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Test Methods Matter: Representative Sampling and Clean Air Act Test Methods Can Survive EPA's Credible Evidence Rule

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The Clean Air Act (CAA) criminal case, *United States v. San Diego Gas & Electric Co. (SDG&E)*,[1] attracted national attention for highlighting a well-masked and disquieting fact:[2] Since 1993, the

1 United States v. SDG&E, No. 3:06-CR-0065 (S.D. Cal. Mar. 9, 2007) (minute order consolidating two indictments in Criminal Case Nos. 06-CR-0065-DMS and 07-CR-0484-DMS).

2 *See, e.g.*, Anne Krueger, *Charges Against SDG&E Rejected*, SAN DIEGO UNION-TRIB., Nov. 24, 2006, at B1; Robert C. Cook, *Asbestos: Appeals Court Allows New Criminal Trial Against San Diego Firm, Two Employees*, 33 Chem. Reg. Rep. (BNA) 280 (Mar. 23, 2009); Jocelyn Allison, *US' Asbestos Evidence Barred in San Diego Gas Case*,

Environmental Protection Agency (EPA) has increasingly based the nation's CAA asbestos enforcement program on a test method that has never been promulgated into law under the Administrative Procedures Act and which expressly rejects key aspects of the CAA test method's specific protocols for averaging asbestos content from representative multilayered samples.[3] Described by the court as raising "numerous novel issues of law,"[4] the three-year *SDG&E* case addressed for the first time the EPA's credible evidence rule in a criminal case and whether it could fix shortcomings in agency rulemaking and testing methods.

Dismissing the first indictment in 2006, the federal court in *SDG&E* concluded that basic principles of administrative law dictate that the EPA lacks authority to rewrite or substitute without rulemaking the CAA's definitional test method for "regulated asbestos containing material" (RACM) as set forth by law.[5] The government pointed unsuccessfully to the EPA's 1997 credible evidence rule as authority for the proposition that "it is not limited to a specific test method" to prove a crime.[6]

Upon reindictment in 2007, the *SDG&E* court then squarely confronted an unprecedented evidentiary question: If the government

LAW360, Sept. 2, 2009, http://www.law360.com/articles/120254; Robert C. Cook, *Enforcement: Court Strikes Government's Evidence in Asbestos Case Against San Diego Utility*, Nat'l Env't Daily (BNA) (Sept. 3, 2009); Anne Krueger, *Judge Removes Key Evidence in SDG&E Case*, SAN DIEGO UNION-TRIB., Sept. 12, 2009, at B3; *Government Dismisses Asbestos-Contamination Claims Against SDG&E*, 20 Mealey's Litig. Rep. Asbestos 8 (LEXIS) (Nov. 8, 2009); Anne Krueger, *Charges Against SDG&E in Asbestos Case Dismissed*, SAN DIEGO UNION-TRIB., Oct. 7, 2009, at B3.

3 *See* United States v. SDG&E, No. 06-CR-0065-DMS, 2006 WL 3913457 (S.D. Cal. Nov. 21, 2006) (order granting motion to dismiss counts 1, 2, 3, and 5 of the indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material).

4 United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2009 WL 4824489, at *2 (S.D. Cal. Aug. 31, 2009) (order denying motion of United States of America to admit designated evidence).

5 *SDG&E*, 2006 WL 3913457, at *6–*9 (order granting motion to dismiss counts 1, 2, 3, and 5 of the indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material) (finding the nonpromulgated test method for asbestos content was nonbinding, does not replace the existing method in the regulation, and "may not provide the basis for the [g]overnment's prosecution"). "Regulated asbestos-containing material" must contain more than one percent asbestos as determined by a specified method and be in a friable state or, if not in a friable state, subject to future acts of disturbance that will likely make it friable. *See* 40 C.F.R. § 61.141 (2009).

6 *SDG&E*, 2006 WL 3913457, at *8 (order granting motion to dismiss counts 1, 2, 3, and 5 of the indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material).

is limited to the law's specified test method for determining whether material is regulated by the CAA, does the credible evidence rule open the door for the government to apply nonpromulgated test methods in the pursuit of enforcement under the theory that virtually all testing, even if artificially inflated, merely "goes to [the] weight" of what the specified test method would have shown?[7]

Since promulgation in 1997, the EPA's credible evidence rule has found a narrow, niche application. The rule has been repeatedly applied in citizen suits and government civil CAA enforcement cases where resource-intensive and sporadic compliance "reference testing" of plant emissions is increasingly supplemented or bypassed altogether by the use of publicly available and self-reported enhanced continuous air monitoring data from operational plants.[8] Despite its impact on testing of emissions, the credible evidence rule has never been deemed to be a license to cut evidentiary corners. As the *SDG&E* court held, the rule does not supplant the Federal Rules of Evidence or undercut the fundamental importance of promulgated test methods that define, as a threshold matter, what constitutes regulated material.[9] Like the court in *SDG&E*, other courts have imposed common sense limits in the last several years on the extreme application of the credible evidence rule in enforcement actions.

7 The government raised the credible evidence rule to use extensive noncompliant testing from twenty-seven pipe coating samples as proof of asbestos content. *See SDG&E*, 2009 WL 4824489, at *15 (order denying motion of United States of America to admit designated evidence).

8 *See* Paul D. Hoburg, *Use of Credible Evidence Rule to Prove Clean Air Act Violations*, 25 B.C. ENVTL. AFF. L. REV. 771, 785 (1998) (describing reference test methods as "generic multi-use test protocols that measure whether a source's emissions comply with numeric standards"); *see also* EPA, THE USE OF INFORMATION OTHER THAN REFERENCE TEST RESULTS FOR DETERMINING COMPLIANCE WITH THE CLEAN AIR ACT (1996) (available from the ELR Document Service, ELR Order No. AD-3099) (noting that reference tests can cost up to $100,000 and take one week or more to complete); Credible Evidence Revisions, 62 Fed. Reg. 8314, 8315 (Feb. 24, 1997) (to be codified at 40 C.F.R. pts. 51, 52, 60 & 61).

9 United States v. SDG&E, Nos. 08-50072 & 08-50073, 2009 WL 689627, at *2 (9th Cir. Mar. 17, 2009) (agreeing with the district court); *SDG&E*, 2009 WL 4824489, at *15 (order denying motion of United States of America to admit designated evidence) (finding the credible evidence rule has not previously been applied in a criminal case, and it cannot "run roughshod" over rules of evidence or rehabilitate "noncompliant samples and test methodologies").

I
BACKGROUND OF EPA'S CREDIBLE EVIDENCE RULE

The credible evidence rule was born out of a combination of a 1984 California district court decision limiting EPA enforcement exclusively to a specified reference test method,[10] the 1990 CAA amendments allowing credible evidence to be used for penalty calculations,[11] and the CAA's section 114(a)(3) new enhanced monitoring program.[12] For purposes of CAA civil compliance, the EPA specifies "not only the maximum permissible level of emissions, but also the performance or *reference test* that should be used as a means of sampling and analyzing air pollutants for the particular standard."[13] Reference test methods are the specific tests and protocols set forth by the regulations or permits to measure a facility's air emissions compliance with numeric performance standards.[14]

Citizen groups loudly complained of a growing enforcement gap created by the absence of admissible evidence to prove noncompliance. On the one hand, citizen groups had limited access to admissible plant-specific reference test data. On the other hand, extensive continuous emissions data (generally opacity data) were publicly available but off-limits for evidentiary purposes to demonstrate noncompliance with permit obligations. First proposed by the EPA in 1993 and ultimately promulgated in 1997,[15] the credible evidence rule was touted as the "fix" to the enforcement gap:

10 United States v. Kaiser Steel Corp., No. CV 82-2623-IH, 1984 WL 186690, at *2–*3 (C.D. Cal. Feb. 8, 1984) (discussed *infra* at Part I.A).

11 Clean Air Act § 113, 42 U.S.C. § 7413 (1981), *amended by* Pub. L. No. 101-549, 104 Stat. 2399 (Nov. 15, 1990).

12 *Id.* § 7414(a)(3); *see* Edward B. Sears, *The "Any Credible Evidence" Rule: Is EPA Really Holding All the Cards?* 4 ENVTL. LAW. 157, 167–68 (1997) (noting that in 1996 the EPA decided, for various reasons, to issue the rules separately). *See generally* EPA, *supra* note 8; Credible Evidence Revisions, 62 Fed. Reg. at 8314; Sierra Club v. Pub. Serv. Co. of Colo., 894 F. Supp. 1455, 1460 (D. Colo. 1995) (applying concept prior to final 1997 rule); Enhanced Monitoring Program, 58 Fed. Reg. 54,648, 54,676–77 (Oct. 22, 1993) (to be codified at 40 C.F.R. pts. 51, 52, 60, 61 & 64) (stating that the credible evidence rule and enhanced monitoring rule (later restructured as the "compliance assurance monitoring" (CAM) rule) were originally proposed together in 1993).

13 Clean Air Implementation Project v. EPA, 150 F.3d 1200, 1202 (D.C. Cir. 1998) (emphasis added).

14 Hoburg, *supra* note 8, at 785 (noting that in 1998, "approximately 130 reference methods [had] been promulgated").

15 Enhanced Monitoring Program, 58 Fed. Reg. at 54,659–60 (soliciting comments for proposed credible evidence rule and enhanced monitoring rule); Credible Evidence Revisions, 62 Fed. Reg. at 8314.

> For the purpose of . . . establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.[16]

The EPA states that it promulgated the credible evidence rule to overcome and "remove[] what some have construed to be a regulatory bar to the admission of non-reference test data to prove a violation of an emission standard, no matter how credible and probative those data are that a violation has occurred."[17] In situations where facility emissions reference testing was infrequently performed, the absence of daily testing was construed by industry and at least one court to bar enforcement on each and every day lacking such testing. To overcome that industry enforcement advantage, the EPA sought to place both sources and potential enforcers on the "same evidentiary footing in an enforcement action" and allow both sides to use nonreference data either offensively or defensively to prove or disprove violations.[18]

In practice, the credible evidence rule's anticipated uses by states, the EPA, and citizens have taken a quantum leap from the rule's modest "housekeeping" beginnings, where it was portrayed as merely keeping the door open to enforcement on days without reference testing. In *SDG&E*, the federal government stretched the credible evidence rule beyond recognition. It argued that jurisdictional testing under a specified method to show whether the material was regulated under the CAA could be replaced or refuted under the rule with all sorts of dubious and inflated testing, regardless of its representativeness or reliability, to prove criminal violations.[19] Specifically, the EPA took the extreme position in *SDG&E* that where a particular test method is specified by law to define regulated material and that method weighs against any crime, as happened in

16 40 C.F.R. § 61.12(e) (2009); *see* discussion *infra* Part II.B (discussing that the credible evidence rule was added to three CAA programs and multiple sections of the relevant CAA regulations).

17 Credible Evidence Revisions, 62 Fed. Reg. at 8314, 8315.

18 *Id.* at 8315.

19 United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2007 WL 4326773, at *6 (S.D. Cal. Dec. 7, 2007) (order granting defendants' motion for new trial).

SDG&E,[20] the credible evidence rule allows the government to use alternate and nonpromulgated test methods that artificially inflate the results above regulatory limits to prosecute. As the government reasoned in *SDG&E*, its own failure to comply with the CAA's jurisdictional test method merely "go[es] to the weight of the evidence and not its admissibility."[21]

To state the obvious, the EPA has no authority to enact evidentiary rules that overstep constitutional protections or purport to be superior to those of Congress or state legislatures that govern the proceedings of state and federal courts, such as the Federal Rules of Evidence. As the Ninth Circuit concluded in the appeal of the *SDG&E* new trial ruling:

> We also reject the government's contention that even if the samples were obtained in violation of the regulations, they were nonetheless admissible as circumstantial evidence of asbestos content under 40 C.F.R. § 61.12(e), the "Credible Evidence Rule." Even if this rule applies to the alleged violations, it does not purport to limit the trial court's discretion to exclude evidence when, as here, the prejudicial effect of the evidence substantially outweighed its probative value.[22]

The Ninth Circuit's rebuke of the EPA's contention in 2009 regarding the allegedly broad scope of the credible evidence rule stands in stark contrast to the EPA's original justification for the rule in 1997:

> Today's rule does not establish or alter standards with which sources regulated under the CAA must comply. Rather, today's rule only concerns the evidence that can be used to prove violations of a standard, giving full recognition to the role of reference test methods under the standards. The Federal Rules of Evidence govern the admission of evidence in all federal district court litigation, including CAA enforcement actions, without any discernible constitutional infirmity. Similar evidentiary rules govern federal administrative and state environmental actions. Our legal system provides that a federal or administrative law judge will

20 *Id.* at *11 (noting that the defense presented substantial evidence calling into question the government's test results at trial and which "preponderated sufficiently" against the verdict).

21 *See* Government's Reply Brief in Support of Proposed Sample Evidence at 13–15, United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS (S.D. Cal. Aug. 17, 2009).

