • BOSTON • DALLAS • WASHINGTON • HOUSTON • MIAMI • DENVER • HARTFORD • SAN DIEGO

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Complaint

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EXHIBIT B

"POPEYE"

Phone Programs, Inc.

AudioVideo

Popeye: Shiver me timbers, boys and girls. I gots a secret to tell you. I gots a brand new phone line story. Me, Popeye. And all me buddies, of course. A goi, goi, goi.

Call Popeye Now!
1-900-909-4 POP

Olive Oil: Oh, Popeye.

Man with club: Yeah, boys and girls. Call now, and I'll tell you about our adventures. Plus, every caller gets a special gift.

Every Caller Gets a Gift.
Call Popeye Now
1-900-909-4 POP

Olive Oil: That's right. It's Popeye's birthday, but you get the present. Oh, I'm so excited.

Call Popeye Now
1-900-909-4 POP

Voice: Remember, kids. Call now and celebrate Popeye's birthday.

Popeye: That's right, boys and girls. We're waiting to hear from you.

Other voice: \$2 the first minute. 45 cents each additional minute. Children, get your parents' permission before you dial.

Call Popeye Now
1-900-909-4 POP
\$2 the first minute.
45 cents each additional
minute.
By 900 U.S.

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Complaint

EXHIBIT C

“POPEYE” #1 “NO TRAPEZE, PLEASE!” 1:50 LIONEL WILSONMUSIC: (POPEYE THEME)POPEYE: Shiver me timbers, boys and goils, it's your old friend, Popeye the sailor -- wit' lots o' new stories and surprisques -- like the time I takes me goil Olive to the coicus ... (MUSIC: CIRCUS MUSIC)OLIVE: Oh, joy of joys, Popeye! The show's starting!RINGMASTER: (AFTER SFX: FANFARE) And on the flying trapeze -- the one and only -- BLUTO, THE BIRDMAN! ...POPEYE: Me peepers is deceivin' me! It's that swab, Bluto!OLIVE: Popeye! He's swinging right towards US!SFX: (SLIDE WHISTLE AS TRAPEZE APPROACHES)BLUTO: Hiya, Olive cutie! How about a ride on my trapeze?OLIVE: Scram, you rude dude! I'm with my financee!POPEYE: Swing elsewhere before I decks you wit' my fisks!BLUTO: Oh, yeah! TAKE THAT! ...SFX: (POW! ... POPEYE RIPS THROUGH THE CANVAS)OLIVE: Oh, how despicable! You've knocked Popeye out of the tent!BLUTO: Let's fly, Baby-doll! Up and away!OLIVE: HELP! HELP! ... (FADES) POPEYE! ...POPEYE: What am I doin' here - at the refreshkment stand?VENDOR: Hot dogs! Spinach pie! ...POPEYE: SPINACH PIE? Gimme three! ... (MUSIC: POPEYE THEME)
Now I makes mincemeat outta dat flyin' fink! ... Hey! He's got Olive two-hundred feets in de air!OLIVE: (AT DISTANCE) HELP! ...POPEYE: He's comin' at me again! (SFX: TRAPEZE APPROACHES)BLUTO: I thought I got rid o' you!POPEYE: I t'ought one good toin desoives anudder!SFX: (EXPLOSION AS POPEYE'S FIST CONNECTS)OLIVE: Popeye! He landed in that cannon! (SFX: CANNON SHOT)
Now he's flyin' through the top of the tent!POPEYE: TENT nuthin' at all! Ca-ca-ca! Would youse like ta swing wit' me, Miss Oyl?OLIVE: My daring young man on the flying trapeze!POPEYE: And wuld YOUSE like to call again tomorra fer some more surprisques -- and some news about a special boithday party? ...

EXHIBIT D

“POPEYE” #2 “COUNT TEN, MEN!” 1:50 LIONEL WILSON

MUSIC: (POPEYE THEME)
POPEYE: Avast, Mateys! Popeye da two-fisted sailor here and I’m glad youse called -- ‘cause I wanna tell you dat fisticuffing just ain’t genteel. And dat’s what I told me little nephews when I takes dem to dinner in a restaurank ... (MUSIC -- OUT) ... So remember, fellers -- ALWAYS COUNTS TEN BEFORE USIN’ YOUR FISKS! ...

POOPEYE: Yes, Unca Popeye ...
PIPEYE: Here’s the waiter, Unca Popeye!
POPEYE: HEY! Dat’s no waiter! Dat’s BLUTO!
BLUTO: Welcome to Bluto’s Beanery! Whaddaya want fer starters, bowlegs? Some ice cold potato soup? (SFX SPLASH!) Ooops! It slipped! (LAUGHS)

POPEYE: Hey! I wants to slurp me soup -- not WEAR it!
PEEPEYE: Uh-UH! Count ten, Unca Popeye!
POPEYE: One - two - three ...
BLUTO: How about a couple o’ hard-boiled eggs? Here! I’ll crack ‘em for ya! (SFX: EGGS CRACK ON POPEYE’S HEAD)

POPEYE: Oh, me delicate dome!
PUPEYE: Count ten, Unca Popeye!
POPEYE: ... four - five - six ...
BLUTO: How about a nice fresh LOBSTER? It’s so fresh, it’s still ALIVE! ... (LAUGHS - SFX: LOBSTER SNAPS CLAW!)

POPEYE: He-e-e-ey! Dat’s my nose!
POOPEYE: Count ten, Unca Popeye!
POPEYE: ... seven - eight - nine ...
BLUTO: And here’s a nice bowl of GREEN salad! ... OOPS! Now wasn’t dat clumsy o’ me? (LAUGHS) I guess dey’ll all be callin’ ya SPINACH-HEAD!

POPEYE: Did I hear dat name what’s muskic to my ears? SPINACH?
MUSIC: (POPEYE’S THEME)
PIPEYE: Count ten, Unca Popeye!
POPEYE: TEN!!! (SFX: “SPLAT” AS POPEYE SOCKS BLUTO -- THEN SOUND OF BLUTO CRASHING INTO TABLE NEARBY)

PUPEYE: Gee, Unca Popeye -- looka Bluto! He’s layin’ on dat table over dere covered with gravy!
POPEYE: Ya might say Bluto’s in a STEW! Ca-ca-ca! ... And I’LL be in da SOUP, boys and goils, if you don’t comes back tomorra -- fer some news about me comin’ boithday party -- and anudder story ...

DECISION AND ORDER

The Commission having heretofore issued its complaint charging the respondent named in the caption hereof with violation of Section 5 of the Federal Trade Commission Act, as amended, and the respondent having been served with a copy of that complaint, together with a notice of contemplated relief; and

The respondent, its attorney, and counsel for the Commission having thereafter executed an agreement containing a consent order, an admission by respondent of all the jurisdictional facts set forth in the complaint, a statement that the signing of said agreement is for settlement purposes only and does not constitute an admission by respondent that the law has been violated as alleged in such complaint, and waivers and other provisions as required by the Commission's Rules; and

The Secretary having thereafter withdrawn this matter from adjudication in accordance with Section 3.25(c) of its Rules; and

The Commission having considered the matter and having thereupon accepted the executed consent agreement and placed such agreement on the public record for a period of sixty (60) days, now in further conformity with the procedure prescribed in Section 3.25(f) of its Rules, the Commission hereby makes the following jurisdictional findings and enters the following order:

1. Respondent Phone Programs, Inc. is a corporation organized, existing and doing business under and by virtue of the laws of the State of New York, with its office and principal place of business located at 919 Third Avenue, New York, New York.

2. The Federal Trade Commission has jurisdiction of the subject matter of this proceeding and of the respondent, and the proceeding is in the public interest.

ORDER

For purposes of this order, the term "*children*" or "*child*" shall mean a person of age twelve or under.

For purposes of this order, the term "*information service for children*" shall mean a telephone message accessed through a num-

bered exchange (*e.g.*, "900") for which a fee is charged, consisting of live or recorded statements promoted or sold primarily to children.

For purposes of this order, the term "*premium*" shall mean any item respondent offers to send to those who call its information service for children.

For purposes of this order, the term "*information service message*" shall mean any live or recorded story, program or other communication transmitted to callers of respondent's information service for children.

For purposes of this order, the term "*video advertisement*" shall mean any advertisement intended for dissemination on television broadcast, cablecast, home video, or theatrical release.

For purposes of this order, the term "*affiliate*" includes, but is not limited to, corporations with a majority of shareholders or directors in common with respondent.

I.

It is ordered, That respondent Phone Programs Incorporated, a corporation, its successors, assigns, and affiliates, and its officers, agents, representatives, and employees, directly or through any corporation, subsidiary, division or other device, in connection with the advertising, promotion, offering for sale, sale or transmission of any information service for children in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from misrepresenting, directly or by implication:

- A. The ease with which a premium is obtainable; and
- B. The content of any information service message for children.

II.

It is further ordered, That respondent Phone Programs Incorporated, its successors, assigns, and affiliates, and its officers, agents, representatives and employees, directly or through any corporation, subsidiary, division or other device, in connection with the advertising, promotion, offering for sale, sale or transmission of any

information service for children in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from failing as specified below to disclose, clearly and prominently, whenever an offer of any premium is made, all the material terms, conditions and obligations upon which receipt and retention of the premium is contingent. Such terms, conditions, and obligations shall include, but not be limited to, the number of calls necessary to receive the premium, if more than one, and the need to have a writing implement and paper available to record the necessary information given during the information service message.

The disclosure shall be made in a manner understandable to children, and shall be made in the same medium in which the offer of the premium is made and, in addition, in any information service message.

III.

It is further ordered, That respondent Phone Programs Incorporated, its successors, assigns, and affiliates, and its officers, agents, representatives and employees, directly or through any corporation, subsidiary, division or other device, do forthwith cease and desist from disseminating or causing to be disseminated any advertisement in any medium for an information service for children that does not include the following statement:

"KIDS, YOU MUST ASK YOUR MOM OR DAD AND GET THEIR PERMISSION BEFORE YOU CALL. THIS CALL COSTS MONEY."

The above required disclosure shall be presented in a manner designed to ensure clarity and prominence. If the disclosure is made in the manner described below, it will be considered as complying with this provision of the order.

A. In any video advertisement, the disclosure shall be presented simultaneously in both the audio and video portions of the advertisement. The disclosure shall appear immediately following the first video presentation of the "900" telephone number, but in any event shall begin within the first fifteen (15) seconds of the advertisement.

The audio portion shall be presented in a slow and deliberate manner. Each line of the video portion shall be at least as large as one-half of the size of the largest presentation of the "900" number that appears on the screen during the advertisement, shall be of a color or shade that readily contrasts with the background, and shall appear on the screen for the duration of the audio disclosure.

B. In any print advertisement, the disclosure shall be parallel to the base of the advertisement and shall be placed in close proximity to the 900 number. All lines of the disclosure when taken together shall be the same size or larger than the largest presentation of the 900 number, but in any event the type size of each line of the disclosure shall be no less than 12 point, bold-face type.

C. In any radio advertisement, the disclosure shall be presented in a slow and deliberate manner and shall appear immediately following the first presentation of the "900" telephone number, but in any event it shall begin within the first fifteen (15) seconds of the advertisement.

Nothing contrary to, inconsistent with, or in mitigation of the above required statement shall be used in any advertisement in any medium.

IV.

It is further ordered, That respondent Phone Programs Incorporated, its successors, assigns, and affiliates, and its officers, agents, representatives and employees, directly or through any corporation, subsidiary, division or other device, do forthwith cease and desist from disseminating or causing to be disseminated any advertisement in any medium for an information service for children that does not include a disclosure of the cost of a call to the information service. This disclosure shall be presented in a manner designed to ensure clarity and prominence. In any video advertisement, the disclosure shall be presented simultaneously in both the audio and video portions of the advertisement.

V.

It is further ordered, That respondent Phone Programs Incorporated, its successors, assigns, and affiliates, and its officers, agents, representatives and employees, directly or through any corporation, subsidiary, division or other device, shall include, at the beginning of every information service message, an introductory preamble that states in a slow, deliberate and clear manner the following:

"THIS TELEPHONE CALL COSTS MONEY. IF YOU DO NOT HAVE YOUR MOM OR DAD'S PERMISSION, HANG UP NOW AND THERE WILL BE NO CHARGE FOR THIS CALL."

VI.

It is further ordered, That respondent Phone Programs Incorporated, its successors, assigns, and affiliates, and its officers, agents, representatives and employees, directly or through any corporation, subsidiary, division or other device, do forthwith cease and desist from billing or causing to be billed, or collecting any funds or causing any funds to be collected, for any call to any information service for children terminated within no less than five (5) seconds of the end of the introductory preamble, as required by paragraph V of this order.

Provided, in the event that any provision of a federal law or regulation of the Federal Communications Commission is in "actual conflict" with any requirement imposed by paragraphs V or VI of this order, compliance with such law or regulation shall not be deemed to be a violation of this order. As used herein, "actual conflict" shall mean that it is impossible for respondent to comply with both the law or regulation and paragraphs V and VI of this order.

VII.

It is further ordered, That respondent Phone Programs Incorporated, its successors, assigns, and affiliates, and its officers, agents, representatives and employees, directly or through any corporation, subsidiary, division or other device, do forthwith cease and desist

from inducing children to call its information service for children and thereby incur charges, without providing any reasonable means for the person responsible for payment of such charges to exercise control over the transaction. For purposes of this paragraph, if the respondent does not provide, prior to placement of any call by a child, a reasonable means for the person responsible for payment to avoid unauthorized calls, the provision of a reasonable means to exercise control over the transaction shall be the use of the respondent's best efforts to ensure that one-time refunds or credits are provided upon request for unauthorized calls made by children, as specified below. Best efforts shall include at least the following:

A. Contracting with the appropriate interstate common carrier or local exchange carrier to:

(1) Identify in all telephone bills containing charges for calls to respondent's information service for children each telephone call to such service by the characters "CHILD CALL";

(2) Place in all telephone bills containing charges for calls to respondent's information service for children, clearly and prominently in close proximity to the itemization of those charges, a toll-free or local telephone number specified to be used for consumer inquiries concerning charges on the telephone bill; *provided*, that a general billing inquiry telephone number for customer inquiries concerning charges on the telephone bill shall satisfy this requirement;

(3) Refer all customers who call the toll-free number inquiring about the charges for respondent's information service for children to their local exchange carrier for information regarding the availability of blocking in their jurisdiction; and

(4) Provide a one-time prompt and full credit or refund at the customer's request for all such calls, whether such request is made to the toll-free or local telephone number specified herein or in any other manner; *provided*, that respondent must contract with the carrier to provide a second prompt and full credit or refund to any customer who requests the first credit or refund during a period of the billing cycle where unauthorized calls have been made, but do not yet appear on the customer's bill, and subsequently requests a second credit or refund for any additional unauthorized calls made before the

date of the first request for a credit or refund; *provided*, that if the interstate common carrier utilized by respondent employs local exchange carriers to provide billing inquiry services, respondent shall be in compliance with subparagraphs A(3) and (4) of this paragraph if its contract with the interstate common carrier provides that the interstate common carrier notify each local exchange carrier of the interstate common carrier's policies to:

- (i) Provide the customer with information regarding the availability of blocking 900 number calls; and
- (ii) Provide upon request one-time refunds or credits for unauthorized calls by children, as provided in subparagraph A(4) of this paragraph.

B. In the event that respondent receives any information that the interstate common carrier has failed to fulfill its obligations under the contract required by subparagraph A of this paragraph, immediately notifying the interstate common carrier:

- (1) Of the existence of the alleged failure(s);
- (2) Of the carrier's responsibility to fulfill its obligations under the contract;
- (3) Of the need to investigate and correct all past failures; and
- (4) That if a pattern or practice of failures continues, respondent will terminate the use of said carrier for any information service for children; and

C. Terminating the use of said interstate common carrier for any information service for children, in the event that the interstate common carrier does not correct all past failures or continues to fail to fulfill its obligations under said contract.

D. Compliance with the requirements set forth in subparagraphs A - C of this paragraph is deemed to be satisfactory compliance with this paragraph.

Provided, that for purposes of this paragraph, the mere inclusion of any audio or video disclosure relating to parental authorization in advertisements or information service messages is expressly deemed not to be a reasonable means, prior to placement of any call by a

child, for the person responsible for payment to avoid unauthorized calls.

VIII.

It is further ordered, That for three (3) years from the date of service of this order, respondent shall maintain and upon request make available to the Federal Trade Commission for inspection and copying: (1) all advertisements for information services for children and all corresponding information service messages; (2) a record of all credit or refund requests made for charges billed for respondent's information services for children; (3) all documents relating to compliance with paragraph VII of this order; and (4) all consumer complaints and dispositions thereof relating to respondent's information services for children.

IX.

It is further ordered, That respondent shall notify the Commission at least thirty (30) days prior to any proposed change in the corporation such as dissolution, assignment or sale resulting in the emergence of a successor corporation or corporations, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of this order.

X.

It is further ordered, That respondent shall forthwith distribute a copy of this order to each of its operating divisions and any carrier(s) or other entities providing billing and/or collection service for its information services for children.

XI.

It is further ordered, That respondent shall, within sixty (60) days after service of this order and at such other times as the Commission may require, file with the Commission a report, in writing, setting forth in detail the manner and form in which it has complied with this order.

IN THE MATTER OF

AMERICAN PSYCHOLOGICAL ASSOCIATION

CONSENT ORDER, ETC., IN REGARD TO ALLEGED VIOLATION
OF SEC. 5 OF THE FEDERAL TRADE COMMISSION ACT

Docket C-3406. Complaint, Dec. 16, 1992--Decision, Dec. 16, 1992

This consent order prohibits, among other things, a Washington, D.C. association from restricting the dissemination of truthful, non-deceptive information by its members. In addition, the respondent is prohibited from banning payments by psychologists to patient-referral services. Finally, the respondent must cease its affiliation with any state, regional or other psychological association that imposes similar restrictions.

Appearances

For the Commission: *Elizabeth R. Hilder.*

For the respondent: *Arthur N. Lerner, Michaels & Wishner,*
Washington, D.C.

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, having reason to believe that the named American Psychological Association, a corporation, hereinafter sometimes referred to as respondent, has violated said Act, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, hereby issues its complaint, stating its charges in that respect, as follows:

PARAGRAPH 1. Respondent American Psychological Association is a corporation organized, existing and doing business under and by virtue of the laws of the District of Columbia, with its offices and principal place of business located at 1200 Seventeenth Street, N.W., Washington, D.C.

PAR. 2. Respondent is a professional and scientific association with more than 90,000 members or affiliates, who are psychologists, persons in training as psychologists, and teachers of psychology. Members and affiliates of respondent reside in and transact business in all fifty of the United States and in numerous foreign countries. A significant majority of persons licensed as psychologists in the United States are members or affiliates of respondent and a majority of such persons have received their professional training as psychologists in programs academically accredited by respondent. A majority of psychologists in the United States who are not subject to licensure requirements are members or affiliates of respondent. Respondent has the largest membership of any professional organization of psychologists in the United States. Respondent has as one of its purposes advancing psychology as a profession. A significant portion of respondent's activities furthers the pecuniary interests of its members.

PAR. 3. By virtue of the facts alleged in paragraph two, respondent is now and has at all times relevant herein been a corporation within the meaning of Section 4 of the Federal Trade Commission Act, 15 U.S.C. 44.

PAR. 4. Many of respondent's members provide psychological services, products, or publications for a fee. Included among these are members who provide clinical psychological services; who engage in employee evaluation, assessment, training, and management; who engage in market research and evaluation; who engage in psychological education and testing; and who lecture, train, and provide publications that enable members of the general public to help themselves in addressing various personal, career, and family problems, difficulties, and crises. Except to the extent that competition has been restrained as herein alleged, many of respondent's members have been and now are in competition among themselves.

PAR. 5. The acts and practices of respondent, including the acts and practices alleged herein, have been, or are, in or affecting commerce within the meaning of Section 5 of the Federal Trade Commission Act, 15 U.S.C. 45.

PAR. 6. In selecting psychologist providers of services, products; and publications, prospective clients, patients, or other consumers consider factors, such as psychologists' ability, experience, and

competence; the utility and convenience of the offered services, products, and publications; and price and other terms of sale. Advertising, including the use of comparative advertisements and the use of testimonials, can enable psychologists to inform clients, patients, and other consumers better about such factors. Truthful and nondeceptive advertising benefits clients, patients, and other consumers by increasing the information available to them about the factors they employ in selecting among psychologists and by promoting competition among psychologists.

PAR. 7. In informing clients, patients, and other consumers of psychological services about their services, products and publications, some psychologists use means of communication in addition to advertising. Among these means are professional referral and marketing services. Such referral and marketing services can benefit clients, patients, and other consumers by offering comparative information to them so that they may better and more easily choose among a variety of alternative psychologists, products, and services, reducing search costs and thereby promoting competition among psychologists.

PAR. 8. Respondent has acted as a combination of its members or has conspired with at least some of its members to restrain competition in the sale and delivery of psychological services and the sale and delivery of psychologists' services, products, and publications by:

A. Prohibiting its members from engaging in certain forms of truthful, nondeceptive advertising and solicitation; and

B. Prohibiting or restricting its members' participation in patient referral services or other similar institutions or arrangements, to the extent their operation is financed, in whole or in part, through individual assessments based upon business referrals made to contracting providers by or through the institution or arrangement.

PAR. 9. Respondent has engaged in various acts and practices in furtherance of the combination or conspiracy described in paragraph eight above. These acts and practices include, among other things, adopting in 1981; enforcing until at least December 1986; and, until rescinded in June 1989, maintaining provisions in respondent's

Ethical Principles of Psychologists, which have restrained competition in the following ways, among others:

A. Prohibiting psychologists from advertising or otherwise making any public statement "concerning the comparative desirability of offered services" (Ethical Principle 4b.(vii)(1981 *ed.*)). This restriction has deterred or may have deterred psychologists from advertising a broad range of truthful claims about the merits of the services they offer, such as significant scientific advances in certain psychological testing and evaluation procedures.

B. Prohibiting psychologists from advertising or otherwise making any public statement "implying unusual, unique, or one of a kind abilities" (Ethical Principle 4b.(v)(1981 *ed.*)). This restriction has deterred or may have deterred psychologists from making such wholly accurate claims as representations that they are the only psychologist in a particular market who provides particular evaluation services, who is trained to use a new therapeutic approach or who provides certain copyrighted testing materials.

C. Prohibiting psychologists from advertising or otherwise making any public statement "intended or likely to appeal to a client's fears, anxieties, or emotions concerning the possible results of failure to obtain the offered services." (Ethical Principle 4b.(vi)(1981 *ed.*)). This restriction has deterred or may have deterred psychologists from using in advertising virtually any statement about matters of concern to prospective clients, patients, or other consumers, such as, statements pointing out the risks of obesity or the symptoms of depression or alcoholism.

D. Prohibiting the use of a testimonial from a patient regarding the "quality" of a psychologist's services or products (Ethical Principle 4b.(iii)(1981 *ed.*)). This restriction, which is not limited to solicitation of testimonials from individuals who are vulnerable to undue influence, has deterred or may have deterred psychologists from supporting truthful claims about their practices with statements from patients, such as claims that accurately describe the personal qualities of the psychologist, the convenience of the psychologist's office hours, or the utility and perceived value of the psychologist's practice of providing psychological therapy jointly with such other services as dietary or vocational counseling.

E. Prohibiting psychologists from:

1. Making "a statement of direct solicitation of individual clients" (Ethical Principle 4b.(viii)(1981 *ed.*)). This restriction, which is not limited to solicitation of individuals who are vulnerable to undue influence, has deterred or may have deterred psychologists from initiating one-on-one discussions with individuals about the provision of therapeutic services or such services as market testing and evaluation; or

2. "Offering their own services directly" to "a person receiving similar services from another professional" (Ethical Principle 7b.(1981 *ed.*)). This restriction, which is not limited to offerings of services to individuals who are vulnerable to undue influence, has deterred or may have deterred psychologists from approaching individuals such as parents enrolled in a social worker's seminar on child development, and presenting to individuals information as to the advantages that can be gained from enrolling in the psychologist's own program apposed to remaining enrolled in the competing seminar;

F. Forbidding psychologists from giving or receiving "any remuneration for referring clients for professional services" (Ethical Principle 6d.(1981 *ed.*)). This restriction has deterred or may have deterred psychologists from operating or participating in such institutions as client or patient referral services or other similar institutions to the extent that operation of these institutions is or may be financed, in whole or in part, through individual assessments based upon business referrals made to contracting providers by or through the service or institution.

