

SERVED September 13, 2005
UNITED STATES DEPARTMENT OF TRANSPORTATION
OFFICE OF HEARINGS
WASHINGTON, D.C.

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, ¹)	
Complainant,)	Docket No. RSPA-2004-17025
v.)	(Hazardous Materials - PHMSA)
STEIGERWALT ASSOCIATES, INC.)	
Respondent.)	

**DECISION AND ORDER
OF ADMINISTRATIVE LAW JUDGE RICHARD C. GOODWIN**

Found: Complainant proved violations of 49 C.F.R. §§171.2(c) and 178.35(c)(3)(v) and DOT-E 11194 as charged. An assessment of \$3,850 will be levied.

The Office of Chief Counsel of the Research and Special Programs Administration ("RSPA"),² the Complainant in this matter, seeks a civil penalty of \$3,850 against Steigerwalt Associates, Inc. ("Steigerwalt" or "Respondent") for certifying cylinders although failing to verify the accuracy of the hydrostatic test system prior to conducting the hydrostatic test of the cylinders. Complainant also charges Steigerwalt with failure to fulfill its duties as an independent inspection agency.

¹ Now the Pipeline and Hazardous Materials Safety Administration ("PHMSA"). The Research and Special Programs Administration ("RSPA") was an operating administration of the Department at the time this proceeding began. It no longer exists. The Norman Y. Mineta Research and Special Programs Improvement Act ("Improvement Act"), P.L. No. 108-426, 118 Stat. 2423 (November 30, 2004) reorganized RSPA into two new operating administrations: PHMSA and the Research and Innovative Technology Administration ("RITA"). PHMSA succeeded to all authority formerly exercised by RSPA respecting hazardous materials. See Section 2 of the Improvement Act, amending 49 U.S.C. §108(f)(1). For administrative continuity, and because the alleged violations took place under RSPA, I have kept the original caption. Tr. 7-8.

² See n. 1.

I. Background

RSPA's Hazardous Materials Regulations ("HMRs"), 49 C.F.R. §§171-180, governed (among other things) the manufacture, marking, and maintenance of a packaging or container represented or certified for use in the transportation of hazardous materials (§171.1(a)(3)). The regulations in force in 2000, when the alleged violations occurred, subjected any "person" (which includes corporations, see §171.8) testing a package or container which that person represented or certified as qualified for use in the transportation of hazardous materials to all orders and regulations issued under the HMRs.³

Carleton Technology, Inc. of Glen Burnie, MD ("Carleton") is a cylinder manufacturer. It held an exemption, granted under the authority of 49 U.S.C. §5117 and 49 C.F.R. §107.113, to manufacture non-DOT specification packagings for high pressure gas service (Exhs. C-2 and R-3; Tr. 15, 19-20, 43-44, 71-72, 105-06; see §107.1). The exemption, known as DOT-E 11194, permitted Carleton to offer liquefied and non-liquefied gases under high pressures for transportation in commerce in a cylinder whose specifications were outside existing regulations. More specifically, DOT-E 11194 allowed Carleton to manufacture certain carbon-fiber reinforced aluminum lined cylinders. The exemption required that the cylinders conform to the "Basic Requirements for Fully Wrapped Carbon Fiber Reinforced Aluminum Lined Cylinders (DOT-CFFC) (Second Revision), dated June 1998" (Exh. C-2, p. 2; see Exh. C-11). DOT-CFFC was attached as Appendix A of the exemption and is a fully integral part of it (Exhs. C-3, C-11, R-3, and C-8, p. 7; Tr. 19, 33, 44, 48, 78-79, 106). Exempt cylinders are required to achieve a safety level at least equal to the safety level required by the regulation from which the exemption is granted (49 U.S.C. §5117(a)(1); Tr. 84-85, 87).

DOT-CFFC, in particular CFFC-13, contains terms and conditions under which the exempt cylinders were to be tested (Tr. 44; Exh. C-2, p. 3 (subparagraph 7.b.1)). Cylinders were required to be inspected and subject to certain nondestructive tests, including hydrostatic testing. The exemption, further, required an "independent inspection agency" approved under 49 C.F.R. §107.803 to inspect and verify testing of the cylinders (Exh. C-3, p. 3, at CFFC-4; Tr. 92-93). Records and reports were to be maintained as evidence of calibration (Exh. C-3, pp. 19, 20).

