

**ORAL ARGUMENT NOT YET SCHEDULED**

No. 11-1131 (Lead) and Consolidated Cases

**IN THE UNITED STATES COURT OF APPEALS FOR THE  
DISTRICT OF COLUMBIA CIRCUIT**

---

NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES,  
*et al.*,*Petitioners,*

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
and LISA P. JACKSON, ADMINISTRATOR,*Respondents.*

---

MAXWEST ENVIRONMENTAL SYSTEMS, INC., et al.,*Intervenors.*

---

ON PETITIONS FOR REVIEW OF 76 FED. REG. 15,372 (MAR. 21, 2011) &  
77 FED. REG. 25,087 (APR. 27, 2012) (CONSOLIDATED)

---

INTERVENOR MAXWEST ENVIRONMENTAL SYSTEMS, INC.'S  
OPENING BRIEF IN SUPPORT OF MUNICIPAL PETITIONERS

---

D. Cameron Prell  
McGuireWoods LLP  
2001 K. Street N.W.  
Washington DC 20006-1040  
(202) 857 - 1700

*Counsel for MaxWest  
Environmental Systems, Inc.*

Lisa Sharp  
McGuireWoods LLP  
One James Center  
901 E. Cary Street  
Richmond VA 23219  
(804) 775 - 1000

July 24, 2012

**CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES**

Pursuant to Circuit Rule 28, MaxWest Environmental Systems, Inc.

(“MaxWest”) submits the following supplemental statement:

**(A) Parties and Amici**

All parties, intervenors, and amici appearing in this Court are listed in the Brief of Municipal Petitioners.

**(B) Rulings Under Review**

References to the rulings at issue appear in the Brief of Municipal Petitioners.

**(C) Related Cases**

References to related cases appear in the Brief of Municipal Petitioners.

/s/ Lisa Sharp

\_\_\_\_\_  
Lisa Sharp

## **CORPORATE DISCLOSURE STATEMENT**

MaxWest Environmental Systems, Inc. (“MaxWest”), by counsel, pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and this Circuit’s Rules, states as follows for its corporate disclosure statement:

### **A. Ownership interests**

MaxWest is a privately held company with the following publicly-held investor companies that have a 10 percent or greater interest: Leaf Clean Energy Company, and Invesco, Plc. MaxWest has no parent companies.

### **B. MaxWest’s General Nature and Purpose**

MaxWest, a sustainable energy company, uses a proprietary closed-loop gasification process to convert the fixed carbon contained in biosolids (sewage sludge) into thermal energy that is then re-cycled into the drying process, all without releasing methane into the atmosphere. It operates the only commercially-operating biosolids gasification facility in North America near its headquarters in Sanford, Florida.

/s/ Lisa Sharp

Lisa Sharp

## TABLE OF CONTENTS

|   | <b>Page</b> |
|---|-------------|
| Certificate As To Parties, Rulings, And Related Cases.....  | i           |
| Corporate Disclosure Statement .....  | ii          |
| Table of Authorities .....  | v           |
| Glossary .....  | vi          |
| <b>STATEMENT OF THE CASE</b> .....  | 1           |
| The Regulatory Environment at MaxWest’s Inception.....  | 2           |
| This Court’s decision in <i>NDRC v. EPA</i> .....   | 3           |
| EPA Determined the MaxWest’s Facility Falls Within the SSI Rule.....  | 5           |
| Cost Impact of the SSI Rule on MaxWest .....  | 5           |
| How MaxWest’s Gasification System Differs From SSI Units EPA<br>Studied .....   | 6           |
| <b>SUMMARY OF ARGUMENT</b> .....  | 7           |
| <b>ARGUMENT</b> .....   | 8           |
| <b>I.    STANDARD OF REVIEW</b> .....   | 8           |
| <b>II.   EPA’S FAILURE TO RESPOND ADEQUATELY TO<br/>      CRITICAL FACTUAL AND LEGAL ISSUES RAISED DURING<br/>      THE RULEMAKING PERIOD IS ARBITRARY AND<br/>      CAPRICIOUS</b> ..... | 9           |
| A.   Commenters Explicitly Asked EPA to Revise the Proposed SSI<br>Rule to Account for Gasifiers That Have The Capacity To<br>Beneficially Reuse Sewage Sludge for Energy Generation..... | 11          |
| B.   EPA Refused To Respond To These Comments Beyond a Bare<br>Refusal To Consider Any “Combustion” Process As Distinguishable<br>from Incineration .....                                 | 12          |
| C.   EPA’s Failure To Respond Adequately To Gasification<br>Concerns Renders the SSI Rule Arbitrary and Capricious .....  | 14          |