22 United States v. SDG&E, Nos. 08-50072 & 08-50073, 2009 WL 689627, at *2 (9th Cir. Mar. 17, 2009).

> be the ultimate, independent arbitrator of the evidence's admissibility and credibility.[23]
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> . . . .
>
> Of course, in judicial enforcement proceedings, what evidence is credible and admissible will be determined by the court taking into account how the evidence was gathered and the specifics of the emission standard and any associated reference method.[24]

In 1997, the EPA was adamant that the credible evidence rule simply clarifies preexisting agency powers and would change nothing substantively. Specifically, the rule would (1) create no new rights nor powers in citizen enforcers or open the flood gates of enforcement for minor violations;[25] (2) be limited to reference test methods only, which would remain the benchmark for compliance and CAA violations;[26] and (3) not alter the stringency of emission compliance tests.[27] At the same time, the EPA cautioned industry back in 1997 that, in its view, Congress intended the evidentiary threshold in enforcement actions "to be a low one."[28]

Over time, it has become increasingly difficult for the agency to maintain the position that the credible evidence rule changes nothing when the EPA itself no longer considers mandated reference testing to be necessary to show CAA violations.[29] While the EPA continues to pay lip service to the importance of reference tests for operational plants, it simultaneously states that these same compliance tests can be ignored altogether for enforcement purposes.[30] The EPA reasons that the use of nonreference test data to prove violations and their duration addresses a larger public policy goal of correcting undetected noncompliance arising from (1) limited public access to facility

23 Credible Evidence Revisions, 62 Fed. Reg. at 8317.

24 *Id.* at 8322–23.

25 *See id.* at 8318.

26 *See id.* at 8316, 8320, 8323.

27 *See id.* at 8323.

28 *See id.* at 8318.

29 *See id.* at 8322, 8324 (disagreeing with Senator Chafee's and commentators' argument that an initial violation must be proved with a reference test first); Brad E. Harker, Comment, *The Incredible Effects of the EPA's "Any Credible Evidence" Rule*, 7 DICK. J. ENVTL. L. & POL'Y 237, 251 ("Congress neither authorized nor imagined the EPA's complete elimination of the reference test method . . . .").

30 Credible Evidence Revisions, 62 Fed. Reg. at 8314, 8323; *accord* Sierra Club v. Pub. Serv. Co. of Colo., 894 F. Supp. 1455, 1458 (D. Colo. 1995) (finding no available reference testing data).

compliance data, (2) infrequent government inspections, and (3) infrequent emissions compliance monitoring schedules.[31]

To this day, the EPA is fond of using the metaphor that the credible evidence rule does nothing to change the legal speed limit, but merely the available tools for the enforcement police to detect whether the speed limit (i.e., the CAA standard of compliance) has been exceeded.[32] Yet, the government's application of the rule in recent years has been more far reaching. As discussed herein, the credible evidence rule has been used in novel and multifaceted ways by the government to build cases of CAA violations with more lenient and biased test methods that have never been through rulemaking.

A. History of the EPA's Credible Evidence Rule and Its "Fix" to the Clean Air Act Enforcement Gap

Before the 1990 CAA amendments and the EPA's 1997 credible evidence rule, air pollution standards specified not only the permissible levels of emissions, but also a specific reference test to measure objectively a source's compliance with those limits on a pollutant-by-pollutant basis.[33] Because the presence of a specific reference test in a regulation had been "read to allow only a very limited amount of information, i.e., data from reference test methods, to be used as evidence of violations[,]"[34] an enforcement gap developed, especially with respect to facilities requiring continuous compliance with emissions limits.[35]

According to its regulatory history, the credible evidence rule responded directly to the restrictive evidentiary limitations imposed on the EPA in 1984 following *United States v. Kaiser Steel Corp.*[36] *Kaiser Steel* involved a government civil enforcement action against an operational California plant for alleged violations of smoke opacity standards. The EPA relied upon the broad and imprecise language of

31 Credible Evidence Revisions, 62 Fed. Reg. at 8314, 8315; EPA, *supra* note 8.

32 *See* Sierra Club v. Tenn. Valley Auth., 430 F.3d 1337, 1348 (11th Cir. 2005) (citing Credible Evidence Revisions, 62 Fed. Reg. at 8326); EPA, *supra* note 8.

33 *See* Clean Air Implementation Project v. EPA, 150 F.3d 1200, 1202 (D.C. Cir. 1998).

34 Credible Evidence Revisions, 62 Fed. Reg. at 8317.

35 *See* Andrew C. Hanson, *A SIP Call for Clarity: An Analysis of the Effect of the Eleventh Circuit's Decision in* Sierra Club v. Tennessee Valley Authority *on State Implementation of the Federal Credible Evidence Rule*, 33 COLUM. J. ENVTL. L. 283, 284 (2008).

36 United States v. Kaiser Steel Corp., No. CV 82-2623-IH, 1984 WL 186690, at *2 (C.D. Cal. Feb. 8, 1984); *accord* 62 Fed. Reg. at 8320.

CAA section 113(a), 42 U.S.C. § 7413(a),[37] that dates back to the 1970 CAA to "support its claim that it could use nonreference test method data in an enforcement action."[38] The *Kaiser Steel* court restricted the EPA's ability to admit evidence of ongoing smoke emission opacity violations to only those days during which the promulgated visual observation reference method (known as Method 9) was actually performed.[39] Stated differently, those days upon which the Method 9 visual observation reference method was *not* performed at the plant were, by definition, off-limits for enforcement purposes under the rationale of *Kaiser Steel*.[40]

The EPA complained bitterly that thousands of irrefutable and scientifically documented plant violations would go unpunished.[41] Complicating matters further was the fact that the facility in *Kaiser Steel* had no obligation to perform the reference test on a continuous basis. The EPA noted a serious enforcement dilemma—mandated compliance testing is "sporadic" and often done only once per year, or perhaps once every five years.[42] Accordingly, taking *Kaiser Steel* to its logical conclusion, the EPA, states, and citizens were foreclosed from enforcing opacity violations on potentially hundreds of days per year during which visual compliance testing was not required.

Despite arguments from the EPA and commentators that the legislative history of the CAA's 1990 amendments plainly cast *Kaiser Steel* aside,[43] and that Congress fixed the enforcement gap for citizens and the federal and state governments, the actual statutory response from Congress in 1990 was far more conservative. The only part of

37 42 U.S.C § 7413(a) (1981), *amended by* Pub. L. No. 101-549, 104 Stat. 2672 (Nov. 15, 1990), *invalidated by* Tenn. Valley Auth. v. Whitman, 336 F.3d 1236, 1238 (11th Cir. 2003) ("Whenever, *on the basis of any information available to the Administrator*, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of an applicable implementation plan or permit, the Administrator . . . . may . . . bring a civil action [to enforce the CAA].") (emphasis added).

38 *See* Sears, *supra* note 12, at 164–65.

39 Method 9 is the genesis of Revised Method 9 discussed at length in *Donner Hanna Coke Corp. v. Costle*, 464 F. Supp. 1295 (W.D.N.Y. 1979), which was again modified by the EPA outside the rulemaking process to test, under threat of criminal prosecution, Donner Hanna's noncontinuous coke oven emissions.

40 *See* Credible Evidence Revisions, 62 Fed. Reg. at 8320.

41 EPA, *supra* note 8, at 2.

42 Credible Evidence Revisions, 62 Fed. Reg. at 8315; *see also* S. REP. NO. 101-228, at 358 (1989), *reprinted in* 1990 U.S.C.C.A.N. 3385, 3741; Hanson, *supra* note 35, at 284.

43 *See generally* Hanson, *supra* note 35, at 292–302 (citing Credible Evidence Revisions, 62 Fed. Reg. at 8315).

the CAA after the 1990 amendments that explicitly references "credible evidence" is section 113(e)(1), 42 U.S.C. § 7413(e)(1), where it is merely designated as one of several "penalty assessment criteria" that has nothing to do with whether a violation has occurred in the first instance.[44] The amended 1990 CAA statute provides that "[i]n determining the amount of any penalty to be assessed under this section or section 7604(a) of this title, the Administrator or the court, as appropriate, shall take into consideration . . . *the duration of the violation as established by any credible evidence (including evidence other than the applicable test method)* . . . ."[45] There is no explicit reference to *Kaiser Steel* in the statute or the evidentiary challenges that the 1984 California case created for the EPA.

Incoherently, the EPA argues to this day that the post–1990 fix for the enforcement gap through credible evidence rule rulemaking was unnecessary because the agency always enjoyed "long-standing authority," even before the 1990 CAA amendments, to resort to all available evidence in enforcement actions.[46] The EPA's actions speak otherwise. The EPA evidently felt compelled to promulgate a new evidentiary rule between 1993 and 1997 and demand that states revise their own rules to follow it.[47] Several courts have found the EPA's

44 Harker, *supra* note 29, at 250. The EPA also regularly points to CAA section 113(a) and its nonspecific language, "[w]henever, *on the basis of any information available to the Administrator*," as inherent authority for the credible evidence rule even prior to the 1990 CAA amendments. *See* Credible Evidence Revisions, 62 Fed. Reg. at 8314 (emphasis added).

45 42 U.S.C. § 7413(e)(1) (2006) (emphasis added).

46 According to the EPA, four years of rulemaking did nothing more than "clarify" existing authority that "data from reference test methods are not the exclusive means of establishing noncompliance or compliance in enforcement actions." Credible Evidence Revisions, 62 Fed. Reg. at 8322. But, in adopting the credible evidence rule, the EPA cited to the 1990 CAA amendments. *Id*. at 8321–22. Specifically, the EPA relied on CAA section 113(e), which provides the following: "In determining the amount of *any penalty to be assessed* under this section . . . the court, as appropriate, shall take into consideration . . . *the duration* of the violation as established by *any credible evidence (including evidence other than the applicable test method)*. . . ." 42 U.S.C. § 7413(e)(1) (emphasis added).

47 Credible Evidence Revisions, 62 Fed. Reg. at 8314 ("[C]redible evidence revisions are based on EPA's long-standing authority under the [Clean Air] Act, and on amplified authority provided by the 1990 CAA Amendments."); Hanson, *supra* note 35, at 301 (citing Credible Evidence Revisions, 62 Fed. Reg. at 8315).

inconsistency and equivocation on its own authority with or without the credible evidence rule to be noteworthy.[48]

B. The Federal Credible Evidence Rule Is Incorporated into Three Clean Air Act Programs

The EPA credible evidence rule expressly applies to three major CAA programs set forth in 40 C.F.R. Parts 51, 52, 60, and 61, where self-reporting is crucial.[49] The programs include the following:

1. CAA section 110:[50] Attainment of National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, such as ozone, carbon monoxide, and particulate matter, implemented through federally approved State Implementation Plans (SIP) found in 40 C.F.R. Parts 51 and 52[51]
2. CAA section 111:[52] Permitting of newly constructed or modified major stationary sources (e.g., power plants) that fall within the New Source Performance Standards (NSPS) program found in 40 C.F.R. Part 60
3. CAA section 112:[53] National Emission Standards for Hazardous Air Pollutants (NESHAP) found in 40 C.F.R. Part 61[54]

The EPA added nearly identical language in 1997 to the regulations implementing these three separate CAA programs, which are individually and collectively referred to as the credible evidence rule,

48 *See* Sierra Club v. Tenn. Valley Auth., 430 F.3d 1337, 1352 (11th Cir. 2005) (stating that if the federal credible evidence rule changes nothing, there would have been "no point in EPA's insisting that each state adopt [the evidentiary] rule").

49 EPA, *supra* note 8, at 4–6.

50 42 U.S.C. § 7410 (2006).

51 The architecture of the CAA is built upon the basic federalist principle that the EPA is tasked with developing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, and the individual fifty states are tasked with developing SIPs at the local level to achieve those NAAQS. Sierra Club v. Georgia Power Co., 365 F. Supp. 2d 1297, 1299 (N.D. Ga. 2004), *rev'd on other grounds*, 443 F.3d 1346 (11th Cir. 2006) ("Each state's SIP must be approved by the [EPA] and, once approved, [becomes] enforceable in the [federal] courts by an action filed by either the State, the [federal government], or by citizens.").

52 42 U.S.C. § 7411 (2006).

53 *Id.* § 7412.

54 The credible evidence rule was added to five sections of CAA regulations. *See, e.g.*, 40 C.F.R. §§ 51.212(c) (2009) (SIP "source surveillance" test methods), 52.12(c) (approval of SIP compliance programs), 52.33(a) (SIP compliance certifications), 60.11(g) (NSPS compliance standards), 61.12(e) (hazardous air pollutant NESHAP compliance program).

or occasionally the "all credible evidence rule."[55] In order to ensure the "evidentiary rules for CAA violations are consistent in all fifty states," the EPA concurrently initiated in 1997 a "SIP call" to all states calling upon each to modify its SIP to adopt the credible evidence rule.[56]

After promulgation, the credible evidence rule was initially touted as a government and citizen enforcement tool to prevent circumvention or concealment[57] of continuous emissions limits under the three CAA programs, each of which is built upon self-reporting of emissions within the exclusive control of the regulated facility. The EPA justified the rule's promulgation on the grounds that "infrequent on-site inspections and even more infrequent reference tests . . . to check compliance with emission limits at major stationary sources" were "inadequate to ensure that sources continuously stay within their emission limits."[58] The EPA explained that reference test data could be manipulated in such a way that it was not representative of actual operating conditions, and that such tests were also expensive and burdensome to perform.[59]

The credible evidence rule was designed originally to address an evidentiary imbalance that largely disfavored the government, but that goal has been lost through "after the fact revisionism" in the aggressive pursuit of case-specific enforcement to cure government

55 The pertinent language of the credible evidence rule from each of the programs states that, for purposes of compliance evaluations, nothing shall "preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed." 40 C.F.R. § 51.212(c); *see also id.* §§ 52.12(c), 52.33(a), 60.11(g), 61.12(e).