PAR. 10. The purposes, effects, tendency and capacity of the combination or conspiracy and the acts and practices described above have been and are to restrain competition unreasonably and to injure clients, patients, and other consumers in the following ways, among others:

A. Hindering, restraining, foreclosing and frustrating competition in the delivery of psychological services, and the sale of products and

publications by psychologists, on the basis of price, service, and quality.

B. Depriving clients, patients, and other consumers of the benefits of truthful information about the availability of psychologists' services, products, and publications; and

C. Depriving clients, patients, and other consumers of the benefits of competition among psychologists in the provision of their services, products, and publications through competing referral services and institutional arrangements.

PAR. 11. The combination or conspiracy and the acts and practices described above constitute unfair methods of competition or unfair acts or practices in violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. 45. The acts and practices of respondent, as herein alleged, or the effects thereof, are continuing and will continue or recur in the absence of appropriate relief.

DECISION AND ORDER

The Federal Trade Commission having initiated an investigation of certain acts and practices of the respondent named in the caption hereof, and the respondent having been furnished thereafter with a copy of a draft of complaint that the Bureau of Competition proposed to present to the Commission for its consideration and that, if issued by the Commission, would charge the respondent with violation of the Federal Trade Commission Act; and

The respondent, its attorney, and counsel for the Commission having thereafter executed an agreement containing a consent order, an admission by the respondent of all the jurisdictional facts set forth in the aforesaid draft of complaint, a statement that the signing of said agreement is for settlement purposes only and does not constitute an admission by respondents that the law has been violated as alleged in such complaint, and waivers and other provisions as required by the Commission's Rules; and

The Commission having thereafter considered the matter and having determined that it had reason to believe that the respondent has violated the said Act, and that a complaint should issue stating its charges in that respect, and having thereupon accepted the executed

consent agreement and placed such agreement on the public record for a period of sixty (60) days, now in further conformity with the procedure prescribed in Section 2.34 of its Rules, the Commission hereby issues its complaint, makes the following jurisdictional findings and enters the following order:

1. Respondent American Psychological Association is a corporation organized, existing and doing business under and by virtue of the laws of the District of Columbia, with its office and principal place of business located at 1200 17th Street, N.W., Washington, D.C.
2. The Federal Trade Commission has jurisdiction of the subject matter of this proceeding and of the respondent, and the proceeding is in the public interest.

ORDER

I.

For the purposes of this order:

"Respondent" means the American Psychological Association, its directors, trustees, councils, committees, boards, divisions, officers, representatives, delegates, agents, employees, successors, or assigns.

"Members" means the Fellows, Members, and Associates classes of members of the American Psychological Association, and persons that hold Affiliate status with the American Psychological Association.

"Psychotherapy" means the therapeutic treatment of mental, emotional, or behavioral disorders by psychological means, and excludes programs, seminars, workshops, or consultations that address specific limited goals, such as career planning; improving employment skills or performance; increasing assertiveness; losing weight, giving up smoking; or obtaining non-individualized information about methods of coping with concerns common in everyday life.

"Current psychotherapy patient" means a patient who has commenced an evaluation for or a planned course of individual,

family, or group psychotherapy, where the patient and the therapist have not agreed to terminate the treatment. However, a person who has not participated in psychotherapy with the psychologist for one year shall not be deemed a current psychotherapy patient.

II.

It is ordered, That respondent, directly, indirectly, or through any corporate or other device, in or in connection with respondent's activities as a professional association, in or affecting commerce, as "commerce" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. 44, do forthwith cease and desist from:

A. Restricting, regulating, impeding, declaring unethical, interfering with, or restraining the advertising, publishing, stating, or disseminating by any person of the prices, terms, availability, characteristics, or conditions of sale of services, products, or publications offered for sale or made available by any psychologist, or by any organization or institution with which a psychologist is affiliated, through any means, including but not limited to the adoption or maintenance of any principle, rule, guideline, or policy that restricts any psychologist from:

1. Making public statements about the comparative desirability of offered services, products, or publications,

2. Making public statements claiming or implying unusual, unique, or one-of-a-kind abilities;

3. Making public statements likely to appeal to a client, patient or other consumer's emotions, fears, or anxieties concerning the possible results of obtaining or failing to obtain offered services, products, or publications;

4. Presenting testimonials from clients, patients, or other consumers;

5. Engaging in any direct solicitation of business from actual or prospective clients, patients, or other consumers or offering of services directly to a client, patient, or other consumer receiving similar services from another professional.

Provided that, nothing contained in this order shall prohibit respondent from adopting and enforcing reasonable principles, rules, guidelines, or policies governing the conduct of its members with respect to:

1. Representations that respondent reasonably believes would be false or deceptive within the meaning of Section 5 of the Federal Trade Commission Act;
2. Uninvited, in-person solicitation of business from persons who, because of their particular circumstances; are vulnerable to undue influence; or
3. Solicitation of testimonial endorsements (including solicitation of consent to use the person's prior statement as a testimonial endorsement) from current psychotherapy patients, or from other persons who, because of their particular circumstances, are vulnerable to undue influence.

Provided further, that nothing in this order shall prohibit respondent from adopting and enforcing editorial, scientific, peer review, or display standards for its publications and conferences.

B. Prohibiting, restricting, regulating, impeding, declaring unethical, interfering with, or restraining any of its members, or any organization or institution with which any of its members, is associated from giving or paying any remuneration to any patient referral service or other similar institution for referral of clients, patients, or other consumers for professional services.

Provided that, nothing contained in this order shall prohibit respondent from formulating, adopting, disseminating, and enforcing reasonable principles, rules, guidelines, or policies requiring that disclosures be made to clients, patients, or other consumers that the psychologist, or organization or institution with which he or she is associated, will pay or give, or has paid or given, remuneration for the referral of the clients, patients, or other consumers for professional services.

III.

It is further ordered, That respondent shall:

A. Cease and desist for ten (10) years from the date at which this order becomes final, from taking any action against a person alleged to have violated any ethical principle, rule, policy, guideline, or standard, or taking disciplinary action on any other basis against a person, so as to restrain or otherwise restrict advertising, solicitation of business, or the payment of fees for the referral of clients, patients, or other consumers for services without first providing such person, at a minimum, with written notice of any such allegation and without providing such person a reasonable opportunity to respond. The notice required by this part shall, at a minimum, clearly specify the ethical principle, rule, policy, guideline, or other basis of the allegation and the reasons the conduct is alleged to have violated the ethical principle, rule, policy, guideline, or standard or other applicable criterion.

B. Maintain for five (5) years following the taking of any action referred to in Part III. A. of this order, in one separate file, segregated by the names of any person against whom such action was taken, and make available to Commission staff for inspection and copying, upon reasonable notice, all documents and correspondence that embody, discuss, mention, refer, or relate to the action taken and all bases for or allegations relating to it.

IV.

It is further ordered, That respondent shall:

A. Within thirty (30) days after the date this order becomes final, remove or amend to eliminate from the respondent's Ethical Principles, Bylaws, and any officially promulgated or authorized guidelines or interpretations of respondent's official policies any statement of policy that is inconsistent with Parts II and III of this order.

B. Within sixty (60) days after the date this order becomes final, publish in The APA Monitor, or any successor publication that serves

as an official journal of respondent, a copy of this order with such prominence as is therein given to regularly published feature articles.

C. Within sixty (60) days after the date this order becomes final, publish in The APA Monitor, or any successor publication that serves as an official journal of respondent:

1. Notice of the removal or amendment, pursuant to this order, of any Principle, Bylaw, guideline, interpretation, provision, or statement, together with;

2. A copy of any such Principle, Bylaw, guideline, interpretation, provision, or statement, as worded after any such amendment.

D. Within sixty (60) days after the date this order becomes final, distribute by mail a copy of Appendix A to this order, along with a copy of the order itself, to each of respondent's members and to each state psychological association affiliate.

E. Cease and desist for a period of one (1) year from maintaining or continuing respondent's affiliation with any state, regional, or other psychological association affiliate within one hundred twenty (120) days after respondent learns or obtains information that would lead a reasonable person to conclude that said association has, following the effective date of this order, maintained or enforced any prohibition against:

1. Advertising or making public statements concerning the comparative desirability of offered services;

2. Advertising or making any public statement representing or implying unusual, unique, or one of a kind abilities;

3. Advertising or making any public statement intended or likely to appeal to a client's fears, anxieties, or emotions;

4. Using a testimonial regarding the quality of a psychologist's services or products;

5. Directly soliciting individual clients;

6. Offering services directly to persons receiving similar services from another professional; or

7. Making payments to patient referral services;

where maintenance or enforcement of such prohibition by the respondent would be prohibited by Part II of this order; unless, prior to the expiration of the one hundred twenty (120) day period, said association informs respondent by a verified written statement of an officer that the association has eliminated and will not reimpose such prohibitions(s), and respondent has no grounds to believe otherwise.

V.

It is further ordered, That respondent shall:

A. Within ninety (90) days after the date this order becomes final, and at such other times as the Commission may require by written notice to the respondent, file with the Commission a written report setting forth in detail the manner and form in which respondent has complied and is complying with the order;

B. For a period of five (5) years after the date this order becomes final, maintain and make available to Commission staff for inspection and copying, upon reasonable notice, records adequate to describe in detail any action taken in connection with the activities covered by Parts II, III, and IV of this order, including but not limited to all documents generated by the respondent or that come into the possession, custody, or control of respondent, regardless of the source, that discuss refer to, or relate to any advice or interpretation rendered with respect to advertising, solicitation, or giving or receiving any remuneration for referring clients for professional services, involving any of its members.

VI.

It is further ordered, That respondent shall notify the Commission at least thirty (30) days prior to any proposed change in respondent, such as dissolution, assignment, sale resulting in the emergence of a successor corporation or association, or any other change which may affect compliance obligations arising out of this order.

APPENDIX A

ANNOUNCEMENT

Dear _____ :

As you may be aware, the American Psychological Association ("APA" of "the Association") has signed a consent agreement with the Federal Trade Commission under which the Commission has entered a cease and desist order that became final on [insert date]. A copy of that order is enclosed with this letter. The order is also printed in the [insert date] issue of The APA Monitor, which may be obtained from APA headquarters. The agreement between the Commission and the APA is for settlement purposes. It does not constitute an admission by the Association that it has violated any law.

Under the terms of the order, APA may not ban any of its members from engaging in truthful, nondeceptive advertising and marketing. Specifically, the Association may not prohibit its members from:

1. Making public statements about the comparative desirability of offered services;
2. Making public statements implying or expressing unusual, unique, or one-of-a-kind abilities;
3. Making public statements likely to appeal to a person's emotions, fears, or anxieties concerning the possible results of obtaining or failing to obtain offered services, products or publications; or
4. Presenting testimonials regarding the quality of a psychologist's services, products, or publications; except that the Association may formulate and enforce reasonable guidelines with respect to the solicitation of testimonials from persons who are vulnerable to undue influence.

Under the order, Association also may not prohibit its members from making statements of direct solicitation of individuals, including offering services directly to persons who may be receiving similar services from other professionals.

In addition, the Association may not prohibit its members from paying any patient referral service or similar institution for referrals, including those where the institution's operations are funded, in whole or in part, through individual assessments of participating psychologists that are based on the referrals that have been made.

The order, however, provides that the Association may formulate and enforce reasonable principles or ethical guidelines to prevent deceptive advertising and solicitation practices. APA also may issue principles or guidelines with respect to uninvited, in-person solicitation of business, or the solicitation of testimonials from current psychotherapy patients, as defined in the order, or other persons who, because of their particular circumstances, are vulnerable to undue influence by a psychologist.

And, under the order, APA also may issue reasonable principles or guidelines requiring that disclosures be made to clients, patients, or other consumers regarding fees paid by any psychologist to any patient referral service or similar institution for referring the client, patient, or other consumer for professional services.

The Association is required, under the terms of the order, to provide any person against whom it initiates or takes action for any alleged violation of any of the Association's Ethical Principles, rules, or other standards that relate to advertising and solicitation of business or to the payment of referral fees to patient referral services or similar institutions, written notice of the specific allegations and of the opportunity to respond to those allegations. The procedures that have been in effect under the Rules and Procedure of the Ethics Committee of the American Psychological Association may continue to be employed by APA in this regard.

Finally, the order requires APA to amend the Ethical Principles of Psychologists, its Bylaws, and any guidelines or interpretations officially promulgated or authorized by APA to delete any provisions that are in conflict with the order and to cease its affiliation for one year with any of its state or regional associations that engage in conduct prohibited by the order and that does not notify APA that it has ceased, and will not repeat such conduct.

In entering into an agreement with the Association, the Federal Trade Commission has not endorsed any principle, guideline, policy, or practice of the Association. For more specific information, you should refer to the Federal Trade Commission's order itself.

Thank you for your cooperation.

Sincerely,

President
American Psychological Association

SEPARATE STATEMENT OF COMMISSIONER MARY L. AZCUENAGA
CONCURRING IN PART AND DISSENTING IN PART

The Commission today accepts a consent order that bars the American Psychological Association ("APA"), through its Ethical Principles (code of ethics for its members), from restricting the advertising of its members. I concur in the general prohibition of the order. Part of the order, however, is troubling in the context of this case and raises concerns about the Commission's general approach to analyzing horizontal agreements and, in particular, agreements embodied in professional codes of ethics.

In addition to the general prohibition of restraints on advertising, the order enumerates several specific prohibitions designed to force the APA to repeal specific ethical principles. One in particular raises an issue about the extent to which the Commission is willing to substitute its judgment for the professional judgment of a psychologist. The order bars the APA from restricting its members from advertising that is "intended or likely to appeal to a client's fears, anxieties, or emotions concerning the possible results of failure to obtain" psychotherapy services.¹ I dissent from this provision of the order because of its potential for harm to patients and prospective patients, given the nature of psychotherapy services.²

Appeals to the "fears, anxieties and emotions" of consumers can be an effective form of advertising. The Commission normally would view a broad restriction of this kind of advertising with a high degree of skepticism. The APA rule in question is limited, but even assuming it is inherently suspect, under *Massachusetts Board of Registration in Optometry*, 110 FTC 549, 602-04 (1988), that is not the end of the inquiry. Instead, in deciding whether a restraint on advertising is unlawful under Section 5 of the Federal Trade Commission Act, it is necessary to consider the possible justifications for the restriction. *Id.* at 604. Broad order prohibitions that are appropriate in one context may not apply in the same fashion in another context. Before banning the APA's restriction on this form of advertising, we must consider whether the APA has legitimate reasons for the restriction.

Here, the challenged rule restricts advertising by psychologists that is intended to arouse consumers' fears, anxieties or other emotions about the consequences of failing to obtain psychotherapy services. The plausible justification for this restriction is the professional concern about compounding the psychological problems of vulnerable individuals and interfering with psychotherapy. An individual who fears the consequences of failing to obtain psycho-

¹ The APA had such a restriction in its ethical code but repealed it in the face of the Commission's investigation. See ¶ II.3 of the order and ¶ 9.C of the complaint.

² "The therapeutic treatment of mental, emotional, or behavioral disorders by psychological means." Order ¶ I.

therapy may be less successful in psychotherapy or require a longer course of treatment than one who has positive expectations.³ On the record before us, I do not know that this is a valid professional justification, but, more importantly, in deciding whether the APA's restriction may be unlawful, I do not know that it is not.

When we are presented with a plausible justification for restrictive conduct that involves or may involve a professional judgment, we should substitute our judgment for that of the professional only if we have a sound basis for doing so. The Commission has deferred to the professional judgments of professionals in the past, especially where quality of care has been involved. At the very least, it has not rushed to overturn such judgments absent compelling cause. Here, the justification is plausible, we have nothing to weigh against it and the Commission lacks expertise concerning psychotherapy. The decision to ignore the plausible justification and invalidate the rule is based on a truncated record. Everything the record contains on this point supports the justification, and nothing, even hypothetically, suggests that the justification is either implausible or invalid. In addition, as often happens in cases of this nature, the respondent has substantial financial incentives to accept the settlement rather than litigate.

The order partly concedes the validity of the APA's concerns about engendering fears and anxieties in consumers and interfering with the therapeutic process by permitting the APA to restrict its members from direct solicitation of business and the solicitation of testimonials from current psychotherapy patients and others who may be "vulnerable to undue influence."⁴ The same potential for harm to vulnerable persons might have been recognized by allowing the APA to restrict emotional appeals regarding failure to obtain psycho-

³ The APA Ethical Principle at issue fully supports the justification. By its terms, the APA's rule did not restrict emotional appeals about the benefits of obtaining psychotherapy services but rather advertising that is intended to appeal to a client's "fears, anxieties or emotions concerning the possible results of failure to obtain [psychotherapy] services." *See* Complaint ¶ 9.C.

⁴ Order ¶ II.A, provisos 2 & 3. Although I might have addressed these issues differently in the context of the order as a whole, the provisos appropriately credit plausible justifications offered by the APA.

therapy services in advertisements. The majority instead paints with a broader brush, to the possible detriment of consumers.

As a matter of law, the Commission necessarily substitutes its judgment on this professional question for that of the APA when it invalidates the APA's rule. Making that judgment without better reason than is apparent here suggests a willingness to expand the *per se* rule, is unnecessarily intrusive and has serious implications for future cases, particularly in view of the recognized difficulty of identifying and articulating plausible efficiency justifications. Overly broad orders may deter other legitimate conduct. Our zeal to promote competition should not override our attention to the interests of consumers. In evaluating the reasonableness of private conduct and the validity of justifications for that conduct, the Commission should be cautious about overriding the tenets of professionalism, especially in the context of a consent order.

IN THE MATTER OF

OCCIDENTAL PETROLEUM CORPORATION, ET AL.

FINAL ORDER, OPINION, ETC., IN REGARD TO ALLEGED VIOLATION OF
SEC. 7 OF THE CLAYTON ACT AND SEC. 5 OF
THE FEDERAL TRADE COMMISSION ACT

Docket 9205. Complaint, April 11, 1986--Final Order, Dec. 22, 1992*

This final order upholds the ruling of the administrative law judge, which requires Occidental, a California-based corporation, to divest certain Tenneco PVC plants to a Commission-approved acquirer within one year. The order prohibits Occidental, for 10 years, from acquiring all or any part of the stock or assets of, or any interest in, any producer of PVC located in the United States, without prior Commission approval.

Appearances

For the Commission: *Rhett R. Krulla and Marc G. Schildkraut.*

For the respondents: *Michael Sohn, Arnold & Porter, Washington, D.C. Louis Nizer Phillips, Nizer, Benjamin Krim & Ballon, New York, N.Y. and Robert Luss, in-house counsel for respondent Occidental Chemical Corporation, Dallas, TX.*

INITIAL DECISION BY

THOMAS F. HOWDER, ADMINISTRATIVE LAW JUDGE
SEPTEMBER 30, 1988

CITATION FORMAT

Hearing testimony presented by affidavit or declaration in this proceeding is identified by the name of the witness, the exhibit number and the appropriate page and paragraph reference (*e.g.*, Pflugrath CX 177F ¶10).

Hearing testimony from The B.F. Goodrich Co., FTC Docket 9159, is identified by the name of the witness followed by the

* Complaint previously published at 111 FTC 27 (1988).

designation "Dkt. 9159" and the Goodrich transcript page number (*e.g.*, Kaserman Dkt. 9159, 2313).

Hearing testimony from the preliminary injunction proceeding in *FTC v. Occidental Petroleum Corp.*, Civil No. 86-0900 (D.D.C. 1986), is identified by the name of the witness, the joint exhibit number (JX 1) and the appropriate page and line reference (*e.g.*, Kaserman JX 1, 266 ln. 19 - 267 ln. 15).

Joint exhibits, comprised of the trial exhibits and transcripts of testimony from the hearing on the preliminary injunction in *FTC v. Occidental Petroleum Corp.*, Civil No. 86-0900 (D.D.C. 1986), are identified by the prefix "JX" and the exhibit number, followed by the district court transcript page number and line reference for trial testimony, or by the prefix "PX" or "DX," for plaintiff's exhibit and defendant's exhibit, respectively, and the district court exhibit number and page reference as appropriate (*e.g.*, JX 3, PX 129 at 7).

Complaint counsel's and respondents' exhibits are identified by the prefix "CX" or "RX," respectively, and the exhibit number and page reference as appropriate (*e.g.*, CX 156F).

References to exhibits in the record in *The B.F. Goodrich Co.*, FTC Docket No. 9159, are identified by the prefix "Dkt. 9159" followed by the exhibit number and appropriate page reference (*e.g.*, Dkt. 9159 CX 1Z37).

References to the numbered findings in Goodrich, as adopted by the Commission in *The B.F. Goodrich Company*, Docket No. 9159, Final Order, March 15, 1988, at 2, are identified as "Goodrich F." and the finding number. Other references to the Initial Decision, as adopted by the Commission in Goodrich, are identified as "Goodrich ID at" followed by the page number of the Initial Decision.

References to complaint counsel's proposed findings are identified by "CPF" and the finding number.

References to respondents' proposed findings dated December 7, 1987, are identified by "RPF" and the finding number.

PRELIMINARY STATEMENT

The Federal Trade Commission issued its administrative complaint in this case on April 11, 1986, challenging the acquisition of Tenneco Polymers, Inc., a wholly-owned subsidiary of Tenneco,

Inc., by Occidental Chemical Corporation, a wholly-owned subsidiary of Occidental Petroleum Corporation. Respondents filed their Answers on May 19, 1986, denying that the transaction violated Section 7 of the Clayton Act and Section 5 of the Federal Trade Commission Act, as alleged in the complaint.¹

Pursuant to agreement of the parties, the record in the instant case incorporates the record in The B.F. Goodrich Company case, Docket 9159 (decided by the Commission on March 15, 1988), together with additional documentary exhibits and witness testimony in the form of affidavits and declarations. The record also contains trial exhibits and testimony adduced by the parties in the Commission's unsuccessful attempt to obtain a preliminary injunction in the instant case.²

This proceeding is before me upon the pleadings, the record as described above, and the proposed findings of fact and conclusions of law filed by the parties. The proposed findings, conclusions and arguments of the parties have been considered, and those findings and conclusions not adopted either in the form proposed or in substance are rejected as not supported, or as involving immaterial issues unnecessary for this decision.

Any motions not heretofore or herein specifically ruled upon, either directly or by the necessary effect of the conclusions in this decision, are hereby denied.

FINDINGS OF FACT

I. THE RESPONDENTS

A. *Occidental*

1. Occidental Petroleum Corporation ("Occidental") is a California corporation with its principal offices in Los Angeles, California (JX 3, PX 15 at 17; JX 3, PX 16 at 56; JX 3, PX 46).

¹The Commission subsequently accepted a consent agreement on the part of the Tenneco respondents, the Decision and Order dated July 19, 1988.

² See the description of this attempt set forth in note 3 and pages 2-3 of the Commission's opinion in the Goodrich case (March 15, 1988).

2. Occidental Chemical Corporation ("Oxychem") is the Occidental subsidiary responsible for all of Occidental's PVC-related activities (JX 3, PX 15 at 14). Oxychem is the entity which acquired Tenneco Polymers, Inc. (JX 3, PX 17 at 904338A).

3. [##] (JX 3, PX 16 at 11-18). [##] (PX 3, PX 140 *In Camera*; JX 3, PX 16 at 17).

4. [##] (Lull JX 1, 506-508; JX 3, PX 15; Dkt. 159 CX 519M *In Camera*).

5. Oxychem is the successor corporation to Diamond Shamrock Chemicals Company ("DSCC"), a respondent in The B.F. Goodrich Company, FTC Docket No. 9159. In 1986, DSCC was acquired by Occidental and merged into Oxychem (CX 1D, N, Z2, Z12; CX 160).

6. At all times relevant herein, Occidental Petroleum Corporation and Occidental Chemical Corporation have engaged in commerce as "commerce" is defined in Section 1 of the Clayton Act, 15 U.S.C. 12, and Section 4 of the FTC Act, 15 U.S.C. 44 (Occidental Answer ¶ 2; JX 3, PX 15 at 17; JX 3, PX 16 at 5; RPF 6).

B. Tenneco

7. Tenneco Inc. ("Tenneco"), is a large, integrated oil company (JX 3, PX 19 at 1-5) [##] (JX 3, PX 140 *In Camera*; *See* Schaefer JX 1, 592 ln. 10-13; JX 3, PX 20 at 11, 15, 17, 19).

8. Tenneco Polymers, Inc. ("Tenneco Polymers"), is a wholly-owned subsidiary of Tenneco Inc. (JX 3, PX 11 at 622 ln. 12-14; Cunningham JX 1, 784 ln. 2-5).

