

C&H  
Curtin & Heefner<sup>LLP</sup>  
ATTORNEYS AT LAW

2005 S. EASTON ROAD • SUITE 100 • DOYLESTOWN, PA 18901

(267) 898.0570 • (800) 773.0680 • FAX (215) 340.3929

WWW.CURTINHEEFNER.COM

JORDAN B. YEAGER  
LAUREN M. WILLIAMS  
JBY@curtinheefner.com  
LMW@curtinheefner.com

April 20, 2018

Robert A. Willig, Esq.  
Senior Deputy Attorney General  
Commonwealth of Pennsylvania  
Office of the Attorney General  
6<sup>th</sup> Floor, Manor Complex  
564 Forbes Ave.  
Pittsburgh, PA 15219  
*Via email: rwillig@attorneygeneral.gov*

**Re: ACRE Complaint of Ms. Katie Hetherington Cunfer – East Penn Township  
Carbon County**

Dear Mr. Willig:

We represent East Penn Township in connection with the Township's response to your letter regarding Ms. Cunfer's complaint concerning Township Ordinance No. 77. Please note that while the letter was dated March 12, 2018, the Township did not receive the letter, with all intended attachments, until March 21, 2018. Thank you for the opportunity to respond Ms. Cunfer's ACRE<sup>1</sup> complaint.

Ms. Cunfer does not identify specific legal bases for her arguments, and only generally references ACRE and Com., Office of Atty. Gen. ex rel. Corbett v. E. Brunswick Twp. ("East Brunswick II"), 980 A.2d 720 (Pa. Commw. Ct. 2009). Because of the vagueness of her complaint, the potential breadth of issues in any ACRE analysis, and the variety of statutes discussed in East Brunswick II, in the discussion that follows we will, out of an abundance of caution, attempt to identify and address potential arguments on which Ms. Cunfer might be seeking to rely.

Thus, this letter will provide: 1) an overview of Ordinance 77; 2) an analysis pertaining to the validity of Ordinance 77 under ACRE (to the extent it applies), East Brunswick II, and the other statutes raised in East Brunswick II, and 3) a discussion of potential conflict of interest and bias concerns as to the Attorney General's Office in this matter. In sum, Ordinance 77 is a valid

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<sup>1</sup> 3 Pa.C.S. §§ 311-318.

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exercise of the Township's authority. The Ordinance is one way in which the Township carries out its constitutional obligations as a trustee under Article I, Section 27 of the Pennsylvania Constitution to affirmatively enact legislation to address local environmental conditions and, in turn, conserve and maintain public natural resources relied on by Township residents.

I. Overview of Ordinance 77

Ms. Cunfer relies heavily on East Brunswick II and incorrectly claims that Ordinance 77 is just like the ordinance at issue in that case. In reality, Ordinance 77 is very different than the ordinance in East Brunswick II.

The entire point of Ordinance 77 is tailoring the impact of waste operations, including land application of sewage sludge, to local environmental conditions. The Ordinance specifically states that the Township found this to be a necessary thing to do to protect residents' environmental rights. (Ordinance 77, p.7, last ¶.) As counsel to various third-party appellants challenging PADEP actions, we can confirm that the PADEP rarely takes local conditions into account, including in the biosolids land application 30-day notice review process. In fact, PADEP's check-the-box approach is particularly pronounced in the biosolids site review process.<sup>2</sup>

Ordinance 77's registration requirement for waste operations is specifically tied to a process of determining a proposed operation's potential impact on drinking water given the Township's specific geologic conditions, history of industrial activity, and heavy reliance on groundwater for drinking water. (Ord. 77, § IV.A.1.(a), (b); see also § III; pp.6-7). A secondary purpose of the registration requirement and associated information that must be submitted is so that the Township can be prepared in the event of a spill or other accident. (Ord. 77, § IV.B.7; see also p.4, ¶ 3; pp.6-7). Thus, the registration is directly tied to addressing the Township's unique local conditions and ensuring that a waste operation, including land application of sewage sludge, is done in a matter that is protective of the local environment given such local conditions. Also, although the registration establishes a preference for municipal entities, private persons such as the Cunfers are allowed to obtain a registration certificate. The Ordinance merely requests information demonstrating that private entities have the requisite financial and other resources to properly manage the waste operation. (Ord. 77, § III.2.). This furthers the goal of protecting residents and the local environment by ensuring that private entities have economic ability to comply with the law and will not simply abandon their operations, leaving the Township and its residents with potential contamination and a cleanup burden.

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<sup>2</sup> See cited deposition testimony of PADEP officials and Synagro employees and representatives:  
<http://ehb.courtapps.com/efile/documentViewer.php?documentID=26359>

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For instance, the Township requires that applicants submit information on waste characteristics, which informs the Township and residents about both: 1) potential impacts to water supplies and the degree of risk; and 2) emergency response needs. (Ord. 77, § IV.B.7).

The hearing process in Section IV.A. of Ordinance 77 allows residents and the applicant to present evidence such that the Township can evaluate the impacts on local residents. The Ordinance's financial security requirements are likewise tied directly to the costs of replacing water supplies harmed by waste operations, such as sludge application. (Ord. 77, § IV.A.3). Residents in East Penn Township are reliant entirely on private water, and thus such financial security is necessary to prevent innocent residents from bearing the costs of other individuals' operations on their land. Further, the Ordinance specifically limits the Township's ability to place conditions in the registration to the matters under the Ordinance, such as water supply protection. (Ord. 77, § IX.2.). Thus, the Township cannot simply overburden an approval with conditions to block a project. The application fee associated with registration is also nominal (\$100), and specifically tied to administrative costs. (Ord. 77, § XIV).

Separate from drinking water, Ordinance 77 addresses waste truck routes in order to protect sensitive populations (e.g. schoolchildren) from potential accidents. (Ord. 77, § V). It likewise addresses the hours and days of *delivery* (not disposal) of waste to waste operation sites to minimize disruption to local residents, (Ord. 77, § VI), and addresses potential adverse local impacts like odors, insect breeding, and rodents. (Ord. 77, § IV.B.6.). Thus, the entire Ordinance is focused on the impact of a proposed waste operation on local residents given local conditions, including geology, groundwater reliance, and other factors specific to East Penn Township.

## II. Ms. Cunfer's Complaint

As noted earlier, there is very little detail in Ms. Cunfer's complaint that identifies what, beyond the registration requirement, is the basis for her challenge to Ordinance 77. Ms. Cunfer does not identify any legal bases for her challenge other than general references to ACRE and East Brunswick II. The Township does not read Ms. Cunfer's complaint to challenge the *entirety* of Ordinance 77 or to challenge it under any other law except for ACRE. However, the Township will address other laws beyond ACRE out of an abundance of caution. In particular, due to Ms. Cunfer's reliance on East Brunswick II, which delved into other laws beyond ACRE, we are constrained to likewise address the Solid Waste Management Act, the Nutrient Management Act, and the Agricultural Area Security Law.

Thus, the Township will address two areas of inquiry: 1) Ms. Cunfer's express identification of the registration requirement for land application of biosolids as a basis for her ACRE complaint; and 2) her erroneous argument that Ordinance 77 is just like the ordinance in East Brunswick II.

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To the extent that the AG's Office reads Ms. Cunfer's complaint to challenge the Ordinance in its entirety, or as a challenge under other statutes, the Township would respectfully request a further opportunity to respond accordingly.

A. Registration Requirement and Associated Water Protection Requirements Are Valid under ACRE and Statutes Addressed in *East Brunswick II*

Ordinance 77's registration requirement and associated water protections are valid under ACRE because: 1) land application of biosolids is not a "normal agricultural operation" under ACRE and thus ACRE does not apply; 2) the Township is neither prohibited nor preempted from enforcing the Ordinance's requirements; and 3) the Township has express and implicit authority for the requirements.

According to ACRE, a local ordinance is "unauthorized" if it:

- 1) is enacted or enforced by a local government unit;
- 2) prohibits or limits a normal agricultural operation; and does so
- 3) without expressed or implied authority under State law to adopt the ordinance; and/or
- 4) the municipality is prohibited or preempted under State law from adopting the ordinance.