Steigerwalt Associates, Inc. Allentown, PA, was the DOT-approved inspection agency responsible during April-May 2000 for verifying the accuracy of the hydrostatic test system for Carleton's carbon-fiber cylinders and for conducting hydrostatic testing on them (Exhs. C-1, C-2, and C-3; Tr. 46, 97, 105, 109).

³ Then-section 171.1(a)(4)(b). Current §171.1, which in relevant part is substantially unchanged from the old section, became effective January 1, 2005. See 69 Fed.Reg. 30588, May 28, 2004.

Under the exemption the hydrostatic test system had to be calibrated at the beginning of each day prior to testing, using a calibrated cylinder following procedures specified in CGA [Compressed Gas Association] pamphlet C-1 "Methods of Hydrostatic Testing of Compressed Gas Cylinders" (Exh. C-3, p. 20 (at CFFC-13(a)(ii)); Tr. 53-54). DOT-CFFC explains approved hydrostatic testing procedure:

The hydrostatic test must be by the water jacket method. The system must be calibrated and operated so as to obtain accurate data. The pressure reading must be accurate within one percent in the range of 80 percent to 120 percent of the test pressure, and the volumetric expansion measurement must be accurate to within one percent of the total expansion established when in system calibration, or 0.1 cubic centimeter.

Exh. C-3, pp. 19-20 (at CFFC-13(a)(i)); Exh. R-2; Tr. 36, 65-66, 115.

This proceeding stemmed from RSPA inspector Sandra Webb's compliance inspection of Carleton, the cylinder's manufacturer, on March 27 and 28, 2001 (Tr. 14; Exh. C-1). Test records that inspector Webb reviewed indicated to her that on two dates, April 26, 2000 and May 16, 2000, the test equipment had not been calibrated within the range of 80 percent to 120 percent of the test pressures for cylinders (Tr. 35-38, 44-45, 48-49; Exh. C-1, p. 2). Respondent, however, had certified to RSPA that the cylinders complied with the requirements of exemption DOT-E 11194 (Exh. C-6).

On July 2, 2001, Complainant served Steigerwalt with a Notice of Probable Violation ("Notice") pursuant to §107.311 of Subpart D of its Hazardous Materials Program Procedures, 49 C.F.R. Part 107. The Notice alleged violations of HMR §§171.2(c) and 178.35(c)(3)(v) and exemption DOT-E 11194 issued thereunder. The former section 171.2(c) prohibited any person from representing or certifying a packaging or container as meeting the requirements of an exemption unless the packaging or container was manufactured, maintained, or retested in accordance with applicable requirements of the HMRs or pursuant to an exemption. Section 178.35(c)(3)(v) obligates a cylinder inspector to witness all tests and to "determine that each cylinder made is in conformance with the applicable specification."⁴ Complainant, who bears the burden of proof (§107.321(c)), seeks a penalty of \$3,850.

Respondent denied the charges and requested a formal hearing under §§107.313(a)(3) and 107.319.

⁴ New section 171.2, which in relevant part is substantially unchanged from the old, became effective under the Improvement Act on January 1, 2005. See 69 Fed.Reg. 30588, May 28, 2004. Section 178.35(c)(3)(v) was unaffected by the Improvement Act (see n. 1 p. 1).

A hearing was held in Allentown, PA on March 21, 2005. The parties filed briefs, and the case is now ready for decision.

II. Discussion and Findings

I find and conclude that Complainant met its burden and proved that Respondent Steigerwalt Associates, Inc. knowingly violated §§171.2(c) and 178.35(c)(3)(v) and DOT-E 11194 as charged.