9. At all times relevant herein, Tenneco Inc., and Tenneco Polymers, Inc. have engaged in commerce as "commerce" is defined in Section 1 of the Clayton Act, 15 U.S.C. 44 (JX 3, PX 19 at 1, 3-17).

10. Prior to the acquisition, Oxychem and Tenneco Polymers were direct competitors in the relevant PVC (Schaefer JX 1, 592 ln. 10-13; JX 3, PX 8 at 38 ln. 6-9; Weimar JX 1, 34 ln. 14-20 (copolymer); Mason JX 1, 196 ln. 7-13 (dispersion); Beveridge JX 1, 87 ln. 25-88 ln. 2 (dispersion); Friedman JX 1, 131 ln. 1-133 ln. 12 (mass and suspension homopolymer)).

II. THE ACQUISITION

11. Through its wholly-owned subsidiary, Oxychem, Occidental acquired Tenneco Polymers' 750 million-pound capacity suspension PVC plant at Pasadena, Texas, and its 150 million-pound capacity suspension PVC copolymer and dispersion PVC resin plant at Burlington, New Jersey. In addition, Oxychem acquired all buildings, machinery, equipment, and intangible assets related to Tenneco Polymers' PVC operations (Cunningham JX 1, 751 ln. 6-21; *See, e.g.*, JX 3, PX 97).³ The total purchase price was approximately \$70 million, plus approximately \$30 million for Tenneco's PVC inventories (Cunningham JX 1, 805 ln. 7-14; JX 3, PX 17 at 8).

III. PVC INDUSTRY OVERVIEW

A. Product Description

12. PVC resins are "thermoplastic" materials, *i.e.*, plastics that become soft and malleable when heated. In virtually all applications, PVC resins must be compounded with a variety of additives, including stabilizers, plasticizers, and coloring agents to give the resins the desired characteristics required for processing and fabrication into end products. After compounding with other ingredients, PVC resins can be converted, through the application of heat and pressure, into a wide variety of finished "vinyl" products (The B.F. Goodrich Company, (FTC Docket No. 9159) slip op. at 1, 17 (March 21, 1988); Goodrich F 17-18; Kaserman JX 1, 270 ln. 10-20, 266 ln. 16 - 267 ln. 11; Dkt. 9159 CX 427L-M; Dkt. 9159 CX 428M-N).

13. [##] (Dkt. 9159 CX 6D, 6Z37; Dkt. 9159 CX 8B; Dkt. 9159 CX 40Z2 *In Camera*; Dkt. 9159 CX 109E, *In Camera*). In 1987,

³ In addition to the resin and compounding plants and portions of the associated land, acquired assets include all buildings, machinery and equipment related to the manufacturing facilities; inventories; stores; spare equipment; and intangible assets such as trade secrets, patents, technology agreements, permits, trade names and customer rights (JX 3, PX 17 at 2-8). [##] (JX 3, PX 97; Taylor 181B ¶ 2 *In Camera*). [##] (Taylor CX181B-D *In Camera*).

United States production of PVC of all types was approximately 8.0 billion pounds (CX 213C).

14. PVC resins are derived from the chemicals ethylene and chlorine. The chemicals are converted into ethylene dichloride ("EDC"), from which the intermediate chemical product, vinyl chloride monomer ("VCM"), is manufactured by a thermal-cracking process (Goodrich, slip op. at 17, 20; Goodrich F 17, 30, 32; Dkt. 9159 CX 4G; Dkt. 9159 CX 6, Z35-Z36).

B. Production Processes

15. All PVC resins are produced by a polymerization process which links VCM molecules together in a vessel, commonly referred to as a reactor, under specific temperatures in the presence of catalysts. The resulting PVC resins, in the form of white powder or granules, can be compounded with auxiliary ingredients (*e.g.*, stabilizers, plasticizers, and impact modifiers), and converted into a wide variety of vinyl end products through several types of fabricating and finishing processes. The processing and performance characteristics of PVC resins and, consequently, suitability for a particular end-use product, vary according to the resin type and, within each type, a number of variables that are controlled in the resin production process (Goodrich F 17-23; JX 3, PX 11 at 627 ln. 13-631 ln. 11, 656 ln. 17 - 658 ln. 17; Lull JX 1,504 ln. 6-14).

16. There are four basic processes used to manufacture PVC resin: (1) suspension; (2) mass (or bulk); (3) dispersion (or emulsion); and (4) solution⁴ (Goodrich F 20-23; JX 3, PX 11 at 627 ln. 13 - 631 ln. 11; JX 3, PX 8 at 7 ln. 18-21; Dkt. 9159 CX 6D, 6Z37; Dkt. 9159 CX 427I-K).

17. The most common method is the suspension process (Disch Dkt. 9159, 627-628). VCM is added to a reactor that contains water, a colloid (a suspending agent), and initiators. The mixture is then heated, which starts the reaction. The process of polymerization, *i.e.*,

⁴ The solution polymerization process is utilized at only one facility in the United States, exclusively for the production of specialty copolymers. It represents less than one percent of total U.S. production capacity (Goodrich F 23 n.6; Disch Dkt. 9159, 630-631; Dkt. 9159 CX 427L).

combining the VCM molecules into longer molecular chains, requires several hours. The manufacturer then stops the reaction, removes unreacted VCM from the mixture, and dries the PVC (JX 3, PX 11 at 627 ln. 22-629 ln. 5; Disch Dkt. 9159, 627-629; Dkt. 9159 CX 642Z26-Z29). Suspension PVC homopolymer resins account for approximately eighty-five percent of all PVC resin manufactured in the United States (Goodrich, slip op. at 17; Goodrich F 21; JX 3, PX 11 at 627 ln. 22 - 628 ln. 5; Dkt. 9159 CX 30G).

18. Another method of polymerization of homopolymer PVC resin is the mass process (also known as the bulk process). In this method, VCM is polymerized without the use of other liquids (Goodrich, slip op. at 17; Goodrich F 23; JX 3, PX 11 at 629 ln. 7-13; Dkt. 9159 CX 642Z31). Mass polymerization consists of a two-stage process, which yields a resin comparable in appearance and properties to suspension PVC homopolymer resin (Goodrich F 23-24; JX 3, PX 11 at 631 ln. 13 - 632 ln. 24; JX 3, PX 8 at 12 ln. 12-21; JX 3, PX 6 at 73 ln. 18-21; Disch Dkt. 9159, 631-632; Dkt. 9159 CX 50V-W; Dkt. 9159 CX 427K-L; Dkt. 9159 CX 642Z31-Z36).

19. Suspension PVC copolymer resins are produced by a suspension process, but differ from suspension PVC homopolymer resin in that they are produced by the polymerization of two distinct monomers, introduced in controlled proportions in the reaction process. [##] (Hill CX 183F ¶13 *In Camera*; Flammer CX 184B ¶3, CX 184D ¶6; JX 3, PX 9 at 15 ln. 20-16 ln. 4; JX 3, PX 8 at 13 ln. 6 - 16 ln. 20; Lull JX 1, 505 ln. 4-8). VCM accounts for 80 to 90 percent of the raw material cost of the finished product, and vinyl acetate accounts for 10 to 20 percent of the raw material cost of the finished product (JX 3, PX 8 at 30 ln. 22 -31 ln. 5).

20. [##] (Goodrich F 22; Hill CX 183F ¶ 17 *In Camera*; Flammer CX 184B ¶ 4, CX 184D ¶ 6; Boyer 185B-C ¶ 3, ¶ 5; JX 3, PX 8 at 7 ln. 18 - 8 ln. 23; JX 3, PX 11 at 630 ln. 3-23, 632 ln. 25 - 633 ln. 10; Lull JX 1, 505 ln. 12 - 506 ln. 6; Dkt. 9159 CX 642Z29-Z31).

C. Uses

1. Mass and suspension PVC homopolymer

21. [##] (Goodrich F 97-193; Pflugrath CX 177B ¶ 3 *In Camera*; Heath CX 178B-C ¶ 3 *In Camera*; Stuart CX 201A-B ¶ 2 *In Camera*; Friedman JX 1, 116 ln. 7-14, 118 ln. 1-16, 121 ln. 6-14; Witsken JX 1, 610 ln. 20 - 611 ln. 1; DiLiddo Dkt. 9159 3108; Disch Dkt. 9159, 665-671, 674-677; Belt Dkt. 9159, 2010-2012; Dkt. 9159 CX 14F *In Camera*; Dkt. 9159 CX 40Z2-Z6 *In Camera*; Dkt. 9159 CX 92F; Dkt. 9159 CX 97C *In Camera*; Dkt. 9159 RX 143C; Dkt. 9159 RX 166A; Dkt. 9159 CX 244E-G; Dkt. 9159 CX 417A-Z22; *See generally* JX 3, PX 9 at 112 ln. 7 - 116 ln. 21). [##] (Wilhite CX 179B-C ¶ 3 *In Camera*; Porter CX 198B-C ¶ 3 *In Camera*; Alberti CX 199F-G ¶ 9 *In Camera*; Stuart CX 201B-C ¶ 4 *In Camera*; Underwood CX 203B ¶ 3 *In Camera*; Yu Dkt. 9159, 2142-2144; Waggoner Dkt. 9159, 3646; Dkt. 9159 CX 300Z7 *In Camera*). [##] (Dkt. 9159 CX 92Y; Dkt. 9159 CX 300Z8 *In Camera*; Dkt. 9159 CX 428Z100). [##] (Friedman CX 191B ¶ 5 *In Camera*; Friedman JX 1, 116 ln. 7-14, 118 ln. 1-16, 121 ln. 6-14; Disch Dkt. 9159, 665; Becker Dkt. 9159, 1317; Dkt. 9159 CX 300Z9 *In Camera*; Dkt. 9159 CX 92X; Dkt. 9159 RX 172T). [##] (Becker Dkt. 9159, 1268-1270; Dkt. 9159 CX 428E; Dkt. 9159 CX 542A *In Camera*; Dkt. 9159 CX 642Z9).

22. [##] (Clark CX 193B ¶ 2 *In Camera*; Bendavid CX 194B ¶ 3 *In Camera*; JX 3, PX 9 at 112 ln. 7-12; JX 3, PX 8 at 47 ln. 23-48 ln. 3; Kaserman JX 1, 270 ln. 10-20; Dkt. 9159 CX 299Z44- Z46, Z49-Z50 *In Camera*).

23. Compounding gives mass and suspension PVC homopolymer a broad array of performance properties. Plasticizers can be used to make mass and suspension PVC homopolymer more flexible and less brittle. Stabilizers are added to protect against degradation from heat or light. For less demanding applications, fillers can be utilized to reduce raw material costs. Pigments add color (JX 3, PX 11 at 627 ln. 13 - 631 ln. 11, 656 ln. 17 - 658 ln. 17; Disch Dkt. 9159, 656-58; Dkt. 9159 CX 184Z83-Z85; Dkt. 9159 CX 427L).

24. [##] (Goodrich F18 n.5; Dellevigne CX 188A ¶ 4 *In Camera*; Friedman CX 191B ¶ 4 *In Camera*; Dkt. 9159 CX 427M; Dkt. 9159 CX 642Z23).

2. Suspension PVC copolymer

25. [##] (Hill CX 183D ¶ 10 *In Camera*; JX 3, PX 13 at 452726; JX 3, PX 9 at 14 ln. 12-25; *See* Weimar JX 1, 30 ln. 20 - 31 ln. 2).

26. Suspension PVC copolymer resins are compounded with various additives before processing (Disch Dkt. 9159, 655-657). [##] (Hill CX 183E ¶ 11 *In Camera*; Dkt. 9159 CX 427Z7). [##] (Goodrich F 186; Hill CX 183F ¶ 13-14 *In Camera*; Flammer CX 184E-F ¶ 10; Disch Dkt. 9159, 678-679; JX 3, PX 136 56 ln. 24 - 57 ln. 1; Dkt. 9159 CX 300Z10 *In Camera*).

27. Phonograph records are fabricated by the compression-molding of suspension PVC copolymer compound (Disch Dkt. 9159, 661-662). [##] (Hill CX 183E ¶ 12 *In Camera*).

28. [##] (Weimar CX 192F-G ¶ 15 *In Camera*; Rawlins CX 197B ¶ 3 *In Camera*; Weimar JX 1, 30-32; Barlet JX 1, 56-57).

29. [##] (Weimar CX 192A-B ¶ 3 *In Camera*). [##] (Weimar CX 192A-B ¶ 3 *In Camera*; Rawlins CX 197A-B ¶ 2 *In Camera*; Barlet JX 1 56-57).

3. Dispersion PVC

30. [##] (van Haaren CX 187B ¶ 5-6 *In Camera*; Boulay CX 189A-B ¶ 2 *In Camera*; Truog CX 202A ¶ 1 *In Camera*; Baker CX 205A-B ¶ 1; Kaserman JX 1, 262 ln. 9 - 264 ln. 9, 266 ln. 16 - 267 ln. 15 Rutland JX 1, 731; JX 3, PX 8 at 8 ln. 24 - 9 ln. 11, 32 ln. 15-21, 47 ln. 16-23; JX 3, PX 9 at 14 ln. 12-18; JX 3, PX 13 at 452717). [##] (Flammer CX 184E-F ¶ 10; van Haaren CX 187B ¶ 5 *In Camera*; JX 3, PX 8 at 32 ln. 15 - 37 ln. 24).

31. The consumption of approximately 40 percent of the United States market for dispersion PVC resin is accounted for in the manufacture of vinyl resilient sheet flooring (JX 3, PX 8 at 43 ln. 16-23). [##] (van Haaren CX 187B-C ¶ 6 *In Camera*; Barlet JX 1, 63-66; JX 3, PX 9 at 98 ln. 3-7).

32. A major group of applications for dispersion resin involve coating a surface with a plastisol of resin (dispersion particles suspended in fluid plasticizers) compounded with other ingredients. These applications primarily comprise the coating of fabric or paper with resin which is then fused to the substrate. Products using

dispersion-coated fabric include vinyl upholstery covering, handbags, shoe uppers, wall coverings, luggage, apparel, hospital equipment and carpet backing (Mason JX 1, 192; JX 3, PX 9 at 96 ln. 25 - 97 ln. 19) In addition, dispersion resin may be used for coating containers, such as paint cans or bottles (JX 3, PX 8 at 34 ln. 15 - 35 ln. 7; JX 3, PX 9 at 95 ln. 8-10, 97 ln. 20-23).

33. [##] (Flammer CX 184E-F ¶10; Boulay CX 189A-B ¶ 2 *In Camera*; Lore JX 1, 177-179, 186-188; JX 3, PX 8 at 35 ln. 15 - 37 ln. 12).

D. History of PVC

34. [##] (Dkt. 9159 CX 200M *In Camera*). [##] (Goodrich F 27; DiLiddo Dkt. 9159, 3106; Dkt. 9159 CX 92G; Dkt. 9159 CX 40Z2 *In Camera*).

1. Mass and suspension PVC homopolymer

35. The initial growth and development of mass and suspension PVC homopolymer as a product in the 1950's and 1960's occurred as flexible (plasticized) PVC resin found markets in wire and cable, calendered sheet, and specialty applications (Goodrich F 28; *See* DiLiddo Dkt. 9159, 3106-08). [##] (Goodrich F 28; Dkt. 9159 RX 639H *In Camera*).

36. [##] (Goodrich F 29; Dkt. 9159 RX 639H *In Camera*). [##] (Goodrich F 29; Dkt. 9159 RX 639H, P *In Camera*). [##] (Goodrich F 29; Disch Dkt. 9159, 641, 648-653; Dkt. 9159 CX 374G, Q *In Camera*; Dkt. 9159 CX 405R; Dkt. 9159 CX 420F; Dkt. 9159 CX 428Z12).

37. [##] (H. Wheeler Dkt. 9159, 1734-35; Disch Dkt. 9159, 641-42; *See* Dkt. 9159 CX 505S-T; Dkt. 9159 CX 515G; Dkt. 9159 RX 639H, R *In Camera*; Dkt. 9159 CX 6420), and the development and implementation of vinyl chloride emission control technology to comply with newly-instituted environmental regulations (*See* Dkt. 9159 CX 642 U-V; Dkt. 9159 CX 597 A-E).

38. [##] (Dkt. 9159 CX 42A-Z64 *In Camera*; Dkt. 9159 RX 639H *In Camera*). [##] (*See* Eades Dkt. 9159, 1464-1465; *See* Dkt. 9159 RX 639H *In Camera*).

39. The mid-to-late 1970's were also a period of fundamental changes in the regulatory environment facing the PVC and VCM industries which had a profound effect on the technological design, siting, and operation of plants, capital costs, and the structure of the markets (*See* Dkt. 9159 CX 642Z5-Z6; Dkt. 9159 CX 504D-O; Dkt. 9159 CX 505S-U; Dkt. 9159 CX 597A-E). While regulations promulgated by both federal and state agencies during this period affected all aspects of business, environmental regulations had the greatest overall impact on the PVC and VCM industries (*See* Dkt. 9159 CX 597C). Following the finding of VCM as a highly specific cause of liver cancer, the Occupational Health and Safety Administration (OSHA) announced a standard in 1975 to reduce occupational exposure to residual VCM. And in 1976, the Environmental Protection Agency (EPA) promulgated a standard to reduce atmospheric VCM emissions (Goodrich, slip op. at 32; *See* Dkt. 9159 CX 642U). Additional environmental regulations affecting other aspects of PVC and VCM production facilities were subsequently adopted (Dkt. 9159 CX 597C-D; Dkt. 9159 CX 642Z164- Z177).

40. [##] (Dkt. 9159 CX 200L *In Camera*; Dkt. 9159 CX 642Z5). Most of the requirements regarding VCM control technology pertain to PVC plants, which, as batch process operations, contribute proportionately more emissions than VCM/EDC plants, which operate through a self-contained continuous flow process (Dkt. 9159 CX 642).

2. Suspension PVC copolymer

41. [##] (Hill CX 183F ¶ 16 *In Camera*; Flammer CX 184D ¶ 7; Boyer CX 185G-H ¶ 16; Fisher CX 208A-B ¶ 2; Schaefer JX 1, 586; Kaserman JX 1, 329, 473-474; JX 3, PX 9 at 42 ln. 17 - 43 ln. 11; JX 3, PX 13 at 452726)

3. Dispersion PVC

42. [##] (Flammer CX 184D ¶ 7; Boyer CX 185E ¶ 10; van Haaren CX 187C ¶ 8 *In Camera*; Kaserman JX 1, 329, 473; JX 3, PX

8 at 34 ln. 21 - 35 ln. 1, 80 ln. 20-24; JX 3, PX 9 at 93 ln. 25 - 94 ln. 16; JX 3, PX 13 at 452717).

IV. THE RELEVANT PRODUCT MARKETS

43. In its landmark decision in *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962), the Supreme Court outlined a two-step process for product market analysis. First, the outer boundaries of a product market are to be identified by determining reasonable interchangeability of use or cross-elasticity of demand between the product itself and substitutes for it. *Id.* at 325. See also *United States v. Continental Can Co.*, 378 U.S. 441, 447-49 (1964); *Tampa Electric Co. v. Nashville Coal Co.*, 365 U.S. 320 (1961); *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 393-395, 400-401, 404 (1956).

44. Further *Brown Shoe* explains that the boundaries of markets for antitrust purposes may be determined by examining "such practical indicia as industry or public recognition of the [market] as a separate economic entity, the product's particular characteristics and uses, unique production facilities, distinct prices, sensitivity to price changes, and specialized vendors." *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962). The overriding principle in this two-step analysis is to identify meaningful competition where it actually exists. *United States v. Continental Can Co.*, 378 U.S. 441, 449 (1964).

45. The *Department of Justice Merger Guidelines* and the *Statement of Federal Trade Commission Concerning Horizontal Mergers*⁵ provide principles for defining the relevant product market.

⁵ In 1982, the Justice Department issued revised Merger Guidelines. *Department of Justice Merger Guidelines* (1982), 2 Trade Reg. Rep. (CCH) ¶ 4500, *et seq.* Those 1982 Guidelines were further revised by the Department in 1984. See *U.S. Department of Justice Guidelines*, 2 Trade Reg. Rep. (CCH) ¶ 4490, *et seq.* (June 14, 1984) ("DOJ Merger Guidelines"). Also in 1982 the Federal Trade Commission issued a statement concerning horizontal mergers. *Statement of Federal Trade Commission Concerning Horizontal Mergers*, 2 Trade Reg. Rep. (CCH) ¶ 4516 (June 14, 1982) ("FTC Merger Statement").

While these statements are not binding on the courts, courts have applied them when determining the impact on competition of a proposed acquisition. See, e.g.,

The DOJ Merger Guidelines establish the following test for determining a relevant product market:

[T]he Department will begin with each product (narrowly defined) produced or sold by each merging firm and ask what would happen if a hypothetical monopolist of that product imposed a "small but significant and non-transitory" increase in price. If the price increase would cause so many buyers to shift to other products that a hypothetical monopolist would not find it profitable to impose such an increase in price, then the Department will add to the product group the product that is the next-best substitute for the merging firm's product and ask the same question again. This process will continue until a group of products is identified for which a hypothetical monopolist could profitably impose a "small but significant and nontransitory" increase in price. The Department generally will consider the relevant product market to be the smallest group of products that satisfies this test.

DOJ Merger Guidelines, supra, ¶ 492.101, at 6879-9. The Department has identified an example of "a small but significant and nontransitory increase in price" as a price increase of five percent lasting for one year. *Id.*

46. Although direct evidence of the likely effects of a price increase is sometimes available, it is often necessary to rely on circumstantial evidence to delineate a product market. Such indicia are set out in both the *DOJ Merger Guidelines* and the *FTC Statement*. The evidence may include the buyer's perception that the products are not substitutes, *DOJ Merger Guidelines, supra*, ¶ 4492.102, at 6879-9; differences or similarities in price movements that are not explained by common costs or similar variables, *Id.*; differences between products in usage, physical composition or technical characteristics; *Id.*; sellers' perceptions that the products are not substitutes, *Id.*; and persistent price differences over time. *FTC Merger Statement, supra*, ¶ 4516, at 6901-6-7; *See Goodrich*, slip op. at 16; *Grand Union Co.*, 102 FTC 812, 1041 (1983).

FTC v. Bass Brothers Enterprises, Inc., 1984-1 Trade Cas. (CCH) ¶ 66,041, at 68,620 (N.D. Ohio 1984); *FTC v. PPG Industries, Inc.*, 628 F. Supp. 881, 884-85 (D.D.C.), *aff'd in part & rev'd in part on other grounds*, 798 F.2d 1500, 1503 (D.C. Cir. 1986); *Monfort of Colorado, Inc. v. Cargill, Inc.*, 591 F. Supp. 683 (D. Colo. 1983), *aff'd*, 761 F.2d 570 (10th Cir. 1985), *rev'd on other grounds*, 107 S. Ct. 484 (1986); *Marathon Oil Co. v. Mobil Corp.*, 530 F. Supp. 315, 325 (N.D. Ohio), *aff'd*, 669 F.2d 378 (6th Cir. 1981), *cert. denied*, 455 U.S. 982 (1982).

47. A meaningful economic market is a market that could be subject to the exercise of market power, *i.e.*, a market in which firms could exercise market power if they possessed the ability to coordinate their actions. *DOJ Merger Guidelines, supra*, ¶ 4,492 at 6879-8; Goodrich slip op. at 15-16; Kaserman JX 1, 252; *See also* Klass Dkt. 9159, 5030-32. The group of products (product market) and geographic area (geographic market) that comprise a market for purposes of merger analysis are defined in terms of the probable demand responses of consumers and supply responses of other firms to a price increase for the product of the merging firms. *DOJ Merger Guidelines, supra*, ¶ 4,492 at 6879-8.

48. A product market defines a group of products that are close substitutes such that the producers of that group of products could profit from a price increase without experiencing a degree of substitution by other suppliers or to other products sufficient to defeat the profitability of that price increase (Kaserman JX 1, 252-54; Kaserman Dkt. 9159, 2222, 2229). *See* Goodrich, slip op. at 16. Products which are not close substitutes in consumption or production for those of the merging firms are excluded from the relevant product market because changes in the prices or availability of such products do not directly or substantially affect the pricing decisions for the product of the merging firms (Kaserman JX 1, 252; Klass Dkt. 9159, 5025).

49. The purpose of defining a relevant product market is to provide a context for analysis of industry structure so that a meaningful prediction of industry performance may be made on the basis of the effects of the acquisition on industry structure (Kaserman JX 1, 252; Kaserman Dkt. 9159, 2226; *FTC Merger Statement* ¶ 4516 at 6901-6; *See also* Klass Dkt. 9159, 2227).

