IN RE CITY OF SALISBURY, MARYLAND

CWA Appeal No. 00-01

FINAL DECISION

Decided January 16, 2002

Syllabus

The City of Salisbury, Maryland, appeals a ruling issued on February 8, 2000, by Chief Administrative Law Judge Susan L. Biro ("Presiding Officer") holding the City liable for violating the Clean Water Act ("CWA"), 33 U.S.C. §§ 1251-1387, and assessing a $16,000 administrative penalty. The Presiding Officer found that on twenty-seven occasions in 1996 and 1997, the City's publicly owned treatment works ("POTW") violated regulations implementing CWA § 405(d), 33 U.S.C. § 1345(d), by applying to farm fields sewage sludge that contained arsenic, cadmium, nickel, and molybdenum in excess of established concentration limits. The Presiding Officer found that EPA Region III had established a prima facie case of liability by coming forward with the City's own quarterly sludge monitoring reports, called "Discharge Monitoring Reports" ("DMRs"), for 1996-1997, as well as the City's response to a CWA section 308 information-gathering letter ("308 Response"). These materials documented the excessive metals content of the sludge that was sampled and applied to land on the twenty-seven incidences in question.

In defense, the City pointed out that it had "qualified" or "conditioned" its reports of the sludge exceedances by explaining, in a note at the bottom of each DMR form, that the high metals levels were uncharacteristic or atypical of its sludge. Thus, the City argued, even though it had signed a standard certification statement on each DMR form attesting that it believed the reported information to be true, accurate, and complete, the DMRs did not in fact constitute admissions that the alleged exceedances actually occurred. In the City's view, the exceedances were caused by errors in the analysis of the sludge samples conducted by its contract laboratory, CT & E Environmental Services Inc. ("CT & E"), and were not legitimate readings. The Presiding Officer rejected the City's arguments, holding: (1) data reported on DMRs may be deemed admissions of liability even where those data are qualified as they were here; (2) reliance on DMRs to establish liability is consistent with a congressional desire, evidenced in the legislative history, to streamline CWA enforcement, and to find otherwise would "severely frustrate" Congress' intent; and (3) if "qualifying" the DMR certification statement were sanctioned, the certification itself would be rendered a nullity and sloppy laboratory practices would be rewarded rather than deterred. The Presiding Officer also evaluated, and deemed insufficient, the evidence of laboratory error presented by Salisbury.

On appeal, Salisbury argues that the Presiding Officer's Initial Decision should be reversed because it is based on a misunderstanding of the burden of persuasion and the evidentiary standard set forth in the Consolidated Rules of Practice, 40 C.F.R. part 22. In Salisbury's view, the Presiding Officer erred by placing on it, rather than on the Region, the burden of persuasion regarding the validity of the disputed sampling results. Salisbury

claims that the Presiding Officer also erred by requiring it to meet a "heavy burden" of showing laboratory error. A "heavy burden" standard, Salisbury argues, is akin to a "clear and convincing evidence" standard of proof, whereas the Consolidated Rules explicitly require proof only by a preponderance of the evidence.

Held: The Presiding Officer's finding of liability for twenty-seven land-application violations is affirmed. Region III successfully presented a prima facie case of violation by introducing Salisbury's sludge DMRs and 308 Response. Given Congress' heavy reliance on self-monitoring and reporting as a primary means of ensuring compliance with CWA permits, and given the importance of accurate and complete reporting by those responsible for such reporting, DMRs are appropriately regarded as, at a minimum, presumptively accurate and indicative of noncompliance. The City's efforts here to qualify its DMRs did not serve to diminish the reports' presumptive character as admissions; rather, the qualifications merely served to preserve in this case the City's opportunity to later attempt to impeach these admissions in this enforcement action. Accordingly, the Region could rely on the City's admissions in the DMRs to establish a prima facie case of liability.

As to the question regarding the standard of proof pertaining to the City's rebuttal of the Region's prima facie case, the Board finds no clear error in the Presiding Officer's characterization of that burden as a "heavy" one. In light of the great importance self-monitoring reports such as DMRs are given in CWA enforcement actions, any party attempting to impeach the data reported in a DMR is undertaking a difficult task. Rather than elevating the preponderance of the evidence standard to a more onerous one, the term "heavy burden" (which is used on a recurring basis in the federal case law) appears to refer not so much to the standard of proof but rather to the nature of the evidence needed to satisfy the standard of proof. The Board concludes that the Presiding Officer was using the term "heavy burden" in this sense.

After conducting an evidentiary hearing — during which Salisbury introduced a wide variety of circumstantial evidence of laboratory error — the Presiding Officer concluded the City had failed to meet its rebuttal burden. Based on the Board's review of the Initial Decision and the record below, the Board finds no clear error in this conclusion. Significantly, Salisbury's evidence did not include any of the kinds of evidence most commonly required by the courts in impeaching DMR results. For example, Salisbury did not submit documentation of CT & E's analytical processes and likewise failed to submit reanalyses of any of the original sludge samples or analyses of any "split" (i.e., duplicate) samples by CT & E or other laboratories. Instead, it appears that Salisbury only began investigating its exceedances in earnest after Region III initiated enforcement action against it in 1998. At that point, it was too late to reconstruct what had happened in 1996-1997 using the types of evidence listed above. CT & E had closed its doors, so the relevant quality assurance/quality control data and other test-related documentation were no longer available for review, and the City's sludge lagoons, which undergo periodic additions and removals of sludge, no longer contained the same body of material as had been sampled on the four days in question.

Without the benefit of the kind of direct evidence that more timely attention to its data quality might have provided, Salisbury undertook to establish, by circumstantial evidence, that the reported exceedances were the result of CT & E's error. The Presiding Officer found this body of circumstantial evidence insufficient to meet the City's rebuttal burden. Based on its review of the evidence in the administrative record, and being mindful of the deference due presiding officers' factual findings based on witness testimony at evidentiary hearings, the Board holds that the Presiding Officer's conclusion in this case was not clearly erroneous.

Before Environmental Appeals Judges Scott C. Fulton, Ronald L. McCallum, and Kathie A. Stein.

Opinion of the Board by Judge Fulton:

The City of Salisbury, Maryland ("the City" or "Salisbury") owns and operates a publicly owned treatment works ("POTW") that accepts and treats wastewater from a variety of domestic, commercial, and industrial sources. Salisbury appeals a ruling issued on February 8, 2000, by Chief Administrative Law Judge Susan L. Biro ("Presiding Officer") holding the City liable for violating the Clean Water Act ("CWA" or "Act"), 33 U.S.C. §§ 1251-1387, and assessing a $16,000 administrative penalty. The Presiding Officer found that on twenty-seven occasions in 1996 and 1997, Salisbury violated regulations implementing CWA § 405(d), 33 U.S.C. § 1345(d), by applying to farm fields sewage sludge that contained arsenic, cadmium, nickel, and molybdenum in excess of established limits. These violations, combined with an earlier finding by the Presiding Officer of liability on Salisbury's part for two sewage sludge monitoring violations and thirteen reporting violations, resulted in the aggregate penalty of $16,000. For the reasons set forth below, we affirm the Presiding Officer's liability ruling and uphold the $16,000 penalty.

I. *BACKGROUND*

A. *Statutory and Regulatory Background*

In section 405 of the Clean Water Act, Congress directed the U.S. Environmental Protection Agency ("EPA" or "Agency") to develop regulations for the disposal and use of sewage sludge, which POTWs generate in the normal course of removing pollutants from wastewater. CWA § 405(d)(1), 33 U.S.C. § 1345(d)(1). The Agency responded by promulgating 40 C.F.R. part 503, entitled "Standards for the Use or Disposal of Sewage Sludge." 40 C.F.R. pt. 503; *see* 58 Fed. Reg. 9248 (Feb. 19, 1993). In the preamble to these regulations, EPA explained that wastewater treatment by POTWs "results in an effluent that may be discharged and a residual material, sewage sludge." 58 Fed. Reg. at 9249. The Agency defined "sewage sludge" as:

> [S]olid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge.

40 C.F.R. § 503.9(w).[1]

According to EPA, "[p]roper disposal of sewage sludge is important because contaminated or improperly handled sludge can result in pollutants in the sludge re-entering the environment, and possibly contaminating a number of different media through a variety of exposure routes." 58 Fed. Reg. at 9249. The Agency explained:

> The chemical composition and biological constituents of [sewage] sludge depend upon the composition of the wastewater entering the treatment facilities and the subsequent treatment processes. Typically these constituents may include volatile organics, organic solids, nutrients, disease-causing pathogenic organisms (e.g., bacteria, viruses, and others), heavy metals and inorganic ions, and toxic organic chemicals from industrial wastes, household chemicals, and pesticides.

Id. Given the potentially unhealthful mix of chemicals and organisms that might be present in sewage sludge, EPA was, at the time it issued the part 503 regulations, very concerned that the material be treated with caution. However, the Agency also recognized that sewage sludge contains nutrients and could be beneficially used to enrich agricultural and forest lands and to landscape and reclaim strip-mined land. EPA explained, "The organic and nutrient content of sewage sludge (biosolids) makes it a valuable resource to use both in improving marginal lands and as a supplement to fertilizers and soil conditioners." *Id*. at 9257. Thus, EPA set forth specific rules by which parties can safely and beneficially apply municipal sewage sludge to land.

The municipal sewage sludge disposal and use rules apply to any person (which includes any municipality, such as Salisbury) who, among other things,

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[1] "Domestic sewage" is defined as "waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works," 40 C.F.R. § 503.9(g), while the term "treatment works" means "either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature." *Id*. § 503.9(aa). "Domestic septage" is:

> [E]ither liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

Id. § 503.9(f).

"prepares sewage sludge"[2] or "applies sewage sludge to the land."[3] 40 C.F.R. §§ 503.1(b)(1), .9(q). Regulated entities are tasked with a number of responsibilities, including the duties to monitor their sludge for contaminant levels, keep records of and report their monitoring findings, and refrain from applying to land any sludge found to contain more than specified ceiling concentrations of various pollutants. *See id*. §§ 503.13(a)(1), (b)(1) & tbl. 1 (pollutant ceilings), .16 (monitoring), .17 (recordkeeping), .18 (reporting). For example, sewage sludge may not be applied to land if the concentration of arsenic in the sludge exceeds 75 milligrams per kilogram ("mg/kg"), if cadmium exceeds 85 mg/kg, if molybdenum exceeds 75 mg/kg, or if nickel exceeds 420 mg/kg. *Id*. § 503.13(b)(1) & tbl. 1. Furthermore, as part of their recordkeeping and reporting obligations, regulated entities must submit certification statements attesting to the accuracy of their sludge monitoring activities. *See id*. § 503.17. Regulated entities typically record their sludge sampling results on "Discharge Monitoring Reports" ("DMRs") or similar forms, which generally include the requisite certification signed by a responsible party.[4] *See id*. (listing certification language to be used for various types of sludge). Finally, section 405(e) of the CWA makes it unlawful for any person to dispose of sludge from a POTW except in accordance with the regulations promulgated pursuant to CWA section 405(d). CWA § 405(e), 33 U.S.C. § 1345(e); *see* 40 C.F.R. pt. 503.

These sludge program requirements are similar in a number of important respects to the pre-existing National Pollutant Discharge Elimination System ("NPDES") regulatory model that authorizes point source discharges of pollutants to waters of the United States in prescribed circumstances. *Compare* 40 C.F.R. pt. 122 (EPA-administered NPDES permit program rules) *with* 40 C.F.R. pt. 503 (sludge rules). In particular, the sludge rules reflect, as the NPDES rules do, Congress' interest in establishing a CWA regulatory regime that relies heavily on accurate self-monitoring and reporting of pollutant discharges.[5] *See infra* Part

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[2] A person who "prepares sewage sludge" is "either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge." 40 C.F.R. § 503.9(r).

