

1 **UNITED STATES COURT OF APPEALS**
2 **FOR THE SECOND CIRCUIT**

3 August Term 2010

4 Docket No. 09-4551-cv

5 Submitted: September 13, 2010

Decided: July 18, 2011

6
7 ERNEST BROD, ROBERT DEMARCO, BEVERLY PETERSON, RESIDENTS
8 CONCERNED ABOUT OMYA, an unincorporated association under Vermont law, on behalf of
9 its members who are residents of Pittsford, Vermont living in close proximity to defendants'
10 Florence facility,

11
12 *Plaintiffs-Appellants,*

13 - v. -

14 OMYA, INC., OMYA INDUSTRIES, INC.,

15 *Defendants-Appellees.**
16

17 Before: MINER, LEVAL, and WESLEY, Circuit Judges.

18 Appeal from (1) a judgment entered in the United States District Court for the District of
19 Vermont (Niedermeier, M.J.), vacating, after a remedy hearing, so much of a summary judgment
20 as held defendants liable for creating an “imminent and substantial endangerment” as set forth in
21 the Resource Conservation and Recovery Act of 1976 (“RCRA”) due to the presence of
22 aminoethylethanolamine (“AEEA”) in defendants’ waste; and (2) so much of a summary
23 judgment as granted dismissal of plaintiffs’ open dumping claim brought under the provisions of
24 RCRA; the District Court (i) determined that, based on, inter alia, subsequent testing and expert
25 testimony presented at the remedy hearing, the potential harm posed by AEEA did not in fact
26 constitute a “serious endangerment” and thus no remedy was warranted; (ii) granted defendants’
27 motion to dismiss all claims related to AEEA because plaintiffs had failed to satisfy the citizen
28 suit notice requirements of RCRA; and (iii) found that arsenic was not present at a level high
29 enough to subject defendants to liability under RCRA.

30 Affirmed.
31

* The Clerk of the Court is directed to amend the official caption as set forth above.

1 David K. Mears, Director of the Environmental and
2 Natural Resources Law Clinic at Vermont Law
3 School, South Royalton, Vermont, for Plaintiffs-
4 Appellants.

5 Alan P. Biederman, Biederman Law Office,
6 Rutland, Vermont, for Defendants-Appellees.

7 Edward V. Schwiebert and Hans G. Huessy, Kenlan
8 Schwiebert Facey & Goss, P.C., Rutland, Vermont,
9 for Defendants-Appellees.

10 MINER, Circuit Judge:

11 Plaintiffs-appellants, Ernest Brod, Robert DeMarco, Beverly Peterson, and Residents
12 Concerned about Omya (collectively, the “plaintiffs” or “RCO”), appeal from a judgment
13 entered September 30, 2009, in the United States District Court for the District of Vermont
14 (Niedermeier, M.J.), vacating so much of a summary judgment as held defendants-appellees
15 Omya, Inc. and Omya Industries, Inc. (collectively, “Omya”) liable for creating an “imminent
16 and substantial endangerment” within the meaning of the Resource Conservation and Recovery
17 Act of 1976, Pub. L. 94-580, 90 Stat. 2795 (October 21, 1976) (codified at 42 U.S.C. §§
18 6901–92) (“RCRA”). Liability was predicated upon a finding that aminoethylethanolamine
19 (“AEEA”) was present in Omya’s waste. Following a remedy hearing held after the entry of
20 summary judgment, the District Court (1) determined that, based on, inter alia, subsequent
21 testing and expert testimony presented at the remedy hearing, the potential harm posed by AEEA
22 did not in fact constitute a “serious endangerment,” and thus no remedy was warranted; and (2)
23 granted Omya’s motion to dismiss all claims related to AEEA because plaintiffs had failed to
24 satisfy the citizen suit notice requirements of RCRA. In an Opinion and Order, dated July 1,

1 2008, the District Court dismissed RCO’s open dumping claim, the court having found that
2 arsenic was not present at a level high enough to subject Omya to liability under RCRA. In its
3 complaint, which raised two claims, RCO alleged that Omya’s waste disposal practices violated
4 RCRA. RCO first claimed that Omya was creating an imminent and substantial endangerment to
5 human health and the environment by permitting its waste to seep into the groundwater, thereby
6 contaminating hydrologically-connected water sources with AEEA. RCO also claimed that
7 Omya was operating an unlawful open dump because Omya’s solid waste allegedly contained an
8 amount of arsenic above the permitted level established by the Environmental Protection Agency
9 (“EPA”). On appeal, RCO claims that the District Court: (1) erred by concluding that Omya’s
10 disposal of AEEA did not create an imminent and substantial endangerment; (2) erred by
11 granting Omya’s motion to dismiss all claims related to AEEA, the District Court having held
12 that RCO failed to satisfy RCRA’s citizen suit notice requirements; (3) erred in finding that
13 Omya’s disposal of solid waste did not violate RCRA’s prohibition on open dumping; and (4)
14 abused its discretion by denying RCO’s request to present expert testimony on arsenic
15 contamination and area toxicity. For the reasons stated below, we affirm.