3 Pa.C.S. § 312. Despite ACRE's ban on enacting and enforcing "unauthorized local ordinances," it specifically states that it does not:

diminish, expand or otherwise affect the legislative or regulatory authority of local government units under State law, including the following:

- (1) Chapter 5 (relating to nutrient management and odor management).
- (2) The regulation, control or permitting procedures for the land application of class A or B biosolids.

3 Pa.C.S. § 313.

1. Land Application of Sewage Sludge is Not a "Normal Agricultural Operation" and Is Thus Not Protected by ACRE

A "normal agricultural operation" under ACRE refers to the Right-to-Farm Act, which says that such an operation is:

The activities, practices, equipment and procedures that farmers adopt, use or engage in the production and preparation for market of

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poultry, livestock and their products and in the production, harvesting and preparation for market or use of agricultural, agronomic, horticultural, silvicultural and aquacultural crops and commodities and is:

- (1) not less than ten contiguous acres in area; or
- (2) less than ten contiguous acres in area but has an anticipated yearly gross income of at least \$10,000.

The term includes new activities, practices, equipment and procedures consistent with technological development within the agricultural industry. Use of equipment shall include machinery designed and used for agricultural operations, including, but not limited to, crop dryers, feed grinders, saw mills, hammer mills, refrigeration equipment, bins and related equipment used to store or prepare crops for marketing and those items of agricultural equipment and machinery defined by . . . the Farm Safety and Occupational Health Act. Custom work shall be considered a normal farming practice.

3 P.S. § 952.

Land application of biosolids is not included in the definition of “normal agricultural operations.”<sup>3</sup>

The Township recognizes that the Pennsylvania Supreme Court addressed a similar question in Gilbert v. Synagro Cent. LLC, 131 A.3d 1 (Pa. 2015); however, the Gilbert case is distinguishable. The question of whether application of sewage sludge to agricultural land is a “normal agricultural operation” for purposes of ACRE was not addressed by the Pennsylvania Supreme Court in Gilbert was a case under the Right to Farm Act and a statute of repose, not ACRE. Although ACRE and the Right to Farm Act use the same definition, the Pennsylvania Supreme Court noted that “fact finding [is] inherent in the application of Act 38 [ACRE].” Id. at 16. Further, because Gilbert dealt with the application of a statute of repose, the Court

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<sup>3</sup> Hempfield Twp. v. Hapchuck, 620 A.2d 668 (Pa. Commw. Ct. 1993) is not applicable here for several reasons. First, the case predates ACRE. Second, as the Commonwealth Court pointed out in East Brunswick I, if the General Assembly wanted to cross-reference the definition of “normal farming operations” in the SWMA, which discusses sewage sludge, it could have done so, but did not. 956 A.2d at 1115. Indeed, the fact that the SWMA, but not ACRE or the Department of Agriculture, addresses sewage sludge lends support to the Township’s argument that sewage sludge is a waste product, not a benign agricultural fertilizer or even akin to manure. Third, that case had to do with whether a use continued to be agricultural under a zoning ordinance, and was not an ACRE matter.

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determined that such matters are questions of law and that a farmer should not have to fight through to a jury just to establish that a suit is barred.

ACRE is a different law. The farmer is not a party in an ACRE case. The AG's Office is. The Right to Farm Act is far narrower in scope than ACRE. Also, when the AG's Office challenged the East Brunswick Township ordinance, the Commonwealth Court determined that the question of whether sludge application to farms is a "normal agricultural operation" is a question of fact under ACRE, *not* a matter of law. Com., Office of Atty. Gen. ex rel. Corbett v. East Brunswick Twp. ("East Brunswick I"), 956 A.2d 1100, 1114-16 (Pa. Commw. Ct. 2008).<sup>4</sup>

Thus, Gilbert's bare legal determination cannot simply be imported into ACRE, which requires development of facts.

When the facts are considered, it is clear that sewage sludge application on farmland is not a "normal agricultural operation." Indeed, the scientific evidence demonstrates the damage sewage sludge application has caused *to farms* and the threats posed by industrial contaminants in sludge.

Unlike manure, the composition of which is generally predictable based on the type of animal, feeds, and medicine, the composition of biosolids (which we use interchangeably with sewage sludge) is highly variable and contains industrial waste. Sewage sludge is essentially material removed from and left behind by the wastewater treatment process. The composition of sewage sludge can vary significantly depending on the type of wastewater plant in question, including what industrial wastewater is accepted at the plant.

The majority of what is in sewage sludge is not regulated by anyone, not even the PADEP or the U.S. E.P.A. This is despite the fact that governmental agencies have widely documented that biosolids contain a broad range of unregulated constituents, including flame retardants, pharmaceuticals, steroids, hormones, organics, and unregulated metals.<sup>5</sup> In January

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<sup>4</sup> East Brunswick II did not address this question because the Court had to assume for the purposes of the Township's demurrer that the application of sewage sludge to agricultural land is a "normal agricultural operation." 980 A.2d at 729.

<sup>5</sup> <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1003RNO.PDF?Dockey=P1003RNO.PDF>; <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1003RL8.PDF?Dockey=P1003RL8.PDF>; <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100534B.PDF?Dockey=P100534B.PDF>. This is also despite US EPA efforts to discredit certain biosolids research that investigated adverse effects. Attachment A, pp. 38-41. Further,

The EPA's Inspector General has criticized the EPA's biosolids program sharply, finding in a 2002 report that the "EPA does not have an effective program for ensuring compliance with land application requirements of Part 503. Accordingly, while EPA promotes land application, EPA

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2011,<sup>6</sup> the PADEP identified barium, strontium, and radioactive material in sewage sludge coming from a municipal wastewater treatment plant that accepted fracking wastewater.<sup>7</sup> That sludge was applied to a farm in Bedford County, Pennsylvania.<sup>8</sup>

Further, researchers have documented silver nanoparticles in sludge, found uptake of nanoparticles in crops, and documented adverse impacts on microbial biomass in soils and on certain types of crops from nanoparticles in sludge.<sup>9</sup> Compounds in sewage sludge, including the variety of unregulated compounds, can leach out when exposed to rainwater, resulting in steroids and hormones in runoff, or other materials migrating downward into soil and thus groundwater. It is likely that new testing would find PFOAs in sludge, given the increasing degree to which they are being found at military and other facilities.

A significant amount of truck traffic, far beyond what is normal for agriculture, is also associated with sewage sludge application. PADEP regulations distinguish between “exceptional quality” (or Class A) and “non-exceptional quality” (Class B) sludge. To be “exceptional quality,” one requirement is that the sewage sludge be both nonliquid and nonrecognizable as human waste. 25 Pa. Code § 271.911(b)(1). In the case of the Cunfer Farm, all but two of the 51 facilities slated to deliver sludge to the Farm supply Class B, or non-exceptional quality sludge, meaning the material can be quite liquid. Synagro documents confirm this.

As stated by the Environmental Quality Board:

Liquid sewage sludge has the potential to be much more variable than a nonliquid sludge, particularly with respect to pathogen and vector attraction reduction. Limiting the EQ sewage sludge to

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cannot assure the public that current land application practices are protective of human health and the environment.”

Attachment A, p.4.

<sup>6</sup> This was before PADEP’s call on municipal wastewater treatment plants to “voluntarily” stop accepting fracking wastewater.

<sup>7</sup> Attachment B. The facility in question, the Johnstown WWTP, is one of the facilities approved for the Cunfer Farm. However, at this time, it is believed that the WWTP does not currently accept fracking wastewater. [https://www.epa.gov/sites/production/files/2015-06/documents/johnstown\\_0.pdf](https://www.epa.gov/sites/production/files/2015-06/documents/johnstown_0.pdf)

<sup>8</sup> Attachment B.

<sup>9</sup> <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0057189>; see also <https://pubs.acs.org/doi/abs/10.1021/acs.est.5b01208> (finding *inter alia* increased metal uptake in crops treated with sludge containing nanoparticles).

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nonliquid products will reduce the potential for adverse effects to human health, which are caused by using sewage sludge that may not continuously meet the required pathogen and vector reduction standards. In addition, contrary to the EPA assumptions, ***liquid sewage sludge is not fertilizer-like*** and due to its variability is not always marketed. ***Because of the low nitrogen and high water content, it may be necessary to bring 40 times more liquid sludge to a site to get the same amount of nutrients supplied by one load of liquid commercial fertilizer. This intense traffic and the management practices associated with land applying the huge volumes of liquid*** require the more intensive management techniques that are necessary for non-EQ sewage sludges.

