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Pollution Control Hearings Board
By Dolores Orland
Clerk

BEFORE THE
POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

IN THE MATTER OF AMERICAN SMELTING AND REFINING CO., Tacoma Smelter, Appellant, vs. PUGET SOUND AIR POLLUTION CONTROL AGENCY, Respondent.	PCHB Nos. 271 and 296 FINDINGS OF FACT, CONCLUSIONS AND ORDER

These matters, involving ten civil penalties of $250.00 each for alleged sulphur dioxide emission violations of Section 9.07 of respondent's Regulation I, came before the Pollution Control Hearings Board (W. A. Gissberg, presiding officer, Walt Woodward and James T. Sheehy also in attendance) in the Board's Lacey, Washington office at 10:00 a.m., June 28, 1973.

Appellant appeared through Ronald A. Roberts; respondent through Keith D. McGoffin. Eugene Barker, Tacoma court reporter, recorded the

proceedings.

Witnesses were sworn and testified. Exhibits were admitted. Counsel filed post hearing briefs of argument.

From testimony heard, exhibits examined and arguments considered, the Pollution Control Hearings Board makes these

FINDINGS OF FACT

I.

In 1968, respondent's Board of Directors adopted Section 9.07 of its Regulation I, said section, in part, making it unlawful for the emissions of sulphur dioxide which result in concentrations and frequencies at a primary ground level monitoring station of (a) 0.4 parts per million by volume (ppm) in an "averaging time" of sixty minutes and (b) 0.25 ppm in an "averaging time" of sixty minutes twice in any seven consecutive days.

II.

Since the turn of the century, appellant has owned and operated a mineral reduction smelter at Tacoma, Pierce County. It emits about twenty-one tons an hour of sulphur dioxide into the ambient air, being about 85 percent of the total sulphur dioxide emission from industrial sources in the Tacoma area.

III.

Starting about 1968, the parties in these instant matters engaged in a legal tug of war over various orders and penalties promulgated by respondent in a continuing effort to control and reduce the Tacoma smelter's emissions in line with Section 1.01 of respondent's Regulation I. Section 1.01, a public policy statement, not only declares that it

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is respondent's role to safeguard human health and safety, animal life, plants and property, but also to promote the economic development of the Puget Sound area (of which Tacoma is a part).

IV.

In 1971 a Variance and compliance schedule issued to appellant by respondent was appealed to this Board. After a protracted hearing and lengthy deliberation, the Board rendered a decision which sought to accomplish two things: (1) safeguard the public and (2) make it possible for appellant to continue economical operation of the Tacoma smelter. The parties herein accepted the Board's decision. Subsequently, and at the Board's insistence, the parties agreed to a Memorandum of Understanding which was designed to clarify and eliminate, as much as possible, disagreement over Notices of Violation and penalties issued under the amended Variance. By stipulation during the hearing the content of the Memorandum of Understanding was agreed by the parties to extend to and be a part of the instant appeals.

The instant matters, appealed to this Board in January and February, 1973, concern these alleged violations of Section 9.07 of respondent's Regulation I:

Notice of Violation No.	Notice of Civil Penalty No.	Amount of Penalty	Date or Dates	Time of Day	ppm One Hr.	Monitoring Station
7354	581	$250.00	9/27/72	1301-1401	0.26	26th & Pearl, Tacoma
			10/2/72	0925-1025	0.28	"
			10/2/72	1025-1125	0.32	"

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Notice of Violation No.	Notice of Civil Penalty No.	Amount of Penalty	Date or Dates	Time of Day	ppm One Hr.	Monitoring Station
7353	582	$250.00	9/27/72	1042-1142	0.28	26th & Pearl Tacoma
			9/27/72	1301-1401	0.26	"
			10/2/72	0925-1025	0.28	"
7352	583	$250.00	9/28/72	1500-1600	0.33	Adams Street Tacoma
			10/2/72	1043-1143	0.30	"
			10/2/72	1520-1620	0.35	"
7351	584	$250.00	10/2/72	1010-1110	0.55	26th & Pearl Tacoma
7356	585	$250.00	10/2/72	0925-1025	0.28	26th & Pearl Tacoma
			10/2/72	1025-1125	0.32	"
			10/3/72	0010-0110	0.43	"
7355	586	$250.00	10/3/72	0010-0110	0.43	26th & Pearl, Tacoma
7357	587	$250.00	10/11/72	0218-0318	0.42	26th & Pearl, Tacoma
7358	588	$250.00	10/17/72	1528-1628	0.43	Fife
7362	593	$250.00	10/18/72	0634-0734	0.46	26th & Pearl, Tacoma
			10/24/72	0742-0842	0.31	"
			10/24/72	0842-0942	0.26	"