50. The Supreme Court has concluded that both demand and supply substitutability are relevant to determining the contours of a relevant product market,⁶ (Goodrich, slip op. at 15). Thus, a relevant product market is defined in light of both demand and supply side substitution (Goodrich, slip op. at 15; Kaserman JX 1, 255;

⁶ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 & n. 42 (1962); *United States v. Columbia Steel Corp.*, 334 U.S. 495, 510-11 (1948); *See also United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956).

Kaserman Dkt. 9159, 2223-24; *See also* Klass Dkt. 9159, 5025, 5021). A relevant product market can also be delineated by measuring cross-elasticities of supply and demand; that is, by determining the degree to which -- within a given period of time -- changes in the price of a given product or service will induce changes in the quantities of a second product or services that are demanded or supplied⁷ (Goodrich, slip op. at 15). The economic issue in defining a product market is to locate the point beyond which products are no longer close substitutes in terms of either demand or supply for the product of the merging firms (Klass Dkt. 9159, 5025).

51. On the demand side, the Commission seeks "to define a product or group of products sufficiently distinct that buyers could not defeat an attempted exercise of market power on the part of sellers of those products by shifting purchases to still different products"⁸ (Goodrich at 16; Kaserman JX 1, 253-54). The Commission thus seeks to determine whether purchasers are likely to shift purchases away from the products of the merging firms in sufficient magnitude to defeat any constraint by the merging firms to raise prices, restrict supply, or lower quality (*FTC Merger Statement* ¶ 4516 at 6901-6; Goodrich, slip op. at 16).

52. Inclusion of products within a product market means that the cross-price elasticity of demand between those products is positive and sufficiently large that they should be considered to be close substitutes (Kaserman Dkt. 9159, 2224; *FTC Merger Statement*, ¶ 4516 at 6901-6. *See* Kaserman JX 1, 254-55). Alternative sources of supply to which users could reasonably turn should all be included in the relevant product market (Klass Dkt. 9159, 5017).

53. Therefore, to hold that something is a product market means that, whatever other products there are that might substitute for this product, they are not close enough substitutes to defeat a price increase (Kaserman Dkt. 9159, 2227; Goodrich, slip op. at 15-16;

⁷ *Grand Union Co.*, 102 FTC 812, 1039-40 (1983); *Beatrice Foods Co.*, 101 FTC 733, 836 (1983) (Douglas, Commissioner and Miller, Chairman, concurring); *FTC Merger Statement*, ¶ 4516 at 6901-7.

⁸ *Hospital Corporation of America*, 106 FTC 361, 464, 466 (1985) (hereinafter "HCA"), *aff'd*, 807 F.2d 1381 (1986), *cert. denied*, 107 S. Ct. 1975 (1987).

Kaserman JX 1, 254-56). This follows from the fact that products that are close enough substitutes to defeat a price increase are included in the market definition (Kaserman Dkt. 9159, 2227; Kaserman JX 1, 252-54, 257; *See also* Klass Dkt. 9159, 4141).

54. On the supply side, market definition takes into account close substitutes in production so as to include those producers who could easily and economically produce and sell the product of the merging firms in response to an increase in price by existing producers of the product (*DOJ Merger Guidelines*, ¶ 4492 at 6879-10; Kaserman Dkt. 9159, 2230; Kaserman JX 1, 255).

A. Mass and Suspension PVC

55. The parties agree that mass and suspension PVC constitutes a relevant product market (Complaint ¶ 13(a); Answer of Occidental ¶ 5; Harris JX 1, 858 ln. 13-18; JX 3, PX 14 at 2). The Commission has held that this stipulation is consistent with the record (Goodrich, slip op. at 19).

56. [##] (*See* Hornack CX 182B-D ¶ 6-8 *In Camera*; Hill CX 183B-D ¶ 4-7 *In Camera*; Flammer CX 184B-E ¶ 3-8; Boyer CX 185G ¶ 15; *See* Goodrich, slip op. at 79-80).

57. Further, PVC homopolymer resin produced by the mass process and PVC homopolymer resin produced by the suspension process belong in one product market because the resins are interchangeable in use (Goodrich F 24; Friedman JX 1, 113 ln. 5-16, 126 ln. 8-11; JX 3, PX 11 at 632 ln. 17-24; RPF 16; JX 3, PX 6 at 73 ln. 18-21; JX 3, PX 8 at 12 ln. 12-21) over a large variety of applications, such as PVC pipe and pipe fitting, wire and cable applications, packaging film and sheet, vinyl siding, bottles, vinyl window components, medical applications, and miscellaneous calendered products (Goodrich F 97; Kaserman JX 1, 270 ln. 12-20; JX 3, PX 9 at 112 ln. 7-12; JX 3, PX 8 at 47 ln. 23-48 ln. 3).

58. Because mass and suspension PVC constitutes a relevant product market, producers of mass and suspension PVC homopolymer could succeed in raising prices a small but significant amount (such as 5 percent) for a sustained period if they coordinated their actions and engaged in collusion. This means that such a price increase would succeed because demand for mass and suspension

PVC resin is significantly inelastic (*e.g.*, consumers cannot economically and feasibly switch to substitute input products) so that customers could not switch their demand to another raw material to defeat the price increase (Goodrich at 19, 73-75; *See* Kaserman JX 1, 252-54, 256-57, 270-71, 345).

59. No suppliers of resins other than mass and suspension PVC can economically or practicably produce mass and suspension PVC homopolymer to defeat a small but significant price increase for a sustained period (*DOJ Merger Guidelines, supra*, ¶ 4,492 at 6878-9; Kaserman Dkt. 9159, 2222, 2229; Kaserman JX 1, 344; *See also* Klass Dkt. 9159, 5221, 5225; Harris JX 1, 858 ln. 13-859 ln. 2). Moreover, because of their higher costs and extremely limited capacity, it makes little difference to the success of any collusive arrangement whether the copolymer producers elect to go along with the collusion by homopolymer producers or elect to take advantage of higher homopolymer prices by increasing their production of suspension PVC homopolymer (Kaserman JX 1, 271, 335-36).

60. In addition, firms producing other products are unlikely to switch to producing mass and suspension PVC in response to a small increase in PVC resin prices, because the machinery needed to produce PVC is essentially unique to that application (Goodrich, slip op. at 19-20; *See* Disch Dkt. 9159 at 663).

61. [##] (Goodrich, slip op. at 19; Kaserman JX 1, 252-55; Kaserman Dkt. 9159, 2231-32; Hornack CX 182B-E ¶¶ 5-6, 8-9 *In Camera*; Hill CX 183B-G ¶¶ 4-8, 10-17 *In Camera*; Flammer CX 184B-F ¶¶ 3-10; Boyer 185D, G ¶¶ 8,15). Indeed, respondents' economic expert himself has examined the product market definition and concluded that he could properly work with the mass and suspension PVC market (Harris JX 1, 858 ln. 13-18).

62. [##] (Goodrich F 94; Kaserman JX 1, 270 ln. 13-25). [##] (Barlet JX 1, 74 ln. 12-21 *In Camera*, Friedman JX 1, 121 ln. 25-122 ln. 5; Goodrich F 95; JX 3, PX 11 at 661 ln. 10-662 ln. 22). As found by the Commission:

Firms that currently purchase [mass and suspension] PVC resin to manufacture PVC end use products cannot substitute other inputs in response to a small increase in PVC resin prices; there are simply no substitutes for PVC resin as an input to produce these products.

(Goodrich, slip op. at 19. *See* Goodrich F 95; JX 3, PX 11 at 662 ln. 23-663 ln. 5; JX 3, PX 8 at 48 ln. 12-20; Kaserman Dkt. 9159, 2232; H. Wheeler Dkt. 9159, 1751-1752).

63. Mass and suspension PVC homopolymer is used to manufacture hundreds of products. The major applications include: pipe and fittings, wire and cable, packaging, film and sheet, siding, and bottles (Goodrich, slip op. at 18-19; Goodrich F 97; Kaserman JX 1, 270 ln. 12-20; *See* JX 3, PX 11 at 663 ln. 14-680 ln. 8; JX 3, PX 8 at 47 ln. 23-48 ln. 3; JX 3, PX 9 at 112 ln. 7-12). As discussed in detail *infra*, the price elasticity of demand for mass and suspension PVC homopolymer products is low, and there is relatively little substitutability between mass and suspension PVC homopolymer products and products manufactured from other materials (Goodrich, slip op. at 72-75; Kaserman JX 1, 254-57, 270-71). Mass and suspension PVC homopolymer products possess unique characteristics that make them highly desirable in their end uses. Consequently, PVC homopolymer finished goods are often selected on the basis of their distinctive properties and not on the basis of changes in price. Mass and suspension PVC homopolymer finished goods generally offer substantial cost savings to purchasers, compared to products manufactured from other materials (Friedman JX 1, 116 ln. 7-14, 118 ln. 1-16, 121 ln. 6-14; Witsken JX 1, 610 ln. 20-611 ln. 1; Goodrich FF 97-193; JX 3, PX 11 at 672 ln. 10-677 ln. 19; *See* generally JX 3, PX 9 at 112 ln. 7-116 ln. 21).

64. There is no supply side substitution for mass and suspension PVC. Apart from the relatively small level of suspension PVC copolymer capacity that can be used to produce suspension PVC homopolymer, machinery and facilities of producers who manufacture products other than mass and suspension PVC homopolymer cannot be converted economically to the manufacture of mass and suspension PVC homopolymer (Kaserman JX 1, 270-72, 335-36; Kaserman Dkt. 9159, 2233; Klass Dkt. 9159, 4119; Dkt. 9159 CX 46A). Moreover, firms producing other products are unlikely to switch to producing mass and suspension PVC homopolymer in response to a small increase in PVC resin prices, because the machinery needed to produce PVC is essentially unique to that application (Goodrich, slip op. at 19-20; *See* Disch Dkt. 9159, 663).

65. For the reasons discussed, *infra*, demand for mass and suspension PVC homopolymer is inelastic (Kaserman JX 1, 270 ln. 10-271 ln. 5; JX 3, PX 10 at 1141 ln. 10-18; (See generally Goodrich FF 97-193; Goodrich, slip op. at 72-75)). There is very little effect on the volume consumed based on the industry-wide movements in mass and suspension PVC homopolymer price (JX 3, PX 6 at 151 ln. 4-152 ln. 5; JX 3, PX 10 at 1141 ln. 10-18; JX 3, PX 136 at 71 ln. 23-72 ln. 2; JX 3, PX 82 at 900139; See CPF 512). This creates a natural incentive for companies to restrict output to raise prices (Kaserman JX 1, 255 ln. 2-9; JX 3, PX 82 at 900138). The strong inference is that mass and suspension PVC homopolymer producers could probably profitably raise prices by five percent or more (Friedman JX 1, 118 ln. 1-20).

66. [##] (Hill CX 183B-F ¶ 4-8, 10-16 *In Camera*; Flammer CX 184B-F ¶ 3-10; Boyer CX 185G-H ¶ 15-16; Weimar CX 192B-C ¶ 4-5 *In Camera*; Rawlins CX 197B- C ¶3-4 *In Camera*; JX 3, PX 136 at 60 ln. 21-61 ln. 10; Kaserman JX 1, 260 ln. 10-21; 261 ln. 21-25; Harris JX 1, 858 ln. 19-859 ln.2; See Hornack CX 182C-E ¶¶ 7-9 *In Camera*). On the supply side, however, as noted, because specialty grades of suspension PVC homopolymer resin can be produced at suspension PVC copolymer plants, the relatively small level of suspension PVC copolymer capacity is included as part of the mass and suspension PVC market (See Kaserman JX 1, 270-72, 335-36).

67. Solution PVC resin does not compete with any other PVC resin product, including mass and suspension PVC homopolymer, and is not produced by Occidental or the former Tenneco Polymers (JX 3, PX 7 at 133 ln. 3-134 ln.3; JX 3, PX 8 at 11 ln. 13-12 ln. 11).

68. It is accordingly found that mass and suspension PVC (including suspension PVC copolymer production capacity) constitutes a relevant product market (Goodrich, slip op. at 19; Complaint ¶ 13(a); Answer of Occidental ¶ 5; Kaserman JX 1, 252 ln. 6-9, 269 ln. 21-272 ln. 25).

B. Suspension PVC Copolymer

1. Suspension PVC copolymer is recognized in the PVC industry as a distinct market

69. Suspension PVC copolymer resin is recognized by producers as a "separate, distinct product" from other PVC resins selling into "distinct end-use markets" (JX 3, PX 8 at 31 ln. 21-32 ln. 14; JX 3, PX 9 at 14 ln. 3-16 ln. 14, 85 ln. 11-86 ln. 14, 145 ln. 24-146 ln. 15; *See Harris JX 1, 858 ln. 19-859 ln. 2*). [##] (JX 3, PX 8 25 ln. 6-16; JX 3, PX 9 32 ln. 25 - 33 ln. 9; Fisher CX 208B ¶ 2; Hill CX 183C ¶ 3 *In Camera*; Boyer CX 185G ¶ 16; Beveridge JX 1 82 ln. 25 - 83 ln. 6; Weimar JX 1, 34 ln. 14-20; Marcus CX 209D ¶ 8 *In Camera*; Kaserman JX 1, 261 ln. 18-20). As noted by Mr. Flammer of Vista:

Both dispersion PVC and copolymer PVC are completely different businesses from suspension PVC homopolymer production. Suspension PVC homopolymer resins do not compete with . . . copolymer PVC resins because these products are sold into different markets.

(Flammer CX 184E ¶ 10).

70. [##] (CX 81B *In Camera*; CX 82C *In Camera*). One such memorandum noted that the acquisition would reduce the number of copolymer producers to two, providing Occidental "with almost half the market . . ." (JX 3, PX 12). The memorandum then stated that "[this] will significantly enhance the profitability of the Pottstown suspension plant " (*Id.*).

71. [##] (CX 96B *In Camera*).

2. Suspension PVC copolymer is characterized by distinct prices and insensitivity to changes in prices of other materials.

72. The prices of suspension PVC copolymer resin move independently of the prices of other PVC resins (Kaserman JX 1, 260 ln. 24 - 261 ln. 9; JX 3, PX 6 at 63 ln. 16-66 ln. 8; JX 3, PX 7 at 54 ln. 4-5; JX 3, PX 8 at 31 ln. 21-32 ln. 14; JX 3, PX 9 at 26 ln. 14-20; JX 3, PX 136 at 121 ln. 2-122 ln. 8; JX 3, PX 13 at 452726; JX 3, PX 128 at PVC 10; JX 3, PX 130 at 131). Copolymer resin is priced higher than other suspension resins (JX 3, PX 13 at 452726). [##]

(CX 114 *In Camera*; *Accord* JX 3, PX 13 at 452726; Hill CX 183D ¶ 8 *In Camera*; Flammer CX 184E ¶ 9). The price of copolymer resin is also independent of the level of supply of other PVC resins (JX 3, PX 6 at 63 ln. 16 - 66 ln. 8; JX 3, PX 9 at 14 ln. 14-20).

73. Mr. Stevens, in explaining that there is little relation between the level of output of suspension PVC copolymer and the price of suspension PVC homopolymer, testified that the copolymer market and the homopolymer market are "separate entities" (JX 3, PX 9 at 14 ln. 14-20). Similarly, Mr. Disch testified that Tenneco did not look at homopolymer prices in setting copolymer prices because the two are "separate, distinct product groups and, in most cases, two distinct end use markets" (JX 3, PX 8 at 31 ln. 21 - 32 ln. 2). Mr. Schaefer echoed this testimony, noting that copolymer and homopolymer prices may show similar movements in price at times not because they are used in the same end-use markets, but because of general economic conditions (JX 3, PX 136 at 121 ln. 1 - 122 ln. 8).

74. Occidental's actual realized prices for its suspension PVC copolymer resins and for its mass and suspension PVC homopolymer resins, as presented in the following table, confirm the relative independence of prices and price movements for suspension PVC copolymer compared to homopolymer resins. [##]

3. The distinct customers, characteristics, and uses of suspension PVC copolymer give suspension PVC copolymer a low cross-elasticity of demand

75. Substitution between suspension PVC copolymer and suspension PVC homopolymer is limited by the unique characteristics of copolymer that require its use in certain product applications, particularly vinyl resilient floor tile and vinyl records.

76. [##] (Weimar JX 1, 31 ln. 21 - 32 ln. 1; Barlet JX 1, 56 ln. 22 - 57 ln. 7; Marcus CX 209B ¶ 4 *In Camera*; Rawlins CX 197B-C ¶ 4 *In Camera*). Suspension PVC copolymer resin is used in floor tile because its properties allow the tile manufacturer to use a substantial amount of inexpensive filler, which the copolymer binds together in the tile (Weimar JX 1, 31 ln. 21 - 32 ln. 1; Barlet JX 1, 56 ln. 22 - 57 ln. 7). Homopolymer resin does not have melt or flow properties similar to copolymer resin, and therefore substitution of homo-

polymer for copolymer requires that greater amounts of PVC relative to filler be used, or that the PVC be blended for longer periods of time at higher temperatures. In either case, the manufacturing cost of the tile would be higher (Weimar JX 1, 32 ln. 9 - 33 ln. 9; Barlet JX 1, 58 ln. 13 - 59 ln. 2). [##] (Weimar JX 1, 32 ln. 3-5; Weimar CX 192C ¶ 5 *In Camera*; Barlet JX 1, 62 ln. 22-25, 73 ln. 7-13 *In Camera*; Rawlins CX 197B-C ¶ 4 *In Camera*; JX 3, PX 136 at 60 ln. 21 - 61 ln. 10).

77. [##] (Hill CX 183E ¶13-14 *In Camera*; JX 3, PX 8 at 13 ln. 6-21; JX 3, PX 9 at 33 ln. 15-22, 37 ln. 25 - 38 ln. 7, JX 3, PX 136 at 56 ln. 18 - 57 ln. 1). Significant increases in the price of suspension PVC copolymer resin would not result in substitution of other materials for copolymer resin in the manufacture of phonograph records (JX 3, PX 8 at 22 ln. 25 - 23 ln. 25; JX 3, PX 9 at 42 ln. 17-25; JX 3, PX 136 56 ln. 24 - 57 ln. 1).

78. The demand for suspension PVC copolymer resin is inelastic. This means that there would be little substitution of other material by purchasers in response to significant increases in the price of suspension PVC resin. Substitution of products manufactured from materials other than PVC, moreover, is limited by the low cost share of copolymer resin in vinyl resilient floor tile and phonograph records, and by the characteristics of these products that reduce the substitutability between them and other products (*See Goodrich F 95; Goodrich ID Discussion at 93*).

4. There is a low cross-elasticity of supply between suspension PVC copolymer and other materials

79. There would be no supply-side substitution by producers of suspension PVC homopolymer in response to significant increases in the price of suspension PVC copolymer resin. Mr. Disch has noted that Tenneco did not shift capacity between suspension PVC homopolymer and suspension PVC copolymer in response to changes in the relative prices of the two resins, because, in his view, they are two distinct situations (JX 3, PX 8 at 32 ln. 7-14). [##] (Boyer CX 185G ¶ 16; Fisher CX 208C ¶ 3; Hornack CX 182C ¶ 7 *In Camera*).

80. Concluding the above discussion, it must be noted that under the *Merger Guidelines*, the issue is whether it would be possible for

a hypothetical monopolist in the sale of suspension PVC copolymer resin profitably to impose a "small but significant and non-transitory" increase in price. The factors described above show that such an increase would be profitable. On the demand side, there would be little substitution between copolymer resin and other materials. Indeed, both complaint counsel's and respondent's economic experts described the demand for suspension PVC copolymer as inelastic, which is the prime issue posed under the *Guidelines* (Kaserman JX 1, 345 ln. 2-6; Harris JX 1, 858 ln. 19-24). On the supply side, there would similarly be no substitution.

81. Thus, it must be found that suspension PVC copolymer resin constitutes a relevant product market.

C. Dispersion PVC

82. The parties agree that dispersion PVC resin constitutes a relevant product market (Complaint ¶ 13(c); Answer of Occidental ¶ 5; Harris JX 1, 858 ln. 13-18; JX 3, PX 14 at 2; *See* JX 3, PX 8 at 8 ln. 3-9 ln. 11; JX 3, PX 9 at 13 ln. 23-14 ln. 25, 146 ln. 3-15).

83. By definition, because dispersion PVC resin constitutes a relevant product market, producers could succeed in raising prices a sustained 5 percent if they coordinated their actions and engaged in collusion. This means that such a price increase would succeed because demand for dispersion PVC is sufficiently inelastic so that consumers could not use other raw materials in sufficient quantities to defeat the price increase (Kaserman JX 1, 262-69, 345). This small but significant and nontransitory price increase would be programmed to succeed because no producer of raw materials other than dispersion PVC could practicably and economically supply the marketplace with dispersion PVC to defeat the price increase (*DOJ Merger Guidelines, supra*, ¶ 4,492 at 6879-8; Kaserman Dkt. 9159, 2222, 2229; Kaserman JX 1, 262-69, 345; *See also* Klass Dkt. 9159, 5221, 5225).

84. The evidence submitted in this proceeding fully supports the agreement of the parties that dispersion PVC resin constitutes a relevant product market. The respondents' expert economist utilized a dispersion PVC resin product market to analyze the effects of

Occidental's acquisition of Tenneco Polymers (Harris JX 1, 858 ln. 13-ln. 18).

85. Dispersion PVC resin uses differ from the uses for mass and suspension PVC homopolymer resin and suspension PVC copolymer resin. As the Commission found in Goodrich: "Bulk and suspension PVC resins have 'quite different' applications than dispersion resins" (Goodrich, slip op. at 17-18 n.37; *See* Disch, Dkt. 9159, 634). [##] (Hill CX 183F-G ¶ 17 *In Camera*; Flammer CX 184E-F ¶ 10; Boyer CX 185D-F ¶¶ 7-12; JX 3, PX 6 at 65 ln. 6-66 ln. 18, 106 ln. 23-107 ln. 7; JX 3, PX 8 at 8 ln. 11, 40 ln. 8-18; JX 3, PX 9 at 13 ln. 23-14 ln. 25, 89 ln. 17-90 ln. 1, 111 ln. 3-12, 146 ln. 3-15; Harris JX 1, 858 ln. 13-18).

86. Purchasers of dispersion PVC resin perceive that dispersion PVC constitutes a distinct and separate market from any other PVC resin. As noted by Mr. Flammer of Vista:

Both dispersion PVC and copolymer PVC are completely different businesses from suspension PVC homopolymer production. Suspension PVC homopolymer resins do not compete with . . . dispersion PVC . . . because these products are sold into different markets.

(Flammer, CX 184E ¶ 10).

87. [##] (van Haaren CX 187B-C ¶¶ 5-7 *In Camera*; Baker CX 205B ¶ 2; Boulay CX 189B-C, D ¶¶ 4-5, 10 *In Camera*; JX 3, PX 8 at 32 ln. 15-37 ln. 24; JX 3, PX 9 at 96 ln. 21-99 ln. 11, 103 ln. 8-104 ln. 14; Kaserman JX 1, 267 ln. 22-268 ln. 12).

88. [##] (JX 3, PX 9 at 15 ln. 1-19, 97 ln.10-98 ln. 2. *See* Hill CX 183F-G ¶ 17 *In Camera*; Flammer CX 184B-D ¶¶ 4-6; Boyer CX 185B-C ¶¶ 3-4).

89. Purchasers and producers recognize that dispersion PVC prices and mass and suspension PVC homopolymer prices and suspension PVC copolymer prices are independent of each other (Flammer, CX 184E ¶ 9; Boyer 185E-F ¶ 11; Beveridge JX 1, 88 ln. 18-23; Kaserman JX 1, 269 ln. 7-12).

90. Dispersion PVC prices move independently of the price of mass and suspension PVC homopolymer or suspension PVC copolymer (Kaserman JX 1, 269; Boyer CX 185E-F ¶ 11; Flammer CX 184E ¶ 9; JX 3, PX 136 at 63-64, 67, 122; Schaefer JX 1, 583; JX

3, PX 8 at 40, 87- 89; JX 3, PX 9 at 13-14, 26-27, 100, JX 3, PX 6 at 33-34, 64-67; JX 3, PX 7 at 127-28, 163-64).

91. [##] (CX 100 A-L *In Camera*; Kaserman JX 1, 269 ln. 7-12).