27 Pa. Bull. 521, 523 (Jan. 25, 1997) (emph. added).<sup>10</sup> Synagro's documentation for 27 of the 51 facilities supplying the sludge for the Cunfer Farm confirms the low-nitrogen, high-liquid quality of the Class B sludge. The amount of truck traffic for a supposedly agricultural operation is going to approach that of a fracking operation, not an agricultural operation.

To illustrate, Synagro's documentation identifies that the Hamden Township WWTP sludge is 25.25 percent solid (approximately  $\frac{3}{4}$  liquid) and has an average of 7.2 pounds of plant-available nitrogen of per wet ton of sewage sludge. If corn were planted on Field H3 at the Cunfer Farm, the total amount of nitrogen needed for the corn, according to Synagro's calculations, is 954 pounds of nitrogen. With an average of 7.2 pounds of plant-available nitrogen, that means 6,868.8 wet tons of sewage sludge would be needed, *just for one field*. There are 33 fields at the Cunfer Farm, which is approximately 124 acres.

Further, the history of how this country has dealt with sewage sludge reinforces that it is not within the ACRE definition of "normal agricultural operations." ACRE's definition of "normal agricultural operations" includes "new activities, practices, equipment and procedures consistent with technological development ***within the agricultural industry***." 3 P.S. § 952 (emph. added). Biosolids land application is not a technological development within the agricultural industry. It is something created from outside the industry as a waste disposal method. Until the Clean Water Act, nearly everything ended up in streams. After the Clean Water Act, wastewater treatment resulted in sludge containing pollutants that used to be discharged. However, this new wastestream had to be dealt with in some fashion. Thus, this

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<sup>10</sup> Despite mention of "more intensive management techniques," there is nothing in the regulations that address traffic, or other impacts. Instead, the regulations treat sludge like manure, 27 Pa. Bull. at 524-25, despite openly admitting that sewage sludge has particular concerns that need to be addressed. See also cited deposition testimony of PADEP officials and Synagro employees and representatives:  
<http://ehb.courtapps.com/efile/documentViewer.php?documentID=26359>

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waste product – sewage sludge – was exported to other sites, including farms. Thus, the advent of sewage sludge land application reflected a technological development within the wastewater treatment industry, not a technological development within the agricultural industry. With the land application of sewage sludge, farm fields become waste disposal sites. Thus, despite attempting to clean up streams, the sludge containing what would have been discharged directly into waterways is sent back into the environment to enter streams and groundwater sources, and to expose rural communities to industrial contaminants.

Sewage sludge is not a benign fertilizer. It is not manure. It is not even merely human waste; it is industrial waste too – including industrial contaminants not addressed by any regulation or limits. It is a waste product that must be treated as such.<sup>11</sup> Ocean dumping of sewage sludge had significant adverse impacts on the marine environment, resulting in ocean dumping prohibitions.<sup>12</sup>

Despite being marketed as safe, free fertilizer to farmers, sewage sludge application has harmed livestock, farm workers, and the community surrounding the agricultural operation.<sup>13</sup> Farmers have sued biosolids entities after their animals died from eating crops grown in sludge.<sup>14</sup> One culprit is molybdenum, which is taken up into crops *more* readily the *higher* the pH of the soil.<sup>15</sup> Typically, lower pHs mean that most metals (molybdenum and arsenic being exceptions) will be taken up by crops more readily.<sup>16</sup> Unlike some metals, there is no “cumulative pollutant loading rate” for molybdenum in the regulations. 25 Pa. Code. § 271.914(b)(2).<sup>17</sup> This means that even if there are levels of molybdenum in fields, and thus in crops, toxic to cattle, sludge can continued to be applied so long as the levels of the regulated metals have not been exceeded. To the extent that molybdenum leaches more readily than other metals out of the soil and into the groundwater, it poses a threat to neighbors, some of whom may use their groundwater for

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<sup>11</sup> Even the U.S. E.P.A.’s Part 503 regulations on sewage sludge use the term disposal at times. 40 C.F.R. § 503.5.

<sup>12</sup> <https://www.epa.gov/ocean-dumping/learn-about-ocean-dumping>

<sup>13</sup> <https://www.nytimes.com/2003/06/26/us/sludge-spread-on-fields-is-fodder-for-lawsuits.html>; Attachment A.

<sup>14</sup> <https://www.nytimes.com/2003/06/26/us/sludge-spread-on-fields-is-fodder-for-lawsuits.html>; Attachment A.

<sup>15</sup> Attachment A, p.26.

<sup>16</sup> Attachment A, p.26.

<sup>17</sup> There is a ceiling concentration for molybdenum pertaining to the batches of sludge that get applied to the fields; however, even the USDA has expressed concerned that the ceiling concentration is too high. Attachment A, p. 23, n.6.

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agricultural or other uses. Another culprit identified in one case of cattle death was an unregulated pollutant present in the sewage sludge due to industrial wastewater.<sup>18</sup>

Anything approaching “normal agricultural operations” should, at the very minimum, be something that does not harm farmers, the food supply, or the local environment in either the short-term or long-term.<sup>19</sup> Land application of sewage sludge is none of that. As a result, the land application of biosolids is not a “normal agricultural operation” and thus ACRE does not apply to Ordinance 77.

2. Ordinance 77 Is Not Preempted or Prohibited by State Law

Assuming that ACRE did apply, Ordinance 77 is not preempted or prohibited by state law. Further, to the extent state law is construed to preempt or prohibit the Township from addressing local environmental conditions to protect residents’ constitutional environmental rights, such a construction is unconstitutional and invalid.

A. State Law Can Only be a Floor, Not a Ceiling on Local Authority to Address Local Environmental Conditions

The Ordinance is a valid exercise of the Township’s authority, and carries out the Township’s obligations to respect its residents’ environmental rights and property rights under Article I, Sections 1 and 27 of the Pennsylvania Constitution. Specifically, the ordinance tailors the impacts of waste operations, including sewage sludge land application, to local conditions. This is a crucial part of the Township’s role as a trustee of public natural resources under Article I, Section 27 of the Pennsylvania Constitution. Robinson Twp. v. Commonwealth (“Robinson II”), 83 A.3d 901, 953, 977-81 (Pa. 2013) (plurality); *id.* at 1006, 1007-08 (Baer, J., concurring); see Pa. Env’tl Defense Found’n v. Com. (“PEDF”), 161 A.3d 911, 919 (Pa. 2017).

No state law can remove a municipality’s constitutional obligations, or command it to ignore such obligations because those obligations trump state legislative action. Robinson II, 83 A.3d at 977-78 (plurality); *id.* at 1000-08 (Baer, J., concurring). No state law can remove a municipality’s implicitly necessary authority to carry out its Section 27 obligations, and no state law can leave local protection unaccounted for, even under the guise of a statewide law that seeks to preempt all local regulation, or place a ceiling on it. *Id.*; Robinson Twp. v. Commonwealth (“Robinson IV”), 147 A.3d 536, 565 (Pa. 2016)(discussing Act 13’s provisions as a “ceiling” on local regulation that could not be exceeded, “no matter what unique local conditions or needs existed in a particular municipality.”).

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<sup>18</sup> Attachment A, p. 27 & n.7.

<sup>19</sup> This is particularly true in this state in which Pennsylvanians’ environmental rights are protected from governmental interference – including sewage sludge approvals – to the same extent as their political rights.

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Ordinance 77's exercise of authority to tailor the impact of industrial operations to local conditions is the type of municipal action that the Pennsylvania Supreme Court implicitly found valid in Robinson II. Indeed, Act 13's express attempts to *block* local governments from exercising such authority, despite municipal obligations under Article I, Sections 1 and 27 of the Pennsylvania Constitution, were the very reason why a majority of the Pennsylvania Supreme Court found *both* Sections 3303 and 3304 of Act 13 unconstitutional. Robinson II, 83 A.3d at 953, 977-81 (plurality); id. at 1006, 1007-08 (Baer, J., concurring). The Court's invalidation of Section 3303 of Act 13 is particularly important because Section 3303 related broadly to the many other ways a municipality can act to protect its residents by addressing local environmental conditions. Robinson II was repeatedly clear that environmental protection in Pennsylvania cannot be dealt with solely by means of statewide averages to the exclusion of local considerations. Id. Rather, local considerations are necessary given Pennsylvania's extreme diversity in geology, topography, population, and other factors. Id. Unlike the operational or technical aspects of a wastewater plant, for example, which may not vary from municipality to municipality, environmental conditions differ markedly across the state. Id.; cf. Retail Master Bakers Ass'n of W.Pa. v. Allegheny County, 161 A.2d 36, 38-39 (Pa. 1960) (contrasting public health issues that vary depending on population density, climate, and other factors to regulation of how elevators function). Here, the Township has taken an active role to address local environmental conditions through Ordinance 77, consistent with its trustee obligations under Section 27, and consistent with its role in respecting residents' property rights and their environmental rights.