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Notice of Violation No.	Notice of Civil Penalty No.	Amount of Penalty	Date or Dates	Time of Day	ppm One Hr.	Monitoring Station
7326	645	$250.00	11/17/72	1326-1426	0.28	Adams Street, Tacoma
			11/17/72	1426-1526	0.39	"
			11/17/72	1526-1626	0.33	"

VI.

Respondent employs sixteen specialists, including qualified laboratory technicians, chemists and meterologists, and uses ten primary ground level monitoring stations in its Puget Sound jurisdiction, four of which are in the Tacoma area. The Davis Monitoring Device, used at each station, records wind direction and speed and sulphur dioxide concentrations and frequencies on a continuous strip chart and by a telemetry system to a computer in respondent's headquarters office in Seattle. Respondent's elaborate air monitoring system, developed over a three year period, is a carefully supervised program designed to provide as accurate information as conscientious and qualified personnel and imperfect machines can produce.

VII.

To maintain a high degree of accuracy, each Davis Monitor goes through an automatic "scrubbing cycle" for nine minutes in each hourly period. During this cycle the monitor does not record sulphur dioxide concentrations. Its strip chart, therefore, records fifty-one minutes of actual concentrations in each hour. To produce a sixty minute "average", technicians draw a straight line to bridge the last recorded

sulphur dioxide concentration with the first recorded concentration after the "scrubbing cycle". Comparison of ninety-two strip charts during the "scrubbing cycle" with a continuous recording device showed that concentrations computed from the bridging were slightly less than reality.

VIII.

The Davis Monitor is not perfect. It can err ten percent, either higher or lower than reality. Respondent's air monitoring system, which calls for periodic calibration testing in the Seattle laboratory of all its Davis Monitors, shows that, over the past several years, seventy-four percent of the devices were recording sulphur dioxide concentrations between ten and twenty percent lower than reality. The Board has no detailed testimony as to what the other twenty-six percent, or one fourth of the devices, were reading. They could have been recording reality higher than reality.

IX.

Tacoma area industries, required to report to respondent their sulphur dioxide emissions, sent 214,266 tons of sulphur dioxide into the ambient air in 1971, 205,433 tons of which, or 95 percent, were contributed by appellant. These figures do not reflect the sulphur dioxide contributions from automobile exhausts and home heating devices. A study made in July and August of 1971, when appellant's Tacoma smelter was shut down by a labor dispute, showed that the average of "background" (sources other than appellant's plant) sulphur dioxide concentration in the Tacoma area was less than .005 ppm. The study was made at a time of year when home heating devices were operating, if at all, on a minimum basis.

X.

Paragraph four of the Memorandum of Understanding, agreed to in May, 1972, by the parties to these appeals, states that respondent will make an "appropriate allowance" for instrument inaccuracy or malfunction, and for other sources of sulphur dioxide in the Tacoma area. Respondent contends, but did not prove, its air monitoring system has a built-in allowance for error of from five to ten percent on the conservative, or lower than reality, side. All ten of the instant citations show no numerical allowance adjustments from the monitor readings. Ten percent is an appropriate allowance for error.

X.

The Davis Monitor, when returned from station to Seattle for periodic calibration, is "warmed up" for three hours before it is deemed to be functioning properly. Penalty No. 582 is based, in part, on a recording which began thirty-three minutes after the Davis Monitor had been taken from Seattle and installed on station.

XII.

In the alleged violation of September 28, 1972, which is part basis for Penalty No. 583, respondent noted a malfunction of the strip chart at its Adams Street monitor. To obtain the sixty minute "average" for the alleged September 28, 1972 violation, respondent relied on one instantaneous one-minute reading and six five-minute readings recorded by telemetry to its Seattle office scanning computer.

From these findings, the Pollution Control Hearings Board comes to these

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CONCLUSIONS

I.

We approach our conclusions by first reacting to what may be appellant's three main challenges to respondent's air monitoring system: (1) the system's data is not sufficient proof to sustain civil penalties because its sixty minute information actually is based on fifty-one minutes of data and nine minutes of hypothetical bridging; (2) appellant is being charged with "background" sulphur dioxide emissions from other sources in the Tacoma area and (3) appellant is not being given an "appropriate allowance" for the fact that respondent's monitoring devices at any time can err by ten percent either above or below actual sulphur dioxide concentrations.

