

STATE OF ILLINOIS )  
                          ) SS.  
COUNTY OF C O O K )

**RECEIVED**

BEFORE THE POLLUTION CONTROL BOARD JUL 21 1975

OF THE STATE OF ILLINOIS

POLLUTION CONTROL BOARD

ENVIRONMENTAL PROTECTION AGENCY, )

Complainant, )

v. )

PCB 74-140

WESTERN PIECE DYEERS AND FINISHERS, )  
INC., a Delaware corporation, )

Respondent. )

NOTICE OF FILING OF SETTLEMENT  
AND PROPOSAL FOR SETTLEMENT

To: Joseph B. Crowley, Esq.  
Thomas L. Brejcha, Jr.  
Boodell, Sears, Sugrue,  
Gimbalvo & Crowley  
One IBM Plaza, Room 2650  
Chicago, Illinois 60611

Mr. Donald G. Satterauer  
Hearing Officer  
5941 Midway  
Downers Grove, Illinois 60515

YOU ARE HEREBY NOTIFIED that on this 21st day of July, 1975, I have filed a Stipulation and Proposal for Settlement, a copy of which is attached hereto and hereby served upon you.

ENVIRONMENTAL PROTECTION AGENCY  
OF THE STATE OF ILLINOIS  
WILLIAM C. SCOTT  
Attorney General  
State of Illinois  
As Its Attorney

July 21, 1975

By: William C. Scott  
WILLIAM C. SCOTT, JR.  
Assistant Attorney General



A. Stipulation

1. Western is a Delaware corporation registered to do business under the laws of Illinois. It operates a manufacturing facility situated at 7033 South Chicago Avenue in Chicago, Cook County, State of Illinois ("the plant"), where it is engaged in the processing and finishing of clothes and fabrics.

Western's plant is bounded on either side by business establishments, including a stonecutting operation to its left. Its plant consists of a single building which directly abuts the sidewalk to the front along South Chicago Avenue, a through business street of four lanes, which carries heavy trucks, among other kinds of vehicular traffic. Across South Chicago Avenue are business and commercial concerns, and immediately to their rear is a raised railroad right of way for the main line of the Penn Central Railroad. Approximately ten trains per day have been observed by Western on that track. Immediately to the rear of Western's plant is an alley. To the northeast across this alley on East 69th Place are rows of single-family dwellings and a high-rise senior citizens' home. A light manufacturing building is at the far end of 69th Place near the next intersection. Directly east and across the alley to the rear of Western's plant is a parking lot and maintenance center used by employees of the Illinois Bell Telephone Company. At the corner of 71st Street, South Chicago Avenue, and Cottage Grove Avenue, south of Western's plant, is the northwest corner of Oakwood Cemetery.

2. Processing and Finishing Operations.

Western conducts five distinct types of cloth and fabric processing at its plant. Four of these operations yield no emissions except water vapor and do not, nor are claimed to, pose any subject for enforcement under the Illinois Environmental Protection Act. These four operations are as follows:

- a. Simple washing and drying of fabrics. Fabrics are introduced into a water washing machine, then passed through drying machines, then stretched and rolled;
- b. Washing, dyeing and drying of fabrics. Same as the simple washing and drying operation (paragraph (a) above) except that, after washing, fabrics are passed through a dyeing operation where they are treated with water-base dyes, and then are dried, stretched and rolled for shipment;
- c. Sanforizing and drying of fabrics. Fabrics are introduced into a sanforizing (pre-shinking) vat, then steam dried and rolled;
- d. Nonpermanent flameproofing of fabrics. Fabrics run through a padder and fireproofing vat are treated with water-based solutions, then steam dried and rolled; or, alternatively, after treatment they are pre-dried in an oven, then run through a normal drying process and rolled.

The fifth operation consists of the permanent flameproofing of fabrics. This operation consists of the treatment of fabrics run through a padder by saturation with dye and/or flameproofing solution; fabrics are then passed through a radiant heater (gas) pre-dryer oven; then through steam heated drying and curing; then through a final flash (electric radiant heat oven) dryer; fabrics are then deposited on a cart.