As a result, any application of state law that purports to impose a ceiling, not a floor – to attempt to preempt or prohibit local governments like the Township from tailoring activities' impacts to local conditions to protect residents' constitutional rights – is invalid. Robinson II, 83 A.3d at 953, 977-81 (plurality); id. at 1006, 1007-08 (Baer, J., concurring); see PEDF, 161 A.3d at 919. This includes ACRE, the Nutrient Management Act, and the Solid Waste Management Act ("SWMA"), all of which East Brunswick II essentially applied as ceilings, not floors, to block local regulation of sludge operations. Any case law prior to Robinson II and PEDF that purports to curtail municipality authority over local environmental conditions must be re-evaluated.

For example, Liverpool Twp. v. Stephens, 900 A.2d 1030 (Pa. Commw. Ct. 2006), incorrectly found that the SWMA *did* establish a preemptive, comprehensive scheme of regulation. This is directly contrary to the language of the SWMA, particularly as to sewage sludge, as will be explained below. Liverpool endorsed a complete blocking of local regulation, even for pressing local conditions. Such a result does not survive Robinson II and PEDF. The Pennsylvania Supreme Court rejected Liverpool's reasoning, see id. at 1038<sup>20</sup>, in Robinson II

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<sup>20</sup> In contrast, the dissent in Liverpool specifically stated: "Because the General Assembly recognized that the *statewide administrative regulations* issued by DEP *do not take into consideration local conditions*, and only deal with the operation of waste sites, it gave second class township the authority to enact legislation regulating the

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and PEDE. Robinson II, 83 A.3d at 953, 963, 977, 979-82 (plurality); id. at 1006, 1007-08 (Baer, J., concurring); see PEDE, 161 A.3d at 919 (quoting Robinson II, 83 A.3d at 963) (“Moreover, public trustee duties were delegated concomitantly to all branches and levels of government in recognition that the quality of the environment is a task with both local and statewide implications . . . .”) id. at 930-32 & n.23.

The General Assembly is tasked with looking at issues broadly from a statewide perspective. This does not mean that local governments have no role. Robinson II specifically *affirmed* that a local role in addressing local conditions is absolutely necessary in a state as diverse as Pennsylvania. Robinson II, 83 A.3d at 953, 977, 979-81 (plurality); id. at 1006, 1007-08 (Baer, J., concurring). This is consistent with the general rule that municipalities may make such regulations in furtherance of the general law, particularly those regulations that pertain to local needs. 32 A.3d at 594-95, Brazier v. City of Phila., 64 A. 508 (Pa. 1906). Any of the General Assembly’s general determinations on health and safety do not mean that sewage sludge is safe to apply under all circumstances, regardless of proximity to humans, geology, or other factors. Thus, the Township, through Ordinance 77, has established a valid system for ensuring that sewage sludge land application is not harmful to residents based on local conditions.

#### B. Traditional Preemption Analysis Standards

There are three types of preemption: 1) express; 2) implied, and 3) conflict. Hoffman Min. Co. v. Zoning Hearing Bd. of Adams Twp., Cambria Cty., 32 A.3d 587, 593-94 (Pa. 2011). Implied preemption can occur when “the state regulatory scheme so completely occupies the field that it appears the General Assembly did not intend for supplementation by local regulations.” Huntley & Huntley, Inc. v. Borough Council of the Borough of Oakmont, 964 A.2d 855, 863 (Pa. 2009). Conflict preemption addresses situations in which a local ordinance “stand[s] as an obstacle to the execution of the full purposes and objectives of the Legislature,” id., or “irreconcilably conflicts with” a statute. Hoffman Min. Co., 32 A.3d at 594. “Conflict preemption is applicable when the conflict between a local ordinance and a state statute is irreconcilable, *i.e., when simultaneous compliance with both the local ordinance and the state statute is impossible.*” Id. at 594 (emph. added). Further,

We will refrain from holding that a local ordinance is invalid based on conflict preemption “*unless there is such actual, material conflict between the state and local powers that only by striking down the local power can the power of the wider constituency be*

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placement of sludge and other solid waste to protect the health, safety, and welfare of their citizens.” 900 A.2d at 1038 (Pellegrini, J., dissenting)(emph. added). The dissent further noted that “what is being preempted is the ability of the municipality, through its elected local officials, to address the needs of its citizens.” Id. at 1039. Overall, the substance of the dissent is consistent with the reasoning of Robinson II and PEDE.

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*protected.*” *United Tavern Owners of Philadelphia v. School District of Philadelphia*, 441 Pa. 274, 272 A.2d 868, 871 (1971). It is a long-established general rule that “in determining whether a conflict exists between a general and local law, [ ] where the legislature has assumed to regulate a given course of conduct by prohibitory enactments, ***a municipal corporation with subordinate power to act in the matter may make such additional regulations*** in aid and furtherance of the purpose of the general law ***as may seem appropriate to the necessities of the particular locality*** and which are not in themselves unreasonable.” *Mars Emergency*, 740 A.2d at 195 (quoting *Western Pennsylvania Restaurant Association*, 77 A.2d at 620). For example, “municipalities in the exercise of the police power may regulate certain occupations by imposing restrictions which are in addition to, and not in conflict with, statutory regulations.” *Western Pennsylvania Restaurant Association*, *supra* at 620.

Id. at 594-95 (emph. added); see also Retail Master Bakers Ass’n, 161 A.2d 36.

There is a presumption against preemption of local regulation. Provident Mut. Life Ins. Co. of Phila. v. Tax Review Bd. of City of Phila., 658 A.2d 500, 502 (Pa. Commw. Ct. 1995). Indeed, total preemption of local authority is rare in Pennsylvania, and has only been found in three cases: anthracite strip mining, alcoholic beverages, and banking. Id. at 593. Further, preemption is something that is done by the General Assembly, *not* by agencies through regulations because agencies and municipalities are on the same level under state law – neither is superior or inferior to one another. See Com., Dept. of Gen’l Servs. v. Ogontz Area Neighbors Ass’n, 483 A.2d 448, 452 (Pa. 1984). Thus, Department regulations, including Department determinations on health and safety, cannot preempt local government authority, including the Township’s exercise of authority via Ordinance 77. Further, the PADEP is tasked with looking at matters from a statewide perspective. This does not prevent local governments from acting to address local conditions.

### C. No Preemption or Prohibition by the SWMA

The SWMA contains no express preemption provisions. The SWMA likewise does not meet the standard for implied preemption. There is no comprehensive scheme of regulation leaving no room for local action. The SWMA repeatedly addresses local participation and action, and expressly contemplates local and state cooperation. 35 P.S. §§ 6018.102(1); 6018.104(2), (3), (4). When read *in pari materia* with Act 101,<sup>21</sup> which also addresses state and local cooperative efforts on waste, the express and clear intent of the SWMA is that a local role

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<sup>21</sup> Also known as “The Municipal Waste Planning, Recycling and Waste Reduction Act.”