56 Credible Evidence Revisions, 62 Fed. Reg. 8314, 8327 (Feb. 24, 1997) (to be codified at 40 C.F.R. pts. 51, 52, 60 & 61) (as of 1996, fifteen states and Puerto Rico responded to the "SIP call" and submitted credible evidence rule amendments to their SIPs for EPA approval); *accord* Sierra Club v. Tenn. Valley Auth., 430 F. 3d 1337, 1342–43, 1351–52 (11th Cir. 2005) (discussing how the EPA mandates that each state adopt its own credible evidence rule as part of enforceable test methods).

57 *See* 40 C.F.R. § 61.19 (defining concealment as activities that take various forms, such as the use of control equipment, gaseous dilution, or modifications designed to mask a violation.).

58 62 Fed. Reg. at 8315.

59 *See* 62 Fed. Reg. at 8315 ("Reference tests may not yield a representative emissions picture because the sources typically schedule, set up and run the tests themselves. This allows sources to 'fine tune' their operations and emissions control processes prior to the tests, and generate results that may not be typical of day-to-day source operations. Reference tests can also be expensive and burdensome: They can cost up to $100,000, and take a week or more to complete.") (citations omitted).

missteps.[60] The *SDG&E* case (discussed *infra* in Part III.A.) is a prime example of this.

C. Courts Recognize but Limit the Reach of the Credible Evidence Rule

1. Credible Evidence Rule Cases That Predate Its 1997 Promulgation

Two federal cases followed the 1993 proposed rule but predate its 1997 promulgation. Both cited the then-proposed rule's basic objectives in allowing citizen enforcement groups to use nonreference data to prove CAA civil violations. The pivotal issue in both citizen suits was the evidentiary value, if any, of publicly available and self-reported plant data that did not conform to infrequently performed reference testing.

Sierra Club v. Public Service Co. of Colorado[61] involved an environmental group's use of a Colorado coal power plant's continuous opacity monitoring data in lieu of the infrequently performed Method 9 opacity reference testing as proof of over 19,000 violations during five years of the twenty percent opacity (particulate matter) standard under Colorado's SIP.[62] Method 9 compliance testing by a state-certified observer was necessary at the Colorado power plant every six months, but the facility was also obligated to use continuous monitoring under its permit.[63] No Method 9 compliance testing showing noncompliance was available to the citizen groups because of plant access limitations.[64]

In allowing the use of nonreference test data to prove opacity violations, not just the duration of violations after the reference test showed a CAA violation, the district court concluded that the purpose of citizen suits would be frustrated if enforcement suits were limited exclusively to Method 9 data because citizen groups do not have the necessary plant access rights to perform such on-site testing.[65] Even the plant owner agreed, according to the court, that the twenty percent

60 *See* Harker, *supra* note 29, at 252; *see also* discussion of credible evidence rule case law *infra* Part I.C.

61 Sierra Club v. Pub. Serv. Co. of Colo., 894 F. Supp. 1455, 1459 (D. Colo. 1995).

62 *Id.* at 1456.

63 *Id.* at 1456, 1460.

64 *Id.* at 1457.

65 *Id.* at 1460.

continuous opacity monitoring data had a high indicia of reliability.[66] The Colorado court cited for support the 1990 amended "credible evidence" statutory language of CAA section 113(e)(1) and the legislative history addressing Congressional objections to the 1984 *Kaiser Steel* decision.[67]

In *Unitek Environmental Services, Inc. v. Hawaiian Cement*,[68] the court similarly allowed a combination of nonreference testing evidence in a citizen suit against a cement manufacturing plant to prove particulate matter dust emission violations under Hawaii's SIP for five years. The citizen enforcer was a downwind corporation adversely impacted by the cement dust. The downwind neighbor sought to rely on a variety of evidentiary sources to prove violations, including the issuance of past notices of violation at the plant, the plant's own negotiated site-specific monitoring plan, internal plant memoranda, and even hypothetical computerized modeling of emissions in support of a permit.[69] Like the court in *Public Service Co. of Colorado*, the *Hawaiian Cement* court pointed to CAA section 113(e) and its legislative history to conclude that the credible evidence standard is "lenient,"[70] and the combination of nonreference evidence as a whole "is credible."[71]

In later cases, the EPA and citizen groups regularly pointed to these early decisions to argue, with mixed results, that the credible evidence rule did not actually create new rights, but merely clarified powers that the government and citizens always had.[72] The rationale of *Hawaiian Cement* and *Public Service Co. of Colorado*, however, has not been uniformly followed by other courts.[73]

66 *Id.* at 1459–60.

67 *Id.* at 1461.

68 Unitek Envtl. Servs., Inc. v. Hawaiian Cement, No. CV 95-00723, U.S. Dist. LEXIS 19261 (D. Haw. Aug. 7, 1997) (order granting plaintiffs' motion for partial summary judgment and denying defendants' motion for partial summary judgment).

69 *Id.* at *7–*12.

70 *Id.* at *11–*12.

71 *Id.*

72 EPA, *supra* note 8, at 8; Credible Evidence Revisions, 62 Fed. Reg. 8314, 8318–19 (Feb. 24, 1997) (to be codified at 40 C.F.R. pts. 51, 52, 60 & 61); *accord* Hanson, *supra* note 35, at 308.

73 *See infra* Part I.C.3.

2. Industries Challenge the Promulgated Credible Evidence Rule in 1998–99 as Introducing Uncertainty in Enforcement and Changing Applicable Emissions Limits Without Rulemaking

The credible evidence rule has generated widespread industry objections from the outset,[74] and it was vigorously challenged twice following its 1997 promulgation.[75] The rule has been described as the "most significant and controversial piece of legislation to come out of the CAA."[76]

In the consolidated case of *Clean Air Implementation Project v. EPA*,[77] industry groups challenged the EPA on the grounds that the new evidentiary rule fundamentally altered the means of determining CAA compliance and thus is tantamount to changing the standard of testing (e.g., reference tests) and the standard of compliance specified in the regulation itself.[78] Industry groups also contended that the rule converted "periodic" compliance standards into more rigorous "continuous" ones.[79] The rule, industry protested, would also discourage self-audits.[80] The EPA again dismissed the objections on the grounds that the rule changes nothing in terms of substantive emission standards;[81] it merely allows "alternate methods [to] yield

74 *See* Sears, *supra* note 12, at 161–62, 174–84.

75 Credible Evidence Revisions, 62 Fed. Reg. at 8317, 8318 (stating that the EPA acknowledges that "[s]ome industry representatives have expressed concern that the use of credible evidence in compliance determinations will reveal multiple minor violations for which EPA, the states or citizens will bring lawsuits"). The EPA's comment about industry concern may have been a gross understatement, as the EPA received more than 800 comments about the proposed one-page rule, mainly from industry. Additionally, ninety-six petitions for review were filed after promulgation and consolidated under lead case *Clean Air Implementation Project v. EPA*, 150 F.3d 1200 (D.C. Cir. 1998). *See* Hoburg, *supra* note 8, at 772.

76 Harker, *supra* note 29, at 262.

77 *Clean Air Implementation Project*, 150 F.3d at 1203.

78 *Id.*; EPA, *supra* note 8, at 2 ("Some regulated sources have argued that allowing the use of credible evidence to determine whether or not a source is in compliance with an emissions standard increases the stringency of the standard; others have argued that states, EPA and citizens will use credible evidence to bring enforcement actions for minor violations.").

79 *Clean Air Implementation Project*, 150 F.3d at 1203–04.

80 Harker, *supra* note 29, at 260–62.

81 EPA, *supra* note 8, at 2 ("By clearly providing that reference test methods are not exclusive methods, EPA does not intend to alter the underlying standards.").

data bearing on what the results of a reference test would have been."[82]

The D.C. Circuit in *Clean Air Implementation Project* concluded that industry's challenges were not then ripe, and the wide array of hypothetical industry fears raised "too many imponderables."[83] The court stated that industry groups upset by the potential application of the rule would have to await an actual enforcement action to test its limits: "An enforcement action brought on the basis of credible evidence would, we believe, provide the factual development necessary to determine whether the new rule has affected whatever existing standard is involved."[84] One year later, the D.C. Circuit again tossed aside as unripe a similar challenge of the credible evidence rule by industry groups that intervened in a case challenging the enhanced monitoring rule—a rule that in 1993 originated concurrently with, and helped give rise to, the credible evidence rule.[85]

3. Post–1997 Credible Evidence Rule Case Law Is Mixed for Industry and Enforcement

Since the D.C. Circuit twice passed on the chance to evaluate the legality of the credible evidence rule in 1998 and 1999, fewer than ten ripe cases have squarely addressed the rule, its scope, and its limitations. The majority of credible evidence rule cases are citizen suits that address the rule in the context of a plant's permitting or compliance with opacity standards. Only two cases arise in the context of criminal enforcement, where the government attempted in both to apply the credible evidence rule to asbestos removal projects having nothing to do with an operational plant or continuous emissions. In its first criminal case test run, the rule fell short of the government's evidentiary objectives. The credible evidence rule did not absolve the government's missteps and enable it to disregard basic elements of proof, such as representative sampling or mandated definitional testing, to determine whether the material was federally regulated and thus subject to asbestos NESHAP work practices.[86]

82 *Clean Air Implementation Project*, 150 F.3d at 1205.

83 *Id.*

84 *Id.*

85 Natural Res. Def. Council, Inc. v. EPA, 194 F.3d 130, 138 (D.C. Cir. 1999).

86 *See* United States v. SDG&E, No. 06-CR-0065-DMS, 2006 WL 3913457, at *8 (S.D. Cal. Nov. 21, 2006) (order granting motion to dismiss counts 1, 2, 3, and 5 of the

Sierra Club v. Tennessee Valley Authority[87] exemplifies the prototypical civil or citizen enforcement case where the credible evidence rule has been tested since 1997. *Tennessee Valley Authority* involved self-reported continuous monitoring data for smoke opacity generated in response to the plant's permit obligations.[88] Large utilities are required, in response to the 1990 CAA amendments, to install enhanced continuous opacity monitoring systems (COMS) or continuous emissions monitoring systems (CEMS) on their smoke stacks.[89]

The environmental groups in *Tennessee Valley Authority* had no available reference test (i.e., Method 9 opacity) data and attempted to use the Alabama plant's own self-reported and publicly available COMS data to demonstrate that the Alabama coal-fired electric power plant regularly violated the applicable twenty percent opacity limitation to control particulate matter emissions.[90] The plant owner performed its mandated Method 9 test "only periodically," typically one to fifteen days per year to perform a single reference test, and only during daylight hours.[91] The Method 9 reference method for opacity therefore measured plant compliance, at most, for only 0.5% of the plant's operational time each year.[92]

Without Method 9 test data in hand, the environmental groups relied instead upon continuous opacity monitoring data produced both before and after Alabama's version of the credible evidence rule was adopted through state rulemaking in 1999.[93] In a striking blow to the EPA's official position that the credible evidence rule is simply "housekeeping" that changes nothing substantively,[94] the Eleventh Circuit rejected the retroactive application of the state's credible

indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material).

87 Sierra Club v. Tenn. Valley Auth., 430 F.3d 1337 (11th Cir. 2005).

88 *See id.* at 1339.

89 *See, e.g.*, *id.* at 1340–41.

90 *Id.* at 1343.

91 *Id.* at 1341–42, 1347.

92 *Id.* at 1347.

93 *See id.* at 1349–50; Ala. Admin. Code r. 335-3-1.13(2) (2008) (effective May 20, 1999). Alabama's credible evidence rule states, "any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, can be used to establish whether or [] not an owner or operator has violated or is in violation of any rule or standard in this Division." *Id*.

94 *See* Sears, *supra* note 12, at 161.

evidence rule and the use of any non–Method 9 data to prove violations prior to local adoption in 1999.[95] However, instead of bringing *Kaiser Steel* back to life, the Eleventh Circuit indicated that alternative types of opacity testing could be considered prospectively after the State's 1999 adoption of the federal credible evidence rule.[96] But the evidentiary availability of post–1999 nonreference data ultimately failed to support CAA violations under the facts of *Tennessee Valley Authority* for sovereign immunity reasons.[97]

Although the Eleventh Circuit imposed boundaries on the potential application of the credible evidence rule that displeased the EPA and environmental groups, it rejected the *Kaiser Steel* rationale long embraced by industry, i.e., that CAA violations are limited exclusively to only those days of the year upon which reference test results document noncompliance. The Eleventh Circuit embraced the EPA analogy that the credible evidence rule is comparable to the use of radar guns and increased police checks to ensure compliance, not a substantive change in the speed limit itself.[98] Nonetheless, the Eleventh Circuit imposed real limits on any retroactive application of "increased police checks" under the credible evidence rule. Specifically, the rule must first be promulgated by the states to be enforceable as part of the federally enforceable SIP. If the Eleventh Circuit holding were applied nationally, the early citizen suit successes in *Hawaiian Cement* (1997) and *Public Service Co. of Colorado* (1995), which predate the rule's promulgation, might not have been possible because those states had not then adopted the pending federal rule.

The remaining civil cases follow the same basic template of *Hawaiian Cement* and *Public Service Co. of Colorado*. In *Sierra Club v. Georgia Power Co.*,[99] Georgia Power was sued by environmental groups under the state's SIP because of opacity and hazardous air pollutant violations.[100] The plant was required by its

95 *Tenn. Valley Auth.*, 430 F.3d at 1342–43. The court found that data that did not comply with opacity reference test Method 9 "cannot be used to determine whether pre-May 20, 1999 emissions violated the opacity limitation." *Id.* at 1351.