### 3. Materials Used in Permanent Flameproofing Operations.

The chemicals utilized in Western's permanent flameproofing operations during all times relevant herein up to on or about March 15, 1975, are as follows:

- a. nonyphenal-ethoxylates
- b. resin 493 modified melanene
- c. tetrakis phosphonium chloride (THPC)
- d. triethenalamine
- e. urea
- f. polyethylene
- g. polyvinyl chloride latex
- h. Tris (2,3-Dibromopropyl) phosphate
- i. toluol
- j. emcol (emulsifying agent)
- k. antimony oxide
- l. glycerine
- m. benagel (thickening agent), and

n. water.

When various materials are heat-cured, resin is bound into the fabric and formaldehyde and hydrochloric acid are emitted. On or about March 15, 1975, at the recommendation of the Southern Regional Laboratories of the U. S. Department of Agriculture, Western commenced use of a newly developed procedure for reducing the amount of formaldehyde evolved from the fire-retardant chemical reaction. Said procedure incorporates the use of Di Sodium Hydrogen Phosphate.

#### 4. Value of Permanent Flameproofing Process.

Western urges that use of the chemical processes which yield emissions of formaldehyde has proved indispensable in the conduct of its permanent flameproofing of fabrics. Further, it urges that its permanent flameproofing process is an area of industrial production affected with a public interest for the following reasons. First, only two other companies had produced flameproof fabrics meeting the same specifications as those of Western -- Reeves Company of New Jersey and Bradford Dyeing & Finishing of Massachusetts. Second, Western's permanently flameproofed fabrics alone meet stringent federal government specifications. Finally, Western notes that recently enacted federal legislation requires permanent flameproofing of certain wearing apparel and other fabrics.

#### 5. Emission Treatment History.

In 1968 Western installed an "Amacon" scrubber unit

manufactured by American Air Flow Company ("AAF"), to capture formaldehyde emissions from its permanent flameproofing operations. From the time the AAF scrubber was installed, through the balance of 1968 and 1969, Western and AAF engaged in continuous efforts to secure proper efficiency in compliance with a commitment made by AAF to control emissions within the limit of air pollution regulations.

After repeated disputes between Western and AAF regarding the efficiency of the AAF scrubber, AAF retained an independent engineering consulting firm, Charles Licht Engineering Associates, Inc., ("CLEA") of Olympia Fields, Illinois, to verify the efficiency of the AAF equipment. On October 3, 1969, CLEA submitted a test report to AAF, which report concluded that the air flow through the scrubber was considerably below that specified by the manufacturer's warranties. The report recommended the installation of additional fan equipment.

Western then contracted with Aero-Vent Company for the installation of additional fan equipment, as recommended by the CLEA report, so as to increase the volume of the air flow through the AAF scrubber.

Western made additional adjustments and engaged in various other attempts to improve the efficiency of its existing air pollution control equipment, among them a plenum chamber to capture fugitive fumes in the peak area of the plant roof so as to cause said fumes to flow through the AAF scrubber.

In late 1969, Western ceased further reliance upon the AAF

scrubber and purchased from United Air Specialists, Inc. ("UAS") of Cincinnati, Ohio, a "pack tower" type of scrubber with a rated capacity of not less than 20,000 cfm. The City of Chicago Department of Environmental Control conducted field tests to gauge the efficiency of the new UAS scrubber system shortly after it was installed, on June 11 and 12 and August 20, 1970. The tests indicated that the concentration of formaldehyde emissions was 9.55 ppm in the scrubber stack. The test report is set forth in a memorandum from George Kimura to Sidney Marco of the Department of Environmental Control, dated June 16, 1970, and is attached hereto as Exhibit A.

In accordance with a further recommendation of the city in the 1970 test report that additional hooding be installed to prevent the escape of fumes without passing through the UAS scrubber, Western proceeded to have such hooding and ducting installed so as to channel fugitive fumes into the scrubber.

