UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF VERMONT

Ernest Brod, Robert DeMarco, Beverly Peterson, and Residents Concerned about Omya Plaintiffs, vs. Omya, Inc., and Omya Industries, Inc. Defendants.	Civil No. 2:05-CV-182 **REPLY IN SUPPORT OF PLAINTIFFS' MOTION FOR PARTIAL SUMMARY JUDGMENT ON LIABILITY AND OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT ON COUNT I**

INTRODUCTION

Plaintiffs Ernest Brod, Robert DeMarco, Beverly Peterson, and Residents Concerned about Omya (collectively "Plaintiffs" or "RCO") respectfully submit the following combined Reply in Support of Plaintiffs' Motion for Partial Summary Judgment on Liability and Plaintiffs' Opposition to Defendants' Motion for Summary Judgment on Count I on Plaintiffs' First Amended and Supplemental Complaint (the "Complaint").

To prevail in summary judgment on the "open dumping" claim, RCO must demonstrate that Omya's solid waste disposal facilities fail to meet the U.S. Environmental Protection Agency's ("EPA") open dump criteria found at 40 C.F.R. § 257. These criteria are adopted by EPA, pursuant to the Resource Conservation and Recovery Act ("RCRA"), in order to determine "which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment." 40 C.F.R. § 257.1(a); 42 U.S.C. § 6944(a). The open dump criteria prohibit practices which contaminate an underground drinking water source above the maximum contaminant level ("MCL") set by EPA. 40 C.F.R. § 257.3-4. Omya argues that, although EPA has revised the MCL for arsenic downward from fifty parts per billion to ten parts per billion, this Court is obligated to apply the older and now outdated MCL in its application of

the open dump criteria. Such an interpretation of the open dump criteria is inconsistent with the language and purpose of both the open dump criteria and RCRA, and should be rejected as a matter of law. Omya's motion for summary judgment is based upon this mistaken interpretation of the open dump criteria and so should be denied.

Further, the material facts relevant to Count I of RCO's Complaint demonstrate that Omya is engaged in open dumping. Omya generates solid waste containing significant volumes of organic chemicals. Omya disposes of this waste in open unlined pits excavated into fractured bedrock and which are hydrologically connected to the groundwater below. As a result of the anaerobic conditions in the groundwater caused by the decomposition of the organic chemicals, arsenic dissolves into solution at levels above the applicable MCL of ten parts per billion. Although Omya attempts to manufacture a factual dispute by contesting non-material facts and offering unsupported theories for alternative sources of contamination, the conclusion that Omya's waste disposal practices have caused the levels of arsenic in the groundwater under the site to exceed the applicable MCL cannot reasonably be disputed. RCO's motion for summary judgment on Count I, the open dumping claim, should be granted.

In addition, the Court should grant RCO's motion for summary judgment on Count II, that Omya's disposal presents an "imminent and substantial endangerment." 42 U.S.C. § 6972(a)(1)(B). RCO has presented undisputed facts that arsenic is present in groundwater under the site at levels which pose a threat to human health. This alone is sufficient to establish an imminent and substantial endangerment. Misunderstanding the RCRA imminent and substantial endangerment standard, Omya incorrectly argues that RCO must prove that the arsenic contaminated groundwater is migrating offsite at levels above the MCL. Cases interpreting the standard make clear that groundwater contamination under a facility like Omya's is by itself

sufficient evidence for an imminent and substantial endangerment to human health and the environment.

RCO has also presented undisputed evidence that unidentified organic chemicals are found in the groundwater which may pose a threat to human health and the environment. Again misperceiving the imminent and substantial endangerment standard, Omya argues that RCO must specifically identify the chemicals and amounts. The presence of unidentified organic chemicals in groundwater is, however, enough to authorize this Court to order that Omya undertake further testing and analysis to determine the extent of the risk.

RCO has presented evidence sufficient to show that Omya is engaged in open dumping and has caused an imminent and substantial endangerment. Therefore, RCO requests summary judgment on both Counts I and II of its Complaint.

ARGUMENT

I. Omya Has Failed To Put Forth Facts that Create Any Genuine Issue

RCO has established that Omya's waste disposal practices cause arsenic and organic chemicals to contaminate the groundwater in violation of the open dumping claim and pose an imminent and substantial endangerment to health and the environment. Omya has failed to offer sufficient evidence which create a genuine issue of material fact. "When a motion for summary judgment is made and supported," an adverse party "must set forth specific facts showing that there is a genuine issue for trial." Fed. R. Civ. P. 56(e). Omya has failed to meet this burden.

A. Standard for Summary Judgment

RCO's memorandum in support of its motion for summary judgment and its accompanying affidavits, appendices, and attachments allege facts and provide evidence that is sufficient for this court to find Omya liable for the contaminated groundwater beneath Florence

Facility. Summary judgment is appropriate when there is "no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c); Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986); Vermont Elec. Power Co. v. Hartford Steam Boiler Inspection & Ins. Co., 72 F. Supp. 2d 441, 444 (D. Vt. 2002) (citing Gallo v. Prudential Residential Servs., 22 F.2d 82, 86 (2d Cir. 1998)).

In order to defeat summary judgment, facts that are disputed must be material. "[O]nly disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). "If the evidence [presented by the nonmoving party] is merely colorable, or is not significantly probative, summary judgment may be granted." Scotto v. Almenas, 143 F.3d 105, 114 (2d Cir. 1998) (citing Anderson, 477 U.S. at 249-50). When a nonmoving party offers facts that are immaterial, they do not create a genuine issue of material fact.