**TABLE OF CONTENTS**  
(continued)

|   | <b>Page</b> |
|---|-------------|
| <b>III. EPA’S FAILURE TO CONSIDER THE FULL REGULATORY, AIR QUALITY AND ENERGY IMPACTS OF THE SSI RULE CONTRAVENES THE CAA AND IS ARBITRARY, CAPRICIOUS, AN ABUSE OF DISCRETION OR OTHERWISE NOT IN ACCORDANCE WITH LAW.....</b> | <b>15</b>   |
| A. EPA Did Not Account for Gasifiers’ Different Emissions Profile And Thus Had No Basis To Consider Gasifiers as Equivalent to Incinerators .....   | 15          |
| B. EPA’s Decision To Include Gasifiers Under § 129 Reads That Section Out of Context With the Overall Statutory Schemes Established By Congress for Renewable Energy and Sewage Sludge Management .....                         | 16          |
| <b>IV. EPA’S FAILURE TO ESTABLISH SUBCATEGORIES RECOGNIZING FUNDAMENTAL CLASS AND USE DIFFERENCES AMONG ENTITIES CONSIDERED WITHIN THE SCOPE OF THE SSI RULE IS ARBITRARY, CAPRICIOUS AND OTHERWISE UNLAWFUL.....</b>           | <b>18</b>   |
| <b>V. CONCLUSION .....</b>  | <b>21</b>   |
| Certificate of Compliance with Type-Volume Limitations.....   | 22          |
| Certificate of Service .....  | 23          |

## **TABLE OF AUTHORITIES**

### **Page(s)**

#### **CASES**

|  |        |
|--|--------|
| <i>American Mining Congress v. EPA</i> , 907 F.2d 1179 (D.C. Cir. 1990) .....                                      | 15     |
| * <i>Chevron, U.S.A., Inc. v. National Resources Defense Council, Inc.</i> , 467 U.S. 837 (1984) .....             | 9      |
| <i>Ethyl Corp v. EPA</i> , 541 F.2d 1 (D.C. Cir. 1976) .....   | 16     |
| * <i>Goldstein v. SEC</i> , 451 F.3d 873 (D.C. Cir. 2006) .....  | 14, 17 |
| * <i>Home Box Office, Inc. v. FCC</i> , 567 F.2d 9 (D.C. Cir. 1977) .....  | 9, 14  |
| <i>Int’l Fabricare Inst. V. EPA</i> , 972 F.2d 384 (D.C. Cir. 1992) .....  | 15     |
| <i>Med. Waste Inst. &amp; Energy Recovery Council v. EPA</i> , 645 F.3d 420 (D.C. Cir. 2011) .....                 | 8      |
| <i>Motor Vehicle Mfrs. Ass’n of the United States v. State Farm Mut. Auto. Ins. Co.</i> , 463 U.S. 29 (1983) ..... | 15     |
| <i>NDRC v. EPA</i> , 489 F.3d 1250 (D.C. Cir. 2007) .....  | 4      |
| * <i>PDK Labs. Inc. v. DEA</i> , 362 F.3d 786 (D.C. Cir. 2004) .....   | 17     |
| <i>Portland Cement Ass’n v. Ruckelshaus</i> , 486 F.2d 375 (D.C. Cir. 1973) .....                                  | 14     |

#### **STATUTES AND RULES**

|                        |    |
|------------------------|----|
| 33 U.S.C. § 1251 ..... | 3  |
| 33 U.S.C. § 1292 ..... | 3  |
| 42 U.S.C. § 6901 ..... | 17 |
| 42 U.S.C. § 7412 ..... | 3  |
| 42 U.S.C. § 7429 ..... | 3  |

**Authorities upon which we chiefly rely are marked with asterisks.**

42 U.S.C. § 7607 ..... 8-9

Proposed Sewage Sludge Incinerator Rule, 75 Fed. Reg. 31,844 .....4, 16

**OTHER**

G. Minimmi et al., Combustion Inst., New Technologies for MSW Thermal  
Treatment: The State of the Art (June 2008)..... 11

Remarks by the President on Energy, March 15, 2012 ..... 18

**GLOSSARY**

|       |  |
|-------|--|
| CAA   | Clean Air Act                                |
| CWA   | Clean Water Act                              |
| NACWA | National Association of Clean Water Agencies |
| MACT  | Maximum Available Control Technology         |
| RPC   | EPA Response to Public Comments              |
| RTP   | EPA Response to Petitions                    |
| SSI   | Sewage Sludge Incinerator                    |
| SWA   | Solid Waste Disposal Act                     |
| WEF   | Water Environment Foundation                 |



## STATEMENT OF THE CASE

A fundamental obligation of publicly owned treatment works (“POTWs”) is to manage sewage sludge (“sludge” or “biosolids”) while respecting the environment and protecting human health and welfare. There are few management options to choose from. Historical choices have focused on sludge disposal and included landfilling, land application, and incineration.