In 1971, Western was advised by UAS and an engineering consultant from Aero-Vent Fan Co. to initiate the use of sodium bisulfate as an admixture to the scrubber water in order to enhance the efficiency of the UAS scrubber. Although the sodium bisulfate did enhance the scrubber's efficiency, Western was not advised as to the proper maintenance procedures to avert a bisulfite build-up on the Rauschig rings in the scrubber and said build-up required complete dismantling, cleaning, and repacking of the Rauschig rings in late 1972.

EPA engineers visited the facility on April 25, 1973 and



May 1, 1973. During these visits, formaldehyde fumes were observed escaping through exhaust fans and roof fans. Similar fumes were not being captured properly by the hooding leading to the scrubber. There is a dispute between the parties as to whether the scrubber was operating with the packed bed.

Nonetheless, on April 9, 1974, EPA engineers, upon visiting the plant, discovered that certain formaldehyde fumes escaped through louvered openings in the plant's roof. Formaldehyde odors were noticed on the roof of the facility and in the adjacent alley. Again, a dispute exists as to whether the scrubber was operating with the packed bed. In the summer of 1974, additional duct work was performed by Western to connect fumes caught in the below-roof gable area and plenum chamber with the inlet duct to the scrubber.

Furthermore, in spring of 1974, Western retained CLEA as its independent engineering consultant in lieu of reliance for technical and engineering advice upon its various suppliers, including UAS, Aero-Vent Fan Co. and its chemical suppliers. CLEA recommended that Western commence using a small amount of ammonium hydroxide as an admixture to its scrubber water so as to cause continuous reaction with formaldehyde gas in the scrubber. Such an admixture of ammonia neutralized formaldehyde fumes. However, from time to time, when said admixture of ammonia was insufficiently regulated, an ammonia odor could be detected at the stack.

Through meetings with EPA personnel during the pendency of

the above-captioned action, through the spring, summer and autumn of 1974, Western abandoned its program of exclusive reliance upon ammonium hydroxide as an admixture and alternately used sodium bisulfite, liquid ammonia and sodium hydroxide.

On or about February 1, 1975, Western contracted with Ozone, Inc., a firm which represented that the introduction of ozone into the scrubber exhaust stream would react with formaldehyde and neutralize any resultant formaldehyde in the exhaust. A mechanism was installed at Western by Ozone, Inc. and substantial testing and experimentation was undertaken without positive results to date.

In April 1975, Western retained still another engineering consultant, Air Resources, Inc., which firm visited its plant and conducted a thorough survey of Western's production processes and pollution abatement systems. This Stipulation and Proposal for Settlement is based upon their findings and recommendation.

#### 6. Permits.

Western applied for installation permits from the City of Chicago in 1968 when the AAF "Amacon" scrubber was installed. Further application was made to the City in 1969 when the UAS "pack tower" scrubber was installed.

Western was granted an air pollution control installation permit by the City of Chicago Department of Air Pollution Control on January 7, 1970, Permit Number B-420122.

A certificate of operation was also granted to Western by the City of Chicago so that in 1973 Western had been deemed in

compliance with all applicable City Department of Environmental Control requirements.

In May 1973, Western made application to the Illinois EPA for an operating permit relating to its boilers and such a permit was granted. Western, at this time, believed that the securing of such a permit would fulfill its obligations under the Illinois Environmental Protection Act.

However, the EPA personnel visited Western's plant in or about May, 1973 and advised Western that an additional EPA operating permit was required for its emission sources and pollution control equipment. Western immediately corresponded with the EPA office in Springfield (Permit Section) to request permit application forms. However, said letter was apparently lost since Western received no reply thereto.

In April 1974, EPA wrote to Western indicating that the company might be in violation of the Environmental Protection Act in that operating permits for its pollution control equipment had not been applied for and a public nuisance might exist as a result of escaping formaldehyde emissions. It was at this time that Western immediately retained CLEA as its independent engineering consultants and directed CLEA immediately to file application for an operating permit. Said application was promptly filed on May 17, 1974. However, on June 17, 1974, EPA, by Keith Conklin, Manager, Permit Section, responded to Western for EPA denying the permit application, pending resolution of the instant enforcement proceeding.