[3] The part 503 rules are self-implementing, which means they apply to regulated entities regardless of whether those entities have permits for the use or disposal of sewage sludge. 58 Fed. Reg. at 9323; Hearing Transcript at 273-74, 333-34.

[4] Notably, the sludge regulations do not dictate the use of any particular standardized form, unlike the National Pollutant Discharge Elimination System ("NPDES") rules, which specifically call for the use of DMRs or other forms required by the permit issuer. *See* 40 C.F.R. § 122.41(*l*)(4)(i). This being said, the form used by Salisbury in reporting the data at issue here was, in fact, the standard DMR used for NPDES and other purposes.

[5] The CWA legislative history makes Congress' interest in this matter clear. *See* S. Rep. No. 92-414 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3730 (expressing desire to ensure CWA provisions "avoid the necessity of lengthy fact finding, investigations, and negotiations at the time of en-

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II.A.3.a (discussing congressional intent in enacting CWA); *compare* 40 C.F.R. §§ 503.8, .16-.18 (sludge program monitoring, recordkeeping, reporting, and certification requirements) *with id.* §§ 122.22(b), (d), .41(j)-(*l*) (NPDES program monitoring, recordkeeping, reporting, and certification requirements). This observation is perhaps most strongly evidenced by the certification language EPA selected to ensure fulfillment of congressional intent: Both the NPDES and the sludge program certification statements set forth in the regulations and included on DMRs culminate in the signatory's acknowledgment that there are "significant penalties" for submitting false monitoring information, including the possibility of fines and imprisonment. *See* 40 C.F.R. §§ 122.22(d), 503.17. Thus, the administrative duties of monitoring, recordkeeping, reporting, and certification are, under both the sludge and NPDES programs, not to be treated lightly but rather are central to CWA compliance efforts.[6]

B. *Factual Background*

Salisbury's POTW, located on Marine Road in Salisbury, Maryland, accepts domestic, commercial, and industrial wastewater from homes and businesses for treatment. Hearing Transcript at 24 ("Tr."). The vast majority of Salisbury's customers discharge directly into the POTW's collection lines, but four metal finishing companies are required to pretreat their effluent before discharging it to the POTW. Tr. at 1253-54. Salisbury also occasionally receives stormwater inflows into the POTW because a portion of the City's sewage collection system is combined with its storm sewer system.[7] Tr. at 1254-56, 1302-04. In 1996-1997, the period at issue in this case, Salisbury received, on average, ap-

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forcement" and stating "[e]nforcement of violations of requirements under this Act should be based on relatively narrow fact situations requiring a minimum of discretionary decision making or delay"); *see also Conn. Fund for the Env't v. Upjohn Co.*, 660 F. Supp. 1397, 1417 (D. Conn. 1987) (noting that "Congress did not intend the courts to be the forums for determining the adequacy or inadequacy of scientific measurements" and citing NPDES regulatory provisions that require regulated entities to monitor their discharges and attest to accuracy of their discharge reports); *Chesapeake Bay Found. v. Bethlehem Steel Corp.*, 608 F. Supp. 440, 452 (D. Md. 1985) (stressing CWA's "heavy emphasis on accuracy" in regulated entities' monitoring and reporting).

[6] In the course of this decision, we cite numerous federal court cases that deal with the issues before us in the NPDES rather than the sludge context. In light of the similarities between these two CWA programs in the monitoring/reporting/certification and penalty contexts, it is our view that these NPDES cases are instructive on the points for which they are cited.

[7] The record does not make clear how much of Salisbury's system is combined. The City's NPDES permit states:

> A portion of the Salisbury wastewater collection system is a combined sewer that is designed to discharge during wet weather when hydraulic flows exceed the system conveyance capacity.

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proximately 4.5 to 5 million gallons of wastewater for treatment every day, and the POTW generated an average of 18,000 gallons per day of sludge. Tr. at 408.

The City's wastewater treatment process begins when raw wastewater (and occasionally stormwater) flows into the headworks of the POTW and is screened to remove sand, grit, rags, plastics, and other large-diameter solids. Tr. at 409. Chemicals are added to induce phosphorous removal from the wastewater, which then flows into primary settling tanks, where the phosphorous settles out of the water as primary sludge. Tr. at 409-10. The wastewater is then sent through secondary treatment, where trickling filters are used to oxygenate the water and aerobic bacteria consume, and thereby break down, organic matter in the water. Tr. at 410. After further settling of solids, the wastewater is chlorinated to kill the bacteria and later dechlorinated before being discharged into the Wicomico River in accordance with CWA effluent limits on certain pollutants. Tr. at 410-11; *see* City of Salisbury Discharge Permit, NPDES Permit No. MD0021571 § II.A (eff. May 1, 1997) (effluent limitations on biochemical oxygen demand, total suspended solids, phosphorus, nitrogen, fecal coliform, total residual chlorine, dissolved oxygen, pH, lead, silver, and zinc).

The sludge, which consists of material that has settled out of the wastewater at the various treatment stages, is pumped into tanks where thickeners are added. Tr. at 411. The thickened sludge is then pumped into two 400,000-gallon digesters, which contain anaerobic bacteria that feed on the sludge. Tr. at 489. Methane gas produced by the bacteria is recycled and burned in boilers to provide heat for the digestion process. Tr. at 411; Respondent's Exhibit ("RX") 14 (Salisbury Wastewater Treatment Plant, PSRP Description). Over the years, Salisbury has used three different mixing techniques in a continuing effort to achieve adequate mixing in the digesters. Tr. at 413-15, 1256-59. The current system consists of an external pump that removes sludge from the digesters, pumps it through a heat exchanger, and reintroduces it into the digesters, as well as an auxiliary pump at the top of each digester that recirculates scum and provides some vertical mixing. Tr. at 413-14, 1256.

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City of Salisbury Discharge Permit, NPDES Permit No. MD0021571 § II.A.1 (eff. May 1, 1997). The NPDES permit further identifies two combined sewer overflow ("CSO") points: (1) Outfall 002, the North Side Pump Station and CSO, located at Fitzwater and Delaware Avenues; and (2) Outfall 003, the Mill Street Pump Station and CSO, located on the east bank of Main Street Bridge. *Id.* § III.B. Both outfalls are subject to technology-based CWA controls (such as best management practices) and discharge into the Wicomico River. *Id.* At the hearing on this case, one of EPA's witnesses stated that the number of CSO outfalls in a community did not necessarily indicate how much of that community had a combined system, because, in the case of two outfalls, for example, "[y]ou could have two big outfalls." Tr. at 1301.

From the digesters, the sludge is pumped into a holding tank, from which the sludge is dropped once weekly into storage lagoons. Tr. at 412. During the sludge drops, fresh sludge can be seen flowing up from injection pipes in the bottoms of the lagoons and spreading across the tops of the lagoons, where it mixes with a layer of decant water (which sits on top of the sludge)[8] and eventually, over the course of several days, settles into place. Tr. at 427-28, 598-601.

Salisbury stores sludge (as well as other materials, described below) in four lagoons. Lagoon 1 is a 500,000-gallon, above-ground lagoon primarily used to store lime-stabilized septage. Tr. at 420, 473, 694. Lagoon 2 is a 1,500,000-gallon in-ground service lagoon used for sludge storage. Tr. at 420-21, 484; Complainant's Exhibit ("CX") 5 (Letter from David K. Winslow Jr., Plant Superintendent, City of Salisbury Wastewater Treatment Plant, to Thomas J. Maslany, Director, Water Protection Division, Office of Compliance & Enforcement, U.S. EPA Region III at 3 (June 12, 1998) ("308 Resp.")). Lagoons 3 and 4 are each 2,000,000-gallon, above-ground structures used to store sludge slated for application to land. Tr. at 420-21, 484. Lagoon 3 is square in shape, approximately 220 feet on a side and seven feet deep, while Lagoon 4 is rectangular, approximately 140 feet wide, 300 to 320 feet long, and seven feet deep. Tr. at 595-96. Lagoons 3 and 4 are made of galvanized steel and lined with heavy duty rubber liners, and they sit out in the open, without benefit of surrounding trees or structures to protect them from wind or storms. Tr. at 427, 805-06.

As an adjunct to its wastewater treatment and sludge generation activities, Salisbury also operates a septage facility that receives shipments of domestic septage from various sources and industrial waste (i.e., food waste, office toilet waste, and/or sludge) from the Nanticoke Seafood and Perdue Soybean companies. Tr. at 701-05. In 1996, the City received shipments of approximately 5,000 gallons of septage and industrial waste per month at its septage facility, while in 1997, it received approximately 2,000 to 3,000 gallons of septage and industrial waste per month. Tr. at 591, 705. Upon receipt of a septage shipment, the facility operator identifies the septage's source, checks its volume and pH, looks for grease, and conducts a quick toxicity test. Nanticoke and Perdue, for their parts, provide the City with metals and nutrient scans for their industrial waste shipments. Tr. at 702-03. Septage and industrial waste that meet Salisbury's admissions criteria are screened to remove rags and other large solids and pumped into the City's six septage holding tanks. When 17,000 gallons of septage and/or industrial waste are accumulated, the City transfers it into a treatment tank, where lime slurry is introduced. The pH of the septage/waste/lime slurry mixture is held

[8] Decant water consists of (1) water that has separated out from the sludge as sludge settles into the lagoons, and (2) rainwater that has fallen into the lagoons. The decant layer typically varies in depth from two to twelve inches and periodically is pumped into the headworks of the POTW for treatment. Tr. at 421, 425, 490.

at twelve for two hours, at which point the septage/waste is deemed treated and is pumped directly into Lagoon 1 or 3. Tr. at 455-58.

Salisbury also occasionally accepts excess sludge from other small local POTWs, such as the Sharptown, Maryland POTW, that may need assistance in disposing of sludge when their own storage facilities are full. Tr. at 700. This material undergoes a full scan for metals and nutrients and, if the levels are acceptable, is placed directly into Lagoon 4. Tr. at 700-01.

Salisbury uses dredges to remove sludge from Lagoons 3 and 4 for land application. The dredges are large, powerful suctioning devices that have a cutter head on the bottom and a pipe that floats on the lagoon surface. The dredges cut a six- to ten-feet-wide, several-feet-deep swath in the sludge as they move forward approximately fifteen to twenty feet in the course of filling one tanker truck, suctioning sludge and decant water as they go. Tr. at 427-30, 490-91, 608-11, 772-73. The sludge is transported by truck to farm fields and applied in either of two ways: injection or surface application. Sludge that is injected is placed six to eight inches under the surface of the land through the use of heavy metal injectors that dig into the ground, whereas sludge that is surface applied is sprayed onto the land surface. Sludge is not applied during precipitation events (rain or snow) or when the fields are frozen or snow-covered. Salisbury applies most of its sludge in autumn after the crops are harvested and generally does so by injection, except in the case of one farm on which sludge is sprayed four times a year. Tr. at 507-08, 640-42.