96 *Id.* at 1343.

97 *Id.* at 1356–57.

98 *Id.* at 1348 (citing Credible Evidence Revisions, 62 Fed. Reg. 8314, 8326 (Feb. 24, 1997) (to be codified at 40 C.F.R. pts. 51, 52, 60 & 61)).

99 Sierra Club v. Ga. Power Co., 365 F. Supp. 2d 1297 (N.D. Ga. 2004), *rev'd on other grounds*, 443 F.3d 1346 (11th Cir. 2006).

100 *Id.* at 1300–02.

operational Title V permit to report continuous opacity monitoring data quarterly, which evidently showed thousands of exceedances of the opacity standard.[101] Georgia Power claimed, without success, that only Method 9 testing could prove opacity violations.[102] At the same time, the plant offered no Method 9 data to refute the violations shown by the nonreference continuous monitoring data.[103]

The *Georgia Power* court pointed to the credible evidence rule and the four prior federal cases that allowed into evidence continuous nonreference data. The court concluded that Georgia Power's continuous monitoring data was sufficiently credible prima facie evidence of violations to be comparable to Method 9 reference test data.[104] A distinguishing fact makes the *Georgia Power* case unique: instead of offering exculpatory Method 9 data, Georgia Power attacked its own continuous monitoring systems as unreliable, which the court found unpersuasive and insufficient to avoid civil liability.[105]

In *Grand Canyon Trust v. Public Service Co. of New Mexico*,[106] an environmental group overreached in its intended application of the credible evidence rule by arguing that all Method 9 reference test data should be excluded from evidence. The citizen suit against a New Mexico public utility focused on whether a preconstruction CAA permit was required. The novel pretrial evidentiary issue before the court was whether continuous monitoring data offered by the environmental group was irrefutable evidence of violations equivalent to, or even superior than, Method 9 results.[107] The environmental group sought to exclude all Method 9 data on the grounds that continuous monitoring data offered irrefutable evidence of violations. The court disagreed, holding that continuous monitoring data may be relevant and admissible, but it certainly can be attacked by the utility as inaccurate or even contradicted by Method 9 evidence.[108]

Two cases decided soon after the adoption of the credible evidence rule found no problem whatsoever with the rule. In *L.E.A.D. (Local*

101 *Id.* at 1301.

102 *Id.* at 1306.

103 *Id.* at 1308.

104 *Id.* at 1306–08.

105 *Id.* at 1300–01.

106 Grand Canyon Trust v. Pub. Serv. Co. of N.M., 294 F. Supp. 2d 1246, 1247 (D.N.M. 2003).

107 *Id.* at 1247–48.

108 *Id.* at 1248–49.

Environmental Awareness Development) Group of Burks v. Exide Corp., a coalition of environmental groups and neighbors litigated a multifaceted water and air citizen suit against the owner of a lead recycling and smelting facility under the Pennsylvania SIP.[109] The case focused on sulfur dioxide NAAQS emission exceedances. Without extensive discussion, the court held that under the recently promulgated credible evidence rule, the plaintiffs' use of continuous emissions monitoring data reported by the facility "is entirely appropriate evidence of Defendants multiple violations of the sulfur dioxide emission limitations in their state permits."[110]

In another Pennsylvania case, the federal government sued the owner of Pittsburgh Coke Works for coke emission violations under Pennsylvania's SIP.[111] The plant operator invoked the *Kaiser Steel* defense and argued that the federal government could not base civil violations upon the plant's continuous emissions monitoring data because such testing was not the approved method of determining compliance under the state's SIP.[112] The court disagreed, citing the 1999 *L.E.A.D.* Pennsylvania case and holding that, in general, a plant's continuous emissions monitoring was "credible evidence" under CAA section 113(e)(1).[113]

In *SDG&E*, the first criminal case to address the credible evidence rule, the Ninth Circuit imposed additional common sense limits in 2009. The government took an extreme, anything goes evidentiary position that in proving a CAA crime, the credible evidence rule allows the government to rely exclusively on nonrepresentative sampling and even improperly conducted test results to prove criminal violations.[114] Stated differently, if the required one percent asbestos NESHAP definitional test shows no CAA jurisdiction, as was the case in *SDG&E*, the government should be able to invoke the credible evidence rule to offer a jury any amount of inflated results

109 L.E.A.D (Local Envtl. Awareness Dev.) Group of Burks v. Exide Corp., No. CV 96-3030, 1999 WL 124473, at *27 (E.D. Pa. Feb. 19, 1999).

110 *Id.* at *28.

111 United States v. LTV Steel Co., Inc., 116 F. Supp. 2d 624, 626 (W.D. Pa. 2000).

112 *Id.* at 633.

113 *L.E.A.D*, 1999 WL 124473, at *27.

114 United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2007 WL 4326773, at *2, *10 (S.D. Cal. Dec. 7, 2007) (order granting defendants' motion for a new trial). In the first trial, the government presented eighteen samples; all but five were destroyed after testing. *Id.* Of those eighteen, twelve were nonrepresentative debris, two were incomplete, and four were tested by nonconforming methods. *Id.*

performed on nonrepresentative debris or produced by dubious protocols to mask the correct results.[115]

The Ninth Circuit concluded that the credible evidence rule, if applicable to criminal cases at all, goes no further than what is allowed by the Federal Rules of Evidence, as determined by the trial judge.[116] If government evidence is deemed misleading and unfairly prejudicial, the credible evidence rule does not make it otherwise. The *SDG&E* court thus vindicated the basic scientific principles of representative sampling, the overarching importance of data produced by the specified NESHAP test method that defines whether the material is regulated under the CAA, and even the Federal Rules of Evidence, all of which remain unchanged by the credible evidence rule.

4. The Credible Evidence Rule Is Not Applicable to Prove Clean Air Act Violations Relevant to Private Contract Disputes

Over a decade after adoption of the credible evidence rule by the EPA and various states, the credible evidence rule is being offered for new and once-unanticipated uses, even outside CAA enforcement. In 2009, the credible evidence rule was held to be completely unavailable to private litigants in a contract dispute involving a plant's emissions.[117] In *BP Amoco*, the plant buyer sought to use evidence other than the testing method specified in the Illinois plant's operational permit to show presale noncompliance with the plant's Title V permit; such noncompliance would then trigger the contract's indemnity provisions in favor of the buyer.[118] The court rejected the use of evidence outside the specific testing authorized by the plant permit, reasoning that the EPA credible evidence rule is limited to "federal enforcement actions," and even suggested that the credible evidence rule is misplaced in citizen suits.[119] It held that the buyer's

115 *Id.* at *11 (finding defense testing preponderated sufficiently against verdicts).

116 United States v. SDG&E, Nos. 08-50072, 08-50073, 2009 WL 689627, at *2 (9th Cir. Mar. 17, 2009).

117 BP Amoco Chem. Co. v. Flint Hills Res., 615 F. Supp. 2d 765, 773–75 (N.D. Ill. 2009).

118 *Id.* at 773.

119 *Id.* at 773–75. There is disagreement about whether the credible evidence rule is available in citizen enforcement suits. The Eleventh Circuit concluded that the "plain language" of the credible evidence rule is "for purposes of Federal enforcement," and citizen suits are not federal enforcement. Sierra Club v. Tenn. Valley Auth., 430 F.3d at 1352–53 (11th Cir. 2005).

"proof of noncompliance is limited to the means and methods specified in the Title V Permit."[120]

Six federal cases, including the two appellate rulings from the Ninth and Eleventh Circuits, have squarely addressed the credible evidence rule since the two unripe D.C. Circuit industry challenges. These cases have helped to shape a niche application over the last decade: the rule allows the use of continuous monitoring data in substitution of infrequent reference testing to prove CAA violations. The scope of the credible evidence rule today is certainly broader than what industry believes is appropriate given the purpose of reference tests under the CAA, but the scope is also much narrower than the anything goes evidentiary position favored by the government and citizen plaintiffs. Some of the limits imposed thus far on the credible evidence rule relate to the exclusion of misleading data under the Federal Rules of Evidence; testing relevant to private contracts; representative sampling; and even specified CAA definitional test methods that frame, for example, what constitutes "regulated asbestos-containing material"—the core issue in the *SDG&E* criminal case.

II
THE CLEAN AIR ACT ASBESTOS NESHAP TEST METHODS ARE NOT SUPPLANTED BY THE CREDIBLE EVIDENCE RULE

In the *SDG&E* case, the government purported to apply the credible evidence rule for the first time to jurisdictional CAA definitions for asbestos-containing materials that technically have nothing to do with plant emissions standards or reference tests.[121] To be clear, asbestos is one of the 189 "hazardous air pollutants" listed under CAA section 112(b)(1), 42 U.S.C. § 7412(b)(1), with a corresponding EPA-promulgated national emission standard (asbestos NESHAP), located at 40 C.F.R. part 61, subpart M. However, asbestos lacks any emissions-related reference method.[122] As discussed below, the reason is purely practical.

120 *BP Amoco*, 615 F. Supp. 2d at 775.

121 *SDG&E*, 2009 WL 689627, at *2.

122 The hazardous air pollutant or NESHAP program's credible evidence rule is located within its general provisions. 40 C.F.R. § 61.12(e) (2009). The general provisions also define various "reference methods" by which to measure continuous air emissions of specific hazardous air pollutants, none of which includes asbestos. *See id.* § 61.02. The regulations enumerate sixteen NESHAP air emission reference test methods to monitor emissions for the following seven hazardous air pollutants: mercury, beryllium, vinyl

EPA explained that the asbestos NESHAP does not mandate any air emissions reference testing or air monitoring whatsoever to prove CAA compliance because it is difficult and costly to monitor total asbestos emissions in typically geographically diffuse, urban demolition or renovation projects.[123] Rather, the asbestos NESHAP is built upon an array of approximately one dozen indirect, field-level "work practices" (e.g., preremoval watering) designed to minimize the release of asbestos fibers.[124] As discussed herein, the government tried to look beyond emissions-related reference testing that once justified EPA's credible evidence rule to completely unrelated definitional and jurisdictional CAA test methods and the key definitions for regulated asbestos-containing material. The original nexus between emissions testing and the credible evidence rule was at risk of fading in importance.

To appreciate how it is possible for EPA national enforcement policy to become so dramatically unhinged from long-standing regulatory law, one must look at the NESHAP's evolution and history.[125] The credible evidence rule could not years later serve to bridge the divide and mitigate the adverse consequences of the government's choice in favor of agency policy over the law.

A. Asbestos NESHAP Test Method

For the first seventeen years of the asbestos NESHAP's existence, 1973 to 1990, the asbestos content of material was measured on the basis of percentage weight, and no particular test method was enumerated by the regulation to determine asbestos content. By 1990, the EPA had decided it was "long overdue" to adopt a specific test method to determine asbestos content to "reduce confusion over what activities are subject to the regulation."[126] The EPA then initiated

chloride, arsenic, polonium, radionuclides, and radon. *See id.* § 61.02 (definition of NESHAP's "reference method"); 40 C.F.R. pt. 61, app. E (2009) (containing a total of sixteen test methods for seven hazardous air pollutants).

123 *See* National Emissions Standards for Hazardous Air Pollutants, 40 C.F.R. pt. 21 (2009); Amendments to Standards for Asbestos and Mercury, 40 Fed. Reg. 48,292, 48,296 (Oct. 14, 1975) (to be codified at 40 C.F.R. pt. 61).

124 *See* Robert M. Howard, Patricia Guerrero, David B. McGrath & Drew R. Van Orden, *The EPA's Prosecution of Clean Air Act Asbestos NESHAP Cases Based Upon Nonbinding Bulk Material Test Methods*, 44 SAN DIEGO L. REV. 173, 198–200 (2007).

125 For a more complete summary of the legislative history of the NESHAP, see *id.*

126 *See* OFFICE OF AIR & RADIATION, U.S. EPA, NATIONAL EMISSION STANDARDS FOR ASBESTOS—BACKGROUND INFORMATION FOR PROMULGATED ASBESTOS NESHAP REVISIONS, EPA 450/3-90-017, 4-12 (1990).

rulemaking to, among other things, substitute the regulation's weight-based standard (with no specific test method) because it had concluded that a one percent dry weight standard tended to underestimate asbestos quantity in denser materials.[127]

Instead of developing an entirely new CAA test method to quantify asbestos for NESHAP purposes alone, the EPA elected instead to incorporate the previously promulgated asbestos test method, which had twice been through EPA rulemaking in 1982 and 1987, under a non-CAA statute.[128] That test method was incorporated into the very definition of "asbestos-containing material" and "regulated asbestos-containing material" (RACM) under the NESHAP, and therefore now defines the universe of regulated materials (the "1990 test method" or "NESHAP test method").[129] As discussed herein, changing the test method literally changes key definitions in the asbestos NESHAP regulations and the universe of regulated materials.[130]

At its basic foundation, the NESHAP test method mandates a multistep analysis of all layers of a material to generate a composite or "average" asbestos percentage result for the material as a whole:

> Bulk samples of building materials taken for the identification and quantitation of asbestos are first examined for homogeneity . . . . *When discrete strata are identified, each is treated as a separate material so that fibers are first identified and quantified in that layer only, and then the results for each layer are combined to yield an estimate of asbestos content for the whole sample*.[131]

The *SDG&E* court concluded that section 1.7.2.1 of the NESHAP test method required volumetric averaging of *all* layers as they existed prior to removal.[132] By contrast, the government's criminal case was

127 *See* National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision, 55 Fed. Reg. 48,406, 48,410 (Nov. 20, 1990) (to be codified at 40 C.F.R. pt. 61) (noting that cement-based fireproofing material containing an unregulated amount of less than one percent asbestos by weight actually contains thirty percent asbestos *by area*).