16 **BACKGROUND**

17 Omya operates a calcium carbonate mineral processing facility (the “Plant”) in Florence,
18 Vermont. It imports raw marble ore, primarily from three quarries in Vermont, and then
19 processes the ore by crushing, purifying, and refining it into finished products, including “fine
20 ground calcium carbonate.” To begin the purification process, Omya adds the crushed ore and a

1 flotation reagent to tanks filled with water.¹ The flotation reagent then binds to naturally-
2 occurring impurities in the ore. Much of the flotation reagent/impurities mixture floats to the top
3 of the tank and is removed by skimming it off, apparently leaving the pure ore at the bottom of
4 the tank. The water/flotation reagent/impurities mixture is then piped to “settling cells.” There,
5 the residual solids settle to the bottom of the cells, and the water from the top of the cells is piped
6 back to the Plant for re-use. The solids that remain are known as “tailings” and are comprised of
7 water, mineral impurities, and flotation reagent. Omya disposes of the tailings into unlined,
8 exhausted quarries, or Tailings Management Areas (“TMAs”), located near the Plant. The
9 TMAs are in direct contact with fractured bedrock, which permits contaminants from the tailings
10 to seep into the groundwater that flows through the adjacent bedrock.

11 The plaintiffs are concerned about the environmental and human health effects of
12 Omya’s disposal of its tailings. In particular, plaintiffs point to the negative impact that the
13 tailings may have on the public water supply wells in Florence, Vermont, and on the streams,
14 ponds, and wetlands adjacent to the TMAs. In 2002, the individual plaintiffs formed RCO to
15 advocate for regulation and remediation of Omya’s on-site waste disposal practices. RCO took
16 action on November 12, 2004, by serving a notice of violation of RCRA and intent to file a
17 citizen enforcement suit (“NOI”) on the EPA administrator, the Vermont Department of
18 Environmental Conservation, the Vermont Agency of Natural Resources (“VANR”), and Omya,
19 as required by the citizen suit notice provisions of RCRA. See 42 U.S.C. § 6972(b) (2006).
20 RCO claimed that Omya violated RCRA’s prohibition on unlawful open dumping of solid waste,

¹ The flotation reagent is a mixture of tall oil hydroxyethyl imidazoline, amine acetate, and AEEA.

1 in violation of 42 U.S.C. § 6945, and that Omya’s disposal practices presented an “imminent and
2 substantial endangerment” to human health and the environment, in violation of 42 U.S.C. §
3 6972. The NOI listed twenty-one chemicals allegedly contained in the waste from Omya’s Plant
4 and claimed that “there have been reports that the waste piles may contain other hazardous
5 substances dumped there in the past.” It also alleged that “the wastes are contaminated with
6 numerous chemicals, including hazardous chemicals listed under Subchapter III of RCRA, as
7 well as pesticides registered under the Federal Insecticide, Fungicide and Rodenticide Act.”

8 When neither the EPA nor the VANR commenced a civil or criminal action against
9 Omya within 90 days, RCO filed an action in the United States District Court for the District of
10 Vermont.² The complaint contained the same allegations that RCO had set forth in its NOI —
11 namely, that Omya was in violation of RCRA’s prohibition on open dumping and that Omya’s
12 disposal practices posed an “imminent and substantial endangerment to health or the
13 environment.”

14 Several months after the action had been filed, Omya sought a solid waste disposal
15 certification from the State of Vermont for its practice of disposing of tailings in its TMAs.
16 While the certification process was ongoing, the state legislature enacted a law requiring that the
17 certification be conditioned in part on Omya first financing and completing a study of the effects
18 of its disposal practices on human health and the environment. Omya responded by hiring

² RCRA provides that actions may not be commenced by private citizens if the EPA or State is, *inter alia*, “diligently” prosecuting an action. 42 U.S.C. § 6972(b)(1)(B), (b)(2)(B) (2006); *see also id.* at § 6972(b)(1)(A) (requiring a 90-day delay period before filing suit).

1 consultants to conduct the study and to produce a report (the “Report”), a process that ultimately
2 took several years to complete.

3 In the interim, the parties began to engage in extensive motions practice, including filing
4 motions for summary judgment. Pursuant to a stipulation, discovery was delayed until all then-
5 pending motions with the court had been resolved. The District Court issued its first substantial
6 ruling in June 2006, when, inter alia, it denied Omya’s motion for summary judgment as to both
7 the open dumping and endangerment claims and denied RCO’s motion for partial summary
8 judgment on its open dumping claim. Following the issuance of the court’s order, RCO retained
9 an expert, Dr. James S. Smith, who opined that “arsenic . . . would be found in solution in the
10 groundwater under the site.” Subsequently, RCO hired a consultant to obtain samples of
11 groundwater from properties in the vicinity of the Plant and from directly underneath the Plant.
12 The results of this sampling confirmed that arsenic was present in Omya’s waste and that it had
13 been released into the groundwater underneath the Plant at levels ranging from 8–12 parts per
14 billion (“ppb”).

15 After obtaining the sampling results, RCO filed a second motion for partial summary
16 judgment. RCO argued that the sampling results showed that Omya had violated 40 C.F.R. §
17 257.3-4, which prohibits waste disposal practices that contaminate underground drinking water
18 sources with specific substances in excess of specific thresholds. Because § 257.3-4 was
19 promulgated under § 6945, which is RCRA’s prohibition of “open dumping,” a violation of §
20 257.3-4 is a violation of § 6945. See S. Road Assocs. v. Int’l Bus. Machines Corp., 216 F.3d
21 251, 256 (2d Cir. 2000) (explaining that the “open dumping” regulations “operate as independent
22 prohibitions of RCRA”). Appendix 1 to the “open dumping” regulations sets a Maximum

1 Contaminant Level (“MCL”) of 50 ppb for arsenic in groundwater. See 40 C.F.R. § 257, App. 1
2 (2011). RCO also noted that the Safe Drinking Water Act (“SDWA”) sets forth an MCL for
3 arsenic at a level of 10 ppb for community water systems. Recognizing that the permitted level
4 of 50 ppb for arsenic in groundwater exceeded the 8–12 ppb of arsenic actually measured, RCO
5 contended that the MCL of 50 ppb stated in Appendix I was outdated. It argued that Appendix I
6 makes reference to, and its values are intended to mirror, the MCLs set forth in the SDWA.
7 Since the SDWA MCL for arsenic in community water systems had been recently updated by the
8 EPA to a maximum permitted level of 10 ppb, RCO argued that Omya was in violation of the
9 open dumping prohibition by releasing arsenic at measured levels of 8–12 ppb.