92. [##] (*See* CX 100 A-L *In Camera*). [##]

93. Producers and purchasers report that dispersion PVC prices remained stable or declined slightly from 1981 until the time of the acquisition (*See* JX 3, PX 8 at 40; JX 3, PX 9 at 81; Schaefer JX 1, 583). Since the acquisition, dispersion PVC prices have increased: once in July 1987 by \$.03 a pound and once in January 1988 by another \$.03 a pound (Baker CX 205C ¶ 4). [##] (Hill CX 183D ¶ 8 *In Camera*; Flammer CX 184E ¶9; Boyer CX 185E-F ¶ 11; Baker CX 205C ¶ 4. *See, e.g.*, Pflugrath CX 177D-E ¶¶ 8-9 *In Camera*; Heath CX 178D-E ¶¶ 7-8 *In Camera*; Weimar CX 192E ¶ 11 *In Camera*).

94. The only common factor affecting the price of dispersion PVC resins and other PVC resins is the cost of the major feedstock, vinyl chloride monomer (VCM) (Schaefer JX 1, 583 ln. 13-15; JX 3, PX 6 at 66 ln. 19-68 ln. 3; JX 3, PX 7 at 83; Disch JX 3, PX 8 at 40 ln. 8-18; JX 3, PX 9 at 100 ln. 15-101 ln. 16; JX 3, PX 136 at 123; Kaserman JX 1, 268 ln. 23-269 ln. 13).

95. As a result of its unique physical characteristics, dispersion PVC resin is essential in the production of a variety of coating, molding, and dipping end-use applications (Kaserman JX 1, 262 ln. 20-21; *See* JX 3, PX 9 at 104 ln. 20-22). Suspension PVC homopolymer resin cannot be processed in the way dispersion resin is processed, because suspension resin is not dispersible in a liquid form (Flammer CX 184E-F ¶ 10).

96. Dispersion PVC resin is used to manufacture products grouped in essentially three end-use segments. These segments are: (1) vinyl resilient sheet flooring; (2) coated fabrics and textiles such as carpet tile; and (3) molding and coating applications, including can or bottle coating (Kaserman JX 1, 266-67, JX 3, PX 138; *See* JX 3, PX 8 at 32-41). Vinyl sheet flooring accounts for consumption of between approximately 33% and 40% of the United States market for dispersion PVC resin (Kaserman JX 1, 266-67, JX 3, PX 138; JX 3, PX 8 at 40; JX 3, PX 9 at 92). Bottle closure and sealant applications account for consumption of approximately 16% of dispersion PVC resin, vinyl automotive molded products account for approximately 7% of consumption of dispersion PVC resin, and coated fabrics

account for approximately 25% of United States consumption of dispersion PVC resin (Kaserman JX 1, 266-67; JX 3, PX 138). The remaining consumption of dispersion PVC resin is accounted for by miscellaneous applications (Kaserman JX 1, 266 ln. 19-267 ln. 15; JX 3, PX 138; Disch JX 3, PX 8 at 43 ln. 16-23).

97. [##] (Barlet JX 1, 64 ln. 13-19, 64 ln. 25-65 ln. 13; van Haaren CX 187B-C ¶¶ 5-7 *In Camera*; Baker CX 205B ¶ 2). No other raw material can presently provide these characteristics.

98. [##] (Barlet JX 1, 65 ln. 17-21; van Haaren CX 187C ¶ 6-7 *In Camera*). [##] (Barlet JX 1, 73 ln. 14-74 ln. 11 *In Camera*; Van Haaren CX 187C,E ¶ 7, 9, 15 *In Camera*; Baker CX 205B, D ¶ 2,4). [##] (Barlet JX 1, 68 ln. 9-69 ln. 5; van Haaren CX 187C-D ¶ 7, 9, 13-14 *In Camera*; Baker CX 205B ¶ 2; JX 3, PX 8 at 32 ln. 15-37 ln. 24, 42 ln. 3-17, 44 ln. 3-10; JX 3, PX 9 at 98 ln. 3-7).

99. Can coatings, bottle cap closures, and adhesives and sealants account for about 50 percent of the approximately 160 million pounds of dispersion PVC consumed in molding applications, or approximately 16% of all dispersion PVC consumed in the United States (Kaserman JX 1, 266-67; JX 3, PX 138). Vinyl dispersion PVC coating is the formulation used to perform those applications. The liquid or paste-like coating consists of a formulation of dispersion PVC resin and several other ingredients, including solvents and plasticizers (Lore JX 1, 177). A 5% increase in the price of dispersion PVC resin would not be likely to lead manufacturers to substitute any other raw material for dispersion PVC resin, because the dispersion PVC would continue to be a lower cost material than any present potential substitutes (Lore JX 1, 177 ln. 8-178 ln. 5, 179 ln. 24-180 ln. 25; *See* JX 3, PX 6 at 44 ln. 2-18, 45 ln. 18-21; JX 3, PX 9 at 95 ln. 8-10; JX 3, PX 138). In addition, dispersion PVC coating creates less environmental concerns than do potential substitutes (Lore JX 1, 180).

100. Vinyl backed carpet tile accounts for consumption of 14 million pounds of dispersion PVC annually, or over 10% of dispersion PVC resin used in all coating applications. Vinyl backed carpet tile accounts for approximately 3.2% of all dispersion PVC consumed in the United States (Kaserman JX 1, 266-67; JX 3, PX 138). Carpet tile contains a fixed formulation of dispersion PVC resin to blending PVC resin (Mason JX 1, 193, 194-95). The two

PVC resins complement each other. The carpet tile is fabricated by adding the vinyl backing, which contains dispersion PVC resin to a tile covered with carpet (Mason JX 1, 192-93). A 5% increase in the price of dispersion PVC resin would not be likely to allow a substitution of blending PVC or any other raw material for the dispersion PVC (Mason JX 1, 194 ln. 25-195 ln. 8; Kaserman JX 1, 266 ln. 16-267 ln. 11). The dispersion PVC resin gives the carpet tile properties that cannot presently be duplicated by any other raw material (Mason JX 1, 194 ln. 25-195 ln. 8; Kaserman JX 1, 266 ln. 16-267 ln. 11; *See* JX 3, PX 9 at 95 ln. 11-13; JX 3, PX 138).

101. [##] (Hill CX 183F-G ¶ 17 *In Camera*; Flammer CX 184B-F ¶¶ 4-8, 10; Boyer CX 185B-E ¶¶ 3-9; JX 3, PX 9 at 14 ln. 3-25, 100 ln. 15-101 ln. 16; JX 3, PX 8 at 86 ln. 5-10).

102. [##] (Hill CX 183F-G ¶ 17 *In Camera*; Flammer CX 184D-E ¶ 8; Boyer CX 185B-E ¶¶ 5-9). [##] (van Haaren CX 187D ¶¶ 13-14 *In Camera*; Boyer CX 185E ¶ 9).

103. [##] (Hill CX 183F-G ¶ 17 *In Camera*; Flammer CX 184B-D ¶¶ 4-6; Boyer CX 185B-D ¶¶ 3-8; JX 3, PX 9 at 14 ln. 3-25, 100 ln. 15-101 ln. 16; JX 3, PX 8 at 86 ln. 5-10).

104. [##] (*See* Hill CX 183F-G ¶ 17 *In Camera*; Flammer CX 184B-F; ¶¶ 4-8, 10; Boyer CX 185B-F ¶¶ 3-11). Therefore, from the supply side, it must be found that dispersion PVC resin constitutes a separate relevant product market.

105. Accordingly, it is clear that dispersion PVC resin constitutes a relevant product market (Complaint ¶ 13(c); Answer of Occidental ¶ 5; Harris JX 1, 858 ln. 13-18; JX 3, PX 14 at 2; *See* JX 3, PX 8 at 8 ln. 3-9 ln. 11; JX 3, PX 9 at 13 ln. 23-14 ln. 25, 146 ln. 3-15).

V. THE RELEVANT GEOGRAPHIC MARKET

106. The purpose of a geographic market definition is to establish a geographic boundary separating firms that are important factors in the competitive analysis of a merger from those that are not (*DOJ Merger Guidelines*, Section 2.31, (CCH) ¶ 4,492 at 6,879-10-11).

107. A geographic market delineates a group of buyers and sellers within a geographic space whose interactions on supply and demand determine the price of the product (Kaserman JX 1, 281; Kaserman Dkt. 9159, 2234-35, 2237) A geographic market is

defined to include producers of the merged firm's product who "place a significant constraint on the ability of the merged firm to raise price or restrict output" (*FTC Merger Statement*, (CCH) ¶ 4,516 at 6,901-7).

108. As in the case of product market definition, a relevant geographic market is defined so as to include all firms whose participation in any collusive arrangement among the producers of a product to raise the price of that product would be necessary in order to make the price increase profitable to those producers (*See Kaserman Dkt. 9159, 2235-37, 2241-42*). Therefore, a geographic market delineates an area within which the producers of a product could profit by formation of a collusive arrangement (*Kaserman Dkt. 9159, 2240*).

109. The Commission has determined that "the relevant geographic market must be broad enough that buyers would be unable to switch to alternative sellers in sufficient numbers to defeat an exercise of market power by firms in the area" (*HCA, 106 FTC at 466; See Goodrich, slip op. at 13; Kaserman JX 1, 281*).

110. The responsiveness of import supply to changes in relative prices is a factor to be considered in determining whether the United States or another geographic area constitutes the relevant geographic market for a product (*Kaserman Dkt. 9159, 2237-38, Kaserman JX 1, 283 ln. 13-24 citing Elzinga & Hogarty, The Problem of Geographic Market Delineation in Antimerger Suits, 18 Antitrust Bull. 45 (1973); Elzinga & Hogarty, The Problem of Geographic Market Delineation Revisited: The Case of Coal, 23 Antitrust Bull. 1 (1978); and Horowitz, Market Definition in Antitrust Analysis: A Regression-Based Approach, 48 S. Econ. J. 1 (1981); See also Klass 5135*).

111. The *DOJ Merger Guidelines* and *FTC Merger Statement* provide principles for defining the relevant geographic market. The *DOJ Merger Guidelines* test is similar to the product market test, asking whether a hypothetical monopolist for sales of the product in an area could impose a price increase that would not be undermined by firms outside the area shifting substantial quantities of product into the area. If the seller located in the area can profitably raise prices despite some additional sales into the area from firms outside the area, the area is an appropriate geographic market. *DOJ Merger*

Guidelines, supra, ¶ 4492.301 at 6879-10-11 (See Goodrich, slip op. at 13-14; Kaserman JX 1, 281- 282). The smallest area that satisfies this test, in most contexts on the basis of a five-percent increase in price lasting one year, would be defined under the *DOJ Merger Guidelines* as the relevant geographic market. (*Id.*) "Imports that could profitably enter the market within one year in response to a 'small but significant and nontransitory' price increase should also be included" (Goodrich, slip op. at 14-15; See, e.g., *HCA*, 106 FTC at 466-467).

112. Although direct evidence of the effect of a price increase is sometimes available (*i.e.*, the relationship between price and quantity shipped into the market, *FTC Merger Statement, supra*, ¶ 4516 at 69,601-7), it is often necessary to rely on circumstantial evidence to delineate the geographic market (See Goodrich, slip op. at 14). Such forms of evidence are set out in the *DOJ Merger Guidelines*, the *FTC Merger Statement*, and the Commission's recent opinion in Goodrich. The evidence may include shipping patterns, *DOJ Merger Guidelines, supra*, ¶ 4492.302 at 6879-11, differences in price movements not explained by common cost factors, *Id.*; costs of transportation or distribution, *Id.*; excess capacity outside the area, *Id.*; or price discrimination, *DOJ Merger Guidelines, supra*, ¶ 4492.303 at 6879-11; *FTC Merger Statement, supra*, ¶ 451 at 9601-7 (See Kaserman JX 1, 283-284). As most recently outlined by the Commission: "Surrogates such as persistent price differences; price change differences; similarities or differences in price movements; impediments to trade, such as transportation costs that are high relative to product value; shipment patterns and transshipment levels; and industry perceptions therefore may be used" (Goodrich, slip op. at 14).

113. The established shipping pattern is particularly probative evidence of a geographic market, *Id.* Some scholars have suggested that an area is a geographic market if imports account for less than 25 percent of consumption in the area (and exports account for less than 25 percent of production in the area). The area is a "strong market" if imports and exports are less than 10-percent. Elzinga & Hogarty, *The Problem of Geographic Market Delineation Revisited: The Case of Coal*, 23 Antitrust Bull. 1, 2 (1978); Elzinga & Hogarty, *The Problem of Geographic Market Delineation in Antimerger Suits*, 18 Antitrust Bull. 45, 75 (1973) (See Kaserman JX 1, 283).

114. There is direct evidence in the instant case that the United States is the appropriate geographic market for each of the relevant PVC products in question. *See* Goodrich, slip op. at 15. Dr. Kaserman, the Commission's economic expert, analyzed the relationship between United States PVC prices and shipments into the market (imports). Dr. Kaserman found that United States producers would lose a relatively small share of their sales to imports of PVC resins as producers increased their price (Kaserman 296 ln. 20-303 ln. 19; *See also* JX 3, PX 141). Based on a regression analysis, Dr. Kaserman found that the long-run effect of a 10-percent increase in the domestic resin price would be a 20-percent increase in PVC resin imports.

115. Because imports, at the time of Dr. Kaserman's analysis, accounted for about 5 percent of the overall PVC sales in the United States, a 10 percent increase in domestic prices would indicate to him that the volume of imports would increase from about 5 to 6 percent of the market (*See* Kaserman 300 ln. 5-18; 301 ln. 12 - 302 ln. 2; CX 172C). This means that, under his analysis, domestic producers would find it profitable to raise their price, as they would only lose about 1 percent of their overall sales if they raised prices by 10 percent (Kaserman 300 ln. 11 - 301 ln. 5, 301 ln. 12-302 ln. 2, 303 ln. 1-11; Harris 860 ln. 15-17; JX 3, PX 141; *See* JX 3, PX 6 at 152 ln. 6-16).

116. [##] (*See* JX 4, DX 13 *In Camera*). Tenneco's December 1985 analysis was relied on by respondents' economic expert in his district court injunction testimony (Harris JX 1, 846 ln. 7 - 848 ln. 3, 886 ln. 21 - 892 ln. 5). [##] (JX 4, DX 13 at 9 *In Camera*). [##] (JX 4, DX 13 at 2 *In Camera*). [##] (JX 4, DX 13 at 3 *In Camera*). The value of the dollar has in reality sharply declined since 1985 (CX 172B-D), leading to a decrease in imports of PVC resin as both the Tenneco study and Dr. Kaserman's analyses would predict.

117. During the 12-month period December 1986 through November 1987, imported PVC resin accounted for 1.5 percent of overall United States PVC supply (CX 158D; CX 212C; CX 147R-Z5; CX 211A-D; Sherman CX 171D ¶ 8; CX 173C). Thus, applying Dr. Kaserman's analysis to the PVC industry today, a 20-percent increase in imports, associated with a 10-percent increase in PVC prices, would increase imports from about 1.5 percent to 1.8 percent of overall United States sales. This means that domestic

producers would find, and indeed have found, it profitable to raise the prices of each of the relevant PVC products, as they would lose only 0.3 percent of their overall sales if they raise prices by 10-percent. Domestic PVC producers would find, and have found, it profitable to raise PVC prices because the low market share of imports in combination with the low responsiveness of imports would not be sufficient to undermine a domestic price increase (Kaserman JX 1, 300 ln. 19-301 ln. 5). Thus, as the Commission found in Goodrich, imports of PVC resin do not, absent extraordinary circumstances, constrain domestic prices (Goodrich, slip op. at 38).

A. Mass and Suspension PVC

118. In Goodrich, the Commission found that the United States as a whole is the relevant geographic market for mass and suspension PVC. The Commission's finding is consistent with the record evidence and confirms the stipulation made by the parties (Goodrich, slip op. at 15; *See* Kaserman JX 1, 291-292).

119. Prices of mass and suspension PVC have increased significantly since the time of the acquisition. Mr. Schaefer, a Vice-President of Occidental, testified that mass and suspension PVC prices were about 23 cents per pound in November 1984 (Schaefer JX 1, 579 ln. 5-17), and that prices had risen to the 28-cent to 30-cent range by the time of the acquisition (Schaefer JX 1, 579 ln. 18-20). [##] (Donnelly CX 176A-B ¶ 2 *In Camera*; Heath CX 178D-E ¶ 7 *In Camera*; Alberti CX 199B ¶ 3 *In Camera*; Wilhite CX 179B ¶ 2 *In Camera*; Pflugrath CX 177D ¶ 7 *In Camera*; Clark CX 193B-C ¶ 3 *In Camera*). Despite the strong price increases sustained in the industry, the level of imports has declined from the four to five-percent range of 1984-1985 (Schaefer JX 1, 580 ln. 4-9, 582 ln. 14-15), to a market share of 1.5 percent during the most recent 12-month period in the evidentiary record (CX 158D; CX 212C; CX 147R-Z5; CX 211A-D; Sherman CX 171C-D ¶ 7; *See* CX 173A-D).

120. Mass and suspension PVC imports have been, and continue to be, only a minor factor in the marketplace. This fact is recognized by Occidental management. Steven Schaefer, Senior Vice President, PVC Products, Occidental Chemical Corporation, observed, in

December 1984, when the level of PVC imports was substantially higher than it is today:

They are there. They exist. They will probably continue to exist but they are not a dominant force in the marketplace by any stretch in my view.

(JX 3, PX 10 at 1129 ln. 24 - 1130 ln. 4; Schaefer JX 1, 575 ln. 20-576 ln. 5; *See* JX 3, PX 52; JX 3, PX 131 at 1335-1336; Beveridge JX 1, 89 ln. 11-12; Goodrich, slip op. at 38).

121. Other witnesses testified in the Goodrich proceeding that imports of mass and suspension PVC do not, and are not likely to, operate as a significant constraint on prices for mass and suspension PVC in the United States (Taylor Dkt. 9159, 1591-92; Arp Dkt. 9159, 3557; Schaefer Dkt. 9159, 1131; McMath Dkt. 9159, 1924). Accordingly, the Commission concluded in that case that mass and suspension PVC imports do not significantly constrain the pricing discretion of producers in the United States (Goodrich, slip op. at 38). Moreover, as discussed, *infra*, imports are even less of a factor today than they were at the close of the record in Goodrich.

122. [##] (Lewis CX 204B ¶ 4 *In Camera*; Pflugrath CX 177C ¶ 5 *In Camera*; Wilhite CX 179D ¶ 4 *In Camera*; Goldstein CX 180C ¶ 4 *In Camera*; Clark CX 193D-E ¶ 6 *In Camera*; Bendavid CX 194C-D ¶ 5 *In Camera*; Gmach CX 200D ¶ 4 *In Camera*). [##] (Rutland CX 196B ¶ 5 *In Camera*). [##] (Donnelly CX 176F-G ¶ 6 *In Camera*). [##] (CX 137B *In Camera*; *See also* RX 198 *In Camera*). It is thus expected that the United States will be, for the remainder of the decade, a net exporter of PVC (CX 43L).

123. The evidence regarding shipping patterns also shows that the United States mass and suspension PVC market is a strong geographic market. Imports accounted for about five percent of mass and suspension supply in 1985 (Schaefer JX 1, 580 ln. 4-9; JX 3, PX 141; Kaserman JX 1, 294 ln. 6-12; Schaefer JX 1, 576 ln. 8-16; *See* Harris JX 1, 860 ln. 15-17), and exports were less than imports (Schaefer JX 1, 577 ln. 7-11; JX 3, PX 9 at 66 ln. 4-16). Imports of PVC resin today account for only 1.5 percent of overall PVC resin consumption (CX 158D; CX 212C; CX 147R-Z5; CX 211A-D; Sherman CX 171C-D ¶ 7).

124. [##] (*See* McMath Dkt. 9159, 1924; Taylor Dkt. 9159, 1590; Arp Dkt. 9159, 3557; Dkt. 9159 CX 66C, F, I, L, O, R, U, X, ZI, Z4, Z13, Z16, Z25, Z28, Z31, Z41, Z44, Z47, Z56 *In Camera*). The Commission stated in that case that imports are only a "small proportion of domestic PVC consumption..." (Goodrich, slip op. at 37-38). Published import statistics do not disaggregate PVC resin imports by type (*See* CX 147A-Z5). It is clear, however, that since 1985, total PVC imports have declined steadily (CX 173A). In 1986, PVC imports of all types accounted for 2.7 percent of total PVC supply in the United States (CX 172C). In the period December 1986 through November 1987, imports of all types of PVC accounted for 1.5 percent of total United States PVC supply (CX 158D; CX 212C; CX 147R-Z5; CX 211D). Moreover, imports in the second half of 1987 were less than one-half the level in the first six months of the year. In the first six months of 1987, PVC imports of all types accounted for 2.1 percent of total PVC supply (CX 147Z1; CX 152C; CX 172C; CX 173A). In the second half of 1987, based upon the five months for which data are in the record, total PVC imports accounted for under one percent of total United States PVC supply (compare CX 211D and CX 212C with CX 147Z1 and CX 152C; *See* CX 172C; CX 173A).

125. The graphs below, prepared by the Commission's Dr. Sherman from published trade and production statistics, depict, by calendar quarter for the period extending from the first quarter of 1982 through the third quarter of 1987, respectively: (1) the level of PVC imports in relation to the level of United States production of PVC (CX 172A); and (2) the level of PVC imports as a percent of the total United States supply (*i.e.*, production plus imports) of PVC (CX 173A). [##]

126. The sharply lower level of PVC imports since mid 1987 may be attributable to a change in applicable United States tariffs and is not likely to be reversed by normal market forces (CX 141A- B). Duty-free imports of PVC from Mexico accounted for 45.1 percent of total United States PVC imports in 1986, and 59.5 percent of total United States PVC imports in the period January through July 1987 (CX 147R; CX 147Z2). Elimination of duty-free status for Mexican PVC imports in August 1987 (CX 141A-B), has terminated this former low-cost source of PVC supply, and has reduced total PVC

imports from Mexico to a small amount (CX 147Z3-Z5; CX 211A-D).

127. In 1985, forty-five percent of United States PVC imports were from Canada (JX 3, PX 5; *See* Kaserman JX 1, 244-245). [##] (Goodrich, slip op. at 38; Kaserman JX 1, 294 ln. 20-295 ln. 13; Kaserman Dkt. 9159, 2248-49; JX 3, PX 140 *In Camera*; Dkt. 9159 CX 2990-P *In Camera*; Dkt. 9159 CX 92K; Dkt. 9159 RX 190D *In Camera*). These countries are the principal sources of imports of mass and suspension PVC into the United States (Goodrich, slip op. at 38; Kaserman Dkt. 9159, 2248; Taylor Dkt. 9159, 1687; CX 43L-M; Dkt. 9159 CX 601AZ8). [##] (Goodrich, slip op. at 38; Kaserman JX 1, 294 ln. 20-295 ln. 13; DiLiddo Dkt. 9159, 3381; Dkt. 9159 CX 1850 *In Camera*). [##] (JX 3, PX 140, Tables 1 through 10 *In Camera*).

128. [##] (*See* Pflugrath CX 177C-D, ¶ 6 *In Camera*).

129. It is Occidental's position that, although PVC imports have declined, world-wide excess capacity presents a competitive threat to United States PVC producers (*See* RPF 95, 100). [##] (Stuart RX 245C ¶ 8 *In Camera*; Marcus RX 242D ¶ 8 *In Camera*). Foreign mass and suspension PVC production capacity does not have a significant impact on the United States marketplace. Mr. Steven Schaefer, Senior Vice President, PVC Products, Occidental Chemicals has testified: "I don't believe it [the overcapacity situation] has a very significant role" (JX 3, PX 10 at 1208 ln. 4-8; Schaefer JX 1, 576 ln. 17-577 ln. 6). [##] (CX 137B *In Camera*; RX 198E *In Camera*; RX 212; Lull RX 1 E ¶ 12 *In Camera*).

130. Another indication that foreign capacity utilization and PVC production is of small importance to competition in the U.S. market is the fact that Occidental does not track PVC output outside the United States (Schaefer JX 1, 577 ln. 12-578 ln. 25). And, it appears that the reason Occidental does not track output outside the United States is because it is not relevant to its business (Schaefer JX 1, 578 ln. 19-579 ln. 4). Indeed, in 1986, Occidental's PVC management canceled Occidental's subscription to *Tecnon Reports*, a British-based trade publication which monitors world PVC developments (CX 218 [March 4, 1988 letter from Henry L. Huser to Rhett R. Krulla, cc: The Honorable Thomas F. Howder]; *See* RX 288-RX 310). Occidental's Chlor-Alkali and Chlorine Group continues to subscribe to

Tecnon Reports and to *Harriman Reports*, another British-based trade publication which tracks world PVC activities (See CX 217A-H), but, according to Occidental counsel, Occidental only uses these publications for their chlor-alkali and chlorine sections and the publications are not used by or transmitted to Occidental's PVC personnel (CX 218).