128 *See* Interim Method for the Determination of Asbestos in Bulk Insulation Samples, 40 C.F.R. pt. 763, subpt. E, app. E (2009) (TSCA regulation).

129 EPA, TEST METHOD: INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES, EPA 600/M4-82-020 (1982), *cited in* 40 C.F.R. pt. 763, subpt. E, app. E [hereinafter 1990 TEST METHOD].

130 *See* 40 C.F.R. § 61.141 (incorporating by reference the 1990 test method into the definition of asbestos-containing material and RACM).

131 40 C.F.R. pt. 763, subpt. E, app. E, § 1.7.2.1 (emphasis added).

132 United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2009 WL 4824489, at *3 (S.D. Cal. Aug. 31, 2009) (order denying motion of United States of

built on the theory that if any *single* layer of a nonrepresentative sample contained more than one percent asbestos, the entire multilayered system was federally regulated under the asbestos NESHAP.[133] The credible evidence rule could not bridge the divide between what the law mandated and the government's theory of prosecution.

B. The Nonbinding EPA 1993 Test Method

A few years after the 1990 promulgation of the first and only asbestos NESHAP test method, the EPA concluded that averaging under the proper application of this method excluded certain multilayered materials from the definition of RACM. In 1993, the EPA therefore concluded that a new asbestos test method was desirable.[134]

It is clear from both the content of the 1993 test method and the EPA's own admissions that rulemaking was required to make the test method binding. But no such rulemaking occurred. The 1993 test method promised "significant revisions" to the 1990 NESHAP test method and "new procedures."[135] Included among the significant revisions was an emphatic rejection of the multilayered averaging of asbestos content mandated by the NESHAP test method.[136]

By the EPA's own admission, the much improved 1993 test method substantially expanded the universe of regulated material to include material not otherwise above the one percent threshold under the NESHAP test method:

> Because the [NESHAP test method] allowed the result to be reported as one number, multi-layered samples which may contain asbestos in a single layer may have been reported by laboratories as nonasbestos-containing. The improved method directs laboratories to analyze and report a result for individual layers . . . . *[A] multi-layered sample which previously was determined to be nonasbestos-*

America to admit designated evidence) (citing Order, Case No. 07-CR-0484-DMS (Apr. 12, 2007)).

133 Government's Bill of Particulars at 9, United States v. SDG&E, Case No. 06-CR-0065-DMS (S.D. Cal. Sept. 8, 2006) ("If any of the layers, standing alone, meets the definition of regulated asbestos containing material (i.e., over [one percent] asbestos and friable), then the entire material is deemed to be regulated asbestos containing material, and the NESHAP work practice standards are applicable to the project.").

134 *See* EPA, METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK BUILDING MATERIALS, EPA 600/R-93/116 (1993) [hereinafter 1993 TEST METHOD].

135 *Id.*

136 *Id.* at 6–7.

> *containing may now have layers which will be classified as asbestos-containing based on the presence of asbestos in greater than [one]percent.*[137]

In the absence of any federal rulemaking since 1990 to modify the NESHAP test method and its jurisdictional significance, at least ten states have expressly adopted the 1993 test method into their respective state asbestos regulations.[138] In 2002, for example, Texas enacted rules to disallow averaging under the NESHAP test method for multilayered materials.[139] In 2006, New Jersey adopted the 1993 test method in place of the NESHAP test method in emergency rulemaking because, to the dismay of state regulators, New Jersey contractors were relying upon the literal language of the NESHAP test method to exclude material as nonregulated.[140]

Of note, some states authorized the use of both the 1990 and 1993 test methods as equivalent methods for purposes of defining regulated asbestos-containing materials.[141] Far from being truly equivalent methods, inasmuch as one averages and the other does not, future cases will have to address the due process conundrum of concluding that the exact same material is simultaneously regulated and unregulated depending upon which of the so-called equivalent, state-approved test methods for asbestos content is performed.[142]

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137 Advisory Regarding Availability of an Improved Asbestos Bulk Sample Analysis Test Method, 59 Fed. Reg. 38,970, 38,971 (Aug. 1, 1994) (to be codified at 40 CFR pt. 61) (emphasis added).

138 These states include: (1) Colorado, 5 COLO. CODE REGS. 1001-10, §§ I.A.4, IV.E.2 (1996); (2) Louisiana, LA. ADMIN. CODE tit. 33 pt. III, § 2711(B) (adopted in 1996, 22 La. Reg. 699 (Aug. 1996) and prohibiting averaging of bulk sample content); (3) Maine, 06-096-425 ME. CODE R. § 6B(2)(b) (Weil 2003) (mandating 1993 test method for flooring samples); (4) Massachusetts, 453 MASS. CODE REGS. 6.08 (1998); (5) Minnesota, MINN. R. 4620.3460 (1996) (prohibiting averaging as set forth in the EPA's second clarification (discussed *infra* at Part II.B.3), 20 MINN. REG. 2765, 2770 (June 24, 1996)); (6) New Jersey, 38 N.J. REG. 2526 (June 5, 2006); (7) South Carolina, S.C. CODE ANN. REGS. 61-86.1, § VI(D)(4) (2008); (8) Texas, 25 TEX. ADMIN. CODE § 295.32 (2002); (9) Virginia, 18 VA. ADMIN. CODE § 15-20-459.3 (2002); and (10) Washington, 09-14 WASH. REG. 1, § 9.02 (June 8, 2009).

139 27 Tex. Reg. 11,424, 11,426, 11,443 (Dec. 6, 2002).

140 38 N.J. Reg. 2526.

141 *See* 453 MASS. CODE REGS. 6.08(5)(f)(1) (authorizing use of either the 1990 or 1993 test methods in state-certified laboratories to quantify asbestos fibers in materials); S.C. CODE ANN. REGS. 61-86.1, § VI(D)(4) (authorizing use of either the 1990 or 1993 test methods in state-certified laboratories to quantify asbestos fibers in materials); 09-14 WASH. REG. 1, § 9.02(D) (allowing use of any EPA-approved test method to quantify asbestos).

142 *See* S.C. CODE ANN. 61-86.1, § VI(D)(4).

The divergence of enforcement policy and the 1990 asbestos NESHAP regulation can be attributed to four key events.

1. The EPA's Courtesy Notice to Laboratories of "Improved" 1993 Test Method for NESHAP

In September 1993, the EPA provided a courtesy notice of its new 1993 test method to the nation's asbestos analytical laboratories for CAA compliance purposes.[143] The EPA acknowledged in its letter that the promulgated NESHAP test method "remains the EPA compliance monitoring method and must be used for AHERA and NESHAP monitoring until further notice," but stated that the NESHAP test method's longevity has been cast into serious doubt because "the agency is considering replacing the Interim [1990 NESHAP] Method with this newer, improved [1993 test method] procedure."[144]

2. First EPA 1994 "Clarification" of NESHAP Test Method

In January 1994, the EPA felt compelled to respond to many questions from industry regarding averaging of the asbestos content of multilayered material under the NESHAP test method to determine whether the material is regulated.[145] The EPA criticized the practice of averaging under the NESHAP test method, with one exception: certain multilayered wall systems. Seven months later, on August 1, 1994, the EPA announced in the Federal Register the availability of an improved scientific test method for quantifying asbestos in materials, i.e., the 1993 test method, that explicitly rejects averaging.[146] The EPA did not engage in rulemaking to adopt the 1993 test method.

3. Second EPA 1995 "Clarification" of NESHAP Test Method

In 1995, the EPA was forced to respond yet again to ongoing public frustration with harmonizing the NESHAP 1990 test method

143 *See* Letter from Michael E. Beard, Chemist, U.S. EPA Atmospheric Research & Exposure Assessment Lab., to All Asbestos Analytical Laboratories (Sept. 7, 1993).

144 *Id.*

145 *See* Asbestos NESHAP Clarification Regarding Analysis of Multi-layered Systems, 59 Fed. Reg. 542 (Jan. 5, 1994) (to be codified at 40 C.F.R. pt. 61).

146 *See* Advisory Regarding Availability of an Improved Asbestos Bulk Sample Analysis Test Method, 59 Fed. Reg. 38,970 (Aug. 1, 1994).

(averaging) and its nonbinding 1993 test method (no averaging).[147] In the face of the irreconcilable positions of the two test methods, the EPA elected to forego rulemaking again, and instead pointed to its long-standing "unwritten policy" against averaging.[148] The EPA admonished industry that its regulatory objectives are more accurately set forth in the nonpromulgated 1993 test method, and it promised to amend the NESHAP regulation to make the 1993 test method new law.[149] The agency has never done so.

4. Nation's Asbestos Laboratories Certified for Over a Decade Under the 1993 Test Method

Over the course of a decade, the entire apparatus to perform asbestos NESHAP testing shifted from the 1990 to 1993 test methods without much public fanfare and without legal challenge, at least until the *SDG&E* case. Government and private laboratories certified to perform asbestos testing are accredited by the U.S. Department of Commerce's National Institute of Standards and Technology (NIST) through its National Voluntary Laboratory Accreditation Program (NVLAP).[150]

In August 1994, NVLAP adopted standards for asbestos testing in certified laboratories concurrently with the EPA's first announcement of the availability of its 1993 test method in the Federal Register.[151] Since then, the improved 1993 test method has increasingly become the de facto test method for laboratory certification purposes.[152]

NVLAP purported to embrace either the 1990 test method or 1993 test method for certification purposes, yet proceeded to direct the

147 *See* Asbestos NESHAP Clarification Regarding Analysis of Multi-layered Systems, 60 Fed. Reg. 65,243 (Dec. 19, 1995) (to be codified at 40 C.F.R. pt. 61).

148 *Id.*

149 *Id.*

150 Since 1976, NVLAP has provided third-party accreditation services to government and private laboratories to promote national uniformity and competence. *See* C. DOUGLAS FAISON, WHAT IS THE NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (2006) (stating 252 national laboratories are accredited under NVLAP for bulk asbestos testing), *available at* http://ts.nist.gov/standards/upload/what-is-the-NVLAP.pdf.

151 *See* ERIC B. STEEL ET AL., NIST HANDBOOK 150-3, BULK ASBESTOS ANALYSIS (1994).

152 The 1994 certification manual for asbestos laboratories known as the *NVLAP Asbestos Handbook* references the acceptable application of the 1993 test method. *See id.* at 11. ("The laboratory shall use the test method contained in [1990 test method] *or the current (1993) U.S. EPA method for the analysis of asbestos in building material*.") (emphasis added).

nation's laboratories to adhere to the newer 1993 test method. While paying lip service to the NESHAP test method in order to remain certified under government-approved standards, NVLAP instructed asbestos testing laboratories nationally to implement the EPA's 1993 test method.[153] Specifically, the 1994 NVLAP Handbook instructs:

> The laboratory shall use the test method contained in The [sic] U.S. EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" [1990 test method] *or* the current U.S. EPA method for the analysis of asbestos in building material [1993 test method]. . . . *The laboratory is responsible for ensuring that it implements the latest revision of the method*.[154]

The EPA and NVLAP have thus jointly promoted the shift by laboratories to the 1993 test method for well over ten years, effectively replacing asbestos tests methods incrementally through a combination of EPA clarifications and NVLAP certifications of laboratories following those agency clarifications.

C. History of Asbestos NESHAP Regulation

The asbestos NESHAP, set forth at 40 C.F.R. subpart M, is an EPA regulation with historical roots in both the 1970 CAA and the 1976 Toxic Substances Control Act (TSCA).[155] The NESHAP has been amended substantively four times since 1973: in 1975, 1984, 1990, and a minor revision in 1994.[156] The asbestos NESHAP responds to Congress's mandate under the 1970 CAA to develop emissions standards for hazardous air pollutants and has roots in TSCA's goal of eliminating asbestos-containing products from commerce and schools.[157]

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153 The 1994 *NVLAP Asbestos Handbook* expressly cites the 1993 test method repeatedly as authority for its accreditation program. *Id.* at 1, 9, 10, 11, C-4. The *NVLAP Asbestos Handbook* also adopts the 1993 test method's definition of "friable" verbatim, not NESHAP's definition of "friable." *Id.* at 2.

154 *Id.* at 11 (emphasis added).

155 Howard, Guerrero, McGrath & Van Orden, *supra* note 124, at 225–30 (providing a detailed chronology of the asbestos NESHAP in Appendix A).

156 The 1994 amendments added an EPA "Interpretative Rule Governing Roof Removal Operations" authorizing, among other things, mechanical removal of roofing materials using a "rotating blade (RB) roof cutter." Interpretive Rule for Roof Removal Operations Under the Asbestos NESHAP, 59 Fed. Reg. 31,157–61 (June 17, 1994) (codified at 40 C.F.R. pt. 61, subpt. M, app. A (2000)).