10 On September 7, 2007, Omya responded by filing a cross-motion for summary judgment
11 on the open dumping claim. In opposition to RCO’s proposition that the EPA had intended to
12 update the MCL for arsenic, Omya argued that the open dumping regulations expressly reference
13 Appendix I and the standards set forth therein. It further contended that “[i]t is pure speculation
14 to suggest that, if and when EPA updates Appendix I, EPA will incorporate the new 10 ppb
15 arsenic standard.”

16 In October 2007, while the second motions for summary judgment were pending, a
17 preliminary Report commissioned by Omya was released, followed several months later by the
18 publication of the final Report, on February 15, 2008. The Report concluded that the
19 groundwater on-site at the Plant contained elevated levels of iron, manganese, arsenic, and
20 AEEA. The Report noted that two separate tests had detected small amounts of AEEA (between
21 3 and 9 ppb) in off-site spring water, which was traced to the Omya Plant. It further explained
22 that AEEA is a “potent cause of a specific and rare birth defect in laboratory rats and, at

1 sufficiently high exposures, might cause such a defect in human fetuses as well.” However, tests
2 of drinking water wells did not find any contaminants traced to the Plant, and the Report
3 concluded that there was no immediate danger to drinking water from Omya’s operations. The
4 Report did, however, recommend expanded monitoring and testing of the groundwater and
5 springs in the area. After examining the Report, RCO became aware that AEEA was among the
6 chemicals being released by Omya’s tailings and concluded that the levels of AEEA that had
7 been detected both on- and off-site could pose a risk to human health. Based on this information,
8 RCO filed a supplemental memorandum in support of its August 2007 motion for summary
9 judgment, arguing, inter alia, that the presence of AEEA in the tailings was alone sufficient to
10 pose an imminent and substantial endangerment to human health. As such, RCO contended that
11 it was entitled to equitable relief as necessary to eliminate the risk posed by Omya’s disposal of
12 toxic wastes, citing Dague v. City of Burlington, 935 F.2d 1343, 1355 (2d Cir. 1991), rev’d on
13 other grounds by, 505 U.S. 557 (1992) (“Significantly, congress used the word ‘may’ to preface
14 the standard of liability. . . . This is ‘expansive language’, which is intended to confer upon the
15 courts the authority to grant affirmative equitable relief . . . to eliminate any risk posed by toxic
16 wastes.” (internal quotation marks omitted) (emphasis in original)).

17 On July 1, 2008, the District Court issued an Opinion and Order granting summary
18 judgment to Omya on the open dumping claim and to RCO on the endangerment claim. The
19 court found RCO’s arguments as to its open dumping claim unavailing principally for two
20 reasons: (1) the open dumping regulation unambiguously references the MCL table in Appendix
21 I, and neither the EPA regulation nor Appendix I mentions the SDWA’s drinking water standard;
22 and (2) even if the EPA had intended to update the values in Appendix I to mirror the levels set

1 forth in the SDWA for drinking water, the agency would have needed to follow strict rulemaking
2 procedures in order to change the regulation’s language, including the MCLs in Appendix I.
3 Because no test had detected arsenic at levels above 50 ppb in the groundwater below Omya’s
4 disposal pits, the court found that RCO did not demonstrate that Omya had violated RCRA’s
5 open dumping regulation.

6 On the endangerment claim, the court noted the Report’s conclusion that the groundwater
7 near Omya’s Plant was not currently contaminated by AEEA to an unsafe level but found that
8 the evidence showed that there was at least some risk of harm to the environment and to human
9 health. Specifically, the court found that continued operations could cause the AEEA level to
10 rise to an unsafe level, and AEEA could spread from the groundwater to drinking water sources.
11 Applying our holding in Dague that courts are authorized “to grant affirmative equitable relief to
12 the extent necessary to eliminate any risk posed by toxic wastes,” 935 F.2d at 1355 (emphasis in
13 original), the District Court concluded that the evidence regarding AEEA met Dague’s expansive
14 “any risk” standard, noting, in addition, that its finding of “any risk” was reinforced by the
15 possibility that Omya had introduced arsenic into the groundwater, even if the levels were below
16 those required for open dumping liability. The District Court concluded: “[w]hile liability is
17 clear, the remedy is far from clear. The Court is tasked with delivering equitable relief, and it
18 would be inappropriate to decide the appropriate relief without a further [remedy] hearing.”

19 After the court issued its liability determination but before it scheduled a remedy hearing,
20 Omya made several defensive motions. In July 2008, it filed a motion to dismiss all claims
21 pertaining to AEEA, arguing that RCO had failed to comply with the RCRA notice requirement
22 because it had not specified AEEA as a waste contaminant in its NOI. Omya contended that

1 neither party had known AEEA to pose a risk of harm until a preliminary draft of the Report was
2 published in October 2007, over three years after RCO served its NOI. While the motion to
3 dismiss was pending, Omya also filed a motion to vacate the District Court's determination as to
4 endangerment liability. Omya argued that five rounds of testing — completed after the court's
5 liability ruling — disproved the Report's conclusion that AEEA was migrating off-site and
6 thereby posing a risk of imminent and substantial endangerment. It further contended that this
7 evidence disproved the court's rationale and required the court to vacate its opinion.