Salisbury samples its sludge on a regular basis and sends the samples to a laboratory for analysis of, among other things, the sludge's metals content. The City collects sludge for testing by reaching into the tanker trucks when they are nearly full of sludge and scooping out grab samples.[9] Tr. at 772-73; 308 Resp. at 9-10. On April 19, June 25, and August 26, 1996, and on March 18, 1997, Salisbury took samples of sludge freshly pumped into the City's tanker trucks from Lagoons 3 or 4.[10] Tr. at 728-29; 308 Resp. at 3. Salisbury applied the April 19th sludge to agricultural fields on April 19, May 2, and May 15, 1996; the June 25th sludge on June 26-27, July 2, 8-11, 17-18, and 22, 1996; the August 26th sludge on August 26, September 20, 23, and 24, 1996; and the March 18th sludge on

[9] In some instances, the City takes samples from the supernatant box on one of the digesters. *See* 308 Resp. at 9-10. This occurs when no sludge has been applied to land and approximately four weeks have elapsed since the last sampling event. *Id*. at 10. According to the City, "[t]his method of sampling introduces a measure of randomness into the data pool." *Id*.

[10] The April 19th and August 26th samples were taken from sludge pumped from Lagoon 3, while the June 25th and March 18th samples came from sludge pumped from Lagoon 4. Tr. at 728-29; 308 Resp. at 3.

March 18 and 24 and April 7-9, 1997. *See* 308 Resp. (sludge application data sheet attachment).

Approximately four to six weeks after sending out each of the four sludge samples mentioned above (and, notably, *after* it had already land applied the sludge in question), the City received sampling results from CT & E Environmental Services Inc. ("CT & E"), the laboratory it had contracted with to provide its sludge analyses at those times. Tr. at 575-78. CT & E reported, *inter alia*, that: (1) the April 19, 1996 sample contained 97 mg/kg of arsenic; (2) the June 25, 1996 sample contained 2,100 mg/kg of nickel; (3) the August 26, 1996 sample contained 150 mg/kg of molybdenum; and (4) the March 18, 1997 sample contained 370 mg/kg of cadmium and 1,100 mg/kg of nickel. *See* 308 Resp. at 3. Each of these five sampling results exceeded the maximum allowable concentration established for these metals for land-applied sludge. *See* 40 C.F.R. § 503.13(b)(1) & tbl. 1 (arsenic and molybdenum in land-applied sludge may not exceed 75 mg/kg, cadmium may not exceed 85 mg/kg, and nickel may not exceed 420 mg/kg).

When it received these results, Salisbury in several (but not all) instances contacted CT & E and requested that the lab rerun the sample.[11] Tr. at 581-82. Salisbury also contacted Martha Hynson, the head of the sludge department at the Maryland Department of the Environment ("MDE"), by telephone and/or letter to report the exceedances and ask for advice as to how to proceed. Ms. Hynson reportedly informed the City in each instance that the results in question were likely invalid and thus the City should "keep going," i.e., continue land applying, and simply test its sludge again at the next testing interval.[12] Tr. at 459, 503-04, 542-43, 567, 579-81, 718-20, 745, 886-87. The City also routinely reported its lab test results on DMRs submitted to MDE and Region III. For most of the five exceedances at issue here, the City flagged the exceedance in the comment sec-

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[11] Salisbury's solids manager, Alan Porianda, testified that he had contacted CT & E a number of times immediately after receiving the June 25, 1996 nickel result (2,100 ppm), asking the lab to rerun the sample. Tr. at 581. CT & E finally informed him, during one of his repeated telephone calls, that they had confirmed their original 2,100 ppm result. Tr. at 582. Mr. Porianda testified that he asked for documentation of the retest but never received any. *Id.*

In addition, materials in the record indicate that Mr. Porianda asked CT & E to rerun the March 18, 1997 nickel and cadmium samples, but the laboratory apparently never complied with the request. *See* RX 10 (Letter from Alan Porianda, Solids Manager, City of Salisbury POTW, to Martha Hynson, Sewage Sludge Permitting Division, MDE (Apr. 23, 1997)); CX 3 (first quarter 1997 DMRs showing exceedances of nickel and cadmium limits, with notations explaining that lab was asked to rerun samples but failed to do so).

[12] Martha Hynson's alleged remarks are unverified by affidavit or testimony by MDE at the hearing. Even assuming that this representation of her position is accurate, it does not constitute evidence that the City's sludge data were in fact invalid. The City was still required to substantiate this supposition, but, as explained in Part II.A.3.b below, it failed to do so.

tion of a DMR (entitled "Comments and Explanation of Any Violations") and included a brief explanation of the exceedance in a cover letter, characterizing the exceedance as "uncharacteristic" or "atypical" of its sludge. For example, Salisbury explained, with respect to its April 19, 1996 arsenic ("As") sample:

> [T]he As level (97 ppm) that was measured for the second quarter [of 1996] was uncharacteristically high and exceeded the 75 ppm ceiling. The level was 100 times higher than what we normally find in our sludge * * * . We believe that this level is due to either a contaminated sample or analysis interference. * * * [T]he As test for the next quarter revealed levels not detectable from the same lagoon.[13]

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[13] The City also wrote the following on its DMR:

> The Arsenic level of 97 ppm is uncharacteristic of our sludge since for two years surrounding this sample we have had an average of less than 1 ppm As.

RX 14 (City of Salisbury POTW, Second Quarter 1996 Sludge DMR (Jan. 8, 1997)). With respect to its June 25, 1996 nickel sample, the City stated in a cover letter to MDE:

> Please note that the nickel content was unusually high, being 2100 ppm where it normally runs around 50-60 ppm. I checked with the lab on this and they ran the sample again and confirmed the result.

CX 5 (308 Resp. attach., Letter from Alan Porianda, Solids Manager, City of Salisbury POTW, to Martha Hynson, Sewage Sludge Division, MDE (Aug. 2, 1996)); *see* Tr. at 580-81. Finally, with respect to its March 18, 1997 nickel and cadmium results, the City stated:

> Please note that for the March analysis (first quarter) we had an unusually high result for cadmium and nickel which is atypical of our sludge. We had asked the lab (CTE) to rerun the sample for these two metals but the lab failed to do so. Because the lab failed to rerun the sample and because this lab received a negative lab evaluation from [MDE] we dropped the lab and began utilizing a new lab. * * * For the balance of the year our cadmium and nickel levels for sludge samples taken from the same lagoon that were sampled in the first quarter were consistently low for these two metals. We attribute this unusually high reading to a problem with the lab analysis as our sludge has had historically low metal levels.

CX 5 (308 Resp. attach., Letter from Alan Porianda, Solids Manager, City of Salisbury POTW, to Christopher Pilla, U.S. EPA (Jan. 15, 1998)); *see also id.* (308 Resp. attach., Letter from Alan Porianda, Solids Manager, City of Salisbury POTW, to Martha Hynson, Sewage Sludge Permitting Division, MDE (Apr. 23, 1997) ("Please notice that the Cadmium and Nickel results are atypical of our sludge by a large degree and I will have the lab rerun these two parameters. Incidentally, we are going to be looking into utilizing another lab since we have not been having what we consider to be reliable test results from this lab for about the last year.")).

RX 14 (Letter from Alan Porianda, Solids Manager, City of Salisbury POTW, to Ann Carkhuff, Permits Enforcement Branch, Water Management Division, EPA Region III (Jan. 17, 1997)). After qualifying its test results in this way, the City explained that it would retest its sludge at the next testing interval. Alan Porianda, the solids manager of the Salisbury POTW, then signed the standard certification statement included on the DMR forms, in which the signatory certifies that the reported results are true, accurate, and complete.[14] The City did not include any information from CT & E, however, stating that the exceedant data had been caused by laboratory error. Indeed, other than qualifying its DMRs as described, consulting with its pretreatment coordinator to satisfy itself that high metals levels were not coming in from the industrial dischargers, and purportedly making some preliminary contacts with CT & E and MDE, Salisbury took no further action to substantiate its hypothesis that the high metals levels were not accurate measurements of its sludge contents.

Sometime after April 21, 1997, Salisbury received a copy of a report prepared by MDE on the laboratory practices and conditions at CT & E. Tr. at 740-41. The report indicated that there were deficiencies in the procedures CT & E used to analyze metals in NPDES samples during the 1996-1997 time frame and recommended that CT & E technicians obtain supplemental training.[15] *See* RX 10 (MDE report); CX 5 (same). Based on the report and Salisbury's problems getting CT & E to respond to telephone calls and requests for information, Salisbury terminated its contract with the laboratory and hired a different laboratory. Tr. at 724-25, 732-41, 881.

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[14] The certification states:

> I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

RX 14 (Salisbury's 1996 DMRs); *cf.* 40 C.F.R. § 122.22(d) (similar certification statement required in EPA-administered NPDES program).

[15] Notably, the Presiding Officer determined that the MDE report examined CT & E's NPDES metals testing procedures, not its sludge metals testing procedures. Initial Decision at 18; *see* RX 10 (MDE report, entitled "Evaluation of NPDES Metals Sampling and Analysis," referencing "NPDES samples" and 24-hour composite sampling method used in NPDES program); U.S. EPA, Office of Research & Development, EPA-600/4-79-020, *Methods for Chemical Analysis of Water and Wastes* xiii (Mar. 1983) (cited in RX 10) (analytical methods "are applicable to both water and wastewaters, and both fresh and saline water samples," while "[m]ethods for pesticides, industrial organic waste materials, and *sludges* are given in other [EPA] publications") (emphasis added).

C. *Procedural History*

On July 15, 1998, EPA Region III commenced this action by filing an administrative complaint pursuant to CWA § 309(g), 33 U.S.C. § 1319(g), alleging that Salisbury had committed multiple violations of the sludge regulations implementing CWA § 405, 33 U.S.C. § 1345, and proposing a penalty of $16,000. The complaint specifically charged Salisbury with: (1) failing to monitor sludge for arsenic and selenium during the first quarter of 1996, in violation of 40 C.F.R. § 503.16; (2) failing to report monitoring data collected for various metals in 1996-1997, in violation of 40 C.F.R. § 503.18; and (3) applying to land sludge that contained concentrations of metals in excess of regulatory ceilings, in violation of 40 C.F.R. § 503.13. Administrative Complaint, Findings of Violations, Notice of Proposed Assessment of a Civil Penalty, and Notice of Opportunity to Request a Hearing Thereon § II. On August 14, 1998, Salisbury filed a response to the complaint, admitting the two alleged monitoring violations but denying all other alleged violations. *See* Motion to Dismiss and in the Alternative Response to Administrative Complaint, Findings of Violations, Notice of Proposed Assessment and Request for Hearing ¶¶ 9-13, 15, 17. In September 1998, the parties entered into an alternative dispute resolution process in an attempt to resolve the issues raised in the complaint, but in January 1999, this effort terminated without resolution.

On May 21, 1999, Region III filed a motion for partial accelerated decision as to liability for all alleged violations in the complaint. Salisbury responded by again conceding liability for the two monitoring violations but contesting the data reporting and land-application violations. On July 30, 1999, the Presiding Officer issued an order finding Salisbury liable for the alleged monitoring and reporting violations. The Presiding Officer, however, held that the City had raised genuine issues of material fact as to the alleged land-application violations and therefore denied the Region's motion as to those charges. On August 4, 1999, Salisbury filed a motion for reconsideration of the partial accelerated decision as to liability with respect to the alleged reporting violations, but the Presiding Officer denied that motion on August 23, 1999.

On September 7-9, 1999, the Presiding Officer held a hearing regarding liability for the alleged land-application violations and the penalty for all adjudicated violations. The Presiding Officer issued an Initial Decision in this case on February 8, 2000, finding the City liable for twenty-seven land-application violations. The Presiding Officer assessed a $16,000 penalty for those violations as well as for the two monitoring violations and thirteen reporting violations.