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in waste operation regulation must be present. 35 P.S. §§ 4000.102(b)(1), 4000.301(2), (3), 4000.304; see also 35 P.S. § 4000.104(b) (requiring that Act 101 be read *in pari materia* with the SWMA); 1 Pa.C.S. § 1932. This cooperative framework is further reinforced by Section 67101 of the Second Class Township Code, on which the Township relies, in part, for authority to enact Ordinance 77. Section 67101 specifically gives the Township the authority to regulate waste *operations* as authorized by the SWMA and Act 101.<sup>22</sup>

Specifically as to sewage sludge, there are simply no site-level standards in the SWMA or Act 101, not even isolation distances between streams or human habitations and land-applied sludge. Rather, the PADEP is directed to “encourage” beneficial use of municipal and other waste “when the department determines that such use does not harm or present a threat of harm to the health, safety or welfare of the people or environment of this *Commonwealth*,” and to “establish waste regulations to effectuate the beneficial use” of municipal and other waste, including through *general* permits for *regional* or *statewide* use. 35 P.S. § 6018.104(18) (emph. added). These general permits, as will be explained below, are for the actual sewage sludge producers. The statute contains no restrictions, requirements, or other standards pertaining to sites for land application. Thus, nothing in the SWMA demonstrates field preemption in the area of site-specific environmental protections for land application of biosolids.

Nothing in Ordinance 77 irreconcilably conflicts with or stands as an obstacle to the beneficial use of sewage sludge. As already noted, the SWMA lacks standards such as isolation distances or water protection requirements that would stand in the way of an operator complying with both the SWMA and Ordinance 77. There are no site-level requirements relative to sewage sludge application. Further, although the SWMA seeks to promote beneficial use, it seeks to do so in a manner protective of human health and the environment. The Pennsylvania Supreme Court has said that a key part of protecting human health and the environment in Pennsylvania is addressing local environmental conditions. Robinson II, 83 A.3d at 953, 977, 979-81 (plurality); id. at 1006, 1007-08 (Baer, J., concurring). Thus, Ordinance 77 furthers the goals of the SWMA by ensuring that land application of sewage sludge is done in a manner protective of the local environment, including via addressing *inter alia* groundwater contamination risks.

In addition, Ordinance 77 does not ban waste facilities, such as biosolids land application sites. Thus, Ordinance 77 does not stand as an obstacle to the beneficial use of such waste. In fact, a waste facility such as a land application site for sewage sludge is not prohibited from operating under Ordinance 77 even if it encounters difficulty demonstrating that it cannot protect local water supplies. Instead, it must provide financial security for water replacement to ensure that local residents do not bear the costs of the operator’s failures to protect local water supplies. In other words, the Ordinance “internalizes” an “externality” by requiring the operator to pay the

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<sup>22</sup> Ordinance 77 cites a prior version of this statutory provision that did not include specific reference to the SWMA and Act 101.

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costs of the damage it causes. Without such provisions, neighboring residents would be forced to bear the cost of damaged water supplies, which violates their right to clean water under Section 27. Consistent with Section 27, the bonding is a protection against private appropriation of a public natural resource through pollution of groundwater. Ill. Cent. RR. Co. v. State of Illinois, 146 U.S. 387 (1892); In re Borough of Downingtown, 161 A.3d 844, 876-77 (Pa. 2017). To contrast Ordinance 77's framework with East Brunswick II, the bonding in East Brunswick II had no connection to local water protection and was *specifically* about making the operation cost-prohibitive.

D. No Preemption or Prohibition by the Nutrient Management Act

Consideration of the Nutrient Management Act ("NMA") leads to the same result. First, the NMA does *not* require nutrient *or* odor management plans for biosolids application. The key purpose of the NMA is to address odors and manure application but only related to certain agricultural operations (concentrated animal operations and concentrated animal feeding operations, and manure generated by such operations). 3 Pa.C.S. §§ 502(1); 506, 507, 509. There is nothing in the NMA that occupies the field in regard to waste facilities of the type addressed by Ordinance 77, including biosolids land application sites. Likewise, there can be no conflict between the NMA and Ordinance 77 because they address different subjects. The NMA is focused on manure practices at certain large agricultural operations, while Ordinance 77 looks at the local impact of waste operations, including biosolids application.

Further, to the best of our knowledge, the Cunfer Farm has no nutrient management plan. This is distinguishable from East Brunswick II, in which the farm had such a plan.

To the extent that Sections 503 and 519 of the NMA are interpreted to preempt local regulation of *land application of biosolids* merely because biosolids qualify as a "nutrient," despite the fact that the NMA supplies *no* standards for biosolids, such an interpretation would make the NMA unconstitutional under Robinson II. Any application of the NMA that would allow imposition of statewide uniformity to the exclusion of local conditions would run directly afoul of Robinson II. Burkholder v. ZHB of Richmond Twp., 902 A.2d 1006, 1013-15 (Pa. Commw. Ct. 2006).

E. No Prohibition or Preemption by the Agricultural Area Security Law ("AASL")

To the extent that the Cunfer Farm is in an Agricultural Security Area, the AASL does not prohibit or preempt Ordinance 77's registration requirement and associated standards because these regulations do not "unreasonably restrict . . . farm practices" and "bear a direct relationship to the public health or safety" and 3 P.S. § 911(a). First, for the reasons explained above, sewage sludge land application is simply not a farm practice. It is a waste disposal

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practice, and Ordinance 77 regulates it accordingly. Indeed, under the AASL, the definition of “normal farming operations” does *not* include the application of sewage sludge. 3 P.S. § 903. Second, even if it were a “farm practice,” it is inherently reasonable to ensure that certain farm practices do not contaminate groundwater supplies on which other residents rely. Indeed, Section 27 requires the Township to act as a trustee to protect groundwater as a public natural resource. Also, the Ordinance’s requirements do not prevent the land application sewage sludge; the Ordinance allows private actors to obtain registration from the Township upon proof of financial and other resources showing an ability to properly manage the waste operation, and thus farmers are not barred from using sludge on their operations.<sup>23</sup> Finally, because Ordinance 77’s registration requirement is directly tied to protection of groundwater supplies and local emergency response for the protection of residents, it “bear[s] a direct relationship to the public health or safety” of the community. 3 P.S. § 911(a).

3. Ordinance 77 is a Valid Exercise of the Township’s Authority

Again, even if ACRE applied here, the Township has multiple sources of authority that support Ordinance 77’s enactment and enforcement. This authority includes the Pennsylvania Constitution, statutes and case law.

First, Robinson II and PEDF confirmed that municipalities are trustees under Section 27 and as part of that role, have an obligation “to act affirmatively to protect the environment, via legislative action.” Robinson II, 83 A.3d at 958 (plurality); *see also id.* at 950, 955-56; PEDF, 161 A.3d at 933. Municipalities possess those “powers expressly granted to them by the Constitution of the Commonwealth or by the General Assembly, and other authority implicitly necessary to carry into effect those express powers.” Fross v. Cty. of Allegheny, 20 A.3d 1193, 1202 (Pa. 2011); *cf.* Com. ex rel. Carroll v. Tate, 274 A.2d 193, 197 (Pa. 1971). Because Section 27 imposes an affirmative obligation on trustees, including municipalities to enact to enact legislation in furtherance of conserving and maintaining public natural resources, the Township possesses that inherent authority necessary to enact legislation to address and account for local environmental conditions. Robinson II, 83 A.3d at 950, 955-56, 958, 977-978 (plurality).

Municipalities are the experts on local environmental conditions. Municipalities are the closest to the people who will be exposed to land-applied sludge. They are the ones who know the land, the waterways, and the local way of life. They are the first people who have to deal with a problem when that sludge is applied. They are often the first people who residents look to for help. The Pennsylvania Supreme Court has confirmed the importance of local municipalities and environmental protection in Robinson II, and in prior cases. Franklin Twp. v. DER, 452

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<sup>23</sup> Although the Ordinance does not prohibit private entities from operating, it should be noted that the Commonwealth Court upheld a zoning ordinance that excluded private, but not public, landfills from the municipality. Kavanaugh v. London Grove Twp., 382 A.2d 148 (Pa. Commw. Ct. 1978).

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A.2d 718, 721-22 (Pa. 1982)(plurality) (adopted by Susquehanna Cty. by Susquehanna Cty. Bd. of Comm’rs v. Com., Dep’t of Env’tl. Res., 458 A.2d 929, 931 (Pa. 1983)).

Addressing local conditions is crucial to Township residents’ quality of life, and the Pennsylvania Supreme Court has agreed. The Township must be allowed to exercise its authority to address local conditions and fulfill its trustee obligations. Barring the Township from exercising its authority to address local environmental conditions would be unconstitutional, as it was in Robinson II, 83 A.3d at 963 (“Moreover, public trustee duties were delegated concomitantly to all branches and levels of government in recognition that the quality of the environment is a task with both local and statewide implications, and to ensure that all government neither infringed upon the people's rights nor failed to act for the benefit of the people in this area crucial to the well-being of all Pennsylvanians.”).