7. Allegations in Complaint.

The above-captioned enforcement action was commenced on or about April 19, 1974 by the filing of a Complaint against Western by EPA; an Amended Complaint was filed by EPA on August 29, 1974.

Count I of the Amended Complaint alleged, among other things, as follows:

"That beginning on or about July 1, 1970, and continuing for each and every day of operation to the filing of the Amended Complaint herein, Respondent has operated its aforementioned facilities in a manner which caused or allowed the discharge of formaldehyde into the ambient atmosphere of the State of Illinois, said emission being a contaminant within the meaning of Section 3(d) of the act, [Ill. Rev. Stat., ch. 111-1/2, Sec. 1003(d) (1973)].

"That beginning on or about July 1, 1970, and continuing for each and every day of operation to the filing of the Amended Complaint herein, Respondent has operated its aforementioned facilities in a manner which caused or allowed the discharge of hydrogen chloride into the ambient atmosphere of the State of Illinois, said emission being a contaminant within the meaning of Section 3(d) of the Act, [Ill. Rev. Stat., ch. 111-1/2, Sec. 1003(d) (1973)].

"That the presence in the atmosphere of on of the said contaminants is of sufficient quantities and of such characteristics and duration as to be injurious to human, plant or animal life, to health or to property or to unreasonably interfere with the enjoyment of life or property by causing citizens residing or working near the Respondent's facility to on various occasions: cease or avoid outdoor recreational and maintenance activities, leave their homes and property, close doors and windows and otherwise attempt to seal their homes in order to avoid or reduce their exposure to the aforesaid odors, as well as by causing physiological reactions in these citizens such as watering of the eyes, nausea and burning nasal membranes and passages, and therefore causes air pollution as that term is defined in Section 3(b) of the Act, [Ill. Rev. Stat., ch. 111-1/2, Sec. 1003(b) (1973)].

"That from on or about July 1, 1970, and continuing every day of operation to the filing of the Amended Complaint herein, Respondent has caused or allowed the discharge or emission of one or more contaminants into the environment so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, in violation of Section 9(a) of the Act [Ill. Rev. Stat. ch. 111-1/2, Sec. 1009(a) (1973)].

Complainant hereby alleges that the emissions and violations alleged in this paragraph will continue on each day of operation hereafter, unless abated after the filing hereof."

The relief sought by EPA pursuant to Count I of the Amended Complaint was as follows:

"That the Board set a hearing date in this matter, to be not less than 21 days from the date of service hereof, at which time Respondent, Western Piece Dyers and Finishers Company [sic], be required to answer the allegations herein.

"That the Board, after due consideration of any statements, testimony and arguments as shall be duly submitted at the hearing, or upon default in the appearance of Respondent, enter and issue a final order directing Respondent to cease and desist from further violations.

"That the Board impose upon Respondent a monetary penalty of not to exceed \$10,000 for each violation, and an additional penalty of not to exceed \$1,000 for each day during which a violation shall have continued.

"That the Board issue and enter into such additional final order, or make such additional final determination as it shall deem appropriate under the circumstances."

Count II of the Amended Complaint alleged, among other things, as follows:

"Respondent, Western Piece Dyers and Finishers Company [sic], owns and operates certain equipment at its above-described facility, including, but not limited to, a waterwash scrubber and permanent flame-proofing finishing dryers.

"The aforesaid equipment is an 'emission source' as defined by Rule 101 of Chapter 2, Part I of the Air Regulations, and as such is regulated by Rule 103(b)(2) of Chapter 2, Part I of the Air Regulations.

"Rule 103(b)(2) of Chapter 2, Part I of the Air Regulations provides in part that all emission sources not previously listed in Rule 103(b)(2) obtain operating permits from Complainant by May 1, 1973. Pursuant to Rule 103(b)(2)(B), Part I of the Air Regulations, the aforesaid date was advanced by Complainant to June 1, 1973.

"That beginning on June 1, 1973, and continuing through the filing of the Amended Complaint herein, Respondent has caused its cloth-finishing facility to operate without having first obtained operating permits from the Complainant.