On March 17, 2000, Salisbury filed an appeal of the Presiding Officer's Initial Decision, challenging her finding of liability for the land-application viola-

tions.[16] *See* Notice of Appeal; Brief in Support of the City of Salisbury's Appeal of the Initial Decision ("App. Br."). Salisbury included within its appeal requests for oral argument and for permission to file a response to the Region's expected reply to Salisbury's appeal. App. Br. at 37. Region III filed a reply to Salisbury's appeal on April 11, 2000. *See* Brief of Appellee, the Director of Water Protection Division-EPA Region III, in Opposition to the City of Salisbury's Appeal of the Initial Decision ("Resp. Br.").

II. *DISCUSSION*

The Board reviews the Presiding Officer's factual and legal conclusions on a *de novo* basis. 40 C.F.R. § 22.30(f) (the Board shall "adopt, modify, or set aside" the Presiding Officer's findings and conclusions);[17] *see* Administrative Procedure Act § 8(b), 5 U.S.C. § 557(b) ("[o]n appeal from or review of the initial decision, the agency has all the powers [that] it would have in making the initial decision except as it may limit the issues on notice or by rule"). This being said, when, as in this case, a presiding officer has "the opportunity to observe the witnesses testify and to evaluate their credibility, [that officer's] factual findings are entitled to considerable deference here."[18] *In re Echevarria*, 5 E.A.D. 626, 639 (EAB 1994) (citing *In re Great Lakes Div. of Nat'l Steel Corp.*, 5 E.A.D. 355, 372 (EAB 1994)); *see also In re Chempace Corp.*, 9 E.A.D. 119, 134 (EAB 2000); *In re Ocean State Asbestos Removal, Inc.*, 7 E.A.D. 522, 530 (EAB 1998). Matters in controversy must be established by a preponderance of the evidence. 40 C.F.R. § 22.24(b).

Appellant City of Salisbury casts this case as one of national significance involving issues of apparent first impression for EPA's administrative law system. Salisbury's concerns are centered principally around the proper application of the burdens of presentation and persuasion under the Consolidated Rules of Practice, 40 C.F.R. § 22.24, in the context of data self-reported by a CWA-regulated party but qualified by that party as being questionable. The City also contends the Pre-

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[16] In this appeal, Salisbury is not challenging the Presiding Officer's findings of liability for the sludge monitoring or reporting violations.

[17] A revised version of the Consolidated Rules of Practice governing these proceedings became effective on August 23, 1999. These procedural rules apply to all administrative proceedings commenced on or after August 23, 1999, and they also apply to proceedings commenced before that date unless their use "would result in substantial injustice." 64 Fed. Reg. 40,138, 40,138 (July 23, 1999). In this case, use of these revised rules would not result in substantial injustice, and thus all references to the 40 C.F.R. part 22 regulations in this decision will be to the 2001 version of these rules.

[18] The federal courts adhere to a comparable principle. *See* Fed. R. Civ. P. 52(a) ("[f]indings of fact * * * shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses").

siding Officer erred in determining that, based on a preponderance of the evidence, EPA Region III established that exceedances of the pollutant ceilings occurred as alleged in the complaint.[19] In the discussion that follows, we consider first the question whether the Presiding Officer properly assigned the burdens of proof in arriving at her decision. We then turn to the question whether, in view of the body of evidence before her, the Presiding Officer erred in concluding that exceedances of the pollutant ceilings did, in fact, occur.

Before proceeding with our analysis of these issues, one final factual matter warrants mention. Namely, we think it important to note that Salisbury operated at the time of the alleged violations in a "continuous sludge application mode," meaning the City (1) sampled the sludge loaded on its trucks, (2) sent the samples to an outside laboratory for content analysis, (3) applied the sludge to land, and (4) later received the sampling results back from the lab. While this approach is not prohibited by CWA section 405 or the section 503 regulations, *see* CWA § 405, 33 U.S.C. § 1345; 40 C.F.R. pt. 503, an entity choosing this course necessarily proceeds at its own peril,[20] assuming both the risk that, as here, lab

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[19] The City also suggests we impose a smaller penalty but does not point out perceived error or abuse of discretion on the Presiding Officer's part in determining the penalty. *See* App. Br. at 28-31. Accordingly, we are not inclined to disturb the Presiding Officer's findings in this regard. *See, e.g., In re Slinger Drainage, Inc.*, 8 E.A.D. 644, 668-69 & n.32 (EAB 1999) (Board typically defers to presiding officer's penalty assessment absent showing of clear error or abuse of discretion), *appeal dismissed*, 237 F.3d 681 (D.C. Cir. Jan. 30, 2001); *In re Ray Birnbaum Scrap Yard*, 5 E.A.D. 120, 124 (EAB 1994) (same). We note in any case that, notwithstanding the fact that the record does reflect some efforts on Salisbury's part to address its data concerns by, *inter alia*, requesting the laboratory to rerun its analysis on at least two of the problem samples and ultimately changing contract laboratories, the CWA is a strict liability statute, and the penalty assessed — $16,000 — does not appear to be excessive. We note in this regard that Salisbury has not claimed inability to pay a penalty of this size.

[20] At the hearing, Alan Rubin, an EPA senior scientist with responsibility for developing and revising the sludge regulations at 40 C.F.R. part 503, testified that there is no language in part 503 about retaining, holding, or storing sewage sludge until test results are received. Tr. at 333. Dr. Rubin explained, however, that the 503 rules are self-implementing (meaning parties must be in compliance with the rules) and that if an entity chooses to land apply prior to receiving clean test results, that entity will be liable for a CWA violation if the results come back showing an exceedance of the concentration ceilings. Tr. at 273-74, 333-34.

The more conservative course would have been to sample the sludge, test it, and then, based on the test results, either apply the sludge if the test results showed no excessive contamination or withdraw the sludge from land application use if the results showed contamination in excess of acceptable levels. Notably, this is the course Salisbury has chosen to institute during the pendency of this enforcement action.

We are not suggesting that this more conservative sample-hold-apply sequence is legally required or that it is cost-free in an economic sense. We note in this regard the testimony of Salisbury employees that they were paying approximately double the cost to obtain metals results in one week rather than four-to-six weeks (i.e., approximately $190 per sample rather than $80 to $90 per sample). Tr. at 545, 548-49. There is some suggestion in the record that other sludge facilities operate in the

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results later received would indicate that already-applied sludge should not have been applied after all, and the practical difficulty of isolating the problematic sludge for further confirmatory analysis.

A. *Burden of Establishing Validity or Invalidity of Sampling Data*

In the Consolidated Rules of Practice that govern this administrative proceeding, the applicable burdens of proof and evidentiary standard are defined as follows:

> (a) The complainant has the burdens of presentation and persuasion that the violation occurred as set forth in the complaint * * *. Following complainant's establishment of a prima facie case, respondent shall have the burden of presenting any defense to the allegations set forth in the complaint * * *. The respondent has the burdens of presentation and persuasion for any affirmative defenses.
>
> (b) Each matter of controversy shall be decided by the Presiding Officer upon a preponderance of the evidence.

40 C.F.R. § 22.24. The Board has elaborated on the burden of proof in the part 22 context, stating:

> The term "burden of proof" * * * encompasses two concepts: the burden of production, and the burden of persuasion. The first of these to come into play is the burden of production — that is, the "duty of going forward with the introduction of evidence." This burden may shift during the course of litigation; if a complainant satisfies its burden of production, the burden then shifts to the respondent to produce, or go forward with the introduction of, rebuttal evidence. The burden of persuasion comes into play only "if the parties have sustained their burdens of producing evidence and only when all of the evidence has been introduced." This burden refers to what a "litigating proponent must establish in order to persuade the trier of

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(continued)
manner Salisbury did at the time of the alleged violations — i.e., sample, land apply, get test results back — for perhaps similar reasons. *See* Tr. at 334-37 (Alan Rubin), 443-44, 503-05 (David Winslow), 621 (Alan Porianda). We are simply observing that the lower-cost approach deployed by Salisbury at the time of the alleged violations, while perhaps initially attractive from a financial standpoint, was not cost-free. Rather, it carried with it certain consequences, including leaving the POTW subject to precisely the kind of lawsuit that we are charged with deciding today.

> facts of the validity of his claim." Importantly, this burden does not shift between the parties during the course of litigation.

In re New Waterbury, Ltd., 5 E.A.D. 529, 536-37 n.16 (EAB 1994) (citations omitted); *cf. In re 170 Alaska Placer Mines, More or Less*, 1 E.A.D. 616, 623-24 (Adm'r 1980).

With these principles in mind, we embark on our review of the burden of proof issues by first summarizing the arguments made and decision reached in the proceedings before the Presiding Officer, then summarizing the arguments made by the parties on appeal to this Board, and finally analyzing what constitutes a prima facie case in this context and whether the burden of persuasion with respect to the alleged land-application violations was carried.

1. *Arguments and Decision Below*

In the proceeding below, Region III, the complainant, introduced as evidence respondent City of Salisbury's quarterly sludge DMRs for 1996 and 1997, as well as the City's response to a CWA section 308 letter[21] ("308 Response") issued it by the Region. Region III argued that the admissions contained in these documents clearly established Salisbury's liability for twenty-seven violations of the land-application rules in 40 C.F.R. § 503.13. Citing federal case law, the Presiding Officer held that Salisbury's DMRs and 308 Response are reports required by law and therefore can indeed be used to establish the City's liability. Initial Decision at 7 ("Init. Dec.") (citing cases).

The City objected to this holding, arguing that even though it had signed the standard certification statement included on the DMR forms (which attests that the signer believes the reported information to be true, accurate, and complete), it had qualified or conditioned its reports of the alleged exceedances, explaining that those data points were "uncharacteristic" or "atypical" of its sludge. Thus, Salisbury argued, its DMRs did not constitute admissions that the alleged exceedances actually occurred. The Presiding Officer rejected this argument for several reasons, finding: (1) data reported on DMRs may be deemed admissions of liability even where those data are qualified as they were here; (2) reliance on DMRs to establish liability is consistent with a congressional desire, evidenced in the legis-

[21] Section 308(a) of the CWA, 33 U.S.C. § 1318(a), authorizes EPA to request from POTW owners/operators information regarding their efforts to comply with the requirements of the CWA, including requirements in CWA § 405, 33 U.S.C. § 1345 (the sludge provisions), and its implementing regulations.

lative history,[22] to streamline CWA enforcement, and to find otherwise would "severely frustrate" Congress' intent; and (3) if "qualifying" the DMR certification statement were sanctioned, the certification itself would be rendered a nullity and sloppy laboratory practices would be rewarded rather than deterred. Init. Dec. at 8-9.

The City argued further that the appropriate recourse in the face of a qualified DMR is an action for failure to monitor under 40 C.F.R. §§ 503.16-.17, rather than one for illegal land application of contaminated sludge under 40 C.F.R. § 503.13. The City apparently conceded that a qualified DMR fails to certify the accuracy of its reported results, as required by 40 C.F.R. §§ 503.16-.17, and thus violates these provisions. The Presiding Officer again rejected Salisbury's position, stating: "Federal case law supports a finding of liability for a monitoring violation rather than for a discharge violation *only* where laboratory error has been *shown*, by sufficient credible evidence." Init. Dec. at 9 (citing *PIRG of N.J., Inc. v. Elf Atochem N. Am., Inc.*, 817 F. Supp. 1164, 1179-80 (D.N.J. 1993)). The Presiding Officer subsequently determined that Salisbury had not advanced sufficient credible evidence to reduce the alleged discharge violations to mere monitoring violations. *Id.* at 15-16.