Offering facts which are not supported by proof does not create a genuine issue of material fact. "Conclusory allegations, conjecture, and speculation are insufficient to create a genuine issue of fact on motion for summary judgment." Kerzer v. Kingly Mfg., 156 F.3d 396, 400 (2d Cir. 1998) (citations omitted); see also Allen v. Coughlin, 64 F.3d 77, 80-81 (2d Cir. 1995). To defeat a motion, "there must be evidence on which the jury could reasonably find for the [nonmovant]." Scotto, 143 F.3d at 114 (citing Anderson, 477 U.S. at 252). Merely asserting the existence of a dispute, without evidence to support the claim, does not defeat summary judgment.

Similarly, "[e]ven where facts are disputed, in order to defeat summary judgment, the nonmoving party must offer enough evidence to enable a reasonable jury to return a verdict in its favor, and may not rely on conclusory allegations or unsubstantiated speculation." Byrnie v.

Town of Cromwell, 243 F.3d 93, 101 (2d Cir. 2001); see also D'Amico v. City of New York, 132 F.3d 145, 149 (2d Cir. 1998); Argus Inc. v. Eastman Kodak Co., 801 F.2d 38, 42 (2d Cir. 1986) (stating that a "mere conjecture or speculation by the party resisting summary judgment does not provide a basis upon which to deny" the motion); Scotto, 143 F.3d at 114. When a nonmovant falls short of creating a dispute over genuine issues of material fact, the moving party is entitled to summary judgment.

B. The Groundwater Beneath Omya's Verpol Facility Is Contaminated with Arsenic and Organic Chemicals

There can be no reasonable dispute that both arsenic and organic chemicals have reached the groundwater below Omya's facility. Arsenic has been found in multiple locations at levels exceeding the ten parts per billion MCL. Organic chemicals have also been found in the groundwater. See, e.g., SMF ¶¶ 3, 19, 24-28, 35-37, 50-61, 69.

With regard to arsenic levels in groundwater, testing performed at the request of RCO has proven the presence of arsenic at levels exceeding the MCL of ten parts per billion. SMF ¶¶ 17-19, 43-49, 54-55; Attachment J, Data Validation for Omya Florence, Vermont Inorganic Analysis Data, Total Metals in Groundwater and Tailings Waste (Trillium, Inc., Jun. 5, 2007) at 19.[1] Omya's own expert, Dr. Peggy O'Day, has accepted the presence of arsenic exceeding the MCL of ten parts per billion in the groundwater under Omya's facility. SMF ¶ 46(d); Attachment Y, Expert Report of Peggy O'Day (July 18, 2007) at 3 [hereinafter "O'Day Report"].

The presence of arsenic in the groundwater above the MCL of ten parts per billion is also supported by testing performed at Omya's own request. SMF ¶ 46(d), (e); Attachment U, Omya Inc., Verpol Plant Spring 2007 Monitoring Report, (Heindel & Noyes, July 27, 2007) at 11; See also SMF ¶¶ 67-68; Attachment BB, Deposition of Peggy O'Day, for Brod, etal., vs. Omya, et al.

[1] The references to specific attachments throughout, such as Attachment J here, refers to the exhibits attached to the Declaration of David K. Mears accompanying Plaintiffs' opening summary judgment motion of August 2007.

(transcript taken August 23, 2007) at 12:7-13 [hereinafter "O'Day Deposition"]. The presence of arsenic in solution in groundwater at levels exceeding the MCL beneath Omya's facility is a material fact for which there can be no dispute.

Similarly, there can be no reasonable dispute that the groundwater beneath Omya's waste disposal units is contaminated with organic chemicals. Omya has admitted in their Response to RCO's Request for Admissions that a suite of chemicals has been found in the groundwater. SMF ¶ 69; Attachment Q, Defendants' Response to Plaintiffs' Request for Admissions (Dec. 12, 2006) #38, [hereinafter "Omya's Admissions"]; Attachment BB, O'Day Deposition at 89:16-20. The presence of two of these chemicals, tall oil hydroxyethylimidazoline ("tall oil") and acetone, in groundwater under the Florence Facility has led the Commissioner of the State of Vermont's Department of Environmental Conservation to conclude that, "[t]all oil and acetone in OMYA's waste material may pose a threat to the public safety and health and the environment." Attachment S, Commissioner's Decision in Limited Reconsideration of Omya Declaratory Ruling, Department of Environmental Conservation, Jeffrey Wennberg (Apr. 29, 2005) at 6. The full extent of organic chemical contamination is yet to be determined. Omya's testing data indicates the presence of unidentified chromatogram peaks. Attachment L, Tailings and On-site Well Samples Organic Acids Analysis Results (Trillium, Inc. Feb. 26, 2007).

C. Omya's Waste Disposal Practices Cause Arsenic Contamination of Groundwater under the Florence Facility

The following facts, discussed in more detail below and supported by references to Omya's own admissions, expert testimony and reports, demonstrate that Omya's practice of dumping massive volumes of waste material contaminated with organic chemicals into open unlined pits has caused arsenic contamination of the groundwater under Omya's Florence Facility. The conditions created by Omya's waste disposal practices cause arsenic to dissolve

into solution. Omya dumps significant volumes of organic chemicals into the waste disposal pits which are in direct hydrological contact with groundwater. These organic chemicals decay through microbial action. This decay causes anaerobic conditions.

This process is a well known scientific phenomenon as is the fact that metals such as arsenic, manganese and lead move out of mineral form into solution in the presence of anaerobic conditions. Further, this process provides the only explanation supported by facts for the arsenic contamination found under Omya's facility. Omya's citation of sampling data indicating aerobic conditions is insufficient evidence, even if accepted by the Court, to support a ruling in Omya's favor. The fact that elevated levels of arsenic have been found in the groundwater, along with elevated levels of manganese and iron, is proof that the conditions under the facility are anaerobic. Also, Omya has failed to offer an alternative source of arsenic which is supported by any facts despite having significant expert resources at its disposal.