"That the aforesaid conduct described in Paragraph 10 above constitutes a violation of Rule 103(b)(2) of

Chapter 2, Part I of the Air Regulations and a violation of Section 9(b) of the Act, [Ill. Rev. Stat., ch. 111-1/2, §1009(b) (1973)]."

The relief sought by EPA pursuant to Count II of the Amended Complaint was as follows:

"That the Board set a hearing date in this matter to be not less than 21 days from the date of service hereof, at which time the Respondent, Western Piece Dyers and Finishers Company [sic], be required to answer the allegations herein.

"That the Board, after due consideration of any statement, exhibits, testimony and arguments as shall be duly submitted at the hearing, or upon default in the appearance of Respondent, enter and issue a final order directing Respondent to cease and desist from further violations.

"That the Board impose upon Respondent a money penalty of not to exceed \$10,000 for the violation alleged herein and an additional penalty of not to exceed \$1,000 for each day during which the said violation shall have continued.

"That the Board require Respondent to obtain the necessary operating permits.

"That the Board issue and enter such additional final order, or make such additional final determination,



as it shall deem appropriate under the circumstances."

8. Settlement Discussions.

Commencing in June 1974, numerous discussions relating to possible settlement of this case have been held, including a major conference between the parties in August 1974, at which the technical staffs of EPA and Western participated.

Additional conferences were held on November 20, 1974, and March 31, 1975. In addition, numerous telephone calls and letters have been exchanged by the parties in an effort to resolve this case.

9. Citizen Testimony.

Both parties, by agreement, presented testimony of citizens residing in the area of the facility. Such testimony was taken at hearings conducted on December 3, 4, 10, 11 and 12, 1974. The EPA presented 13 witnesses and Western presented 15 witnesses.

10. Admission of Violations.

a. Section 9(a) Violation.

For purposes of this stipulation only, Western admits that, based upon the degree of interference with the enjoyment and physical property of certain witnesses presented, the social and economic value of its facility to the community, its suitability to the area involved, and the technical practicability

and economic reasonableness of reducing emissions, set forth more fully below, it has caused "air pollution" as defined in Section 3(b) of the Environmental Protection Act and as alleged in the Complaint, in violation of Section 9(a) of the Act.

b. For purposes of this stipulation only, Western admits that it operated without an air pollution operating permit during the period alleged in the Complaint, in violation of Rule 103(b)(2) of Chapter 2, Part I of the Air Regulations and in violation of Section 9(b) of the Act.

B. Proposal for Settlement

Now, therefore, the parties agree and stipulate that a proposal be made for settlement of the case, and that said proposal be submitted for approval to the Board as follows:

1. That, upon approval of this settlement by the Board, Western agrees, in compliance with recommendations of its engineering consultant, Air Resources, Inc., which recommendations have been reviewed by the technical staff of EPA, to take the following steps, which shall be completed not later than sixty (60) days after Board approval.

a. Stack Height -- Western has increased the height of its main scrubber stack to approximately sixty-eight (68) feet in order to eliminate any possibility of entrapment

of the exhaust plume in the building boundary layer;

b. Scrubber Efficiency -- To enhance the efficiency of its UAS scrubber by:

(i) increasing the speed of the scrubber exhaust fan so as to increase the gas flow from 13,116 actual cubic feet per minute (a.c.f.m.) (per Air Resources, Inc. pitot tube measurement on June 12, 1975) as near as practicable to the fan rated capacity of 20,000 cfm;

(ii) closing all openings in the scrubber and keeping them closed during normal operation so as to avert infiltration of air therein and consequent reduction in scrubber efficiency; and

(iii) substituting a higher efficiency packing material for the 1-1/2 inch Rauschig rings presently utilized in the scrubber if necessary to increase scrubber efficiency; said substituted material to be selected by Air Resources, Inc.

2. That, upon completion of the projects set forth in paragraph 1 of this proposal, Western agrees, within sixty (60) days thereof, to perform a stack test, in the presence of EPA representatives, and under supervision of Air Resources, Inc., utilizing generally accepted test methods, to determine that formaldehyde emissions from its scrubber stack amount to not more than seven (7.0) parts per

million (p.p.m.)