The Presiding Officer concluded that the DMRs and 308 Response were sufficient to carry the Region's burden of going forward with evidence that Salisbury land applied sludge containing concentrations of metals in excess of the regulatory ceilings, in violation of 40 C.F.R. § 503.13. Finding a prima facie case established, the Presiding Officer held that the burden then shifted to the City to rebut Region III's prima facie evidence by showing that the sludge applied to land did not in fact contain metals in the amounts reflected in its DMRs and 308 Response. Init. Dec. at 9. The Presiding Officer noted that, together, the legislative history of the CWA and the required DMR certification

> emphasize the need for accurate reporting and simple enforcement, and evidence Congress' and EPA's intent to place heavy reliance on data reported on DMRs in the context of enforcement. Thus, in order to balance such

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[22] The legislative history at issue states:

> [T]he bill * * * establishes and makes precise new requirements imposed on persons and subject to enforcement. One purpose of these new requirements is to avoid the necessity of lengthy fact finding, investigations, and negotiations at the time of enforcement. Enforcement of violations of requirements under this Act should be based on relatively narrow fact situations requiring a minimum of discretionary decision making or delay.

S. Rep. No. 92-414 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3730.

> heavy reliance, and notwithstanding its "qualification" of reported data, [Salisbury] bears a heavy burden to show laboratory error, in order to prevail under the preponderance of evidence standard of 40 C.F.R. § 22.24.

Init. Dec. at 16 (citing *Elf Atochem*, 817 F. Supp. at 1178; *PIRG v. Yates Indus.*, 757 F. Supp. 438, 447, *reconsideration granted in part on other grounds*, 790 F. Supp. 511 (D.N.J. 1991)). The Presiding Officer explained that to meet this "heavy burden," the City would have to come forward with evidence of reporting inaccuracies in the actual tests performed. *Id*. at 16-23 (citing *Elf Atochem*, 817 F. Supp. at 1178; *SPIRG of N.J., Inc. v. Tenneco Polymers, Inc.*, 602 F. Supp. 1394, 1400 (D.N.J. 1985)).

2. *Arguments on Appeal*

On appeal, Salisbury begins by arguing that the Presiding Officer's Initial Decision is fatally flawed and must be reversed because it is based on a misunderstanding of the burden of persuasion and the evidentiary standard set forth in 40 C.F.R. § 22.24. In Salisbury's view, the Consolidated Rules explicitly assign to the complainant the burden of persuading the tribunal that the alleged violations actually occurred. App. Br. at 8; *see* 40 C.F.R. § 22.24(a). The Presiding Officer therefore erred, Salisbury contends, by placing on it, rather than on the Region, the burden of persuasion regarding the validity of the disputed sampling results. App. Br. at 8. Salisbury claims that the Presiding Officer also erred by requiring it to meet a "heavy burden" of showing laboratory error. A "heavy burden" standard, Salisbury argues, is akin to a "clear and convincing evidence" standard of proof, whereas the Consolidated Rules explicitly require proof only by a preponderance of the evidence. *Id*. at 9; *see* 40 C.F.R. § 22.24(b).

The Region responds that "once a complainant has established its prima facie case, including showing the regulated entity's exceedances by introducing that entity's own sampling results,[23] a regulated entity who claims that those results were erroneous bears the burden of proving that error." Resp. Br. at 5. The Region contends that for legal and practical reasons, only the respondent could reasonably be assigned the burden of proving these data invalid. First, on the legal side, the Region notes that in enacting the CWA, Congress created a "self-monitoring regime" in which regulated entities are responsible for monitoring the contents of their waste streams and reporting the results to regulators. The Region stresses that data collected in this manner play a critical role in the enforcement of the CWA and claims, further, that the legislative history "shows that Congress intended to place upon a regulated entity the full burden of vouching for its own

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[23] Based on the record, we assume that the Region's reference to "sampling results" is intended to refer to DMRs and not underlying laboratory reports.

sampling results."[24] Resp. Br. at 8. Second, Region III contends that, as a practical matter, the burden of demonstrating the validity of Salisbury's sampling data must fall on the City because the City is the only entity in a position to obtain the data needed to establish the data's validity (or invalidity). In the Region's view, the City is uniquely suited to, among other things: (1) request that its original laboratory reanalyze questionable samples; (2) send split samples of the same material to other labs for a "second opinion"; or (3) obtain documentation from the laboratories of their analytical processes (such as quality assurance/quality control ("QA/QC") sheets, calibration curves, digester logs, and the like). EPA has neither possession of nor control over any of these processes or information, the Region asserts, and thus is not in a position itself to determine whether a particular sampling result reflects error. Resp. Br. at 9-11.

3. *Analysis*

The competing arguments presented to us on this first issue largely speak past each other. Salisbury focuses on the first sentence of 40 C.F.R. § 22.24(a), arguing — correctly — that that provision plainly assigns to the Region the ultimate burden of persuasion that the exceedances at issue here occurred as alleged in the complaint. Region III, however, focuses on the second sentence of section 22.24(a), which shifts to Salisbury the burden of coming forward with defenses once the Region establishes — as it successfully did here — a prima facie case of 40 C.F.R. § 503.13 violations. The Region further argues, based on a large body of federal court case law that has developed around the topic, that a discharger attempting to escape the implications of self-reported exceedances in DMRs has the burden of demonstrating that the questioned results are invalid. To resolve these arguments, we first parse through the elements of a prima facie case in this context and then move on to analyze who has the burden of persuasion, by what standard, in these circumstances.

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[24] The Region further argues that, consistent with this legislative history, the regulations implementing the CWA's sludge provisions explicitly place on the regulated entity the burden of establishing sampling data validity (or invalidity). The rules provide that "[a]ny person who prepares sewage sludge shall ensure that the applicable requirements in this part[, which includes the pollutant ceilings in § 503.13,] are met when the sewage sludge is applied to the land." 40 C.F.R. § 503.7. According to the Region, this rule means that regulated entities such as Salisbury must bear the burden of demonstrating that they complied with the relevant pollutant limits when land applying sludge. Resp. Br. at 9. The Region likewise highlights the provision in the sludge rules that directs regulated entities to use a particular EPA-published test method for analyzing inorganic pollutants (such as metals) as contemplating that POTWs must bear the burden of vouching for their analytical results. *Id.*

a. *Prima Facie Case of 40 C.F.R. § 503.13 Violation*

As mentioned in Part I.A above, section 503.13 prohibits the application to land of sludge containing more than specific ceiling concentrations of certain pollutants. The provision states, in relevant part:

> (a) Sewage sludge. (1) Bulk sewage sludge[25] * * *shall not be applied to the land if the concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of § 503.13.

40 C.F.R. § 503.13. Table 1 of section 503.13 lists ceiling concentrations for arsenic of 75 mg/kg; cadmium, 85 mg/kg; molybdenum, 75 mg/kg; and nickel, 420 mg/kg. *Id*. tbl. 1.

The elements that must be pled to establish a violation of section 503.13 by a party subject to the provision[26] include: (1) a regulated entity applied bulk sewage sludge to land; and (2) the sludge contained pollutant levels in excess of the regulatory ceilings on those pollutants. It follows that a prima facie case of violation can be established if the complainant presents evidence of sufficient quality and quantity on each of these two elements such that, if not rebutted, the trier of fact would "infer the fact at issue and rule in [complainant's] favor." Black's Law Dictionary 1209 (7th ed. 1999) (defining "prima facie case"); *see* 21 Charles Alan Wright & Arthur R. Miller, Federal Practice and Procedure § 5122 (1977) (discussing evidence that constitutes a prima facie case); *see also In re New Waterbury, Ltd.*, 5 E.A.D. 529, 538-43 (EAB 1994) (discussing elements of prima facie case establishing appropriateness of proposed penalty under Toxic Substances Control Act); *In re Employers Ins. of Wausau*, 6 E.A.D. 735, 756, 759-60 (EAB 1997) (same).

Here, Region III alleged in the complaint that Salisbury land applied sludge containing excess arsenic, cadmium, molybdenum, and nickel on multiple occasions in 1996-1997. Complaint ¶¶ 9.b.i-.iv. The Region then presented Salisbury's 1996-1997 DMRs and its 308 Response in support of its allegations. The DMRs report three of the five exceedances in question, while the 308 Response lists all five exceedances and the dates Salisbury land applied the affected sludge. *See* Resp. Br. Ex. G (DMR reporting arsenic exceedance); *id*. Exs. H, L (DMR reporting nickel and cadmium exceedances); 308 Resp. (sludge application data sheet attachment).

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[25] "Bulk sewage sludge" is "sewage sludge that is not sold or given away in a bag or other container for application to the land." 40 C.F.R. § 503.11(e). There is no dispute here that the sludge at issue constituted bulk sewage sludge as defined in this provision.

[26] That Salisbury is subject to 40 C.F.R. § 503.13 is not in dispute.

In ordinary circumstances, there would be no question but that this evidence is sufficient to establish a prima facie case (at the very least)[27] of section 503.13 violations. Indeed, it is well-established that reports or records required to be kept by law, such as DMRs and other laboratory reports, may be used to establish a respondent's liability. *See, e.g., United States v. Ward*, 448 U.S. 242, 249 (1980) (oil spill report prepared in accordance with CWA establishes liability for civil penalties under the Act); *Sierra Club v. Simkins Indus.*, 847 F.2d 1109, 1115 n.8 (4th Cir. 1988) ("[r]equired reports such as DMRs may be used as admissions in court to establish a defendant's liability"), *cert. denied*, 491 U.S. 904 (1989); *PIRG v. Yates Indus.*, 757 F. Supp. 438, 447 (discussing "strong evidentiary emphasis" placed on DMRs), *reconsideration granted in part on other grounds*, 790 F. Supp. 511 (D.N.J. 1991); *Chesapeake Bay Found. v. Bethlehem Steel Corp.*, 608 F. Supp. 440, 451 (D. Md. 1985) (that DMRs may be used to establish liability "is consistent with the legislative history and the avowed policy of the Act"). In this case, however, the City's certified DMRs were qualified and the exceedant data labeled atypical or uncharacteristic at the time the DMRs were submitted to the regulatory authorities. Salisbury therefore argues that its qualified DMRs do not constitute admissions of violations, unlike typical, unqualified DMRs, which it concedes do constitute such admissions.[28] App. Br. at 10.

As discussed more fully below, we conclude that Salisbury's argument must fail. Given Congress' heavy reliance on self-monitoring and reporting as a primary means of ensuring compliance with CWA permits, and given the importance of accurate and complete reporting by those responsible for such reporting, DMRs are appropriately regarded as, at a minimum, presumptively accurate and indicative of noncompliance. The City's efforts here to qualify its DMRs did not serve

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[27] A number of courts have found DMRs to constitute not simply prima facie but *conclusive* evidence of CWA violations. *See, e.g., Sierra Club v. Union Oil Co.*, 813 F.2d 1480, 1492 (9th Cir. 1987) (Congress intended that self-monitoring reports such as DMRs would provide conclusive, not just prima facie, evidence of violation), *vacated on other grounds*, 485 U.S. 931, *reinstated*, 853 F.2d 667 (9th Cir. 1988); *NRDC v. Texaco Ref. & Mktg., Inc.*, 719 F. Supp. 281, 289 (D. Del. 1989) ("DMRs are practically unassailable evidence of liability"), *vacated in part on other grounds*, 906 F.2d 934 (3d Cir. 1990) (vacating injunctive remedy); *Conn. Fund for the Env't v. Upjohn Co.*, 660 F. Supp. 1397, 1417 (D. Conn. 1987) ("although a basis for defendant's challenge to the accuracy of its [DMRs] may exist as a matter of fact, that defense has no basis as a matter of law," because of the basic notion of strict liability in CWA enforcement); *Atlantic States Legal Found. v. Al Tech Specialty Steel Corp.*, 635 F. Supp. 284, 289 (N.D.N.Y. 1986) ("measurement error is not a valid basis to defeat a plaintiff's motion for summary judgment for the simple reason that a defendant could always claim that the reports filed with the E.P.A. were inaccurate due to measurement error"); *see also United States v. City of Toledo*, 867 F. Supp. 598, 602 (N.D. Ohio 1994) (permittee should resolve any inconsistencies in its sampling data as soon as possible and, if it does not do so, "should not be heard later to dispute the accuracy of its own work and reports").