1. Omya's Waste is in Direct Contact with the Groundwater

It is undisputed that Omya places its waste in unlined former quarries with fractured bedrock surfaces. Attachment Q, Omya's Admissions #1, 2; SMF ¶¶ 10, 28. The depth of these quarries is below the groundwater level and the waste material, which is saturated and largely submerged, is in direct contact with the groundwater. SMF ¶ 15; Attachment E, Section 5, Final Phase I Report Omya Verpol Facility- Florence, Vermont 34-35 (Cambridge Environmental Inc., Geosyntec Consultants, Jan. 21, 2007) (see e.g. line 3.1)[hereinafter "Phase I Report"]; Attachment BB, O'Day Deposition at 25:15. Omya's Primary expert on arsenic admits the accuracy of this characterization of its waste disposal practices. Attachment BB, O'Day Deposition at 24:10-14.

2. Omya's Waste Contains Arsenic

There can be no dispute that Omya's waste contains arsenic. A sample of Omya's waste from the waste pits was tested and found to contain arsenic. SMF ¶¶ 7-8, 23; Smith Aff. ¶11m; Attachment BB, O'Day Deposition at 48:9-12, 58:16-19. These results, indicating an arsenic concentration of approximately 3.56 parts per million, were accepted by Omya's expert, Dr. O'Day, in her expert report. Attachment Y, O'Day Report at 1; Attachment BB, O'Day Deposition at 49:20-21. This fact has not been controverted by Omya.

3. Omya's Waste Contains Organic Chemicals which Decompose and Use Up Oxygen in the Process

It is beyond dispute that Omya's waste contains organic chemicals, such as tall oil, amine acetate, aminoethyl-ethanolamine, ortho-phenyl phenol, acetone, isopropyl alcohol, stearic acid, polyacrylamide, acrylamide, methylisothiocyanate, methylamine, and toluene, and Custamine 51D. Attachment Q, Omya's Admissions #36; SMF ¶¶ 3, 20, 24-27, 61, 69; Smith Aff. at ¶11f. Omya does not controvert the presence of organic chemicals in its waste materials. Attachment BB, O'Day Deposition at 89:3-6. Sampling performed by RCO's experts confirms the presence of organic chemicals in Omya's waste. SMF ¶¶ 24, 29, 32, 35, 37, 61; Smith Aff. ¶11e; See also SMF ¶¶ 64-65.

Further, there can be no reasonable dispute that that organic chemicals, such as the ones present in Omya's waste, decompose in water as the result of bacterial activity that leads to anaerobic conditions. Attachment E, Phase I Report at 24. Omya's expert concurs with this conclusion in her deposition testimony. Attachment BB, O'Day Deposition 86:22-25 ("[Y]ou would expect in any groundwater system that as waters become isolated from the surface that the dissolved oxygen is going to go away. It's going to get used up usually by microorganisms."); see also SMF ¶¶ 35-37, 40-41, 59. In this process, oxygen is used up and in the presence of

sufficient amounts of organic chemicals, so much oxygen is used up that anaerobic conditions result. SMF ¶¶ 35-41, 59; Smith Aff. at ¶11g; Attachment E, Phase I Report at 57.

There can be no reasonable dispute that the conditions in Omya's waste disposal pits are anaerobic. SMF ¶¶ 35-41, 59; Attachment E, Phase I Report at 79. Omya's expert, Dr. O'Day, notes this observation in her deposition testimony without dispute. Attachment BB, O'Day Deposition at 89:3-8, 89:16-20, 90:20-25. Tests performed by Mr. Pitkin and results analyzed by Dr. Smith prove the anaerobic character of the waste and the groundwater. SMF ¶¶ 37-40, 59; Smith Affidavit ¶11.

Omya argues that the issue of whether the conditions in groundwater under Omya's facility are anaerobic is a disputed fact based upon the work of their expert Meddie Perry. Defendants' Opposition to Plaintiff's Motion for PSJ at 6 [hereinafter "Omya Opposition"]. Mr. Perry's conclusions fail however, to refute the basic and significant fact noted below, that arsenic, along with manganese and iron, are found in elevated concentrations in the groundwater under Omya's facility. In light of this evidence, Omya can only defeat summary judgment by presenting sufficient countervailing evidence that, when considered by the Court, would entitle them to a ruling in their favor. Mr. Perry's citation to limited sampling data fails to meet this burden as it fails to refute or provide an alternative explanation for the elevated levels of arsenic, manganese and iron.

4. Arsenic and Other Metals Move into Solution Under Anaerobic Conditions

There can be no reasonable dispute that arsenic moves into solution under anaerobic conditions. SMF ¶¶ 35-36, 38; Smith Affidavit ¶11c. This phenomenon is reported widely in scientific literature including reports relied upon by Omya's own experts. Attachment Y, O'Day

Report at 10 (citing Attachment CC, David Vaughan, Arsenic, 22 ELEMENTS 71 (April 2006)); See also SMF ¶ 40.

Furthermore, the size of the solid portion of Omya's waste, on average approximately fifty microns,[2] increases the rate at which arsenic dissolves into solution. Omya's expert, Dr. O'Day, confirms this scientific fact in her deposition testimony. Attachment BB, O'Day Deposition at 69:10-14.

These facts all support the conclusion that Omya's waste disposal practices are the cause of the arsenic contamination reaching the groundwater. The biological and chemical processes taking place in Omya's waste disposal units are the most logical and obvious mechanisms for the presence of arsenic in solution. Direct contact with the groundwater enables the arsenic in solution to enter the groundwater. SMF ¶¶15, 35, 42-51, 54, 67-68; Attachment BB, O'Day Deposition at 24:10-14.