Seeking to provide POTWs and the communities they serve a more sustainable option, MaxWest Environmental Systems Inc. (“MaxWest”) has designed and developed a proprietary biosolids management process that converts biosolids into syngas—a conversion process that results in no emissions. The syngas is recognized under most state clean energy programs as a renewable or “green” resource. No reasonable person would consider “sludge” to be the same thing as “syngas.” The latter has myriad applications for clean energy production onsite and off, and enables end users to reap environmental benefits.

The potential of syngas as a green fuel, however, is unreasonably constricted by the regulation at issue here. EPA’s Sewage Sludge Incinerator Rule (“SSI Rule”) penalizes MaxWest because it creates syngas from sludge. The Rule regulates emissions from facilities that “combust” syngas as though they were producing emissions from incinerating actual biosolids. Syngas is qualitatively very different from sludge, and EPA is acting arbitrarily by ignoring that fact.

The MaxWest *process* is a positive *advancement* economically and environmentally for POTWs. But the benefits of constructing and operating a new gasifier is only as attractive as its short- and long-term costs. EPA has added costs to gasification through the SSI Rule with little explanation for why syngas combustion, as distinct from biosolids incineration, should be regulated under the same umbrella.

The SSI Rule is therefore arbitrary, capricious and counterproductive to Congress's objectives for environmental regulation. The rule fails to appreciate the major existential and processing differences between (i) simple disposal and energy recovery from sludge, and (ii) the beneficial conversion of sludge into a renewable green gas. In effect, the Rule's cost impact inhibits expanded use of gasification technologies and places a disproportionately negative regulatory burden on small businesses developing newer and environmentally beneficial sludge management options.

### **The Regulatory Environment at MaxWest's Inception**

In 2009, MaxWest first began to employ its gasification process at a facility located adjacent to a wastewater treatment facility owned by the City of Sanford, Florida. Under the then-applicable Clean Air Act ("CAA") § 112-promulgated regulations, a gasifier like MaxWest's was regulated as a component of the POTW because it was used to manage POTW-produced sludge. When the facility became

operational it was subject to federal regulation pursuant to Section 405(d) of the Clean Water Act (“CWA”), and Section 112(e)(5) of the CAA, which are respectively codified at 33 U.S.C. § 1251 and 42 U.S.C. § 7412(e)(5).<sup>1</sup>

Such regulation made sense. The City of Sanford could choose a next-generation sludge management option to generate fuel it could use or sell. MaxWest was able to convert and use the City’s sludge as a valuable resource. There was no question at the time that EPA considered the applicable tandem CAA and CWA regulatory scheme protective of public health and the environment: the record includes a statement from EPA stating as much, confirming that the agency would “continue to support biosolids management in full compliance with the [CWA] regulations.” Letter from Ken Kirk, Attachment A to Comments by NACWA (EPA-HQ-OAR-2009-0559-0098.1), JA:\_\_\_\_.

### **This Court’s decision in *NDRC v. EPA***

In 1990, Congress amended many provisions of the CAA and added a new § 129 for the purpose of regulating “solid waste incineration units” including commercial or industrial solid waste incineration units (“CISWI”). 42 U.S.C. § 7429. Rather than regulating all CISWI units, as expressly directed by Congress,

---

<sup>1</sup> Section 112 authorizes EPA to promulgate standards applicable to “any devices and systems used in the ... treatment, recycling, and reclamation of municipal sewage ... [including] any works ... used for ultimate disposal of residues resulting from such treatment.” 42 U.S.C. § 7412(e)(5), referencing 33 U.S.C. § 1292(2)(A)(defining entities to be regulated).

EPA initially sought to regulate only *some* CISWI units pursuant to a created definition of “commercial or industrial waste.” *See NRDC v. EPA*, 489 F.3d 1250, 1256-57 (D.C. Cir. 2007) (“*NRDC*”). EPA attempted to carve out of § 129 CISWI units that “use a process that recovers thermal energy from the combustion for a useful purpose.” *Id.* at 1256. EPA was referring to biosolids *energy recovery*, i.e. processes used by some CISWIs (and used also by some incinerators of sludge) where a fraction of the heat generated by incineration is captured and re-used.