[28] DMR forms contain a space at the bottom of each sheet for "Comments and Explanation of Any Violations." *See, e.g.*, CX 2-3, 9-12. The City used that space to qualify its exceedant results in the DMRs at issue here.

to diminish their presumptive character as admissions; rather, the qualifications here merely served to preserve in this case the City's opportunity to later attempt to impeach these admissions in this enforcement action.[29] Accordingly, the Region could rely on the City's admissions in the DMRs to establish a prima facie case of liability. The presumptive accuracy of DMRs is not, however, irrebuttable in these circumstances. If a discharger that qualifies its DMRs in the manner done here can later, in the context of an enforcement action, demonstrate with compelling proof that results reported on a DMR were in fact invalid, then in those circumstances the discharger can impeach its DMR admissions, thereby overcoming their presumptive character and defeating complainant's prima facie case.[30]

As the Presiding Officer and numerous federal courts have recognized, Congress intended regulated entities to do the legwork with respect to sampling and analysis needed to monitor compliance with CWA requirements, and Congress fully expected that regulatory agencies would be able to rely heavily on parties' self-monitoring reports. Init. Dec. at 8-9, 16; *see, e.g.*, *PIRG of N.J., Inc. v. Elf Atochem N. Am., Inc.*, 817 F. Supp. 1164, 1178-79 (D.N.J. 1993) (CWA streamlines fact-finding process by placing burden of measuring and reporting pollutant levels on permit holders and by imposing strict liability for permit violations such that court need not inquire into defendant's culpability or good faith in order to find liability); *Conn. Fund for the Env't v. Upjohn Co.*, 660 F. Supp. 1397, 1417 (D. Conn. 1987) ("[i]f an entity reports a pollution level in excess of the [p]ermit limits, it is strictly liable, as Congress has manifested an intention that the courts not reconsider the effluent discharge levels reported"); *Chesapeake Bay*, 608 F. Supp. at 451-53 (rejecting "inaccurate monitoring" defense as inconsistent with congressional intent).[31] Indeed, Congress was very interested in ensur-

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[29] While, as discussed below, we uphold the Presiding Officer's conclusion that the City was ultimately unable to substantiate the qualifications in its DMRs, by qualifying its DMRs at the time of submission, the City avoided the kind of eleventh-hour retreat from sampling results that courts have found particularly objectionable. *See, e.g., United States v. Toledo*, 867 F. Supp. 598, 602 (N.D. Ohio 1994) ("Where a permittee gathers inconsistent data, it should resolve any inconsistency as soon as possible. If it does not do so, and reports a higher value, it should not be heard later to dispute the accuracy of its own work and reports. Certainly, *last minute speculation* of the sort set forth in the City's affidavit fails to create a genuine issue of material fact concerning the sixteen violations that it seeks to call into question.") (emphasis added).

[30] Our holding in this regard is distinguishable from cases such as *Union Oil*, which specified that a "permittee may not impeach its own reports by showing sampling error." 813 F.2d at 1492. Notably, *Union Oil* and cases of its ilk, *see, e.g., supra* note 27, did not involve qualified DMRs of the type we are confronted with today. Rather, they involved unqualified DMRs buttressed with post-hoc affidavits or other evidence or arguments in belated attempts to raise sampling error defenses.

[31] The City argues that the Presiding Officer's reliance on judicial precedent is misplaced in this administrative proceeding governed by the Consolidated Rules of Practice, 40 C.F.R. part 22. According to the City, if the Region had wanted to take advantage of federal case law, it should have

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ing that enforcement would be streamlined and that courts would not be burdened with highly technical disputes regarding sampling results. *See* S. Rep. No. 92-414 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3730-31, 3746; *see, e.g., Upjohn*, 660 F. Supp. at 1417 ("Congress did not intend the courts to be the forums for determining the adequacy or inadequacy of scientific measurements"); *Chesapeake Bay*, 608 F. Supp. at 451-52 ("Congress intended to keep enforcement actions simple and speedy"); *SPIRG of N.J., Inc. v. Fritzsche, Dodge & Olcott, Inc.*, 579 F. Supp. 1528, 1538-39 (D.N.J. 1984) (CWA legislative history "emphasizes the benefits of expedition in enforcing the Act"), *aff'd*, 759 F.2d 1131 (3d Cir. 1985); *see also In re Gen. Motors Corp.*, 7 E.A.D. 465, 475 n.20 (EAB 1997) (Congress "desire[d] to limit the scope of enforcement proceedings under the CWA"), *aff'd*, 168 F.3d 1377 (D.C. Cir. 1999). Thus, as the Presiding Officer found, *see* Init. Dec. at 8-9, it would fly in the face of congressional intent to accept the proposition that the mere act of qualifying DMRs with unsupported assertions that exceedant data must be the result of laboratory error can overcome the presumption of liability that historically has attached to the contents of DMRs.[32] If it were otherwise, a party could simply claim upon each finding of an exceedance of the sludge ceilings that the data point in question is atypical of its sludge, thereby rendering the data ineffective in establishing a prima facie case of a discharge violation, causing an enforcement case against it to fail, and frustrating congressional intent that self-monitoring and reporting provide the backbone for CWA enforcement.[33] *Cf. In re Swing-A-Way Mfg. Co.*, 5 E.A.D. 742, 748-49 (EAB 1995) (company's failure to keep records of nickel use cannot rebut prima

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brought this case judicially instead of administratively. App. Br. at 13. This argument is without merit. We have frequently observed that we and the Agency's trial level administrative law judges may appropriately look to the federal courts for guidance. *See, e.g., In re Clarksburg Casket Co.*, 8 E.A.D. 496, 501-02 (EAB 1999); *In re Antkiewicz*, 8 E.A.D. 218, 231-32 (EAB 1999); *In re Lazarus, Inc.*, 7 E.A.D. 318, 330 & n.25 (EAB 1997); *In re Wego Chem. & Mineral Corp.*, 4 E.A.D. 513, 524 n.10 (EAB 1993). Moreover, as the Region points out, the City "fails entirely to explicate the burdens of the parties in a judicial case, much less show that the burden in this matter differs in any meaningful way." Resp. Br. at 6 n.15. Thus, we will not consider this argument further.

[32] It bears mentioning that the City's so-called "qualifications" were written in a space on the DMR form entitled "Comments and Explanation of Any Violations." By definition, then, the comment field deployed here was not intended to afford a reporter an opportunity to recast an exceedance as something other than a "violation." Rather, it simply provided an occasion for the reporter to explain the circumstances surrounding its *admitted* violation.

[33] Indeed, were we to conclude that enforcement could be undone by a mere qualification, one could expect to see a proliferation of this kind of practice within the regulated community. Fully matured, such an approach would not only greatly complicate the enforceability of CWA permits and regulatory requirements but also frustrate the Agency's ability to gauge environmental pollution loadings associated with regulated activity. Of course, these results could be avoided if the Agency were to increase its own surveillance activity as a substitute for reliance on self-monitoring data, but this would plainly run counter to Congress' intent that the program rely in the first instance on self-monitoring data.

facie case of nickel reporting violation, established using nickel purchase records, because allowing such a result would frustrate Congress' intent that companies monitor their toxic chemical use).

The City contends, as it did below, that a DMR qualified by the suggestion that certain data must be inaccurate is an admission only that the party failed to monitor its sludge in accordance with the regulations, which require accuracy in monitoring, and is not an admission of the underlying exceedance. App. Br. at 11; *see* 40 C.F.R. §§ 503.16-.17. The City observes that the CWA penalties for a failure to monitor are identical to those for exceeding a pollutant concentration ceiling, and the threat of potential civil or criminal enforcement for the monitoring violation would "provide more than adequate safeguards to protect the integrity of the CWA's self-reporting regime."[34] App. Br. at 11. Thus, argues Salisbury, its position that qualified DMRs are not admissions of ceiling exceedances would not "severely frustrate" Congress' intent to ensure streamlined enforcement and would not diminish CWA enforcement authority. *Id*. The government could, in such circumstances, simply bring a failure to monitor charge and assess equivalent penalties on that ground, with no need to immerse itself in the complexities of alleged land-application violations.[35] *Id*.

We agree that a qualified DMR may well constitute an admission of a failure to monitor, but our acceptance of this proposition does not lead us to the conclusion Salisbury urges, i.e., that its qualified DMRs cannot *also* be treated as

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[34] While the City is literally correct in arguing that the CWA authorizes identical penalties for monitoring and discharge violations, *see* CWA § 309(g)(2), 33 U.S.C. § 1319(g)(2), the statute also dictates that a wide variety of factors be taken into account when assessing a penalty. *See id*. § 309(g)(3), 33 U.S.C. § 1319(g)(3) (in determining penalty amount, EPA must take into account "the nature, circumstances, extent and gravity of the violation, or violations, and, with respect to the violator, ability to pay, any prior history of such violations, the degree of culpability, economic benefit or savings (if any) resulting from the violation, and such other matters as justice may require"). In practice, courts often treat discharge violations more harshly than monitoring violations. *See, e.g.*, *Elf Atochem*, 817 F. Supp. at 1180 ("[a]s a general matter, discharge violations will be considered more 'serious' than monitoring violations"); *PIRG v. Yates Indus.*, 757 F. Supp. 438, 454, *reconsideration granted in part on other grounds*, 790 F. Supp. 511 (D.N.J. 1991). Thus, the City's argument in this regard is not entirely accurate.

[35] We must note that Salisbury's apparent concession that qualified DMRs can be treated as monitoring violations is not as generous as it might first appear. While Salisbury "admit[s] to a failure to monitor," App. Br. at 4, it later argues that, notwithstanding this failure, it would largely escape from liability for monitoring violations because "the City tested its sewage sludge more frequently than the minimum federal requirements and, thus, has other data to fulfill the minimum federal monitoring requirements for all but one of the invalid samples." *Id*. at 7. While we do not need to dispose of this proposition, we note that it leads in an awkward direction. Carried to its logical extreme, it would suggest that as long as a permittee has in hand a sufficient number of compliant sampling results, and carefully qualifies as "suspect" all noncompliant sampling results, it can, without further proof that the noncompliant data are in fact defective, effectively render those data inactionable. Such an outcome would be difficult to reconcile with the imperatives that undergird the CWA's self-reporting scheme.

admissions of ceiling concentration exceedances. Upon examination, the qualifications in the DMRs do not themselves purport to *prove* that the data of concern — data at least in theory generated according to established sampling protocols and testing methods — were invalid. The qualifications do not, for example, include contrary data based on splits or reanalysis of the samples that produced the problematic data. At the very best, the qualifications offer possible explanations for why the data may be suspect. Accordingly, rather than serving to invalidate the underlying data, the City's qualifications simply served to flag a potential issue concerning the data, reserving this issue for further argument in the event that an enforcement action were later pursued based on the data.[36] Viewed in this light, we do not judge the qualifications to be sufficient to upset the flow of the burden of proof that would otherwise obtain in these circumstances. Rather, notwithstanding the qualifications, the Region made a prima facie case by introducing the DMRs and 308 Response, and the burden of production then shifted to the City to come forward with evidence sufficient to rebut the Region's prima facie case. To find otherwise would lead to the untenable result mentioned above, in which the government's case could be defeated at the outset with only the most cursory and speculative of assertions that the exceedant data are atypical. Congress surely did not intend such a result.[37]

Accordingly, we find that DMRs reporting data that are exceedant yet qualified in the manner in which the DMRs in this case were qualified will suffice to

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[36] Significantly, federal courts have held unsupported DMR qualifications to be insufficient to defeat summary judgment on liability grounds. *See, e.g., Yates*, 757 F. Supp. at 447; *NRDC v. Texaco Ref. & Mktg., Inc.*, 719 F. Supp. 281, 288-89 (D. Del. 1989), *vacated in part on other grounds*, 906 F.2d 934 (3d Cir. 1990); *see also* Part II.A.3.b, *infra* (discussing kinds of evidence needed to carry burden of proving that laboratory or sampling error defense is meritorious).