5. Omya Attempts to Manufacture a Genuine Issue of Material Fact Regarding the Cause of the Arsenic Contamination by Offering Unsubstantiated Theories

Omya advances two alternative theories of causation. Omya Opposition at 4-5, Omya's first theory is that the arsenic contamination results from natural processes. Id. This theory is contradicted by the fact that samples taken from many wells around Omya's facility, and several taken from onsite wells did not reveal detectable levels of arsenic. SMF ¶¶ 54-56. The fact that Omya has identified one offsite well, the Sandillo Well, Omya Opposition at 16-17, with low levels of arsenic, is not sufficient to rebut this undisputed evidence. Further, this natural processes theory is unsupported by any proof and so is speculative. Omya's second alternative theory, that the arsenic in groundwater is the result of historic pesticide use, is also unsupported

[2] A micron is 1 millionth of a meter. To put the small size into perspective, the "width of a human hair is about 100 microns." *Particulates*, ENCYCLOPEDIA OF ENVIRONMENTAL SCIENCE 273 (John Mongillo and Linda Zierdt-Warshaw ed., Oryx Press 2000).

by facts and speculative. As captured in the following excerpt from Dr. O'Day's deposition, Omya has no data to support the alternative theories for why arsenic is found at elevated levels under Omya's facility:

> "Q. In your expert report, you note the potential – you conclude one potential source of arsenic found in solution under the Florence facility is actual bedrock under the facility. Do I understand that correctly?"
>
> "A. Potentially, yeah. I don't have any evidence for that, but if I were to speculate a little bit about where arsenic comes from, and this is just in general for where we've seen arsenic in other places that don't have an obvious contaminant source, the choices usually are there's some groundwater bedrock source that it's coming from."

Attachment BB, O'Day Deposition at 112:4-15.

> "Q. With regard – you've also mentioned that one potential source of arsenic in the groundwater may be agricultural applications of arsenate, arsenic-based pesticides; is that correct?
>
> "A. Yes.
>
> "Q. Do you know if there were ever orchards on OMYA's facility in Florence?
>
> "A. I don't know.
>
> "Q. Or do you know if they ever raised any – or if there was ever historically any crops ever raised there?
>
> "A. I really don't have any information about that."
>
> "Q. Do you have any knowledge about any agricultural uses in the immediate area surrounding OMYA's facility?
>
> "A. I haven't researched that, no.
>
> "Q. I mean do you have any knowledge at all that would suggest to you that specific to this area that arsenical pesticides were applied to crops or orchards in the area?
>
> "A. Not specifically for this area. The information I have is more general and I believe it was – there's some references in what I've cited in my expert report about the potential for arsenical pesticides which were used quite widely throughout the United States, but in New England, that there are reports that arsenical pesticides may be a contributing factor and those references are in my expert report. But I don't know anything specifically about this particular site or the area around the site."

Attachment BB, O'Day Deposition at 137:10 – 138:16.

Importantly, Dr. O'Day does not rule out the possibility that Omya's waste is the source of the arsenic contamination. Dr. O'Day recommends the use of a "reactive transport model,"

Attachment BB, O'Day Deposition at 93:23, which would demonstrate "the thermodynamic solubility of the mineral and the dissolution rate of the mineral under a particular set of environmental conditions." Attachment Y, O'Day Report at 2. This modeling has not been done and could serve as the basis of injunctive relief granted by this Court. The mere fact that Dr. O'Day would prefer to perform complex modeling before reaching a conclusion about the source of the arsenic is not, however, sufficient to create a genuine issue of material fact. RCO has presented a logical chain of undisputed facts which, when considered in toto, present the only reasonable explanation for the presence of arsenic in groundwater under Omya's facility. In order to defeat summary judgment, Omya must do more than provide alternative, unsupported theories. "Conclusory allegations" and "conjecture" are insufficient to defeat summary judgment. Kerzer, 156 F.3d at 400; Byrnie, 243 F.3d at 101.

D. Contaminated Groundwater Travels Offsite and Is a Source of Drinking Water for Local Residents

The groundwater beneath Omya's facility is connected to the groundwater in the neighboring vicinity and serves as a drinking water source. SMF ¶¶ 67-68, 70-74; Attachment Q, Omya's Admissions ##18-20, 22-24, 28, 29; Attachment F, Omya Inc. Verpol Plant Tailings Product: Site Characterization Report (Heindel & Noyes, Aug. 15, 2005) at 27, 32-36, 38 [hereinafter "Site Characterization Report"]; Attachment R, Omya Inc., Verpol Plant Tailings Geophysical Study (Heindel & Noyes, Sept. 9, 2004) at 16,18 ("Geologic Cross Section A - A`" and "Geologic Cross Section D - D`" attachments thereto). Groundwater from Omya's facility migrates towards environmental receptors. Attachment E, Phase I Report at 12, 21-22, 28; Attachment Q, Omya's Admissions at # 22; Attachment G, Expert Report of Ameddia Perry (May 7, 2007) at 3. Residential drinking water wells are on the east side of the Florence Facility a likely location for contaminants to travel. Attachment E, Phase I Report at 105 fig. 5

(identifying drinking water wells, seeps, and springs).

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Collectively, the undisputed facts described above and offered in support of RCO's Motion for Summary Judgment and reasonable interpretations of those facts offered by RCO's experts provide a sufficient basis for this Court to hold that there are no genuine issues of material fact.

II. RCO Is Entitled to Judgment as a Matter of Law on Both the Open Dumping and Imminent and Substantial Endangerment Claims

A. The Relevant MCL for Arsenic is Ten Parts Per Billion

Under EPA's open dump criteria, the MCLs developed under the Safe Drinking Water Act, 42 U.S.C. § 300 *et. seq.*, are the standard for determining whether waste disposal practices are considered open dumping. These criteria state that "a facility or practice or practice shall not contaminate underground drinking water sources beyond the solid waste boundary." 40 C.F.R. §257.3-4 (emphasis added). The criteria define "contaminate" as the "introduc[tion of] a substance that would cause the concentration of that substance in the groundwater to exceed the maximum contaminant level specified in appendix I." 40 C.F.R. §257.3-4. Notably, Appendix I is titled, "Maximum Contaminant Levels (MCLs) Promulgated Under the Safe Drinking Water Act." 40 C.F.R. §257 App. I. In light of this language, there can be no plausible suggestion that EPA's choice of the term "maximum contaminant level" was accidental; this term is a clear reference to the national primary standards for drinking water set by EPA under the Safe Drinking Water Act. See also 44 Fed.Reg. 53438, 53445 (Sept. 13, 1979).