157 *See* Regulation of Hazardous Chemical Substances and Mixtures, 15 U.S.C. § 2605 (West 2008); *see also* Asbestos; Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions, 54 Fed. Reg. 29,460, 29,468 (July 12, 1989) (to be codified at 40

In fact, the method to quantify asbestos under the NESHAP was enacted originally into law through TSCA rulemaking in 1982 to compel school authorities to inspect and identify friable asbestos in schools.[158] That 1982 TSCA test method[159] was readopted in 1987 under rulemaking to implement the Asbestos Hazard Emergency Response Act of 1986 (AHERA), legislation that amended TSCA.[160] The same test method incorporated into TSCA and AHERA regulations in the 1980s was later explicitly incorporated into the asbestos NESHAP and the definitions of "asbestos-containing material" and RACM in 1990 as part of the last major revisions to that CAA regulation.[161] The NESHAP test method remains today the only test method authorized by law to quantify asbestos in material for purposes of the CAA's asbestos NESHAP.

While the 1973 asbestos NESHAP substantively evolved most dramatically during its first seventeen years, the regulation has remained fairly static since the 1990 amendments. The original 1973 asbestos NESHAP regulation started very modestly.[162] It mandated three basic procedures to remove friable (then undefined) material before demolition of buildings to prevent "emissions of particulate asbestos material to outside air."[163] It was silent on test methods.

The concept of friability was left completely undefined until 1975 when the EPA amended the NESHAP regulation to define "friable asbestos material" as "any material that contains more than *[one] percent asbestos by weight* and that can be crumbled, pulverized, or

C.F.R. pt. 763) (promulgating a three-stage ban of approximately ninety-four percent of all commercial asbestos products under TSCA).

158 *See* Asbestos; Friable Asbestos-Containing Materials in Schools; Identification and Notification, 47 Fed. Reg. 23,360, 23,376 (May 27, 1982) (to be codified at 40 C.F.R. pt. 763).

159 *See* 1990 TEST METHOD, *supra* note 129.

160 Asbestos-Containing Materials in Schools, 52 Fed. Reg. 41,826, 41,837 (Oct. 30, 1987) (to be codified at 40 C.F.R. pt. 763).

161 47 Fed. Reg. at 23,376 (original TSCA 1982 test method); 52 Fed. Reg. at 41,837 (EPA states in 1987 that the existing 1982 TSCA test method is "sufficient" for AHERA purposes); National Emission Standards for Hazardous Air Pollutants; National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision, 55 Fed. Reg. 48,406, 48,410 (Nov. 20, 1990) (to be codified at 40 C.F.R. pt. 61) (incorporating 1987 AHERA test method into 1990 asbestos NESHAP amendments). Thus, the test methods under TSCA (1982), AHERA (1987), and the asbestos NESHAP (1990) are identical.

162 Asbestos, Beryllium, and Mercury, 38 Fed. Reg. 8820 (Apr. 6, 1973) (to be codified at 40 C.F.R. pt. 61).

163 *Id.* at 8829.

reduced to powder, when dry, by hand pressure."[164] Again, no test method was specified to determine one percent asbestos by weight. The NESHAP rule was also amended in 1975 to include renovation projects, another perceived major source of asbestos fiber emissions.[165]

The NESHAP regulation was next amended in 1984. Again, no test method was specified. Essentially, the work practices were repromulgated in 1984 after the Supreme Court's decision in *Adamo Wrecking Co. v. United States*, 434 U.S. 275 (1978), which determined that the asbestos handling work practices were not technically emission standards and thus were not explicitly authorized by an earlier version of the CAA.[166] The last major substantive NESHAP changes took place in 1990, which included the incorporation of the same test method already in use since the 1980s in TSCA regulations to determine asbestos content for purposes of the one percent CAA jurisdictional threshold.

D. 1990 Asbestos NESHAP Amendments

In January 1989, the EPA commenced nearly two years of CAA rulemaking that led to major revisions in the asbestos NESHAP (November 1990) because of the "overwhelming consensus among enforcement officials and industry groups that there is a significant level of noncompliance and confusion with the NESHAP."[167]

The 1990 NESHAP amendments moved away from the then-existing weight-based standard of 1975–1990 with no specified test to determine asbestos quantity in materials (one percent by weight) to a two-dimensional, area-based standard (one percent by area). The EPA also decided it was "long overdue" after seventeen years to adopt a specific test method to determine asbestos content to "reduce confusion over what activities are subject to the regulation."[168]

164 Amendments to Standards for Asbestos and Mercury, 40 Fed. Reg. 48,292, 48,299 (Oct. 14, 1975) (to be codified at 40 C.F.R. pt. 61) (emphasis added).

165 *Id.* ("Demolition" requires the "wrecking or taking out of any load-supporting structural member.").

166 National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard, 49 Fed. Reg. 13,658, 13,658–65 (Apr. 5, 1984) (to be codified at 40 C.F.R. pt. 61).

167 *See* OFFICE OF AIR & RADIATION, *supra* note 126, at 3-1.

168 *Id.* at 4-12.

However, the EPA recognized that a promulgated NESHAP test method would carry heavy future agency rulemaking obligations:

> One advantage to including the analytical method for the identification and quantification of asbestos directly in the NESHAP is that the method is then readily available to those who have an interest in the asbestos NESHAP. *A disadvantage of this approach is that, when the analytical method is revised as a result of improvements in methodology, the analytical method contained in the NESHAP cannot be changed without going through lengthy and time-consuming procedures to amend the regulation. . . . The EPA believes that, by including the analytical method used to determine asbestos content in the definition, future misinterpretation of the definition is unlikely*.[169]

The EPA decided to incorporate the preexisting test method from TSCA (1982) and AHERA (1987) into the NESHAP regulation (1990). This meant that the NESHAP test method would automatically change with any future test method updates promulgated under TSCA or AHERA without mandating separate CAA rulemaking to maintain uniformity and asbestos test method consistency among the statutes. The EPA recognized as early as 1990 that the enumerated test method adopted into the 1990 NESHAP was virtually "locked in place" until such time as either (1) the NESHAP regulation was amended separately to adopt a new or unique NESHAP test method, or (2) the TSCA/AHERA test method regulation, incorporated by reference into the asbestos NESHAP and the core definition of "regulated asbestos-containing material," was amended.[170] Notably, this did not occur; the core NESHAP definitions and their governing test method have never been changed since 1990.

169 *Id.* at 4-16 (emphasis added).

170 The existing NESHAP regulation definition states "regulated asbestos-containing material" must contain "more than [one] percent asbestos *as determined using the method specified in [TSCA/AHERA] appendix E, subpart E, 40 C.F.R. part 763, section 1, Polarized Light Microscopy*." 40 C.F.R. § 61.141 (2009) (emphasis added). As indicated by this language, the NESHAP regulation cross-references to the EPA's test method in a non-CAA AHERA regulation. Specifically, the detailed test protocols of the NESHAP test method are outlined in fifteen pages of the AHERA regulation for schools at 40 C.F.R. pt. 763, subpt. E, app. E.

E. Representative Sampling Is Still Required Post–Credible Evidence Rule and Remains a Fundamental Principle of EPA Enforcement Programs and the Asbestos NESHAP Test Method

In ordering a new trial because of dubious test methods and nonrepresentative sampling, the *SDG&E* court found that a serious miscarriage of justice occurred:

> If the [g]overnment is not required to test samples that are representative of the suspected [asbestos-containing material], a party's guilt or innocence would depend entirely upon the sample collected, no matter how contaminated or unrepresentative. The [g]overnment's proposed rule would permit the following situation: a company tests ACM using a representative sample, finds it is not RACM, and on that information, properly concludes there is no obligation to comply with the NESHAP requirements. Later, after demolition or renovation activities begin, the regulatory authorities retrieve and test bits and pieces from the project that may not be representative or whole samples. If such samples reveal high concentrations of asbestos, the company would be subject to criminal prosecution for asbestos NESHAP violations even when the ACM, based upon a representative sample, is not RACM. Such a result would violate basic principles of due process, which 'require[] legislatures to set reasonably clear guidelines for law enforcement officials and triers of fact in order to prevent arbitrary and discriminatory enforcement' of the law.[171]

The *SDG&E* case then moved forward to test whether the credible evidence rule relieves the government from having to base its criminal prosecutions exclusively upon representative sampling, such as post-removal, nonrepresentative debris that contains less than all original layering of the pipe coating. Specifically, the government sought to apply the credible evidence rule after the new trial ruling in a way that would have allowed CAA prosecutions to be based on nonrepresentative samples.[172] The court rejected the government's novel application.

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171 United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2007 WL 4326773, at *5 (S.D. Cal. Dec. 7, 2007) (order granting defendants' motion for new trial) (citing Smith v. Goguen, 415 U.S. 566, 572-73 (1974)). The government even suggested, without success, that the applicable NESHAP test method may differ depending upon whether the government elects to pursue criminal or civil enforcement. *Id.* at *5 n.5.

172 SDG&E successfully argued that the NESHAP test method (and EPA policy generally) requires at its basic foundation representative sampling in order to produce (and reproduce) consistent, scientific results for asbestos content. *See* United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2009 WL 4824489, at *6–*7 (S.D. Cal. Aug. 31, 2009) (order denying motion of United States of America to admit designated evidence).

The *SDG&E* court noted that the NESHAP test method is squarely founded upon the analytical starting point of representative samples.[173] Section 1.7.1 (sampling) of the 1990 test method[174] in fact instructs that field sampling "shall be taken in a manner prescribed in" the 1979 EPA Guidance Document, "Asbestos-Containing Materials in School Buildings."[175] Section 1.7.1 of the NESHAP test method regulation not only instructs that the 1979 EPA Guidance Document "shall" serve as the governing procedure for field sampling, it states "[i]f there are any questions about the representative nature of the sample, another sample should be requested before proceeding with the analysis." [176] The 1979 EPA Guidance Document explains that representative samples should be obtained by "penetrating the depth of the material,"[177] and further instructs field samplers to be "sure to penetrate . . . *all the layers* of the material."[178]

Representative sampling is not unique to the asbestos NESHAP. According to a wide array of EPA guidelines, technical manuals, and standard operating procedures dating back to at least the early 1990s, representative sampling is the cornerstone of the EPA's enforcement programs.[179] In fact, representative sampling is a bedrock principle of all forms of EPA field sampling, regardless of whether it pertains to

173 *Id.*

174 40 C.F.R. pt. 763, subpt. E, app. E, § 1.7.1.

175 OFFICE OF TOXIC SUBSTANCES, U.S. EPA, ASBESTOS-CONTAINING MATERIALS IN SCHOOL BUILDINGS: A GUIDANCE DOCUMENT 10 (1979) [hereinafter 1979 GUIDANCE DOCUMENT].

176 40 C.F.R. pt. 763, subpt. E, app. E, § 1.7.1 ("[s]amples for analysis of asbestos content shall be taken in the manner prescribed in Reference 5 [1979 EPA Guidance Document] . . . .").

177 1979 GUIDANCE DOCUMENT, *supra* note 175, at 9.

178 *Id.* at 10 (emphasis added).

179 *See, e.g.*, ENVIRONMENTAL RESPONSE TEAM, EPA, EPA SOP NO. 2016, SEDIMENT SAMPLING 1 (1994) (stating that Standard Operating Procedures are "applicable to the collection of representative sediment samples"); ENVIRONMENTAL RESPONSE TEAM, EPA, EPA SOP NO. 2012, SOIL SAMPLING 2 (2000) (identifying "procedures for the collection of representative soil samples"); ENVIRONMENTAL RESPONSE TEAM, EPA, EPA 540/R-95/141, SUPERFUND PROGRAM REPRESENTATIVE SAMPLING GUIDANCE VOLUME 4: WASTE 1 (1995) (stating that "[r]epresentative sampling applies to all phases of a Superfund response action"); OFFICE OF ENFORCEMENT & COMPLIANCE ASSURANCE, EPA, EPA-330/9-89-003-R, DETERMINATION OF ASBESTOS IN BULK BUILDING MATERIALS, app. M (1992) (stating sampling guidelines require representative samples for enforcement); EPA, REGION IV ENVIRONMENTAL INVESTIGATIONS STANDARD OPERATING PROCEDURES AND QUALITY ASSURANCE MANUAL, §§ 5.1–5.3 (2001) (stating that representative sampling is mandatory).

air, soil, sediment, or Superfund sites.[180] The EPA's requirement of representativeness is entirely consistent with the *SDG&E* court's rulings, which held that the asbestos NESHAP requires a representative "whole" sample, i.e., one which contains "all layers of the pipe wrap" in its original proportions, even if the multilayered material is no longer structurally intact.[181]

Because the "concept of 'representativeness' has always been considered a critical component for execution of a sampling plan which will adequately characterize the site or area under investigation," the EPA published in the 1990s a series of technical bulletins to ensure representative sampling for soil, air, waste, ecological, and water investigations.[182] According to the EPA's general-purpose standard operating procedure for "all field activities that involve sampling," not only is representative sampling a basic enforcement rule, the "sampling itself must be conducted so that every sample collected retains its original physical form and chemical composition."[183]

Although the EPA has long adhered to representative sampling for purposes of regulatory and enforcement determinations, the government in the *SDG&E* case argued that the credible evidence rule is an exception to this bedrock principle; indeed, from 2006 to 2009, the government remained steadfastly opposed to limiting its prosecution to representative sampling, or, alternatively, sought to redefine a representative sample as any debris that an inspector happened to encounter in the field post-removal.[184] Once again, the credible evidence rule did not offer a legal foundation to redefine key

180 *See* sources citing EPA standard operating procedures, *supra* note 179.