[37] We note that our conclusion here enjoys additional support from the case law pertaining to circumstances in which proof turns on facts peculiarly within the knowledge or access of only one party to a proceeding. *See, e.g., United States v. N.Y., New Haven & Hartford Ry. Co.*, 355 U.S. 253, 256 n.5 (1957) ("The ordinary rule, based on considerations of fairness, does not place the burden upon a litigant of establishing facts peculiarly within the knowledge of his adversary."); *In re New Waterbury, Ltd.*, 5 E.A.D. 529, 541-43 & n.23 (EAB 1994) (in determining burden of production regarding ability to pay a penalty, consideration is given to violator's unique access to its own financial records); *In re Tenn. Valley Auth.*, Order Regarding the Scope of the Record, the Standard of Review, and Allocation of the Burden of Proof, CAA Appeal No. 00-06, at 37 & n.15 (EAB July 3, 2000) (noting that burden of production "may be influenced by the degree to which the information is peculiarly within" one party's control).

Here, given the timing of notice of the issue to EPA, Region III was in no position to collect split samples of the sludge at the time the disputed samples were taken or to request that CT & E or any other lab run or rerun the samples or document the test results. This kind of information and ability to collect splits or request retests in a timely fashion was peculiarly within the control and/or possession of Salisbury. Requiring the Region to unearth and present this kind of information as part of its prima facie case would not only be unreasonable, it would be difficult to reconcile with Congress' stated interest in streamlined enforcement. *See* S. Rep. No. 92-414 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3730-31, 3746.

establish liability unless and until, as discussed in Part II.A.3.b below, the respondent comes forward with compelling evidence showing that the exceedant data were, in fact, in error. In sum, we hold, as did the Presiding Officer, that in producing the City of Salisbury's 1996-1997 DMRs and 308 Response, Region III came forward with sufficient evidence to establish a prima facie case of section 503.13 violations on the City's part.

b. *Burden of Persuasion*

Under the Consolidated Rules, once a complainant carries its burden of establishing a prima facie case, the respondent must come forward with evidence to support any defenses it has that will rebut the allegations in the complaint. 40 C.F.R. § 22.24(a). The respondent has the burden of presentation with respect to these defenses,[38] while the complainant retains the ultimate burden of persuasion that the violations occurred as alleged in the complaint.[39] *Id.*; *In re New Waterbury, Ltd.*, 5 E.A.D. 529, 542-43 (EAB 1994) (discussing burden shifting under Consolidated Rules). Each matter in controversy must be decided upon a preponderance of the evidence. 40 C.F.R. § 22.24(b).

In this case, Salisbury argues that the Presiding Officer erred by placing upon it the burden of persuasion that the sampling data are invalid. App. Br. at 9 (citing Init. Dec. at 16, 23). Salisbury also contends that the Presiding Officer erred by imposing upon it a "heavy burden" to establish laboratory error. The City claims that the "heavy burden" standard is equivalent to a clear and convincing

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[38] We note that the Region's characterization of Salisbury's data integrity claim as an affirmative defense is not technically correct. As we explained in *New Waterbury*:

> "A true affirmative defense, which is avoiding in nature, raises matters *outside* the scope of the plaintiff's prima facie case." 2A Moore's Federal Practice Manual 8-17a (2d ed. 1994) (emphasis added). Inability to pay a proposed penalty is, by statute, simply one of several factors the Agency must take into account in establishing the appropriateness of the proposed civil penalty. Since the Agency must prove the appropriateness of the penalty, it necessarily follows that "ability to pay" is a matter that the Agency takes into consideration as part of its prima facie case. As such, it is a matter that falls *within* the scope of the Agency's case, and, therefore, by definition, cannot be a matter for the respondent to raise as an affirmative defense. Moreover, inability to pay does not by itself preclude imposition of a penalty.

New Waterbury, 5 E.A.D. at 540. Here, the City raises a defense that directly challenges a portion of the Region's prima facie case (i.e., the DMR evidence). Thus, the laboratory error defense cannot be construed, consistently with *New Waterbury*, as an affirmative defense.

[39] As provided in the Consolidated Rules of Practice, "[t]he respondent has the burdens of presentation *and* persuasion for any affirmative defenses." 40 C.F.R. § 22.24(a) (emphasis added). Salisbury is not raising any affirmative defenses in this case. *See supra* note 38 (discussing hallmarks of affirmative defenses).

evidence standard, which is not appropriate in this administrative context governed by the Consolidated Rules. *Id*. (40 C.F.R. § 22.24(b) mandates simple proof by a preponderance of the evidence standard).

There can be little question that the Consolidated Rules do in fact place on the complainant the burden of persuasion that a violation occurred as alleged in the complaint. 40 C.F.R. § 22.24(a); *New Waterbury*, 5 E.A.D. at 542-43. Moreover, we are not persuaded that the Presiding Officer shifted this burden to the City. Salisbury, on the other hand, appears to have confused the burden of persuasion with the burden of presentation. The fragments of the Initial Decision quoted by the City as proof that the Presiding Officer misapplied the burden are in reality entirely consistent with 40 C.F.R. § 22.24(a),[40] which explicitly shifts the burden of presentation to the respondent to establish any defenses once a prima facie case of liability is made. *See* 40 C.F.R. § 22.24(a) ("[f]ollowing complainant's establishment of a prima facie case, respondent shall have the burden of presenting any defense to the allegations set forth in the complaint"). As discussed in Part II.A above, the burden of persuasion to prove a violation never shifts and is on the complainant at all times.

In our view, the Presiding Officer's decision is consistent with the Consolidated Rules' allocation of burdens and Board precedent in this area. In addition to the selective fragments of Initial Decision the City quotes, *see supra* note 40, the Presiding Officer stated:

> With Complainant having established its *prima facie* case [through the introduction of Salisbury's DMRs and 308 Response], the burden shifts to Respondent to rebut that evidence by showing that the sludge it applied to land on the dates detailed in the Complaint did not, *in fact*, contain concentrations of pollutants in excess of the regulatory ceilings found in table 1 of part 503.13.

Init. Dec. at 9; *see id*. at 23. This statement comports with the procedural rules regarding the burden of presentation, as well as with the Board's earlier interpretation of those rules. *See*, *e.g.*, *New Waterbury*, 5 E.A.D. at 541-43 (under 40 C.F.R. § 22.24(a), respondent must rebut complainant's prima facie case by presenting evidence of defenses, at which point complainant may, in the interest of carrying the ultimate burden of persuasion, respond with additional evidence

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[40] *See* App. Br. at 9 (quoting Initial Decision at 16, 23 & n.12 as variously stating: "Respondent bears a heavy burden to show laboratory error"; "Respondent must show 'that there were errors in the actual tests performed'"; "Respondent has failed to present evidence sufficient to rebut the information evidencing violations contained in its sludge DMRs and 308 Response"; and "[u]pon receipt of a DMR showing exceedances that are 'qualified,' the obligation cannot reasonably be placed on EPA to determine whether the exceedances are valid or not").

rebutting respondent's claims or else engage in cross-examination to discredit respondent's contentions). We therefore find no error in the Presiding Officer's allocation of the burden of persuasion in this case. That burden — i.e., to persuade the tribunal that the violations occurred as alleged in the complaint — rests at all times with Region III.

Moving on to the question regarding the standard of proof pertaining to the City's defense, we conclude that the Presiding Officer did not err in characterizing the City's burden to show laboratory error as a "heavy burden." In light of the enormous importance DMRs are given in CWA enforcement actions, any party attempting to impeach the data reported in a DMR is undertaking a difficult task. *See, e.g*, *PIRG of N.J., Inc. v. Elf Atochem N. Am., Inc.*, 817 F. Supp. 1164, 1179-80 (D.N.J. 1993) (laboratory error is a partial defense to liability under the CWA if defendant submits sufficient credible evidence of such error); *supra* note 27 (citing cases). The Presiding Officer recognized this when she stated:

> Legislative history of the CWA * * * and the required certification on the DMRs[] emphasize the need for accurate reporting and simple enforcement, and evidence Congress' and EPA's intent to place heavy reliance on data reported on DMRs in the context of enforcement. Thus, in order to balance such heavy reliance, and notwithstanding its "qualification" of reported data, Respondent bears a heavy burden to show laboratory error, in order to prevail under the preponderance of evidence standard of 40 C.F.R. § 22.24.

Init. Dec. at 16 (citing *PIRG v. Yates Indus.*, 757 F. Supp. 438, 447, *reconsideration granted in part on other grounds*, 790 F. Supp. 511 (D.N.J. 1991); *Elf Atochem*, 817 F. Supp. at 1178).

The "heavy burden" referenced by the Presiding Officer is a recurrent theme in the substantial body of federal case law on this subject. Rather than elevating the preponderance of the evidence standard to a more onerous one, the term "heavy burden," as used in the case law, appears to refer not so much to the standard of proof but rather to the nature of the evidence needed to satisfy the standard of proof. In particular, the term has been used to indicate that, in view of the great weight placed on DMRs, regulated entities can only successfully rebut a complainant's DMR-based case by coming forward with compelling evidence of laboratory error such as letters from the lab acknowledging inaccuracies in its analytical processes or similar evidence of errors in the actual tests performed. *See, e.g.*, *Elf Atochem*, 817 F. Supp. at 1178-80 & n.17 (discussing direct and circumstantial evidence presented by defendant); *Yates*, 757 F. Supp. at 447 (defendant "must present direct evidence of reporting inaccuracies" and "may not rely on unsupported 'speculation' of measurement error," such as that provided in its

DMR cover letters, which present nothing more than the defendant's theories as to why specific exceedances occurred); *PIRG of N.J., Inc. v. Circuit Foil USA, Inc.*, 37 Env't Rep. Cas. (BNA) 1317, 1321 (D.N.J. 1993) (claim that laboratory's analytical results for pH diverged from results of regular pH analyses conducted by defendant is too speculative to meet heavy burden of establishing faulty analysis); *see also NRDC v. Texaco Ref. & Mktg., Inc.*, 719 F. Supp. 281, 288-89 (D. Del. 1989) ("[r]egardless of the credibility of the proof that defendant has submitted, defendant's sampling error defense conflicts with the legislative motivation behind the [CWA]"), *vacated in part on other grounds*, 906 F.2d 934 (3d Cir. 1990) (vacating injunctive remedy); *SPIRG of N.J., Inc. v. Tenneco Polymers, Inc.*, 602 F. Supp. 1394, 1400 (D.N.J. 1985) (defendant's affidavits stating that lab tests contain inherent margins of error and thus that DMR-reported results do not represent levels of pollutants actually discharged "do not raise a question of fact that there were errors in the actual tests performed [that] showed permit violations"); *SPIRG of N.J., Inc. v. Fritzsche, Dodge & Olcott, Inc.*, 579 F. Supp. 1528, 1538 (D.N.J. 1984) (defendant's unsupported speculation that exceedances may be due to inaccurate measurements or faulty test procedures was unaccompanied by direct evidence of reporting inaccuracies), *aff'd*, 759 F.2d 1131 (3d Cir. 1985).[41] Based on our review of the Initial Decision, we conclude that the Presiding Officer was using the term "heavy burden" in this same sense. *See* Init. Dec. at 16 ("in order to balance * * * heavy reliance [on DMR data in the enforcement context,] * * * Respondent bears a heavy burden to show laboratory error, in order to prevail under the preponderance of evidence standard of 40 C.F.R. § 22.24").