It is important to understand that EPA did not engage in a separate contaminant by contaminant analysis of what level of contamination would satisfy the statutory standard (i.e. whether waste disposal facilities and practices pose a reasonable probability "of adverse effects

on health and the environment" under Section 4004(a) of RCRA, 42 U.S.C. § 6944(a)). Rejecting that approach, EPA instead determined that the risk analysis performed as part of the establishment of primary drinking water standards was a suitable proxy for that determination. 44 Fed. Reg. 53438, 53445-46 (Sept. 13, 1979). In the preamble to the 1979 adoption of the open dump criteria, EPA stated,

> In defining the unacceptable effects of such disposal on ground water, EPA has concluded that solid waste activities should not degrade ground water beyond levels established to protect human health. The criteria are designed to achieve that objective.

Id. at 53445.

For this reason, the MCLs adopted by EPA into Appendix I were drawn directly from the MCLs in effect at the time. Id. at 53446 ("for purposes of these criteria, EPA will rely only on established drinking water standards."). Since the open dump criteria were first adopted, EPA has continued to draw directly from the MCLs adopted pursuant to the Safe Drinking Water Act when updating the MCLs in Appendix I. 44 Fed. Reg. 53438 (Sept 13 1978); 46 Fed. Reg. 47048 (Sept. 23, 1981); 56 Fed. Reg. 50978 (Oct. 9, 1991); 58 Fed. Reg. 9248 (Feb 18, 1993). It is also significant that EPA has expressly stated its intent to update the MCLs listed in Appendix I in the future to incorporate changes to the MCLs under the Safe Drinking Water Act. In the Federal Register notice accompanying the 1991changes to the open dump criteria, EPA stated that, "[p]ursuant to the 1986 amendments to the SDWA, EPA is in the process of promulgating more MCLs. Part 257 will be revised again in conjunction with promulgation of these new MCLs." 56 Fed. Reg. at 50998.

Omya's citation to the fact that EPA did not adopt the MCL for the metal lead into Appendix I of the open dump criteria is inapposite. EPA chose not to incorporate a change to the national primary standard for lead into Appendix I because the new standard was in the form of a

technology-based standard, not a numeric standard. 56 Fed. Reg. at 50998. EPA adopted a technology based standard for lead in the Safe Drinking Water Act regulations because, "[l]ead in drinking water results primarily from corrosion of materials located throughout the distribution system containing lead and copper and from lead and copper plumbing materials used to plumb public- and privately-owned structures connected to the distribution system." 56 FR 26460, 26463 (June 7, 1991). EPA did not adopt this technology-based standard into the open dump criteria because, while such a standard makes sense for protecting drinking water in homes, it does not make sense as a criterion for determining whether the waste disposal practices are causing contamination in the context of open dumping. Apart from the example involving the standard for lead, which is clearly a distinct circumstance, EPA has consistently updated the MCLs in Appendix I to reflect changes in the MCLs under the Safe Drinking Water Act, treating the decision as little more than a ministerial task.

Further, to the extent that the fact that the MCLs cited in the open dump criteria have not yet been updated to reflect the MCLs adopted as national primary drinking water standards presents any ambiguity, such ambiguity should be resolved in light of the purpose of the relevant statute. United Telecommunications, Inc. v. C. I. R., 589 F.2d 1383, 1390 (10th Cir. 1978) ("Where there is an interpretation of an ambiguous regulation which is reasonable and consistent with the statute, that interpretation is to be preferred."). In this case, given the fundamental goal of Congress in enacting RCRA to protect groundwater, the ambiguity should be resolved in favor of the more stringent standard.

In support of its arguments that the old MCL for arsenic should prevail in the context of the open dump criteria, Omya cites two statements in which EPA addresses the question of whether the new arsenic standard applies. Omya's Motion for SJ at 2. Neither example is

persuasive. In the first example, Omya notes that the Food and Drug Administration ("FDA") has applied a new arsenic standard to bottled water based upon the arsenic standard. In the second example, involving RCRA hazardous waste regulations, EPA did not revise the toxicity characteristic standard. Both of these circumstances are, however, different from the circumstance presented in this case in a critical respect: neither the toxicity characteristic standard, nor the FDA bottled water standard are expressly tied to the Safe Drinking Water Act's MCLs, as is true of the open dump criteria.

Similarly, Omya's reference to the sludge technical standards, Defendants' Cross Motion for Summary Judgment at 8, actually proves the converse of what Omya suggests. If EPA had intended to preclude the application of the new MCL for arsenic to the open dump criteria, it could have done so in the same manner as it did for the sludge disposal standards. EPA did not do so. The most salient fact remains that EPA has determined that arsenic levels in groundwater above ten parts per billion pose a significant health threat.

As a general matter, EPA has determined that an exceedance of an MCL is the equivalent of a determination that contamination at that level constitutes "a reasonable probability of adverse effects on health or the environment under RCRA." 40 C.F.R. § 257.1(a). In this case, this Court should find that an exceedance of the current MCL for arsenic as set in the national primary drinking water standards also constitutes a reasonable probability of adverse effects on health or the environment.

Further, the expressly stated purpose of EPA's regulation leaves no doubt that the new MCL for arsenic of ten parts per billion is the appropriate standard to apply in determining whether Omya is engaged in open dumping. The history of the open dump criteria makes plain

that EPA adopted MCLs into the open dump criteria to ensure that groundwater would be protected as a potential source of drinking water.