131. [##] (Stuart RX 245C ¶ 8 *In Camera*; Marcus RX 242D ¶ 8 *In Camera*). [##] (RX 1Q *In Camera*; See CX 7; CX 169C). [##] (CX 7; CX 169C; RX 198 *In Camera*). [##] (RX 198F *In Camera*). [##] (CX 137C *In Camera*). Given these factors, it appears that PVC capacity outside of the United States does not act as a constraint on the exercise of market power in the United States.

132. [##] (Schaefer JX 1, 587 ln. 21-589 ln. 14; JX 3, PX 10 at 1208 ln. 4-24; JX 3, PX 136 at 147 ln. 11-21; 148 ln. 7-149 ln. 9; CX 132; CX 10 *In Camera*; CX 11 *In Camera*; See Kaserman JX 1, 245-246). The graph below tracks domestic and export prices for suspension PVC homopolymer, as reported in RX 288 through RX 310. [##]

133. Until July 1987, United States PVC producers continued their practice, recognized in the prior Goodrich proceeding, of exporting mass and suspension PVC resin at prices substantially below the prevailing domestic price level (RX 288-RX 310). As the dollar has declined in value relative to foreign currencies, U.S. export prices have been rising relative to domestic prices, but remained below domestic prices through June 1987. By September 1987, the continuing decline in the value of the dollar enabled United States PVC producers to charge a premium for export sales. In this climate, United States PVC producers no longer need to accept a lower price in order to divert PVC supplies from the domestic market. United States PVC producers continue to discriminate in price between the United States market and export markets, however, now charging foreign purchasers more than domestic purchasers. The fact that domestic prices are distinct from, and move independently of, export prices, is further evidence that the United States is a relevant geographic market (See Goodrich, slip op. at 14; Kaserman JX 1, 295-296).

134. The fact that United States producers of mass and suspension PVC resin are able to discriminate in price between

United States buyers and foreign buyers of the resin is evidence that the appropriate geographic market is the United States, and not a world market (Kaserman JX 1, 295 ln. 14-296 ln. 4; *See also* Harris JX 1, 915 ln. 14-917 ln. 12). Price discrimination across geographic areas means that producers are charging a different price for the same product in different markets. Such price differences cannot be sustained if these different geographic areas are, in fact, in the same market. Thus, in order to practice price discrimination geographically, it is necessary to have separate geographic markets (Kaserman JX 1, 295 ln. 14-296 ln. 4; *DOJ Merger Guidelines, supra*, ¶ 4492.303 at 6879-11).

135. [##] (Lewis CX 204B ¶ 4 *In Camera*). [##] (CX 112C *In Camera*; CX 113A *In Camera*; JX 3, PX 94; *Cf.* RX 206A *In Camera*). These facts also suggest that producers of mass and suspension PVC homopolymer resin do not consider imported resin to be a significant factor in the United States market.

136. Changes in exchange rates may cause historic import sales and shipment data to overstate the future competitive significance of foreign firms (*DOJ Merger Guidelines*, Section 3.23, (CCH) ¶ 4,493 at 6,879-15; *See also* Klass Dkt. 9159, 5203). [##] (Stevens JX 3, PX 9 at 66 ln. 25 - 67 ln. 7; Donnelly CX 176F ¶ 6 *In Camera*; Goldstein CX 180B ¶ 4 *In Camera*; Dellevigne CX 188D ¶ 11 *In Camera*; Rutland CX 196B ¶ 5 *In Camera*; *See* Klass Dkt. 9159, 5201, 5202).

137. As observed by Dr. Klass in the Goodrich case, the strength of the dollar has had a significant effect on the level of imports (Klass Dkt. 9159, 4222). In order to corroborate witness testimony on this issue, Dr. Klass quantified the changes in the value of the dollar in the years preceding 1985 by tabulating the index of weighted average exchange values of the U.S. dollar on the basis of data reported in the *Federal Reserve Bulletin* (Klass Dkt. 9159, 5175-76, 5179-80; *See* Dkt. 9159 CX 250; *See* Klass Dkt. 9159, 5641, 5645-46). Federal Reserve System data show that, from the third quarter of 1980 to the third quarter of 1984, the United States dollar increased in value by 66 percent, as measured by the Federal Reserve's index of weighted average exchange value (compare Dkt. 9159 CX 776E and Dkt. 9159 CX 777E (Tables 3.28, Foreign Exchange Rates, July-Sept.); *See* Dkt. 9159 CX 250; Klass Dkt. 9159, 5192-94; *See* Klass Dkt. 9159, 5653-55, 5659-60). All else

being equal, this represents a 66 percent increase in the price of mass and suspension PVC in the United States relative to foreign PVC resin prices over this time period (Goodrich, slip op. at 37; Klass Dkt. 9159, 5195). [##] (Goodrich, slip op. at 37; Klass Dkt. 9159, 5200-01; *See* Dkt. 9159 RX 1174A (PVC import volumes); CX 664U *In Camera*; CX 778C (PVC production); Klass Dkt. 9159, 5196-97).

138. As explained by Dr. Klass, these data indicate the supply response of imports to changes in United States mass and suspension PVC resin prices (Klass Dkt. 9159, 4229). In effect, a 66 percent increase in the relative price of mass and suspension PVC in the United States was associated with a 2.9 percent loss of market position by domestic producers to foreign competition through imports (*See* Klass Dkt. 9159, 4150). Had this price increase resulted from concerted action by United States producers of mass and suspension PVC, rather than changes in foreign exchange rates, the price increase clearly would have been profitable to the colluding producers, in light of the observed magnitude of the import response. A 66-percent increase in price accompanied by a 2.9-percent loss of volume sold would yield a net increase in revenues of 61 percent. Price increases in mass and suspension PVC result in little loss of volume by domestic producers to imports, even though, when viewed in comparison to the minuscule level of imports, the threefold increase in imports may appear large. This is because, as acknowledged by Dr. Klass, when the fraction of total consumption accounted for by imports is small, the elasticity of demand faced by collusive firms in the market may be low, notwithstanding a high elasticity of imports (Klass Dkt. 9159, 5156; *See* Klass Dkt. 9159, 5136-43).

139. This evidence demonstrates that, if United States producers of mass and suspension PVC were able to coordinate their actions so as to increase mass and suspension PVC resin prices, the resulting loss of market share by the collusive group to import competition would have little effect on the profitability of the price increase. This conclusion is further supported by the more recent analyses of PVC imports conducted by Dr. Kaserman and by Dr. Sherman (Kaserman JX 1, 282, 300-302; Kaserman Dkt. 9159, 300 ln. 5 - 302 ln. 12; *See* JX 3, PX 141; Sherman CX 171B-E ¶¶ 4-11; CX 174A-D).

140. The record regarding the responsiveness of imports confirms that imports are not sufficiently responsive to changes in mass and suspension PVC resin prices to defeat collusive action by United States producers. Whether imports are likely to constrain pricing actions by United States producers of mass and suspension PVC is dependent upon the responsiveness of imports to changes in United States prices relative to foreign price levels. As explained by Dr. Klass, the evidence of what has happened to imports in relation to changes in the value of the dollar is relevant to assessing the likely effect of a long term sustained increase in mass and suspension PVC prices (Klass Dkt. 9159, 4150). An increase in the value of the dollar relative to foreign currencies is equivalent in effect to a corresponding increase in United States prices for mass and suspension PVC in relation to foreign mass and suspension PVC (Klass Dkt. 9159, 4222-23, 5179; *See* Dkt. 9159 Klass 5169-70).

141. The strong relationship between the level of PVC imports (both in pounds and as a percent of total United States supply) and the value of the dollar can be charted in the graph below (CX 174A). The volume of imports has closely tracked the exchange value of the dollar from 1982 through 1987. Imports attained their peak penetration (6.7 percent - *See* CX 174D) into the domestic market in early 1985, a time at which the U.S. dollar had appreciated nearly 50 percent against other currencies.⁹ Since that time, PVC imports have fallen to less than one percent of U.S. supply, as the dollar has attained values beneath its 1982 levels (CX 174D). [##]

142. As discussed below, reliance by customers on imported mass and suspension PVC resin is limited by several factors, including import duties, high handling costs, and logistical and quality problems associated with imported resin.

143. Imported PVC resin faces substantial duties in the United States, pursuant to The Tariff Act of 1930, 19 U.S.C. 1202, Part 4. The current duty on imported PVC resin of 10.1 percent (*See* CX 147A-Z5) significantly increases the price of imported PVC resins. For example, resin priced at 40 cents per pound overseas would have

⁹ Imports earlier reached a peak of 6 percent of U.S. supply in early 1984 after domestic PVC prices rose sharply following freezing weather conditions that forced the shutdown of several domestic PVC plants (Goodrich, slip op. at 37).

an added duty in the United States of 4 cents. Mexico has recently lost its designation as a "beneficiary developing country," terminating the duty-free status of imports, including PVC resins, from Mexico (CX 141A-B): With this change, customers have found that the price of Mexican resin, before handling and other costs are added, is higher than the price of resin in the United States (*See* CX 14). [##] (Pflugrath CX 177C ¶ 5 *In Camera*; Underwood CX 203C ¶ 5 *In Camera*).

144. The high handling costs associated with shipments of mass and suspension PVC from overseas also represent a barrier to trade flows into the United States. Imports from overseas must be shipped in bags while domestic mass and suspension resin is transported in bulk by rail tank car. The costs to users of handling bag shipments are substantial and are estimated to amount to between three and seven cents per pound (Goodrich, slip op. at 38; *See* Kaserman JX 1, 293). [##] (Pflugrath CX 177C ¶ 5 *In Camera*; Wilhite CX 179D ¶ 4 *In Camera*; Clark CX 193D-E ¶ 6 *In Camera*; Alberti CX 199E ¶ 7 *In Camera*; Weimar RX 249A-B ¶ 3 *In Camera*; Kaserman Dkt. 9159, 2248; H. Wheeler Dkt. 9159, 1776-77; Taylor Dkt. 9159, 1592; Yu Dkt. 9159, 2158-59).

145. [##] (Pflugrath CX 177C Q5 *In Camera*; Wilhite CX 179D ¶ 4 *In Camera*; Goldstein CX 180C-D ¶ 4 *In Camera*; Clark CX 193D-E ¶ 6 *In Camera*; Bendavid CX 194C-D ¶ 5 *In Camera*; Alberti CX 199E ¶ 7 *In Camera*; Gmach CX 200D ¶ 4 *In Camera*; Lewis CX 204B ¶ 4 *In Camera*; Dellevigne CX 188D ¶ 11 *In Camera*; Weimar CX 192F ¶ 14 *In Camera*; Weimar RX 249A-B ¶ 3 *In Camera*; Kaserman JX 1, 293 ln. 6-17; Friedman JX 1, 134 ln. 9 - 135 ln. 18). [##] (CX 15 *In Camera*; *See also* Alberti CX 199E ¶ 7 *In Camera*; Clark CX 193E ¶ 6 *In Camera*; Bendavid CX 194C-D ¶ 5 *In Camera*; Weimar RX 249A-B ¶ 3 *In Camera*). [##] (Goldstein CX 180C ¶ 4 *In Camera*; Gmach CX 200D ¶ 4 *In Camera*; Lewis CX 204B ¶ 4 *In Camera*). [##] (Lewis CX 204B ¶ 4 *In Camera*). The high handling cost and logistical and quality problems associated with bag shipments of mass and suspension PVC limits the feasibility of imports as a practicable source of supply for the major users of mass and suspension PVC in the United States and represents a barrier to trade flows (Yu Dkt. 9159, 2158-59; *See FTC Merger Statement*, (CCH) ¶ 4,516 at 6901-7).

146. [##] (Pflugrath CX 177C ¶ 5 *In Camera*; Heath CX 178C ¶ 5 *In Camera*; Wilhite CX 179D ¶ 4 *In Camera*; Clark CX 193D-E ¶ 6 *In Camera*; Bendavid CX 194C ¶ 5 *In Camera*; Alberti CX 199E ¶ 7 *In Camera*; Gmach CX 200D ¶ 4 *In Camera*; Underwood CX 203C ¶ 5 *In Camera*; Goldstein CX 180C ¶ 4 *In Camera*).

147. Thus, it is found that the United States is an appropriate geographic market for mass and suspension PVC (Complaint ¶ 14; Goodrich, slip op. at 15, 37-38; Kaserman JX 1, 303 ln. 12-19; CPF 122).

B. Suspension PVC Copolymer

148. [##] (Kaserman JX 1, 284 ln. 5-21; Harris JX 1, 863 ln. 6-13; Beveridge JX 1, 85 ln. 11-18; JX 3, PX 8 at 91 ln. 14-25; JX 3, PX 9 at 28 ln. 6-23; Hill CX 183D ¶ 9 *In Camera*; Boyer CX 185F ¶ 14; Dellevigne CX 188D 11 *In Camera*; Silver CX 190D *In Camera*; Weimar CX 192F ¶ 14 *In Camera*; Weimar RX 249A-B ¶ 3 *In Camera*; Marcus CX 209D ¶ 8 *In Camera*; Mercer CX 119I-J). [##] (Marcus CX 209D ¶ 8 *In Camera*). Accordingly, the Commission has earlier concluded in Goodrich that, absent extraordinary circumstances, imports do not constrain domestic prices (Goodrich, slip op. at 38).

149. [##] (Weimar JX 1, 34 ln. 21-35 ln. 2; Weimar CX 192F ¶ 14 *In Camera*; Weimar RX 249A-B ¶ 3 *In Camera*; Beveridge JX 1, 87 ln. 1-4). [##] (Weimar CX 192F ¶ 14 *In Camera*; Weimar RX 249B ¶ 3 *In Camera*).

150. [##] (Silver CX 190D *In Camera*). [##] (Weimar RX 249A-B ¶ 3 *In Camera*), [##] (Weimar CX 192E ¶ 9 *In Camera*) [##]

151. [##] (Weimar CX 192F ¶ 14 *In Camera*). [##] (Weimar CX 192F ¶ 14 *In Camera*)¹⁰ [##] (Weimar CX 192E ¶ 9 *In Camera*), [##] (Weimar RX 249B ¶ 3 *In Camera*). [##] (CX 119I-J *In Camera*; JX 3, PX 9 at 28 ln. 15-23). [##] (CX 136 *In Camera*; See JX 3, PX 140, Table 20 *In Camera*). [##] (Marcus CX 209D ¶ 8 *In Camera*).

¹⁰ The record does not reveal whether the purchases of resin from Mexico, referred to in Mr. Weimar's cross-examination affidavit (Weimar RX 249A-B ¶ 3), were made prior or subsequent to the imposition of these duties.

152. As a result of these factors, it is unlikely that a significant increase in the price of copolymer resin by United States producers would lead to significant increases in the amount of imported copolymer resin (Kaserman JX 1, 287 ln. 22-288 ln. 14 Beveridge JX 1, 87 ln. 19-24).

153. Because it is unlikely that purchasers could easily turn to imported copolymer resin as a regular source of supply, and because it is unlikely that an increase in the price of suspension VC copolymer would lead to significant increases in the amount of imported fabricated products (discussed *infra*), it is likely that copolymer producers could profitably implement an increase in the price of copolymer resin of some 5 percent without being undermined by imports (Kaserman JX 1, 287 ln. 5-13; JX 3, PX 136 at 60 ln. 21-61 ln. 10).

154. Thus, it is found that the United States is an appropriate geographic market for suspension PVC copolymer (Kaserman JX 1, 303 ln. 12-19).

C. Dispersion PVC

155. [##] (JX 3, PX 140, Table 24 *In Camera*). [##] (JX 3, PX 76 at 351556), [##] (*See* JX 3, PX 140, Table 24 *In Camera*). Based on these estimates, the United States constitutes a "strong" geographic market for dispersion PVC (JX 3, PX 7 at 119 ln. 23-120 ln. 2; Kaserman JX 1, 289 ln. 12-25; Harris JX 1, 864 ln. 5-17).

156. [##] (JX 3, PX 140, Table 15, Table 24 *In Camera*). As a leading participant in the both the United States and the North American markets for dispersion PVC, it is unlikely that Goodrich would disrupt a collusive agreement among dispersion PVC producers (*See* Goodrich, slip op. at 38).

157. The share of total United States consumption accounted for by dispersion PVC imports is likely significantly lower today than 8 percent. Occidental's own analysis shows a decline in the level of imports of dispersion PVC in each year since 1984, and projected that 1986 imports would be 13.6 percent below the level in 1985 (JX 3, PX 76 at 351556). The continuing decline in the value of the dollar since the beginning of 1985 has made foreign dispersion PVC significantly more expensive for United States purchasers and has

caused import levels to decline more rapidly than had been projected (See CX 174A; JX 3, PX 9 at 58-59). Because dispersion PVC is priced higher than most types of PVC, the decline in the value of the dollar would impact the cost of dispersion PVC resin imports, on a cent-per-pound basis, more severely than other types of PVC resin. PVC imports of all types in the period December 1986 through November 1987 totaled 121.6 million pounds, reflecting a 68-percent decline from the level experienced in the peak year 1985 (CX 172C; CX 147R; CX 211D). Tenneco's PVC sales manager observed, in early 1986, that "over the past six months we have seen a drying up of [dispersion PVC] imports as the dollar value has declined" (Stevens JX 3, PX 9 at 59). [##] (See CX 172C; CX 147R; CX 211D; JX 3, PX 140, Table 24 *In Camera*).

158. [##] (JX 3, PX 140, Table 12 *In Camera*). [##] (JX 3, PX 140, Table 13, Table 14 *In Camera*). [##] (See Baker, RX 251C ¶ 6; Russ, RX 316B ¶ 4 *In Camera*). Total PVC industry production in 1987 was 17.7 percent higher than industry production in 1985 (compare CX 213C (7,971 million pounds in 1987) and CX 172C (6,771 million pounds in 1985)). If dispersion PVC production increased between 1985 and 1987 in proportion to the increase in production for the PVC industry as a whole, 1987 dispersion PVC production would be approximately 490.1 million pounds ($416.4 * 117.7\%$). Based on this estimate, the dispersion PVC imports of approximately 11.6 million pounds, accounted for approximately 2.3 percent of total dispersion PVC supply ($11.6 / (490.1 + 11.6)$). This estimate suggests that total market demand for dispersion PVC grew at an annual rate of 5.3 percent (501.7 million pounds in 1987 vs. 452.5 million pounds in 1985). If market demand, in fact, remained unchanged between 1985 and 1987, domestic production would have only increased to 440.9 million pounds, with the increase in domestic production just offsetting the decline in dispersion PVC imports. In this event, 1987 dispersion PVC imports may account for as much as 2.6 percent of total dispersion PVC market supply ($11.6 / 452.5$). In any event, imports account for an insignificant share of the United States dispersion PVC market.

159. Imported dispersion PVC resin does not significantly affect the price of dispersion PVC resin sourced in the United States (JX 3, PX 136 at 145 ln. 12-15; Kaserman JX 1, 290 ln. 2-291 ln. 12;

Schaefer JX 1, 583 ln. 10-584 ln. 11). Mr. Schaefer testified that he believed dispersion PVC resin imports have had little effect on the price of dispersion resin in the United States (JX 3, PX 136 145 ln. 12-15). Mr. Disch identified only United States producers as his competitors in dispersion PVC in the United States market (JX 3, PX 8 ln. 6-10). Mr. Stevens noted that competition among United States suppliers of dispersion PVC resin is the principal determinant of dispersion PVC prices in the United States (JX 3, PX 9 at 63 ln. 13-17). Similarly, Mr. Boyer of Formosa testified that imported dispersion PVC resin is "not currently a significant source of supply in the domestic market for dispersion PVC resin . . ." (Boyer CX 185F ¶ 13). [##] (*See* RX 206 *In Camera*; RX 163 *In Camera*).

160. [##] (*See* Van Haaren CX 187D ¶ 11 *In Camera*; Baker CX 205B ¶ 3; Beveridge JX 1, 89 ln. 11-14). Sheet flooring accounts for the largest percentage, approximately 40 percent, of total dispersion PVC resin demand (JX 3, PX 8 at 43 ln. 16-21). [##] (*See* Lore JX 1, 182 ln. 11 - 23), [##] (Boulay CX 189C-D ¶ 8 *In Camera*; JX 3, PX 8 at 44 ln. 14-18). Mr. Disch estimated that approximately 40-50 percent of the dispersion resin customers in the United States, primarily in the coating and the flooring industries, would find it very difficult to use imported resin (JX 3, PX 8 at 44 ln. 3-13; *See* JX 3, PX 9 at 56-57). Mr. Stevens similarly testified that imported resin has been used primarily in low-end dispersion PVC markets, such as traffic cones, in which "there is very little technology involved" (JX 3, PX 9 at 55 ln. 20-23, 56 ln.14-18).

161. Imported dispersion PVC resin is used primarily in low-end, or non-critical applications. These applications include applications such as slush-molding of products such as toys or balls (JX 3, PX 8 at 14-20). In these applications, the quality of the dispersion resin used is lower than the quality of the dispersion resin used in more critical applications such as flooring (JX 3, PX 8 at 44 ln. 21 - 45 ln.8; JX 3, PX 9 at 56-57). PVC producers price dispersion resins sold for more critical applications higher than dispersion resins sold for low-end applications (JX 3, PX 8 at 45 ln. 9-14). Mr. Disch testified that, with increases of 5-10 percent in the price of dispersion PVC resin in the United States, there would be some substitution of imported for domestic dispersion PVC resin in these applications (JX 3, PX 8 at 43 ln. 1-15). [##] (*See* CX 39 *In Camera*; CX 40 *In*

Camera; CX 41 *In Camera*; CX 42 *In Camera*). [##] (*Id.*) [##] (Baker CX 205C ¶ 4; Baker RX 251B ¶ 4 *In Camera*). Dispersion PVC imports failed to constrain these price increases. The successful implementation of these increases, as indicated by the overall increase that has occurred in the price of dispersion PVC resin, demonstrates that imported dispersion PVC resin has little influence on the United States price level, even with respect to the low-end applications.

162. [##] (Beveridge JX 1, 89 ln. 24 - 90 ln. 6; Mason JX 1, 196 ln. 12 - 197 ln. 5; Boulay CX 189C ¶ 8 *In Camera*). [##] (Beveridge JX 1, 89 ln. 11-12, 89 ln. 24-90 ln. 6; Lore JX 1, 182 ln. 11-13; Mason JX 1, 196 ln. 14-15; Boulay CX 189C ¶ 8 *In Camera*; Baker CX 205C-D ¶ 3).

163. [##] (JX 3, PX 9 at 56 ln. 19-57 ln. 3; Beveridge JX 1, 89 ln. 4-10; van Haaren CX 187D ¶ 13-14 *In Camera*).

164. [##] (Kaserman JX 1, 290 ln. 1 - 291 ln. 12; Boulay CX 189C ¶ 8 *In Camera*; Baker CX 205B ¶ 3; Mason JX 1, 196 ln. 14 - 197 ln. 17; van Haaren CX 187F ¶ 15 *In Camera*).

165. Accordingly, it is found that the United States is an appropriate geographic market for dispersion PVC (Kaserman JX 1, 303 ln. 12-19).

D. Fabricated Product Imports

166. As discussed below, imports of fabricated products do not constrain prices in the relevant markets.

167. One element to be considered regarding the likely response of fabricated good imports in response to increased PVC prices in the United States is the cost share of PVC in the final product (*i.e.*, the percentage of the product manufacturing cost accounted for by PVC). If the cost share is low, increased resin prices have a very small effect on the ultimate price of the final product, and therefore are not likely to result in increased imports of fabricated products (Kaserman JX 1, 287 ln. 7-13).

168. The cost share of PVC in fabricated products in each of the relevant product markets is low (Goodrich F 96; Kaserman JX 1, 287 ln. 14-18, 291 ln. 13-24; Goodrich, slip op. at 73-75). As a result, increased PVC resin prices in the United States would be unlikely to

result in a substantial increase in the level of fabricated product imports into the United States (Kaserman JX 1, 291 ln. 13-24).