This Court in *NRDC* struck EPA’s attempt to narrow the scope of § 129. *Id.* at 1258. However, its decision did not address *energy conversion* at all. Despite this, EPA determined without adequate explanation that *NRDC* mandates that sludge gasifiers must also be regulated under CAA § 129. *See* 75 Fed. Reg. 31,844. This is patently absurd and the quintessence of short-sighted and blunt regulatory over-reach. Rather than seeking to regulate all SSIs aggressively under § 112 using a case-by-case, subcategory-by-subcategory scalpel, EPA seeks to regulate everything under § 129 using a sledgehammer. The SSI Rule’s grouping of incinerators that simply *burn* sludge with facilities like MaxWest’s—that *converts* sludge in a sustainable manner to produce a syngas that can be used onsite or off as an independent fuel, contravenes the intent and purpose of international, national and state-level policies seeking to develop and foster renewable energy resources, including the CWA, CAA and Solid Waste Disposal Act (“SWA”).

## **EPA Determined that MaxWest's Facility Falls Within the SSI Rule**

In December 2010, EPA separately determined that MaxWest's process would be regulated by the SSI Rule.<sup>2</sup> EPA essentially argued that MaxWest's combustion of some of the resultant syngas rendered the facility an SSI unit. The effect of such capricious treatment is that the SSI Rule has a chilling effect on the marketplace for innovation in sludge management. It squelches any POTW or private-sector impulse to pursue gasification as a sludge-management technique.

## **Cost Impact of the SSI Rule on MaxWest**

Gasification is capital-intensive. Because the syngas can be used offsite to generate electricity or produce liquid chemicals or biofuels, the optimal revenue stream is the one that enables the facility to be financed and constructed. For POTWs, where historically there had always been a cost associated with sludge management, the use and sale of syngas could provide triple-bottom line returns. But by increasing regulatory costs, the decision to use syngas onsite may not be the most economical, which further reduces the environmental benefits that could accrue.

MaxWest's capital cost for air pollution control equipment at its Sanford facility will increase by 50-60% – all to achieve a minor improvement in emissions. The facility's current emissions are already averaging over 95% lower

---

<sup>2</sup> The comment period for the SSI Rule closed at the end of November 2010.

than the minor source regulations that it was previously permitted under. To comply with the SSI Rule, MaxWest's annual operating costs at Sanford will increase by 20-25% for compliance testing, operator training and reporting, which will render MaxWest's gasification more expensive to the municipality. The air pollution control equipment alone will consume up to 15% of the total capital cost of MaxWest's system.

These cost increases make dramatic emission reductions in the POTW community less likely to be realized. POTWs with reasonable cost constraints may be forced to choose between a cheaper and environmentally suboptimal solution (retrofit), and a more expensive short-term solution that would substantially reduce its emissions. Wholesale changes and capital improvement projects that repurpose how a POTW manages its biosolids may be delayed for years. By including gasifiers, EPA's SSI Rule may actually *cause* a net increase in emissions from POTWs over the long-term by preventing industry adoption of gasification that would otherwise occur.

### **How MaxWest's Gasification System Differs From SSI Units EPA Studied**

EPA considered two kinds of units in developing the SSI Rule—a fluidized bed incinerator (“FBI”) and multiple hearth incinerator (“MHI”). MaxWest's technology starts with a process that is akin to an FBI unit commenced with an infusion of natural gas. At that point in the process, however, all similarities cease.

MaxWest's technology employs a proprietary closed-loop process that converts the fixed carbon contained in sewage sludge into syngas in a high temperature, oxygen-starved chemical reaction. Minimal if any emissions occur during conversion to syngas: The gasifier unit at the Sanford facility has no smokestack. The gasifier's oxygen content is regulated and further combustion is inhibited. The conversion results in ash and an energy-rich syngas that then has myriad uses onsite or offsite as a gas commodity. The syngas can be either sent to a separate process heater where it may be used as recycled fuel to generate new thermal energy to dry and process sludge, or it can be further processed, piped away, and sold as a fuel gas. In either case, the syngas is no longer "sludge." It has a different chemical make-up, is almost entirely devoid of particulate matter, and has a different energy and emission profile from sludge.

The significantly lower emissions of syngas, when separately combusted, are not the most environmentally advantageous aspects of the process. That distinction goes to the self-sustaining nature of the process when the syngas is used onsite in a closed loop. No additional or external energy source is needed to keep the process going.

### **SUMMARY OF ARGUMENT**

EPA had an obligation to investigate the regulatory, air quality, and energy impacts of the SSI Rule and failed to carry out this duty. EPA failed to appreciate

the difference between sludge energy recovery and conversion and sustainable use of syngas. EPA was made aware in public comments that the proposed SSI Rule did not make clear whether it would include gasifiers within its scope of regulation, and how. Instead of squarely responding to comments, EPA clarified the final rule to exclude non-combustion processes without providing any rational explanation why *any* process involving partial combustion should get swept into the SSI maelstrom.