Steigerwalt completed hydrostatic testing of the cylinders on April 26 and May 16, 2000 at test pressures of 3,083 and 3,084 psi, respectively (Tr. 110, 115). CGA pamphlet C-1, whose provisions are expressly made a part of DOT-CFFC, requires that "[E]quipment shall be checked at least once each day at the test pressures that will be used during the day's testing of cylinders." The calibration points Respondent had chosen for the test equipment were 4,000 psi (*i.e.*, pounds per square inch, see §171.8), 5,000 psi and 7,500 psi (Exh. C-4, pp. 1, 3; Tr. 110). Since eighty percent of 3,083 psi is 2,466.4 psi [2,467.2 if 3,084 psi is used], and 120 percent of 3,083 is 3,699.6 psi [3,700.8 psi if 3,084 psi is used] (Tr. 40-41, 115-16), the calibration points were outside the 80 to 120 percent range of the test pressures to be used that day. The closest calibration point Respondent used was 4,000 psi – about 130 percent of 3,083 or 3,084, and well outside the allowable range of the test pressures (Tr. 44, 112). I find, then, that Steigerwalt knowingly failed to calibrate the test equipment within the range of 80 percent to 120 percent of the test pressures for cylinders. Respondent thus violated the terms and conditions of the DOT-E 11194 and transgressed §§171.2(c) and 178.35(c)(3)(v) of the HMRs.

Ernest Steigerwalt, the president of Steigerwalt Associates, Inc., represented his company and testified on its behalf. He asserted that Respondent properly tested and certified the cylinders. Respondent verified the accuracy of the system between 80 and 120 percent of the test pressures on April 26 and May 16, 2000, Mr. Steigerwalt maintained (Tr. 109-10).

Mr. Steigerwalt acknowledged, as I have found, that the cylinders were calibrated at test pressures outside the 80-120 percent range mandated by the exemption (Exh. C-9, pp. 25, 27; Tr. 117-18, 122). But he asserted that DOT-CFFC essentially requires only that the reading be "accurate" (See CFFC-13(a)(i), third sentence; Tr. 114-15, 122; Exh. C-3, p. 20). Admitting that industry practice suggested the use of a calibrated cylinder, Mr. Steigerwalt claimed nonetheless that testing did not have to be performed in that manner if it was demonstrably accurate (Tr. 114-15, 133).

Mr. Steigerwalt elaborated by explaining that a linear elastic relationship exists between the rate of cylinder expansion and the amount of pressure applied to it (Tr. 129). Instructions for performing the testing state that "[t]he expansion readings of the cylinder must be repeatable and linear" (Exh. R-7,

under 4.3; Tr. 138). Respondent's testing conformed with this parameter, he said (Tr. 138). Its testing generated three data points. From those data points, Mr. Steigerwalt continued, Respondent could and did extrapolate the accuracy throughout the entire use of the test system (Tr. 124). He summed up that "if you test at any three points on the line, any three points create a straight line, and you can extrapolate or generate a calibration curve which verifies that the entire system was accurate at other pressures, not just the three you tested at. And that's the basis for our argument . . ." (Tr. 134). Mr. Steigerwalt concluded that Respondent's reading was accurate in the 80 to 120 percent range to within the required one percent (Tr. 122, 124; Exh. C-9, pp. 28, 29).

Mr. Steigerwalt's defense is rejected. Initially, his insistence that only "accuracy" is required is based on a tortured interpretation of conditions required by the exemption. CFFC-13, in proper context, mandates calibration. Indeed, the sentence immediately prior to the sentence Mr. Steigerwalt cited requires that the system "be *calibrated* and operated so as to obtain accurate data" (CFFC-13 (a)(i), in Exh. C-3, pp. 19-20 (emphasis supplied)). In contrast to his contention, the exemption language affirms that accuracy necessitates calibration. A second reason for rejecting Respondent's contentions is that the DOT-CFFC standard simply does not permit the linear method for establishing accuracy. DOT-E 11194 obligates the water jacket method of testing cylinders using a set of control points whose responses are already known (Exh. C-3, pp. 19-20; Tr. 32). System accuracy depends on proper calibration – measuring accuracy relative to a known standard – of the hydrostatic test system within a range of known values (see Compl. Br., p. 9). No other method for establishing accuracy is endorsed. Finally, Respondent failed to demonstrate that the linear method is accurate. Mr. Steigerwalt's conclusion that accuracy of the test system can be established at three arbitrary points was unsupported and speculative. Complainant suggested that the same calibrated cylinder could exhibit nonlinearity of test points and show that the test system was inaccurate (Exh. C-10; Tr. 149). In sum, Respondent's arguments were unpersuasive.⁵

III. Penalty

I will assess a civil penalty of \$3,850 against Respondent for the violations.