In addition, the Township has statutory authority to fulfill its Section 27 trustee obligation to “act affirmatively via legislative action to protect the environment.” Robinson II, 83 A.3d at 977-78, 1007-08, PEDE, 161 A.3d at 919, 933. All statutory grants of authority must be read consistent with these constitutional principles.

For example, the Second Class Township Code states:

The board of supervisors may make and adopt any ordinances, bylaws, rules and regulations not inconsistent with or restrained by the Constitution and laws of this Commonwealth necessary for the proper management, care and control of the township and its finances and the maintenance of peace, good government, health and welfare of the township and its citizens, trade, commerce and manufacturers.

53 P.S. § 66506. This must be read to authorize the Township to implement its trustee obligations via ordinances, such as Ordinance 77, that account for local environmental conditions.

Further, Act 101 *requires* municipalities to, *inter alia*, “assure the proper and adequate transportation, collection and storage of municipal waste which is . . . present within its boundaries.” 53 P.S. § 4000.304(a). Further:

In carrying out its duties under this section, a municipality other than a county may adopt resolutions, ordinances, regulations and standards for the recycling, transportation, storage and collection of municipal wastes . . . , which shall not be less stringent than, and not in violation of or inconsistent with, the provisions and purposes of

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the Solid Waste Management Act, this act and the regulations promulgated pursuant thereto.

53 P.S. § 4000.304(b)(1). Ordinance 77’s provisions protect against groundwater harm and other threats to local residents from the transportation and storage of biosolids.

Additionally, host municipalities – municipalities in which municipal waste landfills or resource recovery facilities are located<sup>24</sup> – have express authority regarding delivery of waste, including hours and days of *delivery*, and routing of trucks. 53 P.S. § 4000.304(b)(2). Ordinance 77 is consistent with this. The Vehicle Code provides additional authority for the Township as to roads. 75 Pa.C.S. §§ 6102, 6109.

The Second Class Township Code also provides:

The board of supervisors in the manner authorized by . . . the “Solid Waste Management Act,” and . . . the “Municipal Waste Planning, Recycling and Waste Reduction Act,” [Act 101] may prohibit accumulations of ashes, garbage, solid waste and other refuse materials upon private property, including the imposition and collection of reasonable fees and charges for the collection, removal and disposal thereof.

53 P.S. § 67101. It further provides that the “board of supervisors may adopt ordinances to secure the safety of persons or property within the township . . .” 53 P.S. § 66527. The Township may prohibit nuisances. 53 P.S. § 66529. Additional statutory authority includes the prohibition of discharge of sewage onto public highways, 36 P.S. § 2621, and the Clean Streams Law’s prohibition on unpermitted discharge of sewage, either indirectly or directly, into waters of the Commonwealth. 35 P.S. § 691.202; see also 35 P.S. § 691.401. The Clean Streams Law defines “sewage” “to include any substance that contains any of the waste products or excrementitious or other discharge from the bodies of human beings or animals,” which sewage sludge does. 35 P.S. § 691.1. “Waters of Commonwealth” includes both streams and groundwater, among other waters sources. 35 P.S. § 691.1.

Federal regulations on sludge also specifically state that municipalities are not precluded “from imposing requirements for the use or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use or disposal of sewage sludge.” 40 C.F.R. § 503.5(b). All of these provide additional support for Ordinance 77’s protections.

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<sup>24</sup> 53 P.S. § 4000.103.

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B. Distinguishable from *East Brunswick II*

To the extent Ms. Cunfer's complaint is based solely on East Brunswick II, that case involved different facts and a substantially different ordinance than Ordinance No. 77. First, as already explained, East Brunswick II's interpretation and application of state laws as ceilings, not a floors, on municipal regulation is inconsistent with the Pennsylvania Constitution and has been effectively overruled by Robinson II and PEDF. Also, in contrast with East Brunswick II, Ordinance 77 is consistent with and valid under the SWMA, the NMA, and the AASL..

The posture of East Brunswick II is important. The Commonwealth Court had preliminary objections from the Township, and had to make certain assumptions based on that procedural posture, including assumptions that favored the AG's Office over the municipality. Thus, the degree to which extensive principles of law can be drawn from East Brunswick II is limited by that procedural posture.

East Brunswick II is also distinguishable on the fact that the farmer in the case had a nutrient management plan, although the case failed to identify if it addressed sewage sludge. To the Township's knowledge, the Cunfers have no nutrient management plan for the application of sewage sludge.

Also, the municipality in East Brunswick II originally banned land application of sewage sludge outright, and then, in response to an ACRE challenge, changed the ordinance to regulate sewage sludge in such a manner as to effectively be a ban in alternative form. 980 A.2d at 723-24, 724-25. In contrast, the Township here has not banned sewage sludge.

Likewise, Ordinance No. 77 does not single-out land application of sewage sludge, as did the ordinance in East Brunswick II. Rather, Ordinance 77 is concerned with waste disposal more broadly, and ensuring that it be done in a way that is respectful of local environmental conditions, especially groundwater quality. All of Ordinance 77's requirements flow from that basic premise, in contrast to the East Brunswick II ordinance, which was solely focused on preventing sludge application (including that which was already occurring) by making it as cost-prohibitive as possible, not by focusing on tailoring operations based on impact and local conditions. 980 A.2d at 722-25.

In East Brunswick II, the Commonwealth Court specifically said that hours and days limitations on *delivery* of sludge could be valid, but not limitations on when sludge could be *applied*. 980 A.2d at 733. Ordinance 77's hours and days restrictions are valid because they govern delivery of waste only. *Id.* (discussing Synagro-WWT, Inc. v. Rush Twp., 299 F.Supp.2d 410 (M.D. Pa. 2003)).

As another example, the financial security provisions in Ordinance 77 are only for when an applicant cannot demonstrate that it can conduct its operations in a manner that will not

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contaminate local groundwater supplies, and the security is tied directly to the cost of water supply replacement. There are no public water systems in East Penn Township, so this provision is crucial to protecting residents. East Brunswick II's bonding was an operational bond designed to be burdensome and an obstacle to sludge application because it applied *per acre* of land that was to have sludge applied to it. 980 A.2d at 727.

Thus, Ordinance 77 is significantly more targeted than the East Brunswick II ordinance because it focuses on addressing and ameliorating local environmental impacts. At the same time, it applies equally to all waste operations, not simply land application of biosolids. Thus, East Brunswick II is distinguishable.

### III. Conflicts of Interest and Bias Concerns

We are concerned about the appearance of impropriety related to Ms. Cunfer's repeated references to her prior employment with the AG's Office, including regarding the East Brunswick II matter. These concerns are compounded by Ms. Cunfer's current high-ranking position with the PADEP. We trust that the Attorney General's Office is taking all necessary action to screen off all employees with relationships and work experience with Ms. Cunfer and to otherwise prevent even the appearance of bias stemming from Ms. Cunfer's invocation of her present and prior positions.

### IV. Conclusion

For the foregoing reasons, Ordinance 77 is valid. Please feel free to contact us to discuss this matter so that we can address any further questions or concerns you may have. We look forward to hearing from you.

Sincerely,



Jordan B. Yeager



Lauren M. Williams  
For CURTIN & HEEFNER LLP

Attachments

**ATTACHMENT A**  
**To East Penn Township Response Letter**

2008 FEB 25 AM 11:04

In the United States District Court  
for the Southern District of Georgia

Augusta Division

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R. A. McELMURRAY, III, : CIVIL ACTION  
R. A. McELMURRAY, JR., :  
RICHARD P. McELMURRAY, and :  
EARL D. McELMURRAY, :

Plaintiffs, :

v. :

UNITED STATES DEPARTMENT OF  
AGRICULTURE, :

Defendant. : NO. CV105-159

ORDER

Plaintiffs, R. A. McElmurray, III, R. A. McElmurray, Jr., Richard P. McElmurray, and Earl D. McElmurray (collectively, the "McElmurrays"), filed the above-captioned case against the United States Department of Agriculture ("USDA"), seeking judicial review of an administrative decision, which denied the McElmurrays' application for a "prevented planting" federal farm subsidy.