EPA, while on notice of the existence and benefits of gasifiers, did not collect any data or analysis about them in determining the SSI Rule. It did not consider the layers of additional and unnecessary costs that MaxWest or other gasification entities would incur. If the Court were to find that EPA was within its discretion to find that any form of syngas combustion should fall within the umbrella of the SSI Rule, EPA still failed to explain how gasifiers' inclusion under the Rule accords with the general scheme and purposes of the CAA and SWA.

## **ARGUMENT**

### **I. STANDARD OF REVIEW**

This Court has the power under the Administrative Procedure Act (“APA”) to set aside EPA’s action on the SSI Rule if it finds that it is arbitrary, capricious or otherwise not in accordance with law. *Med. Waste Inst. & Energy Recovery Council v. EPA*, 645 F.3d 420, 424 (D.C. Cir. 2011)(quoting 42 U.S.C. §



7607(d)(9)(A)). Where the statutory text of the Clean Air Act (“CAA”) is clear, the Court will “give effect to the unambiguously expressed intent of Congress;” where the statute “is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute.” *Chevron, U.S.A., Inc. v. National Resources Defense Council, Inc.*, 467 U.S. 837, 842-43 (1984).

This Court has stated that review of agency action “must be searching and careful, and we must ensure both that the [agency] has adequately considered all relevant factors, and that it has demonstrated a rational connection between the facts found and the choice made.” *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977)(internal citations and quotation marks omitted).

## **II. EPA’S FAILURE TO RESPOND ADEQUATELY TO CRITICAL FACTUAL AND LEGAL ISSUES RAISED DURING THE RULEMAKING PERIOD IS ARBITRARY AND CAPRICIOUS.**

EPA has not adequately considered all relevant factors or demonstrated a rational connection between facts found and choices made. The SSI Rule is over-broad, counterproductive to its intent and purpose, and harmful to small businesses developing innovative sludge-management techniques. MaxWest’s process converts sludge into a new “thing”, syngas, and uses that syngas in a way that is clean, sustainable, and cost-effective.

Nowhere in the proposed or final SSI Rule did EPA specifically clarify whether, and based on what criteria, facilities that gasify sewage sludge to produce renewable fuel, not *solely to reduce* “the volume of the sewage sludge,” should be considered regulatory equivalents to “solid waste incineration units.” Absent such clarification, the SSI Rule is arbitrary and capricious because it fails to provide or detail a reasoned basis and connection between the available facts and EPA’s conclusion to apply the same standard to vastly different entities.

Commenters on the proposed SSI Rule identified that EPA’s treatment of SSI units may—and very likely will—adversely affect non-incineration sludge management technologies that use sewage sludge as an energy source rather than a source of energy recovery. Given the cost and other risks associated with falling within the scope of the SSI Rule, commenters asked EPA to revise the proposed Rule in light of those potential impacts. EPA chose not to and failed to adequately respond to various comments on the subject, including: (1) the SSI Rule ignores any balanced consideration of the potential and actual energy value of sewage sludge when gasified, and (2) that the SSI Rule would intentionally and adversely affect environmentally-beneficial non-incineration technologies that are capable of harnessing sewage sludge as a source for green energy (i.e. gasification and

pyrolysis).<sup>3</sup> It is one thing to consider maximum available control technology (“MACT”) standards for a given sludge-management *incineration* process. It is an entirely different proposition to set standards for one kind of SSI unit, and then layer costs on other SSI units that are lower-emitting technologies.

**A. Commenters Explicitly Asked EPA to Revise the Proposed SSI Rule to Account for Gasifiers That Have The Capacity To Beneficially Reuse Sewage Sludge for Energy Generation.**

The Water Environment Federation (“WEF”), an organization dedicated to water quality, summarized its first comment that, “[The] Proposed [SSI] Rule ... does not promote the recovery of the energy resource inherent in wastewater solids.” Comments of Water Environment Federation (EPA-HQ-OAR-2009-0559-0134.1) (“WEF Comments” at 3 JA:\_\_\_). WEF further stated that the proposed rule:

appears to ignore the energy value of wastewater solids. Approximately 17 percent of the 7 million dry tons of wastewater solids produced in the United States each year are incinerated, which could generate a net energy of approximately 360 kWh per dry ton of wastewater solids or

---

<sup>3</sup> Pyrolysis is a process related, but not identical, to gasification. Gasification has been described as “an incomplete combustion of the [solid] waste in order to breakdown the molecules into a syngas by carefully controlling the amount of oxygen present.” G. Mininni et al., *Combustion Inst., New Technologies for MSW Thermal Treatment: The State of the Art*, at III-3, 4 (June 2008), available at <http://www.acs.enea.it/documentazione/editoria/11.pdf>. Conversely, pyrolysis has been characterized as “a thermal degradation, obtained by means an external source of energy, of waste in absence of air to produce syngas, a liquid stream . . . and solid residue . . . .” *Id.*

2,900 GWh. This represents a significant renewable energy source that the EPA should be encouraging and promoting.