8 The District Court declined to decide Omya's motions and instead scheduled a remedy
9 hearing to take place in March 2009. At the hearing, RCO presented the testimony of three
10 experts regarding its proposal for an appropriate remedy. RCO argued that the court should
11 require Omya to conduct additional monitoring, including drilling new wells at different levels,
12 to monitor more accurately the concentration and migration of AEEA. RCO also sought to
13 present expert testimony, which would have opined that a proper remedy must include arsenic
14 monitoring. However, the court sustained an objection by Omya, ultimately ruling, in response
15 to an offer of proof later filed by RCO for the excluded testimony, that the evidence at issue was
16 not material because the court had previously ruled that RCO failed to demonstrate that arsenic
17 was present in sufficient quantities to violate federal environmental laws. Moreover, the court
18 had previously ruled that the hearing would address only the remedy for the presence of AEEA,
19 not further issues of liability.

20 Omya's experts then testified about changes to the waste management disposal system
21 and groundwater monitoring program, arguing, as it did in its motions to dismiss and to vacate,
22 that its current monitoring and remediation efforts were adequate to protect the plaintiffs. In

1 addition, despite the court’s prior statements that the sole purpose of the hearing was to
2 determine the appropriate remedy for the endangerment violation, the court nonetheless
3 permitted Omya’s experts to testify on the issue of liability. The experts opined that there was
4 no evidence that AEEA posed an imminent and substantial endangerment to RCO, and
5 questioned the Report’s methods, arguing that its conclusions on toxicity were not scientifically
6 valid. The court ultimately indicated that it would consider the testimony regarding the toxicity
7 and danger of AEEA as it was relevant to Omya’s pending motion to vacate, stating: “based on
8 the hearing, [the court] has the option of finding that, in fact, the plaintiffs have met the burden
9 or haven’t met the burden [of proving liability under RCRA].” The court noted that it could,
10 “based on the evidentiary hearing . . . determine the validity of the [c]ourt’s prior conclusion.”

11 In response, RCO filed a motion for leave to present the testimony of Dr. William Bress,
12 the Vermont State Toxicologist, to supplement its opposition to Omya’s motion to vacate,
13 arguing that it had no notice that the court would take evidence regarding the toxicity of AEEA
14 as relevant to the court’s prior liability determination.³ RCO submitted to the court its belief that
15 Bress would have testified, contrary to Omya’s experts, that a human health-based drinking
16 water guideline for AEEA was a necessary remedy to protect human health from the imminent
17 and substantial endangerment posed by AEEA. The District Court denied RCO’s request and
18 stated that it would “consider the testimony of [Omya’s] experts only on the issue of remedy, as
19 the [c]ourt indicated was the sole purpose of the hearing.”

³ RCO had previously filed a motion to clarify the scope of the remedy hearing, arguing that a complete remedy should take arsenic contamination into account. In denying the motion, the court stated that it would “take evidence at the hearing on the appropriate remedy for the violation found in [the court’s July 2008 Order].”

1 On September 30, 2009, the District Court granted Omya’s motion to vacate the July
2 2008 Order holding Omya liable for creating an imminent and substantial endangerment. The
3 court explained that in making its prior liability determination, it had relied on the Report’s
4 conclusion that AEEA may cause birth defects in human fetuses, a conclusion that was grounded
5 in part on an appendix that had not been submitted to the court until after it had issued its Order.
6 Based on a renewed review of the Report and appendix, the court noted that the Report’s authors
7 had stated that “their estimates of acceptably small doses of AEEA is uncertain, the rat studies
8 had not been published in scientific journals, and there was no direct data to support or refute
9 their judgment of toxicity,” and that they “had assumed that the risk for humans was the same as
10 for rats, without the benefit of further studies.” Given the limitations of the Report’s conclusion,
11 the court found Omya’s witnesses to be “very persuasive” on the issue of the potential toxicity of
12 AEEA to humans and the environment. Moreover, the court noted that after issuing its 2008
13 Order, we clarified the Dague standard, stating: “the combination of the word ‘may’ with the
14 word ‘endanger,’ both of which are probabilistic, leads us to conclude that a reasonable prospect
15 of future harm is adequate to engage the gears of [§6972(a)(1)(B)] so long as the threat is near-
16 term and involves potentially serious harm.” Cordiano v. Metacon Gun Club, Inc., 575 F.3d 199,
17 211 (2d Cir. 2009) (emphasis supplied). Applying Metacon, the District Court concluded that
18 “[p]laintiff’s evidence is merely speculative of future harm and is not sufficient for the trier of
19 fact to find that the alleged potential harm claimed constitutes a serious endangerment,” and
20 therefore granted Omya’s motion to vacate. In addition, the court granted Omya’s motion to
21 dismiss, which had argued that RCO failed to satisfy the notice requirements for a RCRA citizen
22 suit with respect to AEEA. This timely appeal followed.

1 On appeal, RCO argues that the District Court (1) erred by granting Omya’s motion to
2 dismiss because it properly complied with the notice requirements of RCRA’s citizen suit
3 enforcement provision; (2) misapplied the legal standard for determining an “imminent and
4 substantial endangerment” under RCRA by (i) failing to consider evidence of arsenic
5 contamination and (ii) failing to address the threat to the environment posed by the
6 contamination of groundwater; (3) erred in finding that Omya’s disposal of solid waste did not
7 violate RCRA’s prohibition on open dumping, because (i) the most recent MCL for arsenic
8 under the SDWA represents the correct benchmark, not Appendix I and (ii) Omya’s disposal
9 practices violated the statutory prohibition on the open dumping of solid waste; and (4) abused
10 its discretion by denying RCO’s request to present expert testimony on arsenic contamination
11 and area toxicity.