Complainant seeks a total civil penalty of \$3,850. Factors which must be evaluated in the determination of penalty are set out in RSPA's (now PHMSA's) penalty regulation, 49 C.F.R. §107.331, which implements the statute's penalty criteria (contained at 49 U.S.C. §5123(c)):

- (a) The nature and circumstances of the violation;
- (b) The extent and gravity of the violation;

⁵ Other arguments advanced by Respondent have been considered and are rejected without further comment.

- (c) The degree of the respondent's culpability;
- (d) The respondent's prior violations;
- (e) The respondent's ability to pay;
- (f) The effect on the respondent's ability to continue in business; and
- (g) Such other matters as justice may require.

See also 49 C.F.R. Part 107, Subpart D, Appendix A, Part III.B.

The Notice of Probable Violation noted also that "[a]n important purpose" of RSPA's enforcement program is to encourage compliance. The Notice continued that RSPA would consider under "such other matters as justice may require" (subsection (g) above) any documented evidence of corrective action and efforts to prevent the violative behavior's reoccurrence.⁶ But Respondent submitted no evidence of corrective action.

For the penalty to achieve its purpose, further, it must have "bite," or deterrent effect. The assessment of civil penalties ensures that the HMRs have "teeth." *Sigma-Aldrich Laborchemikalien, GmbH*, RSPA-2004-19268-2, 2005 WL 1562777 (January 26, 2005).

Complainant argues that its proposed penalty is appropriate. In support, it asserts that Steigerwalt, as a tester, trainer, and certifier, has a high duty of care respecting equipment – equipment which is, by its very nature, hazardous, and thus posing significant safety risks. Mr. Steigerwalt also is a longstanding industry figure active in shaping standards and is familiar with the rules. Further, as an independent inspection agency – a function it continues to perform – Respondent must be knowledgeable about regulations and exemptions (Tr. 94, 98). Complainant also states in support of the proposed penalty amount that Steigerwalt offered no documentation in support of mitigation, such as inability to pay or to continue in business. Finally, Complainant notes that the amount is approximately in the midrange of the penalty for similar violations suggested by its Guidelines (Part 107, Subpart D, Appendix A, Section II, subsection F.10 under "Manufacturing, Reconditioning, Retesting Requirements") (Compl. Br., pp. 19-20).

I conclude, based on the factors to be considered in the penalty determination and on agency policy, that an assessment in the amount of \$3,850 is appropriate and warranted. Respondent, as an independent inspection agency, performed an important safety function which it knowingly violated. It thus allowed an unacceptable risk to develop. The penalty, further, has "bite" appropriate to accomplish the agency's goals of compliance and deterrence. Finally, Respondent offered no documentation in mitigation.⁷

⁶ The regulations similarly endorse penalty mitigation on account of corrective action. See 49 C.F.R. Part 107, Subpart D, Appendix A, §IV.A.

⁷ I note also that the suggested penalty range for a violation of §171.2(c), \$2,000 to \$6,000, contains a higher top number than the top of the range actually utilized by Complainant (\$5,200) in formulating its

For the above reasons, I assess against Respondent Steigerwalt Associates, Inc. a civil penalty of \$3,850 for violating 49 §§171.2(c) and 178.35(c)(3)(v) and exemption DOT-E 11194 as charged in the complaint.⁸



Richard C. Goodwin
Administrative Law Judge

suggested assessment. *See* Appendix A, Section II (subsection F.10 under “Manufacturing, Reconditioning, Retesting Requirements”).

⁸ This decision and order is being issued pursuant to 49 C.F.R. §107.323(a). If Steigerwalt Associates, Inc., wishes to appeal, it must file a written appeal under 49 C.F.R. §107.325 within 20 days of the receipt of this decision and order with the Administrator, Pipeline Safety and Hazardous Materials Administration, 400 Seventh Street S.W., Washington, DC 20590-0001. The filing of an appeal stays the effectiveness of an order issued under §107.323. The appeal must “[s]tate with particularity the findings in the order” that the appealing party challenges, “and include all information and arguments pertinent thereto.” §107.325(c)(2). If the Respondent fails to appeal or pay the civil penalty within 20 days of receipt of this order, the case may be referred to the Attorney General with a request that an action be brought in the appropriate United States District Court to collect the civil penalty.

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