If the test results indicate that emissions are greater than 7 p.p.m., Western agrees to undertake additional work, under the supervision of Air Resources, Inc., so as to reduce formaldehyde emissions to the level of 7 p.p.m. Such additional work, if required, shall be performed within 60 days after receipt of initial test results. On completion of such work, the level of emissions will be re-tested in the same manner as described above.

It is agreed by Western and EPA, after consultation between their respective technical advisors, that emissions of formaldehyde in amounts of not greater than 7.5 p.p.m. at a stack height of approximately 68 feet would not be detectable for citizens living in the community in the neighborhood surrounding Western's plant.

3. That Western agrees to conduct a program of periodic maintenance to ensure that fugitive vapors from its permanent flame-proofing process do not escape the building through windows, vents, or cracks. Such a program will consist of assigning an employee to monitor the roof and walls and to report any leaks discovered. Written reports will be kept and made available to the EPA during inspections. Immediate steps will be taken to seal leaks, close vents or otherwise prevent such fugitive vapors.

4. That Western agrees to conduct a program of periodic maintenance with respect to its scrubber to ensure proper operation. Such a program will consist of assigning a qualified employee to check

the scrubber for: (1) pressure drop, (2) air flow, (3) fan speed, (4) openings, (5) lubrication, (6) corrosion, (7) buildup of contaminants on surfaces, operating parts, etc., or any other variable which may result in loss of scrubber efficiency. Written reports will be kept and made available to the EPA during inspection. Immediate corrective action will be taken to improve operating efficiency.

5. That an annual inspection of the scrubber will be conducted by Air Resources, Inc., or an equivalent EPA approved firm. Said inspection will be accompanied with a written report and will be submitted to the EPA Control Program Coordinator, 2200 Churchill Road, Springfield, Illinois, 62706.

6. That Western agrees to cease its permanent flameproofing process upon any breakdown or serious operating malfunction of its scrubber and to immediately notify the EPA of this occurrence. Said operations will not commence until adequate steps have been taken to ensure proper operating efficiency.

7. That within 30 days after Board approval, Western will submit applications for an air pollution operating permit for its scrubber and "as built" construction permits for the stack work.

8. Within 10 days after Board approval, Western agrees to pay a penalty of \$5,000.00 for the violations previously admitted.

Payments will be made to:

Environmental Protection Agency  
Department of Fiscal Services  
2200 Churchill Road  
Springfield, Illinois 62706.

9. Conditions to Settlement -- This proposed settlement is expressly conditioned upon and effective only upon the entry of an order approving the same in all respects as to all operations carried on by Western at its plant by the Illinois Pollution Control Board, and if such order is not entered, it shall be inoperative at the election of either party, and any admissions, statements, programs and positions of any party or person, including EPA, the Office of the Illinois Attorney General and Western, contained herein, shall be null, void and of no force or effect and shall not be used or offered in evidence in this or any other action or proceeding filed by the Illinois Attorney General or involving any other person or persons, corporation, governmental agency or other entity.

WHEREFORE, this Stipulation and Proposal for Settlement is respectfully submitted to the Illinois Pollution Control Board for approval this 21 day of July, 1975.

WESTERN PIECE DYERS AND FINISHERS, INC.

By George J. Ronaldi

PEOPLE OF THE STATE OF ILLINOIS;

WILLIAM J. SCOTT,  
Attorney General  
As its Attorney

By Michael A. Brundage

July 7, 1975

ENVIRONMENTAL PROTECTION AGENCY  
OF THE STATE OF ILLINOIS

By Richard Brundage

July , 1975

PROOF OF SERVICE

I, KAREN R. BLAKELY, having been sworn and under oath do state that I have this 21st day of July, 1975, served a copy of the foregoing Notice and Response to Motion for Stay upon the persons to whom said Notice is directed by posting same in envelopes addressed to said persons with the U.S. Postal Service located at 160 North LaSalle Street, Chicago, Illinois 60601

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SUBSCRIBED AND SWORN TO  
before me this 21st day  
of July, 1975.

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Notary Public