12 DISCUSSION

13 I. Standard of Review

14 A complaint may be dismissed for “failure to state a claim upon which relief can be
15 granted.” Fed. R. Civ. P. 12(b)(6). We review de novo a district court’s decision granting a
16 motion to dismiss for failure to state a claim. Kuck v. Danaher, 600 F.3d 159, 162 (2d Cir.
17 2010). We accept all factual allegations as true and draw all reasonable inferences in favor of
18 the plaintiff. Hayden v. Paterson, 594 F.3d 150, 160 (2d Cir. 2010). “To survive a motion to
19 dismiss, a complaint must contain sufficient factual matter, accepted as true, to ‘state a claim to
20 relief that is plausible on its face.’” Ashcroft v. Iqbal, 129 S.Ct. 1937, 1949 (2009) (quoting Bell

1 Atl. Corp. v. Twombly, 550 U.S. 544, 570 (2007)). The District Court dismissed the
2 endangerment claim under the provisions of Rule 12(b)(6).

3 This Court reviews a district court’s grant of summary judgment on RCRA claims de
4 novo, construing the evidence in the light most favorable to the nonmoving party. See Jaramillo
5 v. Weyerhaeuser Co., 536 F.3d 140, 145 (2d Cir. 2008). Summary judgment may not be granted
6 unless “the pleadings, the discovery and disclosure materials on file, and any affidavits show that
7 there is no genuine issue as to any material fact and that the movant is entitled to judgment as a
8 matter of law.” Fed. R. Civ. P. 56(c)(2); see Scholastic, Inc. v. Harris, 259 F.3d 73, 81 (2d Cir.
9 2001). “The role of the court is not to resolve disputed issues of fact but to assess whether there
10 are any factual issues to be tried.” Wilson v. NW Mut. Ins. Co., 625 F.3d 54, 60 (2d Cir. 2010).
11 In determining whether summary judgment is appropriate, this Court will “construe the facts in
12 the light most favorable to the non-moving party and must resolve all ambiguities and draw all
13 reasonable inferences against the movant.” Williams v. R.H. Donnelley, Corp., 368 F.3d 123,
14 126 (2d Cir. 2004). A district court’s interpretation of law is reviewed de novo. See Dattner v.
15 Conagra Foods, Inc., 458 F.3d 98, 100 (2d Cir. 2006). The District Court granted summary
16 judgment dismissing the open dumping claim.

17 II. The Statutory Framework

18 RCRA is a “comprehensive environmental statute that governs the treatment, storage, and
19 disposal of solid and hazardous waste.” Metacon, 575 F.3d at 204–05. It was enacted to
20 promote the national policy of reducing or eliminating hazardous waste and, where waste is
21 nevertheless generated, to provide for the treatment, storage, or disposal of such waste “to
22 minimize the present and future threat to human health and the environment.” 42 U.S.C. §

1 6902(b) (2006). In addition to enforcement by the EPA and designated state agencies, RCRA
2 provides private individuals a means, in some circumstances, by which to commence an action in
3 a district court to enforce RCRA’s waste disposal mandates.⁴ See 42 U.S.C. § 6972 (2006). The
4 citizen suit provision of section 6972(b)(2)(A) sets forth the mandatory requirements for
5 bringing a claim of an imminent and substantial endangerment under subsection (a)(1)(B). Such
6 claim requires that a plaintiff provide notice of a violation, at least 90 days prior to bringing suit,
7 to the EPA Administrator, to the state in which the alleged violation occurred, and to “any
8 alleged violator of such permit, standard, regulation, condition, requirement, prohibition, or
9 order.” 42 U.S.C. § 6972(b)(2)(A) (2006). Suits brought under subsection (a)(1)(A), such as an
10 open dumping claim, are subject to the same notice requirements; however, the applicable delay
11 period is 60 days instead of 90 days. 42 U.S.C. § 6972(b)(1)(A) (2006).

⁴ The citizen suit enforcement section provides, in pertinent part:

Except as [otherwise provided,] any person may commence a civil action on his own behalf — (1)(A) against any person . . . who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter; or (B) against any person . . . including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment

42 U.S.C. § 6972(a) (2006).

1 The Supreme Court has emphasized that “[u]nder a literal reading of the statute,
2 compliance with the 60-day notice provision is a mandatory, not optional, condition precedent
3 for suit.” Hallstrom v. Tillamook Cnty., 493 U.S. 20, 26 (1989). The Court explained that, as a
4 matter of policy, the delay periods represent a congressional compromise “between encouraging
5 citizen enforcement of environmental regulations and avoiding burdening the federal courts with
6 excessive numbers of citizen suits.” Id. at 29. We have echoed this balance in our own
7 precedent, noting that strict compliance with the notice and delay provisions fulfills
8 Congressional intent:

9 First, governmental agencies can take the lead in enforcing environmental
10 regulations, with the hope that an agency may be able to compel compliance
11 through administrative action, thus eliminating the need for any access to the
12 courts. Second, the alleged violator is given a nonadversarial period in which he
13 has the opportunity to comply with the law, thus obviating the need for the citizen
14 suit.

15 Dague v. City of Burlington, 935 F.2d 1343, 1351 (2d Cir. 1991), rev’d in part on other grounds
16 by City of Burlington v. Dague, 505 U.S. 557 (1992).

17 RCRA does not describe the required content of a notice of intent to sue (“NOI”) nor has
18 the Supreme Court shed light on this requirement.⁵ See id. at 1354. However, the EPA has
19 promulgated a regulation, which provides:

20 Notice regarding an alleged violation of a permit, standard, regulation, condition,
21 requirement, or order which has become effective under [RCRA] shall include
22 sufficient information to permit the recipient to identify the specific permit,
23 standard, regulation, condition, requirement, or order which has allegedly been
24 violated, the activity alleged to constitute a violation, the person or persons

⁵ The statute merely provides that commencement of an action must be delayed until “sixty days after the plaintiff has given notice. . . . Notice . . . shall be given in such manner as the Administrator shall prescribe by regulation.” 42 U.S.C. § 6972(c) (2006).