Presently before the Court are the parties' cross-motions for judgment on the administrative record. Because the agency's decision was arbitrary and capricious, Plaintiffs' motion will be **GRANTED** and Defendant's motion will be **DENIED**.

## BACKGROUND

The City of Augusta operates the Messerly/Butler Creek Wastewater Treatment Plant, which treats industrial and household wastewater. Administrative Record ("AR") 1862.

Before Congress passed the Clean Water Act in 1972, industrial wastewater effluent was dumped into the nation's rivers, oceans, and other waterways, not subject to much, if any, oversight or regulation. See Rapanos v. United States, 165 L. Ed. 2d 159, 168 (2006). One infamous result of this pollution was that the Cuyahoga River, near Lake Erie in Cleveland, Ohio, caught on fire in the 1960s.

After unregulated dumping of industrial pollutants into the nation's rivers was prohibited, effluent from industries began being routed through the municipal wastewater treatment plants across the country, along with household sewage. At municipal treatment plants, wastewater is treated to remove chemicals, pathogens, and toxic metals from the effluent. These materials are concentrated in the byproduct remaining after treatment, sewage sludge. This byproduct also contains beneficial materials like those found in commercial fertilizer. AR 1233-34. Municipalities were left with a

considerable amount of sewage sludge to dispose of in some manner. See Peter Scalamandre & Sons, Inc. v. Kaufman, 113 F.3d 556, 559 (5th Cir. 1997). In the late 1970s, the treated sewage sludge was re-christened "biosolids" and a "land application/recycling" program was started.

The Clean Water Act recognizes that municipal sewage sludge contains toxic pollutants, and it requires that the United States Environmental Protection Agency ("EPA") establish numerical limitations for each such pollutant. 33 U.S.C. § 1345(d)(2)(A)(i) (2001). In 1979, the EPA enacted rules governing the land application of sludge to farmland where crops are grown. 40 C.F.R. § 257.4 (2007). In 1993, the EPA enacted the "Part 503 Sludge Rule," which further regulates the amounts of heavy metals that may be contained in biosolids applications, and reinforced the agency's view that such municipal waste is safe for spreading on farms where crops are grown. 40 C.F.R. Part 503 (2007).

Because the sludge applications that took place in this case ended before Part 503 was enacted, the Part 503 Rules do not supercede the Part 257 regulations in the instant dispute. "Retroactivity is not favored in the law. Thus, congressional enactments and administrative rules will not be construed to have retroactive effect unless their language

requires this result." Bowen v. Georgetown Univ. Hosp., 488 U.S. 204, 208 (1988). The McElmurrays insist that Part 257 governs, and the USDA has never advanced any argument explaining why Part 503 should apply retroactively.

The EPA's Inspector General has criticized the EPA's biosolids program sharply, finding in a 2002 report that the "EPA does not have an effective program for ensuring compliance with land application requirements of Part 503. Accordingly, while EPA promotes land application, EPA cannot assure the public that current land application practices are protective of human health and the environment." AR 1485, 1518.<sup>1</sup>

Since 1938, the McElmurrays have owned and operated a family dairy farm near Hephzibah, Georgia. In the 1970s, Augusta developed a land application program, whereby treated sewage sludge from the Messerly plant was recycled as fertilizer and applied to private farmland, at no cost to the farmers. In 1979, the McElmurrays and Augusta entered into a series of agreements, and the City began applying its sewage sludge at the McElmurrays' farm. Plaintiffs contend

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Likewise, the Fifth Circuit has noted that the experts have yet to reach a consensus regarding the safety of land application of sewage sludge generally. Scalamandre & Sons, 113 F.3d at 561-62.

that they were told the fertilizer was safe, and the applications continued on their land through 1990.

According to R. A. McElmurray, III, in November 1990, he was having trouble with his crops. McElmurray described the problem to his brother-in-law, who had a degree in agriculture from the University of Georgia. McElmurray related that his brother-in-law opined that the problem was probably aluminum toxicity. Thereafter, McElmurray asked Augusta's land application supervisor to test for aluminum in the sludge. When the result was high, McElmurray ceased allowing sludge applications on his family's farmland. AR 1743.

McElmurray conceded that he did not quit planting the land involved in this dispute until 1998. The land produced a full crop that year, but planting was ceased due to "[l]iability, and what it was doing to our dairy cows[.]" AR 1777. According to Plaintiffs, only years after the sludge applications took place did they learn the full extent of the damage that the sewage sludge had wrought on their land. The McElmurrays accused the City of withholding pertinent information about the particular locations on their land where the sludge was applied, the volume applied, and the presence and amount of toxic metals contained in the

sludge. The McElmurrays contend that the sludge poisoned plants grown on the land, which were fed to their dairy cattle, causing the cows to become seriously ill and die.

As part of the Farm Bill of 2002, Congress provided certain farmers with subsidies, which were based on historical acreage and yields, not current production choices. Direct and Counter-Cyclical Program, 67 Fed. Reg. 64,748 (Oct. 21, 2002). A farmer could establish his base acres and payment acres by including "any acreage on the farm that the producers were prevented from planting during the 1998 through 2001 crop years to covered commodities because of drought, flood, or other natural disaster, or other conditions beyond the control of the producers. . . ." 7 U.S.C. § 7911(a)(1)(A)(ii) (2007 Supp.) (emphasis added).<sup>2</sup>

Prevented plant[ing] means, for the purpose of establishing base acres under § 1412.201, the inability to plant a crop with proper equipment during the established planting period for the crop or commodity. A producer must prove that the producer intended to plant the crop and that such crop could not be planted due to a natural disaster rather than managerial decisions. The

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While it is not very material, in light of the stipulation made by Deputy Administrator Johnson, discussed below, the Court takes notice of the language used in the statute. The law does not appear to support government counsel's suggestion at oral argument that the Court should view the McElmurrays' claim skeptically because they did not qualify under the law for the credit, but were only able to apply because a special exception was made for them.

natural disaster that caused the prevented planting must have occurred during the established planting period for the crop.

7 C.F.R. § 1412.103 (2007).

On January 15, 2003, Plaintiffs submitted a request for acreage/disaster credit to the USDA, listing environmental contamination of the land on their application as the reason for the "prevented planting." The McElmurrays listed the intended crops as 907.1 acres of cotton<sup>3</sup> and 204.8 acres of corn for the years 1999 to 2001. The following day, the McElmurrays submitted additional forms, stating that their request included an additional 559.1 acres of cotton and 59.5 acres of corn for the years 1999 to 2001. The total request was for a prevented planting credit of 1466.2 acres of cotton and 264.3 acres of corn. AR 2134.

At first, Plaintiffs' applications were reviewed by the USDA's Farm Service Agency ("FSA") County Committee. After a preliminary review by the County Committee, the McElmurrays' application was denied because the damage was

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While it may seem odd at first blush, the parties agree that cotton is a food-chain crop. It is common for cows to be fed cotton hulls after the cotton lint is removed from the plant (and people consume beef and dairy products), and cottonseed oil is a common ingredient in many snack foods that people eat, like potato chips. AR 1262. Moreover, there is substantial evidence that cotton is not an economically viable crop without considering the marginal value of cottonseed. AR 1049-50 & 1055-56.

not caused by a natural disaster, as the County Committee believed was required for relief. Yet, a superior FSA official in Washington, D.C., John A. Johnson, reversed the basis for that determination. Johnson, the FSA Deputy Administrator for Farm Programs, stipulated that the McElmurrays could receive the subsidy if their land was contaminated, and the contamination caused the McElmurrays to refrain from planting the intended acreage. On April 22, 2003, the FSA County Committee again denied Plaintiffs' application for payments.

The McElmurrays appealed to the FSA State Committee. This five-member committee of farmers oversees USDA farm programs in Georgia, sets local policies, and settles agriculture-related disputes that involve farmers and public policy. After reviewing the record and conducting multiple hearings, the FSA State Committee voted in favor of Plaintiffs' application, by a vote of three to two. In finding for the McElmurrays, the State Committee discounted the advice of its attorney, Donald Kronenberger, who had opined that the State Committee was bound by certain documents provided to the Committee by the EPA, and had to deny the McElmurrays' application. AR 1988 & 2745.