169. Respondents argued in Goodrich that mass and suspension PVC pricing is constrained by the level of fabricated products containing mass and suspension PVC (Dkt. 9159 RPF 270-271). Evidence in that case, however, established that fabricated product imports were limited primarily to calendered products (*See* Dkt. 9159 RX 1178A-B), an application which constituted only a very small portion of total United States consumption of mass and suspension PVC (Goodrich, slip op. at 75). Even in this application, however, the level of fabricated product imports is not responsive to the price of mass and suspension PVC resin, because PVC accounts for only a small portion of the cost of finished PVC calendered goods (*i.e.*, less than 10 percent, *See* Becker Dkt. 9159, 1308-09). Producers of calendered PVC products overseas, at that time, were utilizing more efficient plants than the plants in the United States, which were considered "outdated" (Dkt. 9159 RX 1320C). Moreover, it was shown that many imported calendered products consisted of "non-critical products with fairly standard colors and with little customer reliance on technical service" (Dkt. 9159 RX 1320C). Thus, producers of calendered products in the United States maintained their competitiveness with overseas imports by providing greater customer and technical service, and by providing better delivery schedules (Dkt. 9159 RX 1320C).

170. [##] (Marcus CX 209C ¶ 5 *In Camera*).

1. Mass and suspension PVC

171. As shown, imports of mass and suspension PVC fabricated products do not significantly affect the price of mass and suspension PVC homopolymer in the United States.

172. Mr. Disch testified that, across a wide range of fabricated products, the price of mass and suspension PVC homopolymer PVC does not significantly affect the level of fabricated product imports (JX 3, PX 8 at 93 ln. 25 - 94 ln. 16, 94 ln. 17-20, 95 ln. 8-21, 29 ln. 15-20). Mr. Disch testified that, in general, the price of mass and suspension PVC does not affect the level of imports of fabricated products, given that the PVC resin accounts for such a small portion

of the price of the product (JX 3, PX 8 at 93 ln. 25 - 94 ln. 13, 95 ln. 14-21, 29 ln. 15 - 25).

173. [##] (Pflugrath CX 177B ¶ 4 *In Camera*; Heath CX 178C ¶ 4 *In Camera*; Wilhite CX 179E ¶ 5 *In Camera*; Underwood CX 203B ¶ 4 *In Camera*). [##] (Wilhite CX 179E ¶ 5 *In Camera*; Pflugrath CX 177B ¶ 4 *In Camera*; Underwood CX 203B ¶ 4 *In Camera*).

174. Thus, the level of imports of PVC pipe does not substantially change as the price of mass and suspension PVC homopolymer resin changes. The very low level of PVC pipe imports and the apparent lack of any supply response as the price of mass and suspension PVC homopolymer resin in the United States changes show that the level of PVC pipe imports into the United States is not sensitive to the price of mass and suspension PVC homopolymer resin in the United States. Therefore, PVC pipe imports have little, if any, effect on the price of mass and suspension PVC homopolymer resin in the United States.

175. [##] (Donnelly CX 176E ¶ 6 *In Camera*; Goldstein CX 180B ¶ 4 *In Camera*).

2. Suspension PVC copolymer

176. Similarly, the level imports of suspension PVC copolymer fabricated products is not sensitive to the price of resin in the United States.

177. [##] (JX 3, PX 11 at 678 ln. 10-16; Hill CX 183E-F ¶ 15 *In Camera*). Mr. Disch noted that a record could sell for as much as 40 times the cost of the PVC compound that was used in the record (JX 3, PX 8 at 29 ln. 1-6). [##] (JX 3, PX 8 at 94 ln. 17-20; JX 3, PX 11 at 679 ln. 2-5; Hill CX 183E-F ¶ 15 *In Camera*).

178. [##] (JX 3, PX 8 at 94 ln. 14-17; Weimar CX 192H ¶ 18 *In Camera*; Marcus CX 209B-C ¶ 5 *In Camera*). [##] (JX 3, PX 6 at 87 ln. 1-87 ln. 1-88 ln. 3; JX 3, PX 8 at 93 ln. 25-94 ln. 13; JX 3, PX 11 at 673 ln. 21-674 ln. 2; Barlet JX 1, 60 ln. 7-23; Weimar JX 1, 35 ln. 3-16; Marcus CX 209C ¶ 6 *In Camera*). Mr. Disch testified that PVC resin accounts for approximately 15-20 percent of the cost of the finished tile (JX 3, PX 11 at 673 ln. 21-24; JX 3, PX 8 at 27). Armstrong has estimated that the resin accounts for close to 10 percent of the cost of one of its typical tile products (Barlet JX 1, 60

ln. 7-23). [##] (JX 3, PX 8 at 93 ln. 25-95 ln. 13; Weimar CX 192H ¶ 18 *In Camera*; Marcus CX 209C ¶ 6 *In Camera*).

3. Dispersion PVC

179. The price level of dispersion PVC fabricated products is also relatively insensitive to the price of dispersion PVC resin in the United States.

180. Mr. Disch testified that the price of dispersion PVC does not significantly affect the level of fabricated product imports (JX 3, PX 8 at 39 ln. 16-19, 95 ln. 8-21, 29 ln. 15-20, 39 ln. 16 - 40 ln. 7). Mr. Disch pointed out, for example, that the reduction in American production of coated fabrics, a dispersion PVC end-use application which has been particularly subject to import competition, has not been affected by dispersion PVC prices in the United States (JX 3, PX 8 at 95 ln. 14-21).

181. Dispersion PVC accounts for only a small portion of the cost of vinyl sheet flooring, a major end-use application of the resin (Barlet JX 1, 66 ln. 15 - 67 ln. 11; JX 3, PX 8 at 11-21). Mr. Barlet also estimated that the dispersion resin accounts for 10 percent, and possibly less, of the cost of sheet flooring products (Barlet JX 1, 66 ln. 15 - 67 ln. 11). Thus, significant increases in the price of dispersion PVC resin would not likely result in any significant increase in the percentage of imported vinyl resilient sheet floors purchased in the United States (JX 3, PX 8 at 39 ln. 16-19; *See* Kaserman JX 1, 291 ln. 13-24).

182. Imports of the other dispersion PVC fabricated products are also insensitive to the price of dispersion PVC resin in the United States. Mr. Disch testified that the effect of imports of coated fabrics on the use of dispersion PVC resin in that application has been "disasterville," yet noted that the price of PVC has had no effect on the level of coated fabric imports (JX 3, PX 8 at 95 ln. 8-21). The level of imports of dispersion PVC in various molding and coating applications is similarly insensitive to the price of dispersion PVC resin in the United States. In general, the price of PVC is a relatively insignificant portion of the cost of the final product (JX 3, PX 8 at 39 ln. 12-15; Lore JX 1, 83 ln. 16 - 184 ln. 4; Mason JX 1, 195 ln. 23 - 196 ln. 3; Kaserman 291 ln. 13-24). Thus, significant increases in the

price of dispersion PVC would not likely have a significant effect on the level of imports of these products (*Id.*).

183. Thus, the level of imports of each of the relevant products, in resin and in fabricated products, is relatively insensitive to the price of these products in the United States. Imports are a small factor in the United States PVC markets and do not constrain United States prices for the relevant products (*See Goodrich, slip op. at 38*). Mr. Schaefer testified generally as to the effect of significant PVC price increases on the level of demand for PVC resin in the domestic market in each of the relevant product markets. He testified that he did not believe such increases would have much effect on demand (JX 3, PX 136 at 71 ln. 22 - 72 ln. 2, 60 ln. 21 - 61 ln. 10, 67 ln. 2 - 11, 75 ln. 23 - 76 ln. 3).

VI. PVC QUANTITATIVE ANALYSIS

A. Competitors in the Mass and Suspension PVC

184. [##] (JX 3, PX 140 "Table 1" *In Camera*). [##] (JX 3, PX 140 "Table 7" *In Camera*). [##] (JX 3, PX 140 "Table 23" *In Camera*).

185. [##] (JX 3, PX 140 "Table 2" *In Camera*). [##] (JX 3, PX 140 "Table 7" *In Camera*).

186. [##] (JX 3, PX 140 "Table 2" *In Camera*). [##] (JX 3, PX 140 "Table 7" *In Camera*).

187. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

188. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

189. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

190. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

191. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

192. [##] (JX 3, PX 140 "Table 2," "Table 1" *In Camera*).

193. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

194. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

195. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

196. [##] (JX 3, PX 140 "Table 2," "Table 7" *In Camera*).

*B. Effect of the Acquisition on Concentration in
The Mass and Suspension PVC Market*

197. [##] (See JX 3, PX 140 *In Camera*; Kaserman JX 1, 306 ln. 20-314 ln. 4).

United States Mass and Suspension PVC Market Shares and Rank

<u>Company</u>	1986 <u>Operating Capacity</u> ¹¹	1985 <u>Homopolymer Production</u> ¹²	1985 <u>Mass and Suspension PVC Production</u> ¹³
	Share Rank	Share Rank	Share Rank
Goodrich			
Shintech			
Formosa			
Tenneco			
Georgia Gulf			
Vista			
Borden			
Occidental			
Air Products			
Certain-Teed			
Vygen			
Keysor-Century			
Total			

¹¹ JX 3, PX 140 "Table 2" *In Camera*.

¹² JX 3, PX 140 "Table 7" *In Camera*.

¹³ JX 3, PX 140 "Table 1" *In Camera*.

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Operating Capacity	Homopolymer Production	Mass and Suspension PVC Production
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Pre-Acquisition HHI:
Post-Acquisition HHI:
Increase in HHI:

Occidental/Tenneco
Combined Share:
Combined Rank:

Pre-Acquisition CR2:
Post-Acquisition CR2:
Increase in CR2:

Pre-Acquisition CR4:
Post-Acquisition CR4:
Increase in CR4 :

Pre-Acquisition CR8:
Post Acquisition CR8:
Increase in CR8:

198. The acquisition reduced from twelve to eleven the number of competitors in the market and eliminated Tenneco as a competitor in the mass and suspension PVC market and as an independent producer of suspension PVC homopolymer. As a result of the acquisition, Occidental and B.F. Goodrich are essentially tied as the leading firms in the market.

199. The acquisition resulted in a substantial increase in concentration in the mass and suspension PVC market by all measurements. HHI concentration in mass and suspension PVC homopolymer production increased by 131 to a level of 1281 and, measured on the basis of total mass and suspension PVC production, increased by 156 to a level of 1278. Significantly, the operating capacity HHI increased by 158 to a level of 1305.

200. Corresponding increases are reflected in two-firm, four-firm and eight-firm concentration ratios. Two-firm concentration in mass and suspension PVC operating capacity increased by 4.83 percent to 37.08 percent; four-firm concentration increased by 7.1 percent to 62.7 percent; and eight-firm concentration increased by 5.05 percent to 95.04 percent. Similar increases are recorded for concentration in homopolymer production and in overall mass and suspension PVC production.

C. Competitors in The Suspension PVC Copolymer

201. [##] (JX 3, PX 140 "Table 18" *In Camera*). [##] (JX 3, PX 140 "Table 17" *In Camera*). [##] (Hill CX 183D ¶ 9 *In Camera*; Boyer CX 185F ¶ 14; Dellevigne CX 188D ¶ 11 *In Camera*; Weimar CX 192F ¶ 14 *In Camera*).

202. [##] (JX 3, PX 140 "Table 18," "Table 17" *In Camera*).

203. [##] (JX 3, PX 140 "Table 18" *In Camera*). [##] (JX 3, PX 140 "Table 17" *In Camera*).

204. [##] (JX 3, PX 140 "Table 18," "Table 17" *In Camera*).

205. [##] (JX 3, PX 140 "Table 18," "Table 17" *In Camera*).

206. [##] (JX 3, PX 140 "Table 18," *In Camera*). [##] (JX 3, PX 140 "Table 17" *In Camera*).

D. Effect of the Acquisition on Concentration in the Suspension PVC Copolymer Market

207. The Table below depicts the effect of the acquisition on concentration in the United States suspension PVC copolymer market, based on suspension PVC copolymer operating capacity at the time of the acquisition and 1985 suspension PVC copolymer production.

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Initial Decision

United States Suspension PVC Copolymer
Market Shares and Rank

<u>Company</u>	1986		1985	
	<u>Operating Capacity</u> ¹⁴		<u>Production</u> ¹⁵	
	Share	Rank	Share	Rank
Tenneco				
Occidental				
Borden				
Keysor-Century				
Vygen				

Total

Pre-Acquisition HHI:
Post-Acquisition HHI: .
Increase in HHI:

Occidental/Tenneco
Combined Share:

Pre-Acquisition CR2:
Post-Acquisition CR2:
Increase in CR2:

Pre-Acquisition CR4:
Post-Acquisition CR4:
Increase in CR4:

208. The acquisition reduced from five to four the number of competitors in the market. By combining the two leading firms in the market, the acquisition established Occidental as the dominant firm in suspension PVC copolymer, with a market share over twice that of the next largest firm.

¹⁴ JX 3, PX 140 "Table 18" *In Camera*.

¹⁵ JX 3, PX 140 "Table 17" in camera.

209. The acquisition resulted in a substantial increase in concentration in the already highly concentrated suspension PVC copolymer market. HHI concentration in suspension PVC copolymer production increased by 1577 to a level of 4368 and operating capacity HHI increased by 1360 to a level of 3504.

210. Corresponding increases are reflected in two-firm and four-firm concentration ratios. Two-firm concentration in suspension PVC copolymer production and operating capacity increased by 20.27 percent to 83.65 percent and by 19.13 percent to 71.3 percent, respectively. Four-firm concentration in suspension PVC copolymer operating capacity increased by 12.75 percent to a level of 100 percent.

E. Competitors in the Dispersion PVC Market

211. [##] (JX 3, PX 140 "Table 13" *In Camera*). [##] (JX 3, PX 140 "Table 12" *In Camera*). [##] (JX 3, PX 140 "Table 24" *In Camera*).

212. [##] (JX 3, PX 140 "Table 12" *In Camera*). [##] (JX 3, PX 140 "Table 13" *In Camera*).

213. [##] (JX 3, PX 140 "Table 13," "Table 12" *In Camera*).

214. [##] (JX 3, PX 140 "Table 13," "Table 12" *In Camera*).

215. [##] (JX 3, PX 140 "Table 13," "Table 12" *In Camera*).

216. [##] (JX 3, PX 140 "Table 13," "Table 12" *In Camera*).

217. [##] (JX 3, PX 140 "Table 13," "Table 12" *In Camera*).

218. [##] (JX 3, PX 140 "Table 13," "Table 12" *In Camera*).

*F. Effect of the Acquisition on Concentration in
The Dispersion PVC Market*

219. The Table below depicts the effects of the acquisition on concentration in the United States dispersion PVC market, based on operating capacity and production. In addition, concentration in dispersion PVC supply, including both domestic production and imports, is presented.

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Initial Decision

United States Dispersion PVC
Market Shares and Rank

<u>Company</u>	1986 Operating <u>Capacity</u> ¹⁶	1985 <u>Production</u> ¹⁷	1985 Production & Imports ¹⁸
	Share Rank	Share Rank	Share Rank

Occidental
Goodrich
Formosa
Goodyear
Tenneco
Borden
Georgia Gulf

Total

Pre-Acquisition HHI:
Post-Acquisition HHI:
Increase in HHI:

Occidental/Tenneco
Combined Share:
Combined Rank:

Pre-Acquisition CR2:
Post-Acquisition CR2:
Increase in CR2:

Pre-Acquisition CR4:
Post-Acquisition CR4:
Increase in CR4:

Pre-Acquisition CR8:

¹⁶ JX 3, PX 140 "Table 13" *In Camera*.

¹⁷ JX 3, PX 140 "Table 12" *In Camera*.

¹⁸ JX 3, PX 140 "Table 24" *In Camera*.

220. The acquisition reduced from seven to six the number of competitors in the dispersion PVC market, and established Occidental as the market leader by a wide margin.

221. The acquisition resulted in a substantial increase in concentration in the dispersion PVC market, moving the market from the upper reaches of the moderately concentrated range well into the highly concentrated range. HHI concentration in dispersion PVC operating capacity increased by 331 to a level of 2051, while the HHI for dispersion PVC production increased by 448 to a level of 2201. Adjusting the production concentration level to account for dispersion PVC imports, which peaked in 1984-1985, HHI concentration in total dispersion PVC supply increases by 330 to a level of 1938.

222. Two-firm and four-firm concentration in dispersion PVC operating capacity increased by 6.58 percent to a level of 49.5, and by 8.52 percent to a level of 87.05 percent, respectively. Corresponding increases for dispersion PVC production are 8.68 percent, to a level of 55.14 percent, and 8.67 percent, to a level of 85.18 percent, respectively. Adjusted for 1985 dispersion PVC imports, the increase in two-firm concentration is 8.01 percent, to a level of 52.61 percent, and 7.98 percent, to a level of 80.25 percent, respectively.

G. There Is a Trend Toward Concentration in the Relevant Markets

223. In assessing whether the increased concentration resulting from Occidental's acquisition of Tenneco's PVC assets and business contributes substantially to an increased likelihood of anticompetitive behavior in the relevant markets, it is important to consider the trend in concentration in the industry (Kaserman Dkt. 9159, 2297-98). If the concentration trend indicates that industry concentration is decreasing in the long term despite the acquisition, concern over the effects of the acquisition may be somewhat less (Kaserman Dkt. 9159, 2298-99). If the concentration trend reveals that concentration in the industry is increasing, however, concern over the effects of the acquisition on likely industry behavior and performance is increased (*Id.*).

1. Mass and suspension PVC

224. Since the mid-1970's, there has been a significant trend toward higher concentration in the mass and suspension PVC market (Goodrich F 54, 56-58; Goodrich, slip op. at 56 "Table III" Kaserman Dkt. 9159, 2301 [##] (Goodrich F 55, F 58; JX 3, PX 140, Table 2 *In Camera*).

225. [##] (Goodrich F 54; JX 3, PX 140, Table 2 *In Camera*). [##] (Goodrich F 54; JX 3, PX 140, Table 2 *In Camera*). [##] (Goodrich F 54; JX 3, PX 140, Table 2 *In Camera*).

226. A series of acquisitions in the market has contributed to the increased concentration in mass and suspension PVC (Goodrich FF 54, 56). In addition, several smaller firms have closed their operations and exited the industry (Goodrich F 55; Dkt. 9159 CX 442B-C). In 1970, Airco, Inc. sold its Chemical and Plastics Division to Air Products & Chemicals, Inc. (Goodrich F 55; Dkt. 9159 CX 323A). Allied Chemical Corporation sold its polyvinyl chloride manufacturing facility at Painesville, Ohio, to Robintech Incorporated in 1973 (Goodrich F 55; Dkt. 9159 CX 325A). [##] (Goodrich F 55; Dkt. 9159 CX 321B *In Camera*; Dkt. 9159 CX 357A *In Camera*; Dkt. 9159 CX 359F). These exits were offset by three new entries into the industry between 1974 and 1975, (Georgia Pacific Corporation, Formosa Plastics Corporation, and Certain Teed Corporation), and the establishment of Shintech, a joint venture between Shin-Etsu of Japan and Robintech, who had acquired Allied Chemicals suspension PVC plant the previous year (Goodrich F 56; Dkt. 9159 CX 344B). By 1975, there were twenty-two firms in the mass and suspension PVC market, up from 19 in 1971 (Goodrich F 55; CPF 239).

227. *De novo* entry has not occurred in PVC production since 1975 (Goodrich, slip op. at 36; Goodrich F 56). From 1975 to the present, new firms have entered the PVC markets only through acquisition (Goodrich F 56). The history of mass and suspension consolidations, acquisitions, and exits is chronicled in the Goodrich case (*See* Goodrich F 56). [##] (Goodrich F 56; Dkt. 9159 CX 317C *In Camera*). In 1977, Union Carbide exited the market after its plant was destroyed by explosion (Goodrich F 57; Dkt. 9159 CX 43B; Dkt. 9159 CX 108Q). [##] (Goodrich F 56; Kaserman Dkt. 9159,

2304; Dkt. 9159 CX 41A *In Camera*; Dkt. 9159 CX 53W; Dkt. 9159 CX 337C *In Camera*; Dkt. 9159 CX 664C,J *In Camera*). Firestone's mass and suspension PVC business was acquired by Occidental Petroleum Corporation in 1980 (Goodrich F 56; Dkt. 9159 CX 307B). [##] (Dkt. 9159 CX 322A, C *In Camera*). [##] (Boyer CX 185A-B ¶ 1-2; Dkt. 9159 CX 318A, D *In Camera*). [##] (Dkt. 9159 CX 300Z6 *In Camera*; See 306B *In Camera*). [##] (See Dkt. 9159 CX 116; Dkt. 9159 CX 561 *In Camera*). In 1984, Pantasote, Inc. closed its suspension - PVC homopolymer plant and exited the market (Dkt. 9159 CX 388 H. Wheeler Dkt. 9159, 1720-21, 1725; See H. Wheeler Dkt. 9159, 1774).

228. These acquisitions and exits have led to a continuous decline in the number of mass and suspension PVC producers since 1977 (Goodrich F 56-57; Kaserman Dkt. 9159, 2301; CPF 239-242). At the time of the Goodrich acquisition, there were seventeen firms in the market (Goodrich F 58). [##] (JX 3, PX 140 "Table 2" *In Camera*).

229. The strong trend toward concentration in the mass and suspension PVC market heightens the probability that Occidental's acquisition of Tenneco's PVC assets and business may have the effect of substantially lessening competition in the market (Kaserman Dkt. 9159, 2304-05). The concentration trend in the mass and suspension PVC market indicates that concentration measurements at the time of the acquisition may in fact understate the current and future potential for exercise of market power by mass and suspension PVC firms.

2. Suspension PVC copolymer

230. Since the mid 1970's there has been a significant trend towards higher concentration in the suspension PVC copolymer market. [##] (Dkt. 9159 CX 323, CX 325, CX 330, CX 333-CX 334, CX 342, CX 347; CX 324, CX 326-CX 329, CX 331-CX 332, CX 335-CX 341, CX 343-CX 346, CX 349-CX 350 *In Camera*). [##] (JX 3, PX 140 "Table 17" *In Camera*).

231. [##] (CX 5E *In Camera*).

232. [##] (Dkt. 9159 CX 330G *In Camera*). [##] (Goodrich F 57; Dkt. 9159 CX 336G *In Camera*). [##] (Dkt. 9159 CX 343G *In Camera*; Dkt. 9159 CX 349Q *In Camera*). [##] (Dkt. 9159 CX 318A

In Camera; Boyer CX 185A-B ¶ 1-2). Formosa is now in the process of dismantling the plant (CX 165A Table n.3). Air Products ceased copolymer production in 1983, after reportedly encountering significant production problems in its attempts to produce copolymer resin at its Calvert City, Kentucky, plant (Fisher, CX 208B ¶ 2; *See* Lull JX 1, 534-535).

233. The strong trend toward concentration in the suspension PVC copolymer market heightens the probability that Occidental's acquisition of Tenneco's suspension PVC copolymer assets and business may have the effect of substantially lessening competition in the market (*See* Kaserman Dkt. 9159, 2304-05).

3. Dispersion PVC

234. [##] (Dkt. 9159 CX 323, CX 325, CX 330, CX 333-CX 334, CX 342, CX 347; CX 324, CX 326-CX 329, CX 331-CX 332, CX 335-CX341, CX 343-CX 346, CX 349-CX 350 *In Camera*; CX 358C-D *In Camera*). [##] (JX 3, PX 140 "Table 12" *In Camera*).

235. [##] (Goodrich F 14; Dkt. 9159 CX 300Z6 *In Camera*; PX 10 at 1183). [##] (Goodrich F 56) (Dkt. 9159, 300Z6 *In Camera*; *See* Dkt. 9159 CX 306B *In Camera*; Dkt. 9159 CX 310D *In Camera*; RX 175A). [##] (Dkt. 9159 CX 340E *In Camera*; Dkt. 9159 CX 349C *In Camera*; Dkt. 9159 CX 350F *In Camera*). [##] (Dkt. 9159 CX 318A *In Camera*; Boyer CX 185A-B ¶ 11-12).

236. The trend toward concentration in the dispersion PVC market heightens the probability that Occidental's acquisition of Tenneco's dispersion PVC assets and business may have the effect of substantially lessening competition in the market (*See* Kaserman Dkt. 9159, 2304-05).