1 responsible for the alleged violation, the date or dates of the violation, and the full
2 name, address, and telephone number of the person giving notice.

3 40 C.F.R. § 254.3(a) (2011) (emphasis supplied). Without detailing what constitutes “sufficient
4 information,” we have held that the content of an NOI must serve the purpose of giving “the
5 appropriate governmental agencies an opportunity to act and the alleged violator an opportunity
6 to comply.” Dague, 935 F.2d at 1354.

7 III. RCO’s Notice of Intent to Sue

8 Omya claims that RCO’s NOI was inadequate because, while it was timely provided to
9 the proper parties, the NOI failed to identify the contaminant upon which the plaintiffs now
10 attempt to premise liability. That is, the NOI expressly specified twenty-one contaminants
11 allegedly contained in Omya’s waste; however, neither AEEA nor arsenic was among those
12 contaminants listed. Moreover, while the NOI alleged that chemicals, including pesticides and
13 Subchapter III hazardous chemicals, were leaching into the groundwater, Omya contends that
14 AEEA is neither a pesticide nor a Subchapter III hazardous chemical. Thus Omya maintains that
15 its motion to dismiss for failure to comply with the RCRA notice provisions was properly
16 granted by the District Court.

17 As noted above, the RCRA regulation governing the contents of an NOI requires the
18 inclusion of “sufficient information to permit the recipient to identify the specific permit,
19 standard, regulation, condition, requirement, or order which has allegedly been violated, [and]
20 the activity alleged to constitute a violation.” 40 C.F.R. § 254.3(a) (2011). We have not
21 previously examined closely the question of what constitutes “sufficient information” for these
22 purposes in an NOI under RCRA. But we have addressed that question for notices under the
23 Clean Water Act (“CWA”), which are governed by a similar regulation. See Catskill Mountains

1 Chapter of Trout Unlimited, Inc. v. City of New York, 273 F.3d 481 (2d Cir. 2001). The
2 regulation governing the contents of an NOI under the CWA, like the corresponding RCRA
3 regulation, requires the inclusion of “sufficient information to permit the recipient to identify the
4 specific standard, limitation, or order alleged to have been violated, [and] the activity alleged to
5 constitute a violation.” 40 C.F.R. § 135.3(a) (2011). The CWA, 33 U.S.C. § 1311(a), provides
6 that “the discharge of any pollutant by any person shall be unlawful,” unless done in compliance
7 with a duly issued discharge permit, 33 U.S.C. § 1311(a) (2006), and defines “pollutant” as
8 “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions,
9 chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded
10 equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged
11 into water,” § 1362(6). Accordingly, in Catskill Mountains, we determined that, to satisfy the
12 regulation, an NOI under the CWA “must identify with reasonable specificity each pollutant that
13 the defendant is alleged to have discharged unlawfully.” 273 F.3d at 488.

14 In Catskill Mountains, recreational users of Esopus Creek, located in upstate New York,
15 brought suit against New York City (the “City”). The City had been operating the Schoharie
16 Dam and Reservoir, also located in upstate New York, to provide drinking water to New York
17 City. In doing so, the City diverted water from the Reservoir, through Shandaken Tunnel, and
18 into Esopus Creek, which eventually connects with the Hudson River and flows toward the City.
19 Id. at 484. The plaintiffs in Catskill Mountains served an NOI that stated that “the City has
20 discharged pollutants in the form of Total Suspended Solids and Settleable Solids into the
21 Esopus Creek.” Id. at 486 (internal quotation marks omitted). The plaintiffs then filed a
22 complaint, alleging that the City was in violation of § 1311(a), the CWA provision prohibiting
23 “the discharge of any pollutant” except in compliance with a duly issued discharge permit (an

1 “NPDES permit”). The plaintiffs contended that Shandaken Tunnel and certain “earth disturbing
2 activities” were discharging pollutants “in the form of suspended solids, turbidity, and heat into
3 Esopus Creek.” Id. at 485. The City agreed that it lacked a NPDES permit to discharge into
4 Esopus Creek but argued that “it need not obtain one because its releases do not constitute
5 ‘discharges’ as defined by the CWA.” Id.

6 We concluded that the NOI gave sufficient notice of some of plaintiffs’ claims but
7 insufficient notice of others. We found that the NOI’s mention of “suspended solids” gave
8 sufficient notice of the claims of unpermitted discharges of suspended solids and of turbidity.
9 On the other hand, we determined that the plaintiffs’ NOI did not provide adequate notice of
10 their claim regarding thermal discharges. We stated that “to be ‘sufficient,’ the information
11 provided [in the NOI] must include the pollutant alleged to be the basis of a violation
12 subsequently alleged in the complaint,” reasoning that “the NOI letter must differentiate
13 pollutants from nonpollutants and one pollutant from another.” Id. at 487; accord Friends of the
14 Earth, Inc. v. Gaston Copper Recycling Corp., 629 F.3d 387 (4th Cir. 2011) (holding that where
15 plaintiffs failed to specify “cadmium, zinc, iron, or oil and grease” in their NOI, the district
16 court’s liability findings as to those pollutants must be reversed); see also Waterkeepers N. C.A.
17 v. AG Indus. Mfg. Inc., 375 F.3d 913, 917 (9th Cir. 2004) (finding an NOI adequate where, inter
18 alia, it “specifically identifies pollutants associated with [the defendant’s] operations”). Because
19 the CWA defines “heat” and “solid waste” as distinct pollutants, see 33 U.S.C. § 1362(6) (2006),
20 the discharge of which can support distinct penalties, we ruled that the plaintiffs’ NOI, which
21 mentioned only the discharge of “solids,” did not give the City adequate notice that the plaintiffs
22 intended to allege in their complaint a second violation of the CWA based on the discharge of
23 “heat.” Id. at 487, 489.