> EPA believes that the prevention of adverse human health effects from direct consumption of groundwater should be the first among several objectives in protecting ground-water quality.

44 Fed.Reg. at 53445.

> EPA sees no reason to doubt that some people will continue to consume groundwater directly without treatment. That portion of the public should protected from adverse effects (as defined by the drinking water standards) caused by solid waste leachate entering their drinking water. In some situations the protection of the public will require non-degradation of an aquifer. The Act does not call for a balancing of the costs of disposal against the "value" of groundwater resources. EPA believes that this criterion represents a reasonable approach to ground-water protection.

Id. at 53447.

In light of the approach taken by EPA to the open dump criteria, it would make little sense to apply a standard for arsenic that EPA has since found is insufficient to protect human health. As noted in RCO's memorandum in support of the present summary judgment at pages 14-17, arsenic in groundwater at any level poses a threat to human health. This conclusion is captured in the MCL Goal of zero, adopted by EPA in 2001, along with the new MCL of ten parts per billion. The adoption of these new standards reflect exactly the kind of information that EPA has determined is the equivalent of a finding that waste disposal activities pose a reasonable probability of adverse effects on health or the environment, the relevant standard under RCRA. Having determined that a violation of an MCL establishes a "reasonable probability of adverse effects on health and the environment" in accordance with RCRA Section 4004(a), 42 U.S.C. § 6944(a), it would be remarkable if EPA found that a violation of a numeric MCL established under the Safe Drinking Water Act did not, in fact, pose such a risk.

Omya argues that, since EPA did not list solid waste disposal facilities in the list of regulated entities affected by the new arsenic standard (as included in the preamble to the

regulation adopting that standard), EPA must have intended to exclude solid waste facilities from the scope of the new arsenic standard. Omya Motion for SJ at 6-7. This argument misses the broader point that EPA uses MCLs in the open dump criteria for a different purpose than used in the Safe Drinking Water Act. The MCLs are applied to drinking water systems to ensure that drinking water system operators construct and operate their systems properly. In the open dump criteria, the MCLs operate as a trigger for determining whether the waste disposal activities have caused contamination for the purpose of determining whether those activities qualify as open dumping. The two purposes are distinct. References to solid waste disposal facilities in a regulation promulgated under the Safe Drinking Water Act would make little sense and it is not surprising that EPA did not do so. For this same reason, Omya's efforts to apply the Safe Drinking Water guidance document for the purpose of calculating arsenic levels in public drinking water systems, Omya Opposition at 34, 35, 40, is similarly misplaced.

Omya makes light of the levels of arsenic found in the groundwater under the site, suggesting that it would take 100 years of consuming those levels for the arsenic to cause significant harm. Omya Opposition at 2. Omya's effort to minimize the long-term dangers of arsenic misses the larger point that the goal of the open dump criteria is to prevent contamination and to protect groundwater as a potential source of drinking water. The preamble to EPA's 1979 adoption of the open dump criteria makes plain that protection of groundwater in an uncontaminated state is a primary concern:

> Ground water, generally a high quality, low cost readily available source of water, is the drinking source for at least one half of the population of the United States; often it is the only economical and high quality water source available. Ground water is generally suitable for human consumption with little or no treatment necessary. Ground water has been contaminated by solid waste disposal on a local basis in many parts of the nation end on a regional basis in some heavily populated and industrialized areas, precluding its use as drinking water. Existing monitoring of ground-water contamination is largely inadequate; many known

> instances of contamination have been discovered only after groundwater users have been affected. The Act and its legislative history clearly reflect Congressional intent that protection of ground water is to be a prime concern of the criteria.

44 Fed.Reg. at 53445.

As noted in this preamble, protection of groundwater was of paramount importance to Congress in the enactment of RCRA. SEN. REP. NO. 94-988, at 12 (June 25, 1976) ("Attention must be given to the potential contamination of groundwater supplies, … and other potential hazards to public health associated with the disposal of solid wastes on the land. Emphasis should be given to any potential contamination of ground water that could occur from the land disposal of solid wastes."); EPA, GSA and Commerce Testimony at House Interstate and Foreign Commerce Subcommittee Hearings on Resource Conservation and Recovery Act of 1976: Hearing on H.R. 14496 Before the Sub. Comm. On Transportation and Comm., 94th Cong. 1 at 98 (1976) (statement of Sheldon Meyers, Deputy Assistant Administrator for Solid Waste Management Programs, EPA) ("A second important concern is the potential impact of land disposal operations on groundwater quality."); see also 42 U.S.C. §6907(a)(2) (Administrator should describe "appropriate methods and degrees of control …protection of the quality of groundwaters and surface water from leachates") (emphasis added); 42 U.S.C. §6903(3) (defining "disposal" to mean "the discharge, deposit, injection, dumping, … of any solid waste or hazardous waste into or on any land or water so that such solid waste constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.") (emphasis added).

Further, EPA has made it clear that the open dump criteria are intended to ensure that groundwater is protected over the long-term. The current use of the Florence Facility

by Omya should not preclude the future use of the groundwater under the site for drinking water. Addressing this circumstance directly, EPA has stated,

> In defining unacceptable solid waste disposal activities, these criteria cannot be based only on current patterns of ground-water use. Potential future uses of the aquifer must be considered.

44 Fed.Reg. at 53446.

The statement by Omya, to the effect that there is no risk from the contaminated groundwater under the site because if it did move offsite the unlucky person whose well as contaminated could find alternative water supplies, is wholly inconsistent with this concept of protecting future groundwater users. Defendant's Statement of Undisputed Material Fact #16. As statements like this reflect, Omya has behaved in the disposal of its waste as though the groundwater under the site belongs to Omya alone, ignoring a national policy that has been in effect since at least 1976 when RCRA was enacted, that industrial facilities must not be allowed to contaminate groundwater. In this case, Omya can not, consistent with EPA's open dump criteria and RCRA, be allowed to contaminate the groundwater above the level of arsenic that EPA has determined is necessary to protect human health. That level is ten parts per billion.