181 Transcript of Proceedings at 39, United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS (S.D. Cal. Mar. 29, 2007); *accord* United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2007 WL 4326773, at *3 (S.D. Cal. Dec. 7, 2007) (order granting defendants' motion for a new trial). *See also* United States v. SDG&E, Case 07-CR-0484-DMS, at 1–2 (Sept. 26, 2007) (order requesting supplemental briefing) ("Regardless of whether the layers are identifiable, intact, connected to the pipe or not, a party should represent that a sample is 'representative' only if the sample contained *all* layers of the pipe wrap *in the same proportion* as originally present on the pipe.") (emphasis in original).

182 ENVIRONMENTAL RESPONSE TEAM, EPA, REPRESENTATIVE SAMPLING: AIR 1 (1992); *see also* sources citing standard operating procedures, *supra* note 179.

183 ENVIRONMENTAL RESPONSE TEAM, EPA, EPA SOP NO. 2001 GENERAL FIELD SAMPLING GUIDELINES 1 (1994).

184 *SDG&E*, 2007 WL 4326773, at *4–*6 (order granting defendants' motion for a new trial) (describing four arguments advanced by the government as to why representative samples are not required in enforcement).

scientific concepts or relieve the government of its obligation to prove elements of a charged offense.[185]

III
UNITED STATES V. SAN DIEGO GAS & ELECTRIC CO.: AGGRESSIVE GOVERNMENT ENFORCEMENT POLICIES COLLIDE WITH THE ADMINISTRATIVE PROCEDURES ACT AND CREDIBLE EVIDENCE RULE

A. Facts and Procedural Background of the San Diego Gas & Electric *Case*

In 2006, the government indicted San Diego Gas & Electric Company and three individuals for alleged violations of the CAA and its asbestos NESHAP regulation.[186] The case related to the removal of more than nine miles of underground natural gas pipelines coated with a multilayered, anticorrosive system, one layer of which contained a thin asbestos felt material saturated in coal tar.[187] The government contended that the multilayered pipe coating system exceeded the one percent regulatory threshold for asbestos fiber content, and the asbestos NESHAP work practices were not followed during pipe removal operations in 2000 and 2001.[188]

The case implicated constitutional issues of first impression, including the government's decision to base its prosecution not upon the promulgated test method that requires averaging of multilayered materials and representative sampling, but upon a nonbinding single-

185 United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2009 WL 4824489, at *15 (S.D. Cal. Aug. 31, 2009) (order denying motion of United States of America to admit designated evidence) (rejecting use of credible evidence rule to prove a crime through "noncompliant samples and test methods").

186 *Id.* at *1.

187 United States v. SDG&E, No. 06-CR-0065-DMS, 2006 WL 3913457, at *1 (S.D. Cal. Nov. 21, 2006). The vast majority of the coating was destroyed before trial, but the coating was described as being an inch or more thick with up to six to nine discrete layers. One layer was less than 0.5 millimeters thick and contained the asbestos felt embedded in a layer of coal tar. Defendants' Memorandum of Points and Authorities in Support of Joint Motion for Judgment of Acquittal [Science-Based Elements of Regulated Asbestos-Containing Material], at 1–2, United States v. SDG&E, No. 07-CR-0484, Doc. 159-2 (S.D. Cal. Aug. 22, 2007). The waterproof and durable coating system prevented corrosion of the steel underground pipes for more than fifty years of service.

188 *SDG&E*, 2006 WL 3913457, at *2 (order granting motion to dismiss counts 1, 2, 3, and 5 of the indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material).

layer test method, i.e., the 1993 test method. That nonbinding method is purposely designed to bias results of multilayered materials above the one percent federal jurisdictional limit by looking at the highest results of any single layer, without any averaging and without testing from the starting point of representative samples.[189] In this case, the government's unaveraged results of up to sixty percent asbestos of the thin single layer were used to render all properly averaged testing that produced results of less than one percent into "'meaningless window dressing.'"[190]

The EPA's stated purpose in changing tests for its CAA asbestos program back in the 1990s was admittedly designed to sweep previously unregulated, mainly multilayered materials into the federal asbestos NESHAP program. The EPA accomplished this not through rulemaking, but rather through a series of "clarifications."[191] The *SDG&E* case presented just the right set of facts for a federal court to conclude that the agency's shift in policy was improper and lacks the force of law absent rulemaking under the Administrative Procedures Act. Accordingly, the court dismissed the first indictment.[192]

In lieu of introspection or rulemaking, the EPA instead moved ahead with a second indictment.[193] In response to the dismissal of the first indictment, the government purported to test the only remaining physical samples, a few grams of debris, using the correct averaging method, which reduced the original asbestos content results by more than ninety percent.[194] However, the due process and rulemaking problems first uncovered in the original indictment only grew in

189 *Id.* at *4–*9; *SDG&E*, 2009 WL 4824489, at *3 (order denying motion of United States of America to admit designated evidence).

190 Defendants' Memorandum of Points and Authorities in Support of Joint Motion for Judgment of Acquittal, *supra* note 187, at 9–10.

191 *SDG&E*, 2006 WL 3913457, at *7 (order granting motion to dismiss counts 1, 2, 3, and 5 of the indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material) (citing Advisory Regarding Availability of an Improved Asbestos Bulk Sample Analysis Test Method, 59 Fed. Reg. 38,970 (Aug. 1, 1994), which states the EPA preferred a different test because "multi-layered samples which may contain asbestos in a single layer may have been reported by laboratories as nonasbestos-containing").

192 *Id.* at *4–*12.

193 *See* United States v. SDG&E, No. 06-CR-0065-DMS & 07-CR-0484-DMS, 2007 WL 4326773, at *2 (S.D. Cal. Dec. 7, 2007) (order granting defendants' motion for new trial).

194 *SDG&E*, 2009 WL 4824489, at *3 (order denying motion of United States of America to admit designated evidence) (finding the original test results of 37–42% asbestos dropped on retesting to 1.55–3.66%).

significance with the second, as the vast majority of the virtually limitless nine miles of pipe coating evidence once available to the government for testing in 2000 and 2001 had been destroyed years before the first trial in 2007 and was no longer available to either side for retesting using the correct, promulgated test method.[195] As the court described the case, the government "attempted to patch together a hodgepodge of evidence" from the original nine miles of pipe that through its own mishandling "have been reduced to a small pile of rubble that would fit easily within a sandwich-size plastic bag."[196]

The promulgated asbestos NESHAP test method, when applied by the defense to the few grams of remaining physical evidence, demonstrated that the pipe coating material in *SDG&E* fell below the federally regulated threshold.[197] The EPA nonetheless chose to introduce at trial the very same misleading and artificially inflated single-layer evidence used in the defective first indictment, but now under the theory that the federal credible evidence rule made all available testing newly relevant. The evidentiary rule was so broad, the government argued, that all test results were relevant, even if they were not performed on representative samples nor tested consistently with the promulgated method to determine asbestos content in the multilayered pipe coating.[198]

The EPA thus elected to invoke the credible evidence rule for the first time in an environmental criminal case in an effort to cure its own mistakes and fundamental post-indictment evidentiary shortcomings. In *SDG&E*, the government relied upon nothing more than a combination of twenty-seven nonrepresentative or improperly tested pipe coating samples that failed to comply with the law's basic requirements for averaging the asbestos content using representative samples.[199] The credible evidence rule not only failed to remedy the evidentiary and due process defects of *SDG&E*—leading to a new trial in 2007[200] and ultimate dismissal of the consolidated indictments

195 *See id.* at *13–*14.

196 *Id.* at *13.

197 *Id.* at *3 & n.5 (stating defendants' "test results yielded asbestos percentages at or below 1% (from 0.7 to 1%)").

198 *Id.* at *15 (arguing noncompliant testing is admissible as circumstantial evidence under credible evidence rule).

199 *See id.* at *14–*15 (excluding all twenty-seven government-proffered samples).

200 *See* United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2007 WL 4326773 (S.D. Cal. Dec. 7, 2007) (order granting defendants' motion for new trial).

in 2009[201]—but both the district court and Ninth Circuit held that the credible evidence rule does nothing to supersede the Federal Rules of Evidence and Rule 403's requirement to exclude unfairly prejudicial and misleading evidence.[202]

Despite government attempts to the contrary, the credible evidence rule could not modify or weaken the specific definitional test method necessary under the CAA to determine, as a threshold matter, federally regulated material. The court also found the rule does not otherwise relieve the government of its basic proof obligations in criminal cases to demonstrate beyond a reasonable doubt the basic elements of a CAA crime, including proving the pipe coating contained more than one percent asbestos as determined by a specific test.[203] The court reserved its most memorable comments in the long battle for last. In excluding all government evidence before any retrial, the court stated:

> The [g]overnment is attempting to present 'scientific test results' based upon samples that are (a) not representative of what was on the pipe, or (b) improperly tested, or both, and then argue to the trier of fact that such results reliably establish asbestos content of the pipe wrap as it existed on the pipe. In other words, the [g]overnment is taking an apple (a noncompliant sample), calling it an orange (a compliant representative and properly tested-sample), and inviting the trier of fact to compare oranges and draw an inference that the 'orange' establishes that the pipe wrap on the pipe contained more than [one percent] asbestos and is therefore RACM. Following the analogy, a sample is not relevant unless it is an orange. The [g]overnment has no oranges.[204]

The credible evidence rule could not make the fundamentally noncompliant results suddenly compliant. Two months later, without any available "oranges" (i.e., representative and properly tested samples) to prosecute, the government dismissed the consolidated indictments.[205]

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201 *SDG&E*, 2009 WL 4824489, at *15 (order denying motion of United States of America to admit designated evidence); United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS (S.D. Cal. Oct. 6, 2009) (order dismissing indictments).

202 *SDG&E*, 2009 WL 4824489, at *13–*14 (order denying motion of United States of America to admit designated evidence); United States v. SDG&E, Nos. 08-50072 & 08-50073, 2009 WL 689627, at *6 (9th Cir. Mar. 17, 2009).

203 *See SDG&E*, 2009 WL 4824489, at *13–*15 (order denying motion of United States of America to admit designated evidence).

204 *See id.* at *14.

205 Government's Motion to Dismiss Indictment, United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS (S.D. Cal. Oct. 6, 2009).

Two months after the *SDG&E* case concluded, a criminal asbestos NESHAP defendant in *United States v. Tucker* attempted to invoke, without success, the same test method and representative sampling defenses to exclude evidence in the context of a building demolition with asbestos-containing roof panels comprised of single-layered, homogeneous material.[206] However, the facts of *SDG&E* and *Tucker* are easily distinguishable. The critical difference is that the *SDG&E* matter involved multilayered material while the *Tucker* case involved single-layered material, where the averaging of nonlayers has no significance. In the *SDG&E* case, testing in accordance with the 1990 test method and representative sampling actually demonstrated that the material was not regulated.[207] In *Tucker*, asbestos content results using different methods were never addressed because such comparative testing was never performed.

In *Tucker*, the government relied upon debris samples obtained from the homogeneous, single-layered roofing material.[208] Because it is both single-layered and homogeneous, any grab sample or debris in *Tucker* would in theory be representative of the original material. The court therefore concluded that "[t]here is no evidence that the debris samples tested by the government are not representative of the roof panel material as a whole."[209]

The defendant in *Tucker* then challenged the government's laboratory testing on the grounds that it "did not precisely comply with the stringent requirements of the [1990 test] method, and for this reason evidence of the samples and test results should be excluded."[210] The government countered by citing the credible evidence rule for only the second time in a criminal case. This time, however, the government pointed to the rule not to suggest other test methods are admissible, but to refute the allegation that the government must be held in strict compliance with step-by-step procedures set forth in the binding 1990 test method. In *SDG&E*, the government had reached for much more than in *Tucker*; specifically, that the credible evidence rule should be construed to allow for both

206 United States v. Tucker, No. 1:09-CR-57, 2009 WL 4856225 (W.D. Mich. Dec. 9, 2009).

207 *SDG&E*, 2009 WL 4824489, at *3 & n.5 (order denying motion of United States of America to admit designated evidence).

208 *Tucker*, 2009 WL 4856225, at *2–*3.

209 *Id.* at *3.

210 *Id.*

the use of nonrepresentative sampling and the substitution of test methods altogether.

Without analyzing any laboratory data before trial, the *Tucker* court summarily concluded that under the CAA credible evidence rule "strict compliance with the testing methods prescribed by the NESHAP . . . is not necessary as long as the testing methods actually used provide results that are both relevant and credible."[211] However, in support of this CAA ruling, the court relied exclusively on non-CAA authority.

Even though the credible evidence rule is uniquely a creature of the CAA, and no CAA cases supported the government's position, the *Tucker* court cited as authority two hazardous waste cases under the Resource Conservation and Recovery Act (RCRA), one civil[212] and one criminal.[213] Neither hazardous waste case even mentions the credible evidence rule. Further, RCRA's regulations do not incorporate into core definitions of hazardous waste a single jurisdictional test method, unlike the asbestos NESHAP for regulated asbestos-containing material. The *Tucker* court thus failed to recognize this critical distinction and the complete irrelevance of RCRA cases to bootstrap its application of the credible evidence rule into its first CAA criminal case.