*Id.* at 3. WEF specifically identified gasification as a process “that focus[es] on beneficial reuse of wastewater solids for energy production and recovery.” *Id.*

Additionally, comments by the County Sanitation Districts of Los Angeles County specifically requested that EPA either include a definition of “combustion” as “an oxidative process to distinguish it from gasifying operations,” or “clarify that gasifiers are unequivocally excluded from the proposed regulations.”

Comments of County Sanitation Districts of Los Angeles County (EPA-HQ-OAR-2009-0559-0088). at 1 (JA: \_\_\_\_).

These requests that EPA address the impact of the SSI Rule on gasification processes were comments whose resolution, if genuinely addressed by EPA, would have been significant to the outcome of the proposed SSI Rule. As proposed, the rule did not clearly state whether it would cover non-incineration technologies that nevertheless employed combustion in some manner.

**B. EPA Refused To Respond To These Comments Beyond a Bare Refusal To Consider Any “Combustion” Process As Distinguishable from Incineration.**

EPA did not adequately explain why gasification is similar in kind to incineration, nor did it explain why gasifiers that use sludge as a renewable energy resource to make and then “combust” something else as still dealing with a “solid waste” for purposes of the SSI Rule. In its response to these comments, EPA

stated that it “revised the definition of sewage sludge to clarify that methods of sewage sludge disposal other than combustion are not subject to the SSI standards.” RTC at 3-4. EPA provided no further rationale, clarification, explanation or justification for including all units employing “combustion” within the scope of the SSI Rule. A simple sentence explaining that conversion of sludge to syngas rendered that process exempt would have sufficed.

EPA, instead, flatly refused to address comments that the proposed rule failed to acknowledge sludge conversion for energy maximization, stating that these comments were “not relevant to EPA’s establishment of emissions standards for SSI Units,” and were relevant only to its rulemaking on the definition of solid waste. *Id.* at 3-14.

By any rational measure, however, the energy value of sludge is central to any economic or environmental assessment of potential sludge-management technologies. Without evaluating the reasons that emissions from sludge management occur, EPA based its decision on less than half the amount of information and data necessary to reach a reasoned conclusion about SSI units. What is “combusted” under EPA’s theory may be sludge, but it may also be cleaner syngas. Different sources with different emission profiles cannot reasonably be evaluated or need to be controlled under the same standards.

**C. EPA's Failure to Respond Adequately To Gasification Concerns Renders the SSI Rule Arbitrary and Capricious.**

EPA's failure to so consider, and to adequately respond to public comments challenging (1) the SSI Rule's treatment of gasifiers, and (2) the need for greater consideration of the role gasifiers play in generating energy from renewable sources, is a fatal flaw of the SSI Rule. "[A] dialogue is a two-way street: the opportunity to comment is meaningless unless the agency responds to significant points raised by the public." *Home Box Office* at 36, citing *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 393-94 (D.C. Cir. 1973). There was no two-way dialogue with respect to gasification in the SSI rulemaking and that was a critical error. If the agency had properly considered and responded to gasification comments properly, it would have recognized that EPA lacked the statutory authority to subject an environmentally beneficial technology to regulations tailored to a wholly different industry: solid waste incineration. *See Goldstein v. SEC*, 451 F.3d 873, 881 (D.C. Cir. 2006) (stating that an agency's "utterly unreasonable and thus impermissible" construction of a statute "cannot survive judicial review").

EPA cannot avoid this fundamental debate or its obligation to respond to public comments by prejudging relevance. The SSI Rule *itself* raised the issue of sludge energy content. Any entity, public or private, that attempts to harvest the maximum amount of energy value in sludge given today's technology would be

subjected to a burdensome regulatory scheme that is designed for entities that *do not* seek to harvest the most energy value from sludge.

It was therefore fair for public commenters to request that EPA address why the proposed Rule did not take the spectrum of renewable energy potential of sludge into consideration. *See Int'l Fabricare Inst. v. EPA*, 972 F.2d 384, 389 (1992), citing *American Mining Congress v. EPA*, 907 F.2d 1179, 1191 (D.C. Cir. 1990) (“We will therefore overturn a rulemaking as arbitrary and capricious where the EPA has failed to respond to specific challenges that are sufficiently central to its decision.”).