In keeping with this body of authority, we conclude that, in a case like this one involving qualified DMRs, for Salisbury to successfully rebut the Region's prima facie case of land-application violations, the City would have to proffer compelling evidence that laboratory error did in fact occur with respect to the samples at issue.[42] Region III retains the ultimate burden of persuading us that the

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[41] We note that two of these cases — *Yates* and *Texaco* — involved qualified DMRs not unlike those at issue here. In both cases, the courts ruled that, notwithstanding the qualifications, the defendant's supporting proof had failed even to demonstrate a genuine issue of material fact sufficient to defeat summary judgment on liability. *See Yates*, 757 F. Supp. at 447; *Texaco*, 719 F. Supp. at 288-89; *cf. NRDC v. Outboard Marine Corp.*, 692 F. Supp. 801, 820 (N.D. Ill. 1988).

[42] We stop short of concluding that, at least in a case like this one where DMRs have been qualified as they were here and at trial circumstantial evidence has been adduced in support of the qualifications, the DMRs should be regarded as conclusive proof of liability, or that circumstantial evidence can *never* be sufficient to invalidate DMR data. While we would agree that direct evidence (e.g., split sample data) is unquestionably the surest path to invalidating DMR results, we cannot foreclose the possibility of a circumstantial case in which the evidence is virtually as reliable as direct evidence. If, for example, a laboratory were found to have systematically falsified or fabricated laboratory reports over a period of time and the laboratory results in question were processed during that same period of time, this might, particularly if the results in question deviated substantially from past

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violations occurred as alleged in the complaint and thus would, in the event of sufficient rebuttal by the City, have to rebut, in its turn, the City's evidence. In the next section, we take up the sufficiency and persuasiveness of the evidence the parties presented at the hearing.

B. *Evidence Pertaining to Alleged Exceedances of Regulatory Ceiling on Metals Concentrations*

As discussed above, the Presiding Officer correctly determined that the burden appropriately fell to the City to present proof that its laboratory data were invalid — proof sufficiently compelling to rebut the Region's prima facie case. After conducting an evidentiary hearing on this issue, the Presiding Officer concluded that the City had failed to meet its rebuttal burden. Based on our review of the Initial Decision and the record below, we do not find clear error in the Presiding Officer's conclusion in this regard sufficient to override the deference typically accorded presiding officers in these circumstances. *See supra* Part II (introduction).

The Presiding Officer's Initial Decision provides a comprehensive and, in our view, competent analysis of the proof adduced by the City at the hearing and the Region's rebuttal of that proof, which we will not restate fully here. This being said, it is important to note that Salisbury's evidence did not include any of the kinds of *direct* evidence most commonly required by the courts in impeaching DMR results. *See, e.g.*, *Elf Atochem*, 817 F. Supp. at 1177-81; *Yates*, 757 F. Supp. at 447; *Fritzsche*, 579 F. Supp. at 1538; *see also Conn. Fund for the Env't v. Upjohn Co.*, 660 F. Supp. 1397, 1416-17 (D. Conn. 1987); *Chesapeake Bay Found. v. Bethlehem Steel Corp.*, 608 F. Supp. 440, 452 (D. Md. 1985). Both the Initial Decision and the Region's Response Brief provide descriptions of the kinds of direct evidence that can be developed in these circumstances, observing that "there is a scientifically valid, reliable methodology a responsible investigator follows in determining if a particular analytical value [i]s erroneous." Resp. Br. at 12; *see* Init. Dec. at 18. First, a "responsible investigator" examines the documentation of the laboratory's analytical processes, including information pertaining to the chain of custody of the sludge sample, the sample's preservation and digestion processes, the calibration of the test equipment used to analyze the sample, preparation of quality control samples, and the like. Resp. Br. at 14; *see* Init. Dec. at 18; Tr. at 1181-1200 (testimony of Robin Costas, EPA chemist). Second, if the document review does not uncover error, the investigator may ask its laboratory

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experience, provide a strong circumstantial basis for concluding that the laboratory results were invalid, at least in the absence of any countervailing considerations. In this case, however, the circumstantial case was not so stark, and the Presiding Officer, weighing the competing evidence and inferences, ultimately viewed the City's circumstantial evidence as insufficient to rebut the Region's prima facie showing.

(or another lab) to reanalyze the original sample. Resp. Br. at 14; *see* Init. Dec. at 18; Tr. at 1076, 1190-93. Third, the investigator could have a duplicate, or "split," of the original sample in reserve and could send that sample to another laboratory for analysis. Resp. Br. at 14-15; *see* Init. Dec. at 18; Tr. at 1193-94. Fourth, the investigator might find it possible to resample the original material and compare the test results for those samples to the first samples. Resp. Br. at 15; *see* Init. Dec. at 18; Tr. at 1183-84, 1198. Each of these four steps could potentially provide evidence of sufficient quality and specificity, related to the actual sludge tests that are subject to investigation, to rebut the prima facie case of violation established by DMRs.[43] Init. Dec. at 18; Tr. at 1199-1200.

In this case, Salisbury did not offer any of these types of direct evidence that a laboratory error occurred. Indeed, it appears that Salisbury only began investigating its exceedances in earnest after Region III initiated enforcement action against it in 1998. At that point, it was too late to reconstruct what had happened in 1996-1997 using the traditional means of the "responsible investigator" listed above. Salisbury's contract lab, CT & E, had closed its doors, so the relevant QA/QC data and other test-related documentation were no longer available for review, and the City's sludge lagoons, which undergo periodic additions and removals of sludge, no longer contained the same body of material as had been sampled on the four days in question. The Presiding Officer was disconcerted by the City's late-breaking attempts to address its concerns regarding the data, noting:

> [Salisbury] reported [its sampling] data, certifying it as "true, accurate and complete" on the DMRs, albeit with "qualification" or reservation manifested in the comments on the DMRs and cover letters. However, [Salisbury] did not have such reservations about its data as to make im-

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[43] The Presiding Officer stated:

> [W]hen a POTW or other lab customer thinks it has received incorrect results from its lab, the first step to take is to ask the lab to reanalyze the sample. The second step is to examine the lab's [QA/QC] data. The [QA/QC] data provides a step by step look at the handling and processing of a sample including checks, in the form of quality control samples, on the results of the analyses run on a sample. A third strong, direct indicator of possible errors in a specific test result is the result from a split sample. A split sample represents a portion of the original sample that is then analyzed separately from the rest of the sample, typically by a separate lab. If the labs involved produce markedly different results, this is an indication that one of the labs may be producing unreliable results. Significantly, [Salisbury] did not present any of these types of direct evidence of erroneous lab results at hearing.

Init. Dec. at 18 (citations omitted).

> mediate efforts to resample as soon as the results were received, and cannot now take advantage of its failure to do so.

Init. Dec. at 15-16. We share the Presiding Officer's concern and are not inclined to sanction the City's practice of taking virtually no action to diagnose the cause of exceedant data until confronted with a lawsuit. *See PIRG of N.J., Inc. v. Elf Atochem N. Am., Inc.*, 817 F. Supp. 1164, 1179 (D.N.J. 1993) ("to the extent we allow permit holders to escape liability by proving laboratory error after the fact, we create an incentive for them to wait until they are sued before taking steps to ensure that their laboratory results and DMRs are accurate"). At the point an enforcement action is filed (which generally occurs, as here, well after the date the sludge samples were taken and after DMRs reporting the exceedances were submitted), it may be too late to determine whether the POTW actually land applied contaminated sludge or whether the reported exceedances were caused by laboratory or other error. The responsibility must lie with the POTW to investigate the source of the exceedances as soon as they are identified, lest the opportunity to obtain a definitive answer as to their provenance be lost. *See United States v. City of Toledo*, 867 F. Supp. 598, 602 (N.D. Ohio 1994) ("[w]here a permittee gathers inconsistent data, it should resolve any inconsistency as soon as possible"); *Elf Atochem*, 817 F. Supp. at 1179 (CWA places burden of accurately monitoring pollutant levels "squarely on the shoulders of permit holders," and "we must hold them to that obligation").

Without the benefit of the kind of direct evidence that more timely attention to its data quality might have provided, Salisbury undertook to establish, by other, less direct means, that the five exceedances were the result of CT & E's error. In so doing, the City compiled a mountain of circumstantial evidence and presented it, in what the Region refers to as "the kitchen sink defense," to the Presiding Officer. *See* Resp. Br. at 17 (Salisbury is attempting to convince the administrative law judges "that its analytical results are erroneous by using the 'kitchen sink' defense, i.e., conjuring up every kind of indirect, tangential bit of information it can find"). While, upon review, the Presiding Officer found this body of evidence to be sufficiently credible to "call[] into question the reliability of test results from [Salisbury's] contract lab," Init. Dec. at 15, she also found the City's arguments based on the evidence to be "ultimately unavailing." *Id*. The Presiding Officer stated that, "after full consideration of all of the evidence submitted in this matter, it is found that [Salisbury] has failed to present evidence sufficient to rebut the information evidencing violations contained in its sludge DMRs and 308 Response." Init. Dec. at 22-23. As stated, after conducting our own review of all the evidence in the administrative record, and being mindful of the deference due the Presiding Officer's determinations in these circumstances, we will not disturb the Presiding Officer's factual finding in this regard. While Salisbury's circumstantial evidence of laboratory error is not without some force, in view of the Re-

gion's rebuttal of Salisbury's evidence, *see, e.g.*, Init. Dec. at 17-23, we do not find the Presiding Officer's conclusion to have been clearly erroneous.

III. *CONCLUSION*

For the foregoing reasons, we affirm the Presiding Officer's finding that on twenty-seven occasions in 1996-1997, the City of Salisbury violated the regulations prohibiting land application of sludge containing pollutants in excess of ceiling concentrations.[44] In addition, we affirm the total penalty of $16,000. Salisbury shall pay the full amount of the civil penalty within sixty (60) days of receipt of this final order, unless otherwise agreed by the parties. Payment should be made by forwarding a cashier's or certified check payable to the Treasurer, United States of America, at the following address:

U.S. EPA, Region III
Lydia Guy, Regional Hearing Clerk
Post Office Box 360515
Pittsburgh, PA 15251-6515

So ordered.

[44] Because the legal issues have been well-framed by the Appeal Brief and Response Brief and further briefing would thus not meaningfully inform the Board's views, the City's request for leave to file a reply to the Region's Response Brief is denied. The City's request for oral argument is also denied on the same basis.