For this reason, this Court should deny Omya's Motion for Summary Judgment on Count I. Because Omya has contaminated the groundwater under its site with arsenic above ten parts per billion, summary judgment for RCO on Count I is proper.

B. Arsenic Contamination Exists Beyond the Solid Waste Boundary

RCO has demonstrated that Omya has contaminated the groundwater under the facility with arsenic above the MCL outside of the "solid waste boundary" thereby satisfying that element of the open dump criteria. 40 C.F.R. § 257.3-4(a) ("A facility or practice shall not contaminate an underground drinking water source beyond the solid waste boundary") (emphasis added). The "[s]olid waste boundary means the outermost perimeter of the solid waste

(projected in the horizontal plane) as it would exist at completion of the disposal activity." 40 CFR §257.3-4. At least two of the three wells (Well E and 10) with arsenic levels exceeding the MCL are outside of the "solid waste boundary" associated with any of Omya's waste disposal pits. This can be seen early from Omya's own maps. SMF ¶¶ 46(b), (d); Attachment K, Omya Inc. Verpol Plant Tailings: Fall 2006 Monitoring Report at 16 (Heindel & Noyes, Jan. 15, 2007). That these wells are outside of the perimeter of Omya's solid waste disposal pits cannot reasonably be refuted[3] and so RCO satisfies the requirement of Part 257 that the contamination is outside a "solid waste boundary."

Omya argues that one of the wells tested, Well B, is not outside of the "solid waste boundary." Omya Opposition at 35. Given the fact that arsenic has been found above the MCL in other wells, resolving this issue is not necessary for the Court to find for RCO on its open dumping claim. Consideration of Omya's argument that the results of the samples taken from Well B are not outside of the "solid waste boundary" is useful, however, as it illustrates a deeper infirmity that pervades Omya's view of the open dump criteria. Omya's use of the "solid waste boundary" in this instance is another case of its efforts to rely upon an overly technical reading of the regulation, here the definition of "solid waste boundary," a reading in direct conflict with the purpose of this requirement.

Strictly speaking, Well B is within the perimeter of the "solid waste boundary;" it draws from groundwater located in the fractured bedrock beneath one of Omya's waste disposal pits. This fact must be understood, however, in light of the fact that Omya, not RCO, drilled the

[3] Omya argues that RCO has failed to demonstrate that these wells are outside of a solid waste boundary, ignoring the fact that Omya's own maps attached to its consultants' reports clearly delineate the boundaries of each disposal pit and show the location of the wells outside of those pits (with the exception of well B); Fall 2006 Report at 16. Merely stating that this is a disputed fact without offering any rebuttal in the form of affidavits, and speculating that the wells might be within a former solid waste disposal unit without concrete information is insufficient to create a genuine issue of material fact. An adverse party "must set forth specific facts…" Fed. R. Civ. P. 56(e)

monitoring well. One of the reasons for the "solid waste boundary" requirement is to prevent the drilling of wells into waste disposal units. In the 1979 preamble to the open dump criteria, EPA stated that the purpose of the provision is to eliminate the environmental risk "posed by the installation of monitoring wells through the waste material or in areas where waste will be deposited. These wells may become conduits for the direct flow of waste constituents (e.g. leachate) into the aquifer." 44 Fed. Reg. at 53448.

It would be ironic if Omya could avoid a finding that it is engaged in open dumping by virtue of placing a well, whether Well B or any other well, through its waste disposal pits, in direct contravention to the central purpose of this regulation. Excluding the sample results from any of the wells on this basis would do violence to one of the primary goals of RCRA as set forth above, i.e., protecting groundwater. A company should not derive a benefit from acting in direct contravention to a regulation. Wilkins v. American Exporters Isbrandtsen Lines, Inc., 446 F.2d 480, 484-485 (2d Cir. 1971) (citing that Plaintiff's violation of an overtime statute leading to his heart attack should not give rise to a worker's compensation claim).

C. An Alternative Boundary Would Contaminate Groundwater Which May Be Needed Or Used For Drinking Water

Similarly, Omya's suggestion that groundwater contamination under the site is authorized by virtue of an "alternative boundary" is equally offensive to RCRA's purpose to protect groundwater. Section 257.3-4 provides that, "a party charged with open dumping . . . may demonstrate that compliance should be determined at an alternative boundary in lieu of the solid waste boundary." 40 C.F.R. §257.3-4(b)(1). Omya attempts to raise a genuine issue of material fact by virtue of the mere existence of this provision. This attempt should be rejected for the simple reason that the "alternative boundary" is unavailable to Omya.

At the outset, the plain language of this provision states that "[t]he court shall establish an alternative boundary only if it finds that such a change would not result in contamination of groundwater which may be needed or used for human consumption." Id. For an alternative boundary to be established, the burden is on Omya, as a "party charged with open dumping," to demonstrate that the groundwater will not be needed or used for human consumption. Id.

Further, EPA expected that states would make this determination only after a careful consideration of the factors in the regulation:

> [T]he criteria allow the State to modify the point for application of the [MCLs]. To prevent this from becoming a major loophole, the criteria establish limits to this flexibility. Only States with approved solid waste management plans may modify the point of measurement. This may only occur where the State has conducted a thorough examination of the site-specific situation and has made a specific finding that establishment of the alternative boundary would not result in contamination of ground water needed or used for human consumption.

44 Fed.Reg. at 53448. In this instance, Omya has not obtained any approval from the State of Vermont to establish an "alternative boundary" for application of the MCLs.