**III. EPA’S FAILURE TO CONSIDER THE FULL REGULATORY, AIR QUALITY AND ENERGY IMPACTS OF THE SSI RULE CONTRAVENES THE CAA AND IS ARBITRARY, CAPRICIOUS, AN ABUSE OF DISCRETION OR OTHERWISE NOT IN ACCORDANCE WITH LAW.**

**A. EPA Did Not Account for Gasifiers’ Different Emissions Profile And Thus Had No Basis To Consider Gasifiers as Equivalent to Incinerators.**

EPA did not collect any data from gasification units in determining either the current emissions of SSI units, or the emission restrictions that will apply to SSIs. In applying the “arbitrary and capricious” standard, this Court determines “whether the agency has considered the relevant factors and articulated a rational connection between the facts and its choices.” *See Motor Vehicle Mfrs. Ass’n of the United States v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). No

deference is due to EPA's decision to group together gasifiers with incinerators because EPA did not collect, have or consider any scientific or statistical data comparing emissions profile differences before making its final decision. *See Ethyl Corp. v. EPA*, 541 F.2d 1, 34-36 (D.C. Cir. 1976)(en banc).

Moreover, neither the proposed Rule nor the final SSI Rule make any comparisons between incinerators and gasification units at all. While EPA previously acknowledged the existence and separateness of gasification in other areas (*See, e.g.* 40 C.F.R. § 51.166(b)(36)(i) (listing gasification as a clean coal technology)), here the agency chose to ignore its own determination, without explaining why it did so.

**B. EPA's Decision To Include Gasifiers Under § 129 Reads that Section Out of Context With the Overall Statutory Schemes Established By Congress for Renewable Energy and Sewage Sludge Management.**

The foregoing notwithstanding, on these issues the SSI Rule stands in stark contrast to the vast majority of other federal and state policies and program initiatives to promote increased use of the full energy value of sludge. The proposed SSI Rule concedes that different POTWs will face significant challenges if they are forced by the burdens of SSI unit regulation to turn to land application or landfills for sewage sludge disposal. *See* 75 Fed. Reg. 63,285 ("We also believe that facilities that use larger SSI units may have more difficulty in landfilling sewage sludge due to potential capacity issues at landfills.). Congress has



separately recognized that “land is too valuable a national resource to be needlessly polluted by discarded materials,” and “alternatives to existing methods of land disposal must be developed.” 42 U.S.C. § 6901(b)(1) and (8).

This Court evaluates EPA’s interpretation of a statute in the broader context of what problems Congress sought to solve in that area of lawmaking. *See Goldstein*, 451 F.3d at 878, quoting *PDK Labs. Inc. v. DEA*, 362 F.3d 786, 796 (D.C. Cir. 2004) (“As always, the ‘words of the statute should be read in context, the statute’s place in the overall statutory scheme should be considered, and the problem Congress sought to solve should be taken into account” to determine whether Congress has foreclosed the agency’s interpretation.”). It is a stunning contradiction of Congress’s environmental policies, as expressed in statutes, for EPA to determine that sewage sludge has essentially no value as a renewable energy source by sweeping gasifiers into the scope of the SSI Rule. The emissions caused by gasification are different in kind and quantity. EPA’s determinations gravely inhibit private industry’s ability to provide alternative management options for municipalities who have ever-dwindling sludge management choices. The SSI Rule’s inclusion of gasifiers, and the additional costs of compliance with that regulatory scheme, effectively means that municipalities already using landfills or land application will not transition to gasification as an alternative method of sewage sludge management.

As recently as March 15, 2012, President Barack Obama declared that the United States “need[s] an energy strategy for the future – an all-of-the-above strategy for the 21st century that develops every source of American-made energy.”<sup>4</sup> Sludge-to-syngas utilization is currently one of the most attractive and robust clean energy solutions. It can and needs to continue to be promoted for public health and welfare reasons as a major component of any all-of-the-above national energy strategy.

**IV. EPA’S FAILURE TO ESTABLISH SUBCATEGORIES RECOGNIZING FUNDAMENTAL CLASS AND USE DIFFERENCES AMONG ENTITIES CONSIDERED WITHIN THE SCOPE OF THE SSI RULE IS ARBITRARY, CAPRICIOUS AND OTHERWISE UNLAWFUL.**

Despite vast processing differences in form and substance, each type of “combustion” technology folded into the SSI Rule must be evaluated and regulated in a manner at least closely resembling or appreciating such differences.

Subcategories are only useful to the degree that the essence of sludge management is integrated into any future SSI Rule or MACT standard determination.

The rationale for regulating SSI emissions should be to drive innovation. MaxWest’s gasification process is that innovation. It involves minimal combustion in a controlled, oxygen-starved environment. MaxWest’s process does

---

<sup>4</sup> Remarks by the President on Energy, March 15, 2012, available at <http://www.whitehouse.gov/the-press-office/2012/03/15/remarks-president-energy>, last accessed July 6, 2012.

not simply vent the products of combustion into the atmosphere, but rather chemically modifies the material into a gas that has its own energy value, and some residual ash.