1 Although we recognized in Catskill Mountains that “[t]he rationale for [requiring an NOI
2 to identify specific contaminants] is most apparent in the context of a suit alleging discharges in
3 excess of NPDES permit limitations, in which the defendant may be discharging some pollutants
4 lawfully and others unlawfully,” we did not limit the applicability of the rule to NPDES permit
5 cases. Catskill Mountains, 273 F.3d at 487; see id. at 488 (“The principle applies equally where,
6 as here, the defendant has failed altogether to obtain a permit.”). In fact, our description of the
7 policies underlying the NOI requirements demonstrates the general applicability of the Catskill
8 Mountains rule: “Specific knowledge of the pollutants allegedly discharged unlawfully makes it
9 easier for the defendants to promptly rectify the problem.” Id. at 488.

10 While we recognize the differences between RCRA and the CWA, we nonetheless have
11 viewed the CWA notice requirements as “analogous” to the RCRA notice requirements. See
12 Bldg. & Const. Trades Council of Buffalo, NY & Vicinity v. Downtown Dev., Inc., 448 F.3d
13 138, 158 (2d Cir. 2006) (“Building Trades”) (describing Catskill Mountains as “an analogous
14 context” in an action brought under RCRA); see also Burnette v. Carothers, 192 F.2d 52, 57 (2d
15 Cir. 1999) (discussing the “substantially identical provisions” for notice under the CWA and
16 RCRA).⁶ Moreover, we have noted that the legislative objectives underlying both the CWA and
17 RCRA notice requirements are the same. See Building Trades at 153–54 (stating that citizen
18 suits require notice and delay to allow both the government and the potential defendant time to
19 respond to a citizen’s concerns before the citizen plaintiff may file suit).

⁶ Like RCRA, the CWA does not describe the content of an NOI. However, the corresponding CWA regulation directs, like a similar regulation promulgated pursuant to RCRA, that “[n]otice . . . shall include sufficient information to permit the recipient to identify the specific standard, limitation, or order alleged to have been violated” 40 C.F.R. 135.3(a) (2011) (emphasis supplied).

1 In Building Trades we examined the sufficiency of an NOI alleging a violation of RCRA.
2 There, the plaintiff alleged that the defendants had created an imminent and substantial
3 endangerment due to “the alleged disposal of solid and hazardous waste contaminating
4 groundwater, surface waters, soil, residences, and air.” Id. at 143. The defendants argued that
5 the plaintiff’s NOI “was insufficient because it failed to identify any particular RCRA pollutants
6 that had been discharged by the defendants.” Id. at 157. Citing our holding in Catskill
7 Mountains that notice “must identify with reasonable specificity each pollutant that the
8 defendant is alleged to have discharged unlawfully,” id. at 158 (citing Catskill Mountains, 273
9 F.3d at 488), we held that the plaintiff’s notice was sufficient where it described the specific
10 contaminants at issue, alleging that “groundwater contaminants disposed of at the site include
11 one or more of chromium, cadmium, cobalt, mercury, lead, arsenic, zinc, silver, nickel, and
12 polycyclic aromatic hydrocarbons,” id. at 158 (internal quotation marks and alterations omitted).

13 Here, because RCO’s NOI did not identify AEEA and arsenic as contaminants in Omya’s
14 waste, it did not give Omya adequate notice of the endangerment and open dumping violations
15 for which RCO seeks to hold Omya liable. Section 6972(a)(1)(B) of RCRA prohibits
16 “contributing to the past or present handling, storage, treatment, transportation, or disposal of
17 any solid or hazardous waste which may present an imminent and substantial endangerment to
18 health or the environment.” RCO claims that Omya’s practice of dumping its processing waste
19 into unlined pits presents “an imminent and substantial endangerment” in violation of §
20 6972(a)(1)(B) because AEEA, a toxic chemical in the waste, is seeping into groundwater. The
21 activity alleged to constitute the violation is not simply the dumping of waste into unlined pits,
22 but rather the dumping of waste contaminated with AEEA into unlined pits. Accordingly,
23 RCO’s NOI, which alleged that Omya was dumping waste into unlined pits but did not identify

1 AEEA as a waste contaminant, did not include “sufficient information to permit the recipient to
2 identify . . . the activity alleged to constitute a violation.” 40 C.F.R. § 254.3 (2011).

3 Similarly, the NOI also gave inadequate notice of the open dumping violation that RCO
4 subsequently sought to prosecute. Section 6945(a) of RCRA prohibits “open dumping” as
5 defined by regulation. See 42 U.S.C. § 6945(a) (2006) (“Upon promulgation of criteria under §
6 6907(a)(3) of this title, any solid waste management practice or disposal of solid waste or
7 hazardous waste which constitutes the open dumping of solid waste or hazardous waste is
8 prohibited”); 40 C.F.R. § 257.1(a)(2) (2011) (defining “open dumping” as any practice that
9 violates §§ 257.1 through 257.4). RCO claims that Omya’s practice of dumping its processing
10 waste into unlined pits is prohibited “open dumping” because the waste is contaminating
11 underground drinking water sources with arsenic in violation of 40 C.F.R. § 257.3-4. See
12 §257.3-4(a) (“A facility or practice shall not contaminate an underground drinking water source .
13 . . .”). The specific regulation allegedly violated is § 257.3-4, and the activity alleged to
14 constitute the violation is the dumping of waste contaminated with arsenic into unlined pits.
15 RCO’s NOI, however, alleged only that Omya’s “disposal of [processing] waste into the
16 environment constitutes illegal open dumping,” and did not mention arsenic or allege that the
17 practice violated any particular “open dumping” regulation. Accordingly, RCO’s NOI did not
18 include “sufficient information to permit the recipient to identify the specific . . . regulation . . .
19 which has allegedly been violated, [or] the activity alleged to constitute a violation.” § 254.3.