As to (1), we think the post hearing briefs of both parties overlook a cardinal word in Section 9.07 of respondent's Regulation I. The word is "averaging". Respondent's Board of Directors, in composing that section, chose to use the phrase "averaging time". The Directors did not require a continuous sixty minute strip of evidence to sustain a penalty. The verb "averaging", as defined by Webster's New Twentieth Century Dictionary, 2nd Edition, means "to calculate the average of or mean of." The nine minutes of bridging, for which uncontroverted testimony was that its values were lower than reality, is reasonable. When averaged with fifty-one minutes of recorded concentrations, it produces a valid "averaging time" of sixty minutes.

Neither are we impressed with the contention that undue amounts of sulphur dioxide from other sources are being charged against appellant. Appellant is the giant contributor to ambient air concentrations of

sulphur dioxide in the Tacoma area.

Respondent's careful meteorological analysis of wind directions during all alleged periods of violations guard against inclusion of sulphur dioxide from other industrial sources. No specific data is at hand as to actual contribution of home heating units or automobile exhausts, but evidence gathered when the smelter was shut down for a two month period due to a labor dispute in 1971 clearly indicates that the contribution of sulphur dioxide in the Tacoma area from sources other than the smelter is almost negligible.

Appellant, however, causes deep concern with his contention that respondent has not lived up to Paragraph IV of the Memorandum of Understanding by not making "appropriate allowance" for the plus or minus ten percent error possible, at any time, in the functioning of a Davis Monitor. While it is a strong point in respondent's favor to note that tests, over many years, show seventy-four percent of the Davis Monitors recording on the low side, the nagging question still remains as to what the other one quarter of all of respondent's monitors were recording. We are asked to balance this possible error with a five to ten percent factor of conservatism "built in" to respondent's air monitoring system. We would be willing to accept such a premise if it were documented, but a careful review of testimony shows that only non-specific answers were given to the repeated question, "Where is this allowance built into the system?" Therefore, we feel that in adjudicating these civil penalties we must give the benefit of a ten percent doubt to appellant.

II.

Applying a ten percent factor in favor of appellant to all the FINDINGS OF FACT,

one hour recordings of sulphur dioxide listed in the instant Notices of Violation, we find that insufficient evidence remains to sustain Notices of Civil Penalty Nos. 581, 582, 586, 587, 588 and 593.

III.

We also find that Notice of Civil Penalty No. 582 is invalid for the additional reason that part of the evidence was produced by a monitoring device which was not sufficiently "warmed up" to be functioning properly.

IV.

Because of our reasoning on the meaning of the word "averaging", as explained in Conclusion I, we find no reason to reject the seven computer-produced scans which were the basis for part of the evidence in Notice of Civil Penalty No. 583. The incursion evidence for that portion of the penalty (September 28, 1972, 1500 to 1600 hours) was 0.33 ppm. With a violation of that intensity, one does not need to be overly concerned with an hourly average based on a generous number (7) of reporting stages.

V.

We, therefore, are prepared to sustain Notices of Violation Nos. 583, 584, 585 and 645.

VI.

Having thus adjudicated to the best of our ability the ten matters brought to us, we are prompted to end this with a gratuitous question to both parties. What has happened to the spirit of cooperation which marked the approval of the Memorandum of Understanding? Is there something which the Board can do, perhaps by presiding over an informal

conference which might be effective in restoring that spirit of cooperation? The Board is anxious to be of assistance.

At any event, the Pollution Control Hearings Board makes this

ORDER

Appeals to Notices of Civil Penalty Nos. 581, 582, 586, 587, 588 and 593 are sustained and they are ordered stricken. Appeals to Notices of Civil Penalty Nos. 583, 584, 585 and 645 are denied and appellant is directed to pay the $250.00 penalty in each case to the total of one thousand dollars.

DONE at Lacey, Washington this 24th day of September, 1973.

POLLUTION CONTROL HEARINGS BOARD

Walt Woodward

WALT WOODWARD, Chairman

W. A. Gissberg

W. A. GISSBERG, Member

Mary Ellen McCaffree, who did not participate in these deliberations and who has succeeded Mr. Sheehy as a member of the Board, does not desire to sign this Order.