The inapplicability of the "alternative boundary" is thus a legal issue. Even to the extent that there is a need to consider any facts, however, there is no reasonable dispute over the material facts; a mere reference to the standards for establishing a "alternative boundary" in the open dump criteria is insufficient to create a genuine issue. Even had it tried, Omya could not make the necessary showing since the groundwater beneath Omya's facility is an "[u]nderground drinking water source." An "underwater drinking water source" is defined as "[a]n aquifer in which the groundwater contains less than 10,000 mg/l total dissolved solids." 40 C.F.R. § 257.3-4(c)(4)(ii). Since the groundwater below Omya's facility has a total dissolved solids concentration much lower than the 10,000 mg/l threshold, it meets the definition of underground drinking water source. SMF ¶¶ 57-58. If the groundwater under the site is unfit for human

consumption, this is so only because Omya has been disposing of chemically contaminated waste into open, unlined pits for over twenty-five years. As noted in the prior section, Omya should not benefit from its own bad acts. Wilkins, 446 F.2d at 484-485.

D. RCO is also Entitled to Judgment as a Matter of Law on Count II, Imminent and Substantial Endangerment

Having demonstrated that Omya has contaminated the groundwater under the Florence Facility with arsenic and organic chemicals, RCO is entitled to a ruling as a matter of law that Omya has caused or contributed to an imminent and substantial endangerment to human health or the environment. 42 U.S.C. § 6972(a)(1)(B). Omya argues that arsenic levels above ten parts per billion do not pose an imminent and substantial endangerment based upon certain provisions contained in an EPA Safe Drinking Water Act guidance document. Omya Opposition at 40-42. The referenced guidance document provides economically disadvantaged communities the opportunity to apply for temporary exemptions to the new arsenic standard. The potential for an exemption, however, cannot be read to overcome the fact that EPA has concluded that any levels of arsenic in groundwater pose a threat and has established a MCL goal of zero arsenic. 65 Fed. Reg. 73,453, 73,456 (Nov. 30, 2000). The exemption provision simply serves as a procedural mechanism, taking cost into consideration balanced against the risk, for providing impoverished communities the time necessary to upgrade their water systems. The guidance document does not suggest that these communities should be granted permanent exemptions nor that drinking arsenic contaminated water above levels of ten parts per billion over the long-term presents an acceptable risk.

Omya's reliance on the guidance document amounts to an effort to revisit the question of whether arsenic levels over ten parts per billion pose a threat to human health, a question that EPA and scores of scientists have answered with a resounding "yes." Memorandum in Support

of Plaintiffs' Motion for Partial Summary Judgment for Liability on Plaintiffs' First Amended and Supplemental Complaint at 20-24. RCRA's imminent and substantial endangerment provision is intended to authorize courts to grant equitable relief as necessary to protect the environment and public health from "any risk." Dague v. City of Burlington, 935 F.2d 1343, 1355 (2d Cir. 1991). The presence of arsenic above ten parts per billion in groundwater under the site clearly poses such a risk.

As discussed in RCO's motion for summary judgment at pages 24-26, case law makes clear that Omya has caused an imminent and substantial endangerment to the environment through its waste disposal practices by creating conditions which cause groundwater contamination. This threat to groundwater alone, without consideration of the potential for offsite migration of the contaminants, is in itself sufficient to support a finding of imminent and substantial endangerment. Omya does not even respond to RCO's reference to the Third Ciruit's holding in Interfaith Cmty. Org. v. Honeywell Int'l, Inc. 399 F.3d 248, 259 (3d. Cir. 2005), that RCRA's imminent and substantial endangerment provision, Section 7002(a)(1)(B), "imposes liability for endangerments to the environment, including water in and of itself." Id. at 263. Instead, Omya attacks RCO's citation to Wilson v. Amoco Corp., 989 F.Supp. 1159 (D. Wyo. 1998), on the basis that the degree of groundwater contamination in Wilson is much greater than in the instant case. Omya Opposition at 43. This distinction, while perhaps relevant to the Court's determination of appropriate relief, is not relevant to the legal basis for the holding in Wilson. The Wilson court's ruling is not based upon the level of contamination, but upon the potential that groundwater otherwise suitable as a source of drinking water might be contaminated. Wilson, 989 F.Supp. at 1176. Based upon this same analysis, this Court should

find as a matter of law that the mere fact that the groundwater under the Florence Facility is contaminated with arsenic constitutes an imminent and substantial endangerment.

Further, as noted in the Attachment E, Phase I Report at 88 and Attachment F, Site Characterization Report at 28, there is no dispute that the groundwater under the Florence Facility is interconnected with other ground and surface water in the area. See also supra at 12-13. This fact alone suggests the potential for contaminants in this groundwater to migrate offsite. It is true, as Omya suggests, that there is no conclusive evidence of offsite contamination linked to Omya. This fact, however, does not mean that there is no risk. Similarly, the undisputed presence of organic chemicals in the groundwater provides additional evidence of a risk to human health and the environment. Attachment E, Phase I Report at 24. This Court has determined that a finding of "imminent and substantial" does not require actual harm, but merely a present risk of some threatened or potential harm. Opinion & Order (June 22, 2006) at 48 (citing Dague, 935 F.2d at 1356).

In this case, the Court should find that the risks are sufficient to satisfy the imminent and substantial endangerment and to order injunctive relief. To the extent the Court finds that the risks require further investigation before determining the appropriate means for requiring Omya to eliminate such risks, the Court can fashion relief intended to determine the precise nature of that risk. Such relief could be initially limited to requiring Omya to perform additional groundwater monitoring and modeling to determine the full extent and nature of both onsite and offsite migration of contamination. See e.g. Maine People's Alliance v. Mallinckrodt, Inc., 471 F.3d 277 (1st Cir. 2006).

CONCLUSION

For the foregoing reasons, we respectfully request that the Court grant RCO's motion for summary judgment on both counts, open dumping and imminent and substantial endangerment, and deny Omya's motion for summary judgment on Count I, open dumping.

Dated: South Royalton, Vermont
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Respectfully Submitted,

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