20 Here, plaintiffs concede that none of the twenty-one contaminants listed in RCO’s NOI
21 gives rise to liability under either the endangerment or open dumping prohibitions of RCRA.
22 That being so, RCO’s failure to give notice of the specific pollutants now at issue circumvents
23 the dual goals that the Supreme Court has said motivate the RCRA notice requirements: (1)

1 “allow[ing] Government agencies to take responsibility for enforcing environmental
2 regulations”; and (2) “giv[ing] the alleged violator an opportunity to bring itself into complete
3 compliance with the Act.” Hallstrom, 493 U.S. at 29 (internal quotation marks omitted);
4 Building Trades, 488 F.3d at 153–54; Catskill Mountain, 273 F.3d at 488; see also Friends of the
5 Earth, 629 F.3d at 400 (analyzing the adequacy of the content of an NOI by examining whether
6 the information “provide[d] the alleged violator with enough information to attempt to correct
7 the violation and avert the citizen suit”); Pub. Interest Research Grp. of NJ, Inc. v. Hercules, Inc.,
8 50 F.3d 1239, 1249 (3rd Cir. 1995) (same). While AEEA apparently was not a cognizable
9 environmental concern until the draft Report was published in 2007, nothing prevented RCO
10 from then giving notice to Omya of a purported violation of RCRA for the discharge of that
11 specific chemical. Likewise, RCO was free to give notice to Omya of alleged improper
12 discharge of arsenic after RCO’s experts and consultants discovered that arsenic was present to
13 some degree in the groundwater on-site at the Plant.

14 Because the liability that RCO asserts depends on the presence of particular contaminants
15 in Omya’s processing waste, namely AEEA and arsenic, we discern no principled reason why
16 we should not apply the holding of Catskill Mountains to RCO’s notice letter. In Catskill
17 Mountains, we held that to be sufficient, an NOI for a claim of discharge of a pollutant in
18 violation of the CWA, 33 U.S.C. § 1311 (2006), must identify the pollutant with sufficient
19 specificity to permit the recipient to identify the specific standard, limitation, or order alleged to
20 be violated and the activity alleged to constitute the violation. 273 F.3d at 487. Accordingly, we
21 now hold that when an alleged violation of RCRA depends on the presence or release of a
22 particular contaminant, the NOI must identify the contaminant alleged to be the basis of the
23 violation with sufficient specificity to permit the recipient to identify the specific legal provision

1 alleged to be violated and the activity alleged to constitute the violation. See 40 C.F.R. §
2 254.3(a) (2011).⁷

3 While we recognize that this rule may prevent plaintiffs in some cases from bringing a
4 citizen suit to enforce provisions of RCRA, that is a consequence of the EPA’s duly authorized
5 regulation. Whether the regulation is wise is not a question entrusted to the courts.

6 For the foregoing reasons, we hold that RCO’s claim that AEEA presents an imminent
7 and substantial endangerment, in violation of RCRA, was properly dismissed under Rule
8 12(b)(6) by the District Court.⁸ For similar reasons, the plaintiffs’ failure to specify arsenic in
9 their NOI supports the District Court’s dismissal of the endangerment and the open dumping
10 claims. Of course, the dismissal of this action will not prohibit RCO from again giving notice to
11 Omya and filing its suit in compliance with RCRA’s notice and delay requirements upon future
12 discovery of potential violations of the federal environmental laws. See Hallstrom, 493 U.S. at
13 32.

14 **CONCLUSION**

⁷ To establish a violation of some provisions of RCRA, a plaintiff need not plead or prove the presence or release of any particular contaminant. Compare 40 C.F.R. § 257.3-1(a) (prohibiting solid waste disposal facilities in floodplains from “restrict[ing] the flow of the base flood . . . so as to pose a hazard to human life, wildlife, or land or water resources”), with § 257.3-3(a) (prohibiting solid waste disposal facilities from “caus[ing] a discharge of pollutants into waters of the United States that is in violation of the requirements of the National Pollutant Discharge Elimination System (NDPES) under Section 402 of the Clean Water Act, as amended”). Of course, an NOI need not identify a particular contaminant if the violation alleged may be proved without establishing the presence or release of that particular contaminant.

⁸ Any error that might be assigned to the District Court in taking Omya’s evidence regarding liability due to AEEA at the remedy hearing, while thereafter rejecting RCO’s motion for leave to present expert testimony to controvert that evidence, is immaterial in light of our disposition.

1 Because we determine that, in a case of this nature, a proper NOI must specify each
2 alleged containment, we need not reach RCO's other claims.⁹ In accordance with the foregoing,
3 the judgment is affirmed.

⁹ As in Building Trades, “[f]or the purposes of this appeal, we assume that non-compliance with the pre-suit notice provisions of the Resource Conservation and Recovery Act . . . does not affect a federal court’s subject matter jurisdiction.” Building Trades, 448 F.3d at 158 n.14 (citing Hallstrom, 493 U.S. at 31 (“[W]e need not determine whether § 6972(b) is jurisdictional in the strict sense of the term.”)).