In other regulatory contexts, EPA has acknowledged that gasification is a “clean” technology whose development has been encouraged by the Department of Energy. For example, EPA exempts from stationary source regulations facilities that replace “an existing coal-fired boiler with ... integrated gasification combined cycle [or] ... integrated gasification fuel cells,” when these modifications were either “awarded funding from the Department of Energy,” or otherwise “qualify for an extension under ...the [CAA].” *See* 40 C.F.R. §§ 60.1 to .2; 60.14; *see also* 40 C.F.R. § 97.102 (noting replacements of coal-fired boilers with “integrated gasification”).

The issue that EPA seems to be erroneously focused on to determine whether a gasifier qualifies as an SSI is: Who uses the synthetic gas produced by gasification? This is evident in the agency’s communication to MaxWest notifying it that its process would be swept into the SSI Rule. EPA’s letter states that it is MaxWest’s combination of gasification with the use of that green gas that causes the gasifier to be classified as an SSI.<sup>5</sup> EPA concludes that combustion of syngas

---

<sup>5</sup> While there is a minor amount of combustion that occurs to sustain the gasification reaction, it does not appear that that combustion is the issue.

in a thermal oxidizer after gasification makes gasification the same as incineration. This argument is flawed.

The combustion of the green syngas in the thermal oxidizer is the mechanism used to heat the hot oil that is used to dry the sludge in a sludge dryer, which must be done before gasification. However, it is equally as easy for a municipality to combust “brown” gas, such as natural gas, to heat the oil for drying. It makes no sense to create an incentive for a municipality to use brown gas and sell the green gas to achieve different compliance standards.

This analysis also leads to absurd results where a municipality that decides to use its green gasifier gas to power its sludge dryer ends up paying significantly higher compliance costs than a municipality that sells the green gasifier gas to a third party. That original municipality will use brown gas for its drying process, and as a result of choosing *not to* use renewable energy, would save money in compliance costs.

It becomes even more convoluted when you consider that a municipality may want the option to sometimes sell the green gas and sometimes use it. This decision would be based upon economics of things like the cost of natural gas and credits offered for green gas. However, if the regulatory compliance equipment required by the SSI Rule depends upon that decision, then there will be a further incentive to use brown gas.

Moreover, if the SSI Rule applies to the combustion of syngas sourced from sludge, it is unclear where in the energy market the MACT requirements applicable to that syngas would end. Logically, any syngas transported by pipe offsite would not be subject to the SSI Rule's Standards when combusted. Such a perverse regulatory disincentive to beneficial use onsite at a POTW is without basis or merit. The SSI Rule does not adequately further the goals of protecting human health and welfare, and is therefore an unlawful Rule that should be reversed.

## **V. CONCLUSION**

For the reasons stated above, EPA acted arbitrarily, capriciously and otherwise unlawfully in the SSI Rule, which therefore and should be reversed.

Dated: July 24, 2012

Respectfully submitted,

MAXWEST ENVIRONMENTAL  
SYSTEMS, INC.

/s/ Lisa Sharp

Lisa Sharp (Cir. Bar # 53622)

MCGUIREWOODS LLP

One James Center

901 E. Cary Street

Richmond, VA 23219

Tel: (804) 775-1000

[lsharp@mcguirewoods.com](mailto:lsharp@mcguirewoods.com)

D. Cameron Prell (Cir. Bar # 48855)

MCGUIREWOODS LLP

2001 K Street N.W.

Washington, DC 20006-1040

Tel: (202) 857-1700

[cprell@mcguirewoods.com](mailto:cprell@mcguirewoods.com)

*Counsel for Intervenor MaxWest  
Environmental Systems, Inc.*

**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME  
LIMITATIONS**

I HEREBY CERTIFY THAT the foregoing brief complies with the type-volume limitations, and typeface and type-style requirements of Fed. R. App. P. 32(a). As determined by the Microsoft Word 2003 software, the proportionally spaced typeface Times New Roman, 14 point, was used to produce this brief, which contains 4,555 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii) and Circuit Rule 32(a)(1).

/s/ Lisa Sharp

Lisa Sharp

July 24, 2012

**CERTIFICATE OF SERVICE**

I certify that on July 24, 2012, I electronically filed the foregoing with the clerk of court of the U.S. Court of Appeals for the District of Columbia Circuit using the electronic case filing system of the court. The electronic case filing system sent a "Notice of Electronic Filing" to the attorneys of record who have consented to accept this Notice as service of this document by electronic means.

/s/ Lisa Sharp

Lisa Sharp

\38500623.14