The *Tucker* court can be fairly criticized for suggesting that the credible evidence rule has any logical role in criminal prosecutions and for arguably opening the door to sloppy government testing. In fairness, the court also noted that the government testing must still be credible, which is obviously harder to evaluate before trial but was fully vetted in the *SDG&E* case following a six-week trial. The true lessons of *SDG&E* were apparently lost on all the participants in *Tucker* because all private and government laboratories in *SDG&E* openly followed one or more test methods different from the one that the asbestos NESHAP specifies. It was not a matter of whether all laboratories in *SDG&E* failed to "precisely comply" with the NESHAP test method.

211 *Id.* (concluding incorrectly that there is more than one test method under the asbestos NESHAP).

212 *Id.* (citing United States v. WCI Steel, Inc., 72 F. Supp. 2d 810, 824 (N.D. Ohio 1999)).

213 *Id.* (citing United States v. Self, 2 F.3d 1071, 1086 (10th Cir. 1993)).

B. The Battle of the Asbestos Fiber Quantification Test Methods: Which One Really Determines Whether Materials Contain More than One Percent Asbestos and Fall Within the Clean Air Act's Jurisdiction?

The collision of the credible evidence rule and constitutional due process protections in the *SDG&E* case boiled down to two basic facts. First, there is one, and only one, test method mandated by law for quantifying the SDG&E pipe coating asbestos content for purposes of the asbestos NESHAP: a CAA method which is incorporated into the very definition of asbestos-containing material and RACM.[214] Second, this NESHAP test method was promulgated into law by the EPA as part of the 1990 amendments to the asbestos NESHAP regulation and has remained on the books without modification ever since.[215] The promulgated test requires averaging of the asbestos content in each layer of a representative multilayered material.[216] The 1993 test method does not. As discussed above, the EPA made a policy choice to rewrite the 1990 test method through a series of subsequent clarifications in 1994 and 1995, coupled with widespread public circulation of its preferred 1993 test method,[217] but the EPA took no rulemaking steps whatsoever either to rescind or supersede the 1990 test method.

SDG&E is not the first case in which the EPA walked away from a promulgated CAA test method that it considered deficient in its practical application. In *Donner Hanna Coke Corp. v. Costle*,[218] the EPA rejected the law's specified test method for opacity compliance for New York coke plant operations, a revised version of Method 9

214 *See* 40 C.F.R. § 61.141 (2009) (defining "[f]riable asbestos material" and "[n]onfriable asbestos-containing material").

215 *See* National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision, 55 Fed. Reg. 48,406, 48,415 (Nov. 20, 1990) (codified at 40 C.F.R. § 61.141).

216 United States v. SDG&E, No. 06-CR-0065-DMS, 2006 WL 3913457, at *5 (S.D. Cal. Nov. 21, 2006) (order granting motion to dismiss counts 1, 2, 3, and 5 of the indictment for failure to state an offense involving jurisdictional amount of "regulated" asbestos-containing material). The NESHAP test method provides: "When discrete strata are indentified, each is treated as a separate material so that fibers are first identified and quantified in that layer only, and then the results for each layer are combined to yield an estimate of asbestos content for the whole sample." Interim Method of the Determination of Asbestos in Bulk Insulation Samples, 40 C.F.R. pt. 763, subpt. E, app. E., § 1.7.2.1 (1995).

217 *See supra* Part II.B.

218 Donner Hanna Coke Corp. v. Costle, 464 F. Supp. 1295 (W.D.N.Y. 1979).

which required averaging of twenty-four visual observation results, in favor of a "stopwatch technique" that, like in *SDG&E*, did not average and was much more likely to find twenty percent opacity violations.[219] The coke plant operator refused to allow the EPA site access to perform its new stopwatch test, and the operator was threatened with criminal enforcement in response.[220] The stopwatch test had never been adopted by the EPA through rulemaking.[221] The plant operator sued to prevent what it considered to be an unlawful EPA search.

The *Donner Hanna* court concluded that the informal stopwatch test suddenly favored by the EPA was such a substantial change in the revised Method 9 that it was unenforceable because the new test violated the rulemaking requirements of both the Administrative Procedures Act and the CAA.[222] Over thirty years ago, the *Donner Hanna* court was one of the first to make the astute observation that test methods matter, stating that "the method of determining compliance with an emission standard can affect the level of performance required by the standard, even though the standard itself has not changed."[223] SDG&E essentially made the same argument three decades later, and that court essentially reached the same conclusion as in *Donner Hanna*.

The *SDG&E* case is the first known case, civil or criminal, since the original 1973 promulgation of the asbestos NESHAP work practices regulation where the central issue was whether the EPA can demonstrate that material is regulated under the CAA and the asbestos NESHAP on the weight of a purely discretionary and nonpromulgated agency test method of choice.[224] SDG&E successfully argued that

219 *Id.* at 1300–02.

220 *Id.* at 1297–98.

221 *Id.* at 1301.

222 *Id.* at 1304–05.

223 *Id.* at 1304.

224 Over 100 published and unpublished civil and criminal asbestos NESHAP cases exist since the 1973 establishment of a CAA asbestos program. The vast majority are civil disputes regarding above-ground building materials where the one percent jurisdictional threshold of the NESHAP regulation to the particular material at issue has never been disputed. The published and unpublished asbestos NESHAP criminal cases, generally post-dating the 1990 NESHAP amendments, involve common denominators such as dry removal of above-ground building materials, unlicensed workers, failure to give ten-day notices, and improper disposal or abandonment of waste at unlicensed facilities. Until the *SDG&E* case, none of the civil or criminal matters involved coal tar pipe coating, and none addressed the jurisdictional consequences of prosecuting crimes under the nonbinding

test methods matter because asbestos content in materials can be manipulated in its reported results by a number of different methods.[225] Depending upon the specific method followed, each method can produce dramatically different results for asbestos content, from zero to one hundred percent, for the exact same material.[226] This is because some asbestos quantification test methods average while others do not.[227] Some visually estimate asbestos fiber content under low magnification; others use X-ray diffraction techniques.[228] The EPA itself has developed no less than three different methods to quantify asbestos fibers in materials, only one of which is actually incorporated into the CAA regulations.[229] One week after the *SDG&E* court granted a new trial on December 7, 2007, the EPA's NEIC laboratory changed its single-layer test method to require averaging for multilayered pipe coating.[230]

1993 test method. One administrative EPA Environmental Appeals Board decision concluded that the 1993 test method could support a $9160 penalty based upon the weight of two post–1990 EPA clarifications purporting to disallow averaging for multilayered material under the NESHAP test method. *See* In re LVI Envtl. Servs., Inc., 10 E.A.D. 99 (2001) (concluding Category I asphalt roofing material is regulated where any single layer is above one percent, even though asbestos content falls below one percent when all layers averaged under NESHAP test method).

225 Defendants' Memorandum of Points and Authorities in Support of Joint Motion for New Trial [Science-Based Elements of Regulated Asbestos-Containing Material], *supra* note 187, at 1, 5–10; Defendants' Memorandum of Points and Authorities in Support of Joint Motion for Judgment of Acquittal [Science-Based Elements of Regulated Asbestos-Containing Material] at 1–6, United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, Doc. 161-2 (S.D. Cal. Aug. 22, 2007).

226 The mere act of averaging the SDG&E pipe coating material dropped the reported results by over 90% from 37–42% to 1.55–3.66% asbestos. United States v. SDG&E, Nos. 06-CR-0065-DMS & 07-CR-0484-DMS, 2009 WL 4824489, at *3 (S.D. Cal. Aug. 31, 2009).

227 40 C.F.R. pt. 763, subpt. E, app. E., § 1.7.2.1 (averaging of bylayer asbestos results).

228 *Id.* § 1.7.2.4 (visual estimation of asbestos fibers); *id.* § 2 (quantifying asbestos content by X-ray diffraction quantification testing); 1993 TEST METHODS, *supra* note 134, § 2.5 (discussing analytical electron microscopy).

229 *See* 1990 TEST METHOD, *supra* note 129; 1993 TEST METHOD, *supra* note 134; NAT'L ENFORCEMENT INVESTIGATIONS CTR., NEICPROC/01-002R5, DETERMINATION OF ASBESTOS IN BULK BUILDING MATERIALS (2008).

230 The NEIC asbestos test manual was amended on December 13, 2007, one week after the new trial ruling. *See* NAT'L ENFORCEMENT INVESTIGATIONS CTR., *supra* note 229, at 26–27. Unlike all prior versions of the NEIC test manual, which are silent on this issue, the new version addresses hypothetical multilayered "pipewrap"; expressly adopts volumetric averaging, and essentially the same volumetric averaging formula used during the first *SDG&E* trial, as the proper procedure to quantify asbestos in the material; and uses, for purposes of illustration, the example of ten-layered "pipewrap." *Id.* at 27.

C. Wisconsin Rejects SDG&E *and the Necessity for Rulemaking to Make the 1993 Test Method Enforceable*

Although one federal court ruled that switching from the 1990 averaging NESHAP test method to the 1993 single-layer test method without rulemaking violates the Administrative Procedures Act, and at least ten states have undergone such rulemaking to adopt the new 1993 test method, confusion still exists. In a four-three decision in 2008, the Wisconsin Supreme Court came to the completely opposite conclusion of *SDG&E* and its own lower court of appeals.[231]

In *State v. Harenda Enterprises*,[232] an asbestos contractor faced $37,138.50 in civil fines under the Wisconsin SIP for the removal of multilayered asbestos-containing wall material from the Milwaukee Auditorium allegedly without following all required NESHAP work practices to minimize the release of fibers.[233] The contractor's laboratory testing indicated that none of the predemolition samples exceeded the one percent asbestos regulatory threshold.[234] The state's single-layer testing, however, showed at least one layer contained more than one percent asbestos and, in the state's view, made the entire multilayered wall material regulated.[235]

The Wisconsin Supreme Court concluded that the 1990 NESHAP test method regarding averaging was "ambiguous" and the EPA's 1994 and 1995 clarifications were agency interpretations that single-layer testing, not averaging, is required.[236] The *Harenda Enterprises* court admitted that "[i]t is often difficult to discern the difference between an interpretive rule and a legislative rule, as they lie upon a

231 In a three-zero decision, the Wisconsin Court of Appeals concluded in a civil enforcement action that the multilayered auditorium wall material required averaging under the 1990 test method. State v. Harenda Enters., Inc., 724 N.W.2d 434, 438 (Wis. App. 2006), *rev'd*, 746 N.W.2d 25 (Wis. 2008), *cert. denied*, 129 S. Ct. 573 (2008). The state invoked the 1994 and 1995 EPA clarifications to base its civil case on a single layer theory to show that the multilayered wall materials exceed the one percent jurisdictional threshold. *Id.* at 437–38. The court of appeals held that the EPA clarifications are "at odds with the clear command of § 1.7.2.1" and reversed the trial court's summary judgment ruling in the State's favor. *Id.* at 438–39.

232 *Harenda Enters., Inc.*, 746 N.W.2d at 25.

233 *Id.* at 31.

234 *Id.* at 30–31.

235 *Id.*

236 *Id.* at 28, 34, 42.

'hazy continuum.'"[237] Nonetheless, it found no obligation whatsoever for the state to undergo rulemaking to make the single-layer testing of the 1993 test method the law of Wisconsin.[238]

In a sharp dissent, Justice Ziegler followed the rationale of the *SDG&E* court and found the plain language of the regulation and its promulgated averaging test method completely inconsistent with the EPA clarifications supporting the single-layer 1993 test method for multilayered materials.[239] The dissent criticized the majority's reasoning, especially the conclusion that the EPA clarifications are merely nonsubstantive interpretations and are thus enforceable without any state adoption of the clarifications whatsoever.[240] The *Harenda Enterprises* case currently stands alone. The Wisconsin Supreme Court never explains why, if state rulemaking is unnecessary, at least ten states thus far have felt compelled to adopt the 1993 test method through rulemaking.

IV
CONCLUSION

Since its adoption in 1997, the EPA credible evidence rule has incrementally expanded beyond its modest penalty criteria beginnings under CAA section 113(e)(1), as amended in 1990. The EPA and others have carved out a niche application that favors the use of continuous emissions monitoring data in civil cases, generally citizen suits, to prove violations where reference test data is sporadic.

The credible evidence rule, however, has recently suffered evidentiary setbacks and collided against Administrative Procedures Act and due process constraints. The rule is unavailable to states or citizen enforcers unless expressly adopted by state SIPs. It has thus far found no solid application in criminal environmental cases, mainly because the Federal Rules of Evidence and heightened due process protections prohibit the use of artificially inflated nonreference data.

237 *Id.* at 32 (citing American Hosp. Ass'n v. Bowen, 834 F.2d 1037, 1045 (D.C. Cir. 1987)). Under federal law, a legislative rule is subject to rulemaking requirements under the Administrative Procedures Act, but an interpretive rule is not.

238 *Id.* at 39–40.

239 *Id.* at 42 (Ziegler, J., dissenting) ("Despite the fact that the 'clarifications' do not clarify the alleged ambiguity, are contrary to the promulgated rule, and were not adopted in this state, the majority still gives them the force of law.").

240 *Id.* at 44–48 (Ziegler, J., dissenting).

The *SDG&E* case is a bellwether case because it is the first to hold under relentless government pressure that the EPA's credible evidence rule, if applicable to criminal cases at all, does nothing to supersede the Federal Rules of Evidence, redefine basic scientific concepts, or rewrite the CAA's promulgated test methods that define which materials are regulated under the CAA in the first instance.