VII. ENTRY INTO PVC PRODUCTION IS A DIFFICULT AND TIME-CONSUMING PROCESS

237. Entry conditions are those aspects of an industry that (1) delay entry in response to the existence of supracompetitive profits; (2) reduce the magnitude of the entry response; or (3) reduce the probability of entry (Goodrich F 59; Kaserman JX 1, 321 ln. 24 - 322 ln. 10; Kaserman Dkt. 9159, 2311, 2314-15). Conditions of entry

influence the competitive significance of a merger in several ways. If entry is difficult to accomplish, incumbent firms have a greater incentive to collude because they have less concern over with attracting new firms into the industry in response to supracompetitive profits (Kaserman JX 1, 322 ln. 20 - 323 ln. 10; Kaserman Dkt. 9159, 2313-2314). If there is a time lag for an entry response, it provides the incumbent firms with an opportunity to engage in some type of strategic behavior regarding threat of new entry (Goodrich, slip op. at 30 & n. 70; Kaserman JX 1, 324 ln. 25 - 325 ln. 14; Kaserman Dkt. 9159, 2313). Finally, to the extent that conditions of entry delay the entry response, they permit anticompetitive behavior to persist for a longer period of time (Kaserman JX 1, 324 ln. 25 - 325 ln. 14; Kaserman Dkt. 9159, 2313-14).

238. In Goodrich, the Commission found that the mass and suspension PVC market was "characterized by substantial barriers and impediments to new entry" (Goodrich, slip op. at 31). Further, the Commission adopted the ALJ's conclusion that new entry into PVC production is "difficult and takes a long time" (Goodrich ID at 92). The Commission noted the substantial lead time for construction of a PVC plant, and the significant minimum efficient scale and sunk costs that would be associated with construction of a new plant (Goodrich, slip op. at 31-36). It stated that the lack of new entry into PVC production confirmed the assessment that entry into PVC production is "difficult" (Goodrich, slip op. at 36).

239. New entry into production of dispersion PVC or into production of suspension PVC copolymer is at least, or even more difficult, than entry into production of mass or suspension PVC homopolymer (Flammer CX 184D ¶ 6). Even a firm experienced in suspension PVC homopolymer production would have little advantage, relative to a firm not in the PVC industry, in attempting to enter the suspension PVC copolymer market or the dispersion PVC market (Flammer CX 184D ¶¶ 6, 7; *See* Disch JX 3, PX 8 at 86 ln. 5-23).

240. There are five factors that significantly affect the conditions of entry into production of PVC: (1) the size of a minimum efficient scale plant in relation to total industry demand; (2) the magnitude of sunk costs; (3) the lead time required for planning, obtaining, permits, and construction of new plants; (4) the presence or absence of excess capacity in the industry; and (5) the extent of vertical

integration existing in the industry (Gobdrich F 59; Goodrich ID at 92; Kaserman JX 1, 324 ln. 5-18; Kaserman Dkt. 9159, 2314-15).

*A. Minimum Efficient Scale of PVC Plants is Large
Relative to the Size of the Relevant Markets*

241. As the Commission found in Goodrich, entry into each of the relevant PVC markets is made more difficult because the size of a minimum efficient scale PVC plant is large in relation to the size of the market (Goodrich, slip op. at 36, n.85; Goodrich F 60- 62; Kaserman JX 1, 326 ln. 23 - 326 ln. 2; Kaserman Dkt. 9159, 2319-21; Schaefer Dkt. 9159, 1132; Schaefer JX 1, 587 ln. 7-17).

242. Minimum efficient scale refers to the size that a new firm would need to achieve in order not to suffer a significant cost disadvantage *vis-a-vis* the other firms in the industry (Kaserman JX 1, 326 ln. 5-22; Kaserman Dkt. 9159, 2315). It is a manifestation of economies of scale in the industry: whether and to what point the costs of production fall as firm size increases (Kaserman JX 1, 326 ln. 5-22; Kaserman Dkt. 9159, 2315). If the minimum efficient scale is large relative to the size of the market and to market growth, then the act of entry at minimum efficient scale is likely to depress industry prices significantly (Kaserman JX 1, 326 ln. 23 - 327 ln. 2; Kaserman Dkt. 9159, 2317-18). This is particularly true when the demand for the product is inelastic (Kaserman Dkt. 9159, 2317-18). Thus, the very act of entry is likely to dissipate the profits that were the basis for the decision to enter in the first place. If a firm enters at a size below minimum efficient scale, in order to avoid disrupting industry prices significantly, it will have a cost disadvantage compared to existing firms, thereby making the entry less profitable or even unprofitable. Potential entrants recognizing the implications of minimum efficient scale are unlikely to attempt entry (Goodrich, slip op. at 39-40; Kaserman JX 1, 328 ln. 9-18). Thus, where the minimum efficient scale is large relative to the size of the market, it may make entry more difficult (Goodrich, slip op. at 39-40; Klass Dkt. 9159, 4446-47, 4635, 4637; Kaserman JX 1, 324 ln. 5-12, 326 ln. 5-22; Kaserman Dkt. 9159, 2314-20).

1. Mass and suspension PVC homopolymer

243. The Commission concluded in *Goodrich* that an optimum scale PVC plant required at least 300 million pounds of annual production capacity (*Goodrich*, slip op. at 36; *Goodrich F 60*). The minimum efficient scale today for a mass or suspension PVC homopolymer plant is more likely to be in the over 500 million pounds per year range (*JX 3, PX 6* at 74 ln. 20-75 ln. 11; *JX 3, PX 15* at 80-81 (optimum scale 600 million pounds); *JX 3, PX 18* at 47 (optimum scale is 2-3 times the size of a 300-400 million pound capacity plant); *See JX 3, PX 10* at 1132 ln. 4-12; *See also JX 3, PX 11* at 643 ln. 22-644 ln. 7; *JX 3, PX 8* at 64 ln. 24-65 ln. 6 (optimal scale plant is 800 to 900 million pounds)). This minimum efficient scale is substantial, with respect to the overall mass and suspension market, so that the construction of a new plant would have a depressing effect on price (*Goodrich*, slip op. at 36, n.85; *Kaserman JX 1*, 327 ln. 25-328 ln. 8; *Kaserman Dkt. 9159*, 2317-18).

244. Industry witnesses in *Goodrich*, *Dkt. 9159*, estimated that the minimum efficient scale, at that time, was in the 300-600 million pound per-year range. Mr. Disch estimated the minimum efficient scale to be at least 300 million pounds but noted there were further scale economies in plants larger than 300 million pounds capacity (*Disch Dkt. 9159*, 644; *See Disch JX 3, PX 8* at 64-65 (economies of scale persist up to 800 or 900 million pounds of capacity)). In 1981, *Diamond Shamrock Chemical Company* also estimated a minimum size of 300 million pounds (*Goodrich F 60*, n. 12; *Dkt. 9159 CX 445*). Mr. Schaefer concluded that the minimum size was 300 million pounds per year with expansion potential to 500-600 million pounds per year (*Schaefer Dkt. 9159*, 1132; *Goodrich F 60*). Dr. DiLiddo stated that there were scale economies in a 550 million pound-per-year plant beyond those in a 300 million pound-per-year plant (*Goodrich F 60*; *DiLiddo Dkt. 9159*, 3345). Dr. Eades' estimate was 500 million pounds (*Goodrich F 60*; *Eades Dkt. 9159*, 1462-63). Mr. Howard Wheeler concluded that the minimum efficient scale for a mass or suspension PVC plant was 600 million pounds per year but that 750 to 900 million pounds per year was preferable. He viewed a plant of even 300 million pounds per year as being too small (*Goodrich F 60*; *H. Wheeler 1734-35*).

245. Dr. DiLiddo's estimate of 200-300 million pounds per year (DiLiddo 3290) incorporated considerations of risk, such as the risk of loading a plant of large size (DiLiddo Dkt. 9159, 3345-47). Because the economic definition of minimum efficient scale is properly a technological concept, rather than one incorporating demand side considerations (Kaserman Dkt. 9159, 2315-16, 2320), this estimate does not correctly apply the definition. Rather, Dr. DiLiddo's estimate is simply a recognition of the fact that entry at a larger scale is difficult and risky, given the conditions of entry in mass and suspension PVC. Furthermore, Dr. DiLiddo stated that a plant of 550 million pounds per year would have scale economies not enjoyed by a plant of 300 million pounds per year (Goodrich F 60; DiLiddo Dkt. 9159, 3345). These additional scale economies were a significant factor in Goodrich's 1979 decision to build a 550 million pound-per-year facility at Convent, Louisiana (Goodrich F 61). 5

246. [##] (Goodrich F 61; Compare Dkt. 9159 CX 302G *In Camera* Dkt. 9159 CX 308E) [##] (Goodrich F 61; DiLiddo Dkt. 9159, 3345; Dkt. 9159 CX 38 *In Camera*).

247. [##] (Goodrich F 62; Dkt. 9159 CX 14F *In Camera*; Dkt. 9159 CX 515). [##] (Dkt. 9159 CX 310D *In Camera*); [##] (Disch Dkt. 9159, 637); [##] (Dkt. 9159 CX 308E); [##] (compare Dkt. 9159 CX 317B,C *In Camera* and McMath Dkt. 9159, 1892). [##] (Dkt. 9159 CX 54Z8-Z10 *In Camera*). This environment makes it more difficult than in the past for a firm to enter at a size below minimum efficient scale. Indeed, it suggests that the minimum efficient scale for a new mass or suspension PVC plant is greater than the 300 million pound estimate used at the time of the Goodrich proceeding. Thus, as discussed supra, current estimates of the minimum efficient scale for a mass and suspension PVC homopolymer plant are over 500 million pounds.

248. [##] (Klass Dkt. 9159, 5303). [##] (JX 3, PX 140 "Table 1" *In Camera*). This is greater than the level that the Commission found in Goodrich would impede entry into PVC (Goodrich, slip op. at 36, n.85), and is similar to the level that the Commission found would impede entry into VCM (Goodrich, slip op. at 39-40).

2. Suspension PVC copolymer

249. The minimum efficient plant size for a suspension PVC copolymer plant is at least 50 million pounds per year, and there is evidence that it could be as high as 300 to 400 million pounds per year (JX 3, PX 15 at 80-81; JX 3, PX 20 at 29-30; JX 3, PX 8 at 67 ln. 3-9). Mr. Disch of Tenneco testified that the minimum efficient scale for a grassroots suspension PVC copolymer plant would be 180-200 million pounds (JX 3, PX 8 at 65).

250. [##] (JX 3, PX 140 "Table 17" *In Camera*). [##] (*Id.*). This is significantly higher, as a percentage of the overall market, than the minimum efficient scale of entry into either mass and suspension PVC or VCM, as found in Goodrich (Goodrich, slip op. at 36, n.85, 41).

251. Entry into the suspension PVC copolymer market at the minimum efficient scale would therefore be significant relative to the overall size of the market and would likely depress the price of suspension PVC copolymer (Goodrich, slip op. at 41; Kaserman JX 1, 327 ln. 3-328 ln. 8; Schaefer JX 1, 587 ln. 7-14; JX 3, PX 20 at 29; JX 3, PX 8 at 65-66). This fact makes entry into the suspension PVC copolymer market most difficult (*See* Goodrich, slip op. at 39-41).

252. Mr. Schaefer of Occidental testified that, because of the small size of the suspension PVC copolymer market, Occidental would not consider restarting its Perryville, Maryland plant to produce suspension PVC copolymer resin (Schaefer JX 1, 585 ln. 21-586 ln. 14). He testified further that new entry into suspension PVC copolymer at any scale, because of the depressing effect it would have on prices in that market, would be unprofitable (Schaefer JX 1, 587 ln.7-14; *accord* JX 3, PX 20 at 29). In January 1988, despite the increased prices and profits realized in the PVC industry, Occidental reaffirmed that it has no intention to restart its Perryville plant (CX 1000).

3. Dispersion PVC

253. The minimum efficient plant size for a dispersion PVC plant is at least 36 million pounds, and could be as high as 300-400 million pounds (JX 3, PX 8 at 73 ln. 22-74 ln. 23; JX 3, PX 15 at 80-81; JX

3, PX 20 at 29-30). Mr. Disch testified that the minimum efficient scale of a grassroots dispersion PVC plant would be approximately 80 to 100 million pounds (JX 3, PX 8 73 ln. 22 - 74 ln. 23).

254. [##] (JX 3, PX 140 "Table 24" *In Camera*). [##] (*Id.*). This also is a significantly higher, as a percentage of the overall market, than the minimum efficient scale of entry into either the mass and suspension PVC or the VCM market, as found in Goodrich.

255. Entry into the dispersion PVC market through construction of a minimum efficient scale dispersion PVC plant would therefore be a significant move relative to the overall size of the dispersion PVC market, and would likely depress the price of dispersion PVC (Goodrich, slip op. at 41; Kaserman JX 1, 327 ln. 3-328 ln. 8; Schaefer JX 1, 587 ln. 7-17; JX 3, PX 20 at 29). This fact makes entry into dispersion PVC less likely (Goodrich, slip op. at 39-40). Indeed, Tenneco has stated its belief that a grassroots dispersion PVC plant would not be "commercially viable" (JX 3, PX 20 at 29).

*B. The Minimum Efficient Scale of PVC Plants Is
Large Relative to the Rate of Growth of
Demand in the Relevant Markets*

256. The significance of the size of a minimum efficient scale plant in relation to the size of the market is affected by the rate of growth of demand (Goodrich F 235; Goodrich ID at 94; Kaserman JX 1, 329 ln. 13-17; Kaserman Dkt. 9159, 2318). If the market demand is growing rapidly, then a new firm might be able to come in, capture a good share of that growth, and run its plant profitably without having a depressing effect on industry prices (Kaserman JX 1, 328 ln. 19 - 329 ln. 4; Kaserman Dkt. 9159, 2318; *See also* Schaefer Dkt. 9159, 1133). Conversely, where demand is growing slowly, the price depressing effect of efficient sized entry is particularly great. In circumstances of slow growth, entry is more difficult (Kaserman JX 1, 328 ln. 19 - 329 ln. 4; Klass Dkt. 9159, 4447, 4637-38; *See* Schaefer JX 1, 585 ln. 2 - 587 ln. 20).

257. In the mass and suspension PVC market, it is the consensus of industry members that the rate of demand growth for mass and suspension PVC, through the 1980's, will be at approximately the rate of growth of GNP (Goodrich, slip op. at 41, n.96; Goodrich F 235;

JX 3, PX 8 at 89 ln. 1-5; JX 3, PX 9 at 125 ln. 15-17; JX 3, PX 10 at 1154 ln. 18 - 1157 ln. 8; Disch Dkt. 9159, 691). Mass and suspension PVC has become a mature product as it reaches the limits of replacement for other materials in a number of applications (Goodrich F 234, F 235; DiLiddo Dkt. 9159, 3324-3325; Schaefer Dkt. 9159, 1155-1157; Becker Dkt. 9159, 1266-1268; Eades Dkt. 9159, 1475; H. Wheeler Dkt. 9159, 1732-1733). The rate of growth of demand for mass and suspension PVC homopolymer is substantially lower than that which occurred in the 1960's and 1970's (Goodrich F 234; DiLiddo Dkt. 9159, 3107-3119; Disch Dkt. 9159, 691-692; Schaefer Dkt. 9159, 1122; Becker Dkt. 9159 1265-1268; Dkt. 9159 CX 64U).

258. The slowdown in the growth of demand for mass and suspension PVC homopolymer makes new entry less likely (JX 1, Kaserman 329 ln. 13-17; Kaserman Dkt. 9159, 2320-21; Eades 1468-69, 1486-87).

259. That slower rate of growth makes entry more difficult is supported by industry experience. Although there have been some recent incremental expansions, no construction of new plants has begun since the downward shift in the rate of growth in demand beginning in 1979 (Goodrich F 216). The slower projected growth was a factor in ICI's decision not to enter (Eades Dkt. 9159, 1468-69, 1486-87).

260. [##] (CX 43L; CX 166; RX 1L *In Camera*; RX 300B; RX 307A; RX 312J; Donnelly CX 176D ¶ 4 *In Camera*; Heath CX 178E ¶ 8 *In Camera*; See CPF 272-274). The long-term rate of 3.4% in the growth of demand for mass and suspension PVC from 1979 through 1988 is consistent with the growth in the economy, and is consistent with the status of a mature industry (compare Dkt. 9159 CX 672Z5 and CX 213C. Goodrich ID at 94; RX 1V; RX 1L; RX 43E; RX 43C; Schaefer Dkt. 9159, 1154 ln. 18 - 1157 ln. 8; Schaefer JX 1, 585 ln. 2 - 587 ln. 20; Becker 1266-67; Eades 1470).

261. [##] (Hornack CX 182C ¶ 7 *In Camera*; Hill CX 183F ¶ 16 *In Camera*; Boyer CX 185G ¶ 16; Schaefer JX 1, 585 ln. 18-586 ln. 14; JX 3, PX 6 at 82 ln. 11-23; JX 3, PX 18 ln. 7-15, 89 ln. 8-10; JX 3, PX 136 at 105 ln. 3-5; JX 3, PX 13 at 452726). [##] (Barlet JX 1, 70 ln. 11-13; Weimar CX 192F-G ¶ 16 *In Camera*; Hill CX 183F ¶ 16 *In Camera*; JX 3, PX 6 82 ln. 11 - 83 ln. 12).

262. The slow decline in the level of demand for suspension PVC copolymer makes new entry unlikely (Kaserman JX 1, 329 ln. 13-17; Flammer CX 184D ¶ 7; Schaefer JX 1, 585 ln. 2- 587 ln. 14; JX 3, PX 136 at 91 ln. 24-92 ln. 20, 95).

263. In dispersion PVC, it is projected that the growth in demand will be flat over the next several years (Boyer CX 185E ¶ 10; JX 3, PX 8 at 89 ln. 1-10; JX 3, PX 9 at 100 ln. 24-101 ln. 8; Schaefer JX 1, 587 ln. 7-20). The demand for dispersion PVC resin was slightly higher in 1986 than it was in previous years (CX 37J). In part, this growth likely reflects the underlying strength in the economy, which has led to strong demand for PVC resins overall. It does not, however, alter the long-term outlook for dispersion PVC demand. Thus, there was testimony and other evidence that demand is expected to grow slowly in most dispersion PVC resin end-use applications, such as flooring, coatings, bottle and cap linings, and other consumer products (*i.e.*, furniture, recreational products) (Barlet JX 1, 70 ln. 14-18; Lore JX 1, 188 ln. 4-6; *See generally* CX 43D). [##] (*See, e.g.*, Boulay CX 189C ¶ 6 *In Camera*). [##] The absence of growth in demand for dispersion PVC makes new entry less likely (Kaserman JX 1, 329 ln. 13-17; Flammer CX 184D ¶ 7; JX 3, PX 9 at 100 ln. 24-101 ln. 8 JX 3, PX 136 at 96 ln. 10-21; Schaefer JX 1, 587 ln. 7-20).

*C. Because Demand for the Relevant Products Is Inelastic,
Entry at Minimum Efficient Scale Is More Difficult*

264. The significance of the size of a minimum efficient sized plant in relation to the size of the market is also affected by the elasticity of demand (Kaserman Dkt. 9159, 2316-2320; Klass Dkt. 9159, 4633-34). The less elastic the demand for a product is to changes in the price, the more the industry price is likely to be depressed as a result of the entry of a new efficient sized plant (Kaserman Dkt. 9159, 2316-20; Klass Dkt. 9159, 5305-06).

265. [##] (Dkt. 9159 CX 110 *In Camera*).

266. A new entrant bringing a new plant on line "would cut prices very substantially and over a long period of time" (DiLiddo Dkt. 9159, 3255-56; *See also* H. Wheeler Dkt. 9159, 1742-43; Schaefer Dkt. 9159, 1132-33). A new entrant faces a period of both

low prices and low volume as it attempts to load its plant (Schaefer Dkt. 9159, 1132; Schaefer JX 1, 585 ln. 13-20). Mr. Schaefer testified that it would take two to four years to find a market for the suspension PVC copolymer resin that Occidental would produce if it restarted its Perryville plant (Schaefer JX 1, 585 ln. 13-20). A new entrant would expect to incur losses for some period of time after entry (Schaefer Dkt. 9159, 1132; *See also* H. Wheeler Dkt. 9159, 1742-43 (need by new entrant to cut price to load plant would have a "disastrous" effect on profitability)).

*D. The Substantial Sunk Costs Associated with PVC Plants
Increase the Risk of Entry into the Relevant Markets*

267. Sunk costs are costs of entering an industry which one cannot retrieve upon leaving the industry (Goodrich F 63; Kaserman JX 1, 329 ln. 18 - 330 ln. 2; Kaserman Dkt. 9159, 2321-22). The magnitude of sunk costs affects the riskiness of the investment by a new entrant (Goodrich, slip op. at 36, n.85; Goodrich F 63; Kaserman JX 1, 330 ln. 2-7; Kaserman Dkt. 9159, 2325). The economic literature recognizes the existence of sunk costs as a condition that may make entry more difficult (Klass Dkt. 9159, 4444). High sunk costs may result in anticompetitive entry conditions (Goodrich, slip op. at 41-42, n.97; Klass Dkt. 9159, 4622-23; *See B.A.T. Industries Ltd.*, 104 FTC 852, 935 (1984); *DOJ Merger Guidelines* at Section 33 nm 21).

268. In assessing the magnitude of sunk costs, the relevant data are those costs which are specialized and committed to the industry, rather than the amount received if one were able to sell the plant to someone for retention in the industry. This is because the sales price one could receive is a function of expected prices and profits in the industry and is therefore subject to risk (*See* Kaserman Dkt. 9159, 2323-25).

269. The magnitude of sunk costs for PVC plants in each of the relevant markets is high (Goodrich, slip op. at 36, n.85; Goodrich F 63; Goodrich ID at 92; Kaserman JX 1, 330 ln. 8-18; Kaserman Dkt. 9159, 2325-26; JX 3, PX 8 at 84 ln. 1-9, 74 ln. 18 - 75 ln. 4; Klass Dkt. 9159, 4397, 4521-24; H. Wheeler Dkt. 9159, 1724-25, 1744-45; Schaefer Dkt. 9159, 1219). [##] (Goodrich ID at 92 *In Camera*).

PVC plants are durable and highly specialized (Goodrich, slip op. at 36, n.85; Klass 4397, 4621-24; Disch Dkt. 9159, 686; *See* Disch 652).

270. PVC plants are specialized in that one cannot normally make materials other than PVC in a PVC plant (Goodrich, slip op. at 36, n.85; Goodrich F 63; Disch 686). It is very difficult to convert a PVC plant to another use, and it may be easier to start fresh and build a new plant (Goodrich F 63; H. Wheeler 1724-25, 1744-45). Sunk costs represent 75-80% of the total value of a PVC plant (Goodrich F 63; H. Wheeler 1744-45; Schaefer Dkt. 9159, 1219). Total costs for an efficient sized plant could exceed as much as \$100 million (Goodrich F 63; Schaefer Dkt. 9159, 1211-12; Dkt. 9159 CX 6S).

271. The significance of the specialized nature of PVC plant assets upon the conditions of entry is not merely a theoretical one. The industry recognizes that investment in a new plant entails considerable risk (Goodrich F 63; DiLiddo Dkt. 9159, 3134-3137). Should it become necessary to close the plant, virtually the entire investment could be lost (Goodrich F 63; Liao Dkt. 9159, 1519-22; *cf.* DiLiddo Dkt. 9159, 3396).

272. Theoretically, it is possible that the magnitude of sunk costs required for construction of either a dispersion PVC plant or a suspension PVC copolymer plant could be reduced by conversion of such plant to suspension PVC production, if entry into the intended market proved unsuccessful. However, conversion of a dispersion PVC plant to suspension PVC production would not likely be practical (Boyer CX 185C-D ¶ 5-6). It would require changes in the reactor, changes in raw material tanks and changes in the VCM stripping and recovery system (Boyer CX 185C ¶ 5; *See also* Flammer CX 184C ¶ 5, describing, for the same reasons, the conversion of a suspension plant to a dispersion plant as "economically impractical"). Mr. Boyer also noted that the use of spray-dryers in the resin drying system is specialized to the production of dispersion PVC (Boyer CX 185C ¶ 5). A spray dryer with an annual capacity of 50 million pounds would have a capital cost of approximately \$15-20 million (JX 3, PX 8 at 74 ln. 19 - 75 ln. 4). [##] (Hill CX 183C ¶ 5 *In Camera*; Hornack CX 182B-C ¶ 6 *In Camera*; Flammer CX 184C ¶ 5; JX 3, PX 15 at 83; JX 3, PX 20 at 30). [##] (Hornack CX 182B-C ¶ 6 *In Camera*; Hill CX 183C ¶ 5