However, the State Committee's decision was stayed, pending a review by the FSA's Deputy Administrator for Farm Programs, pursuant to 7 C.F.R. § 1412.102(d). Although the entire agency record was forwarded to Johnson, there is no indication that the Deputy Administrator reviewed the file. AR 2134 & 2433. On March 18, 2004, the Deputy Administrator overruled the State Committee and denied Plaintiffs' application. AR 2256-57. In part, Johnson's determination was based on a decision of the Richmond County Superior Court, which had granted summary judgment in favor of Augusta, against the McElmurrays in a related civil lawsuit. AR 2000-01. At the time, that decision was on appeal before the Georgia Court of Appeals. AR 2066. Johnson's decision was made over the State Committee's continuing objection. AR 0002 & 2259-60.

On April 22, 2004, Plaintiffs filed another appeal, this time with the USDA's National Appeals Division ("NAD"). On September 2 and 3, 2004, a final hearing was held before NAD hearing officer James Mark Jones. On December 3, 2004, Jones upheld the denial of the farm credit, finding no error

in the FSA's decision to deny the McElmurrays' application, which was based on certain opinions provided by the EPA.<sup>4</sup>

On January 3, 2005, Plaintiffs brought this action for judicial review of the NAD's final administrative determination in the United States District Court for the Northern District of Georgia, pursuant to 7 U.S.C. § 6999 (1999). On September 12, 2005, the case was transferred to the Southern District of Georgia.

On December 27, 2005, Plaintiffs amended their complaint, and on February 2, 2007, they moved to supplement the administrative record. On March 5, 2007, the USDA moved for judgment on the administrative record. On September 28, 2007, Chief Judge William T. Moore, Jr., denied Plaintiffs' motion to supplement the administrative record. On October

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During the NAD appeal process, Jones opined that he did not have the authority to determine whether the land was contaminated, and suggested that the EPA had decided that the land was not polluted. To the contrary, Plaintiffs' counsel, F. Edwin Hallman, Jr., indicated that the EPA had not resolved the issue properly, and argued that the question of contamination was appropriately before Jones. AR 2633-34. Jones also stated that, as far as his review was concerned, "anybody's that's been untruthful, is not going to make any difference." AR 2682 & 2694. Based on these statements, it appears that Jones' view of his authority in deciding the case was unduly narrow, which preordained his conclusion in favor of the agency. To the extent that Jones found the EPA's position questionable or unreliable, either because of the underlying data it was based on, or because the sister agency failed to consider the actual applications presented by the McElmurrays, then Jones should not have relied on, or deferred to, such findings. AR 1495.

4, 2007, Chief Judge Moore reassigned the case to the undersigned for plenary disposition.

#### STANDARD OF REVIEW

Judicial review of the USDA's final determination to deny a prevented planting credit is governed by the Administrative Procedures Act ("APA"). 7 U.S.C. § 6999 (1999); 5 U.S.C. § 701-706 (2007). An agency's decision, including its actions, findings, and conclusions, should not be overturned unless the decision is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or unless it is "unsupported by substantial evidence." 5 U.S.C. § 706(2)(A) & (E) (2007).

The scope of review under the "arbitrary and capricious" standard is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action including a "rational connection between the facts found and the choice made." . . . In reviewing that explanation, we must "consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." . . . Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so

implausible that it could not be ascribed to a difference in view or the product of agency expertise. The reviewing court should not attempt itself to make up for such deficiencies; we may not supply a reasoned basis for the agency's action that the agency itself has not given.

Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (internal cited and quoted sources omitted) (emphasis added).

Substantial evidence is more than a scintilla, and must do more than create a suspicion of the existence of the fact to be established. "It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.". . . and it must be enough to justify, if the trial were to a jury, a refusal to direct a verdict when the conclusion sought to be drawn from it is one of fact for the jury.

NLRB v. Columbian Enameling & Stamping Co., 306 U.S. 292, 300 (1939) (internal case citation omitted) (emphasis added).

The Eleventh Circuit has explained that "[t]he substantial evidence test is no more than a recitation of the application of the 'arbitrary and capricious' standard to factual findings." Fields v. United States, 173 F.3d 811, 813 (11th Cir. 1999). The agency must give reasons for its findings. When the evidence is in conflict, the agency must explain why it credited some probative evidence but not the conflicting evidence. Vemco, Inc. v. NLRB, 79 F.3d 526, 529 (6th Cir. 1996). The substantial evidence standard does

not excuse the agency from its duty to engage in reasoned decision-making. Haebe v. Dep't of Justice, 288 F.3d 1288, 1301 (Fed. Cir. 2002).

"Except as otherwise provided by statute, the proponent of a rule or order has the burden of proof." 5 U.S.C. § 556(d) (2007); Am. Trucking Ass'ns, Inc. v. United States, 344 U.S. 298, 319-20 (1953); Dir., Office of Workers' Comp. v. Greenwich Collieries, 512 U.S. 267, 272-81 (1994). In this case, the McElmurrays bear the burden of proof because they sought the federal subsidy. AR 2440.

While Daubert does not apply to agency decisions in any formal respect, the principles underlying that decision do apply. Pasha v. Gonzalez, 433 F.3d 530, 535 (7th Cir. 2005). Significantly, the APA demands that agency decisions not be based on unreliable evidence, and an agency must provide a coherent reason for refusing to consider the testimony of expert witnesses. Chao v. Gunite Corp., 442 F.3d 550, 559 (7th Cir. 2006). In other words, "deference has its limits." Id.

Nonetheless, contrary to Plaintiffs' repeated contentions throughout the administrative proceedings, agencies may rely on hearsay in making their determinations. Richardson v. Perales, 402 U.S. 389, 402-04 (1971); AR 1427.

The APA provides that any oral or documentary evidence may be considered, so long as the agency excludes irrelevant and immaterial evidence. 5 U.S.C. § 556(d) (2007).

The Court's consideration of the case is limited to the administrative record before the agency when the USDA made its determination to deny Plaintiff's application for prevented planting credits. Dkt. No. 61; see Alabama-Tombigbee Rivers Coal. v. Kempthorne, 477 F.3d 1250, 1262 (11th Cir. 2007) (court should consider evidence outside the administrative record "only where there is initially 'a strong showing of bad faith or improper behavior' by the agency").

#### DISCUSSION

The issue presented in this case concerns whether the McElmurrays' land was contaminated by sludge applications such that the soil was unsafe for growing food-chain crops. The only dispute presented in this case concerns whether the McElmurrays' land was too polluted to use. The agency has never disputed the question of causation, and the evidence of record supports a finding that causation was established. AR 1777.

To determine whether Plaintiffs have met their burden of proof, the Court will examine the sludge data provided by Augusta, the views of the experts as to contamination, and the EPA's contributions, in turn. Along the way, the Court will examine the proof of contamination, and consider the appropriate remedy in light of the evidence submitted.

### I. Augusta's Data

Much of the evidence that was considered by the federal agencies in this case, and by Plaintiffs' experts, is based on data collected by the City of Augusta, with respect to its sludge application program from 1979 to 1990. Although there is a broad consensus that Augusta's reports were unreliable, incomplete, and in some cases, fudged, the City's information is an integral part of this case.

According to the deposition testimony of Hugh Avery, Augusta's sewage sludge land application supervisor beginning in 1984, the City's sludge application data going back to 1979 were inaccurate, and the records predating his tenure were "in shambles." AR 2604-05. Specifically, Avery testified that the records were incomplete and missing

critical information about which fields received sludge applications. AR 2604.

Jeff Larson, an official with the Georgia Environmental Protection Division ("EPD"), conducted an audit of the Messerly plant in 1998, and reported in an internal memorandum that problems with the sludge application program persisted, even after the program had been delegated in part to a reputable contractor, AMSCO, Inc. Larson stated that two hundred truckloads of sludge were leaving the facility for land application each day, "much of which may not be meeting requirements[.]" AR 0985 & 1669.

Larson found fault with the City's digestion system and its inappropriate sludge sampling techniques. Larson asserted that the City ignored certain results to make the program look better than it was in fact. AR 1668 & 1670. The plant was in "very poor condition," with major units rusted and out of service. Larson also reported that management at the facility was "literally a joke[.]" and that the "staff is the most demoralized bunch of people I have ever witnessed[.]" AR 0986.

The final EPD report based on Larson's investigation found that "[t]he sludge regulations are based on a well run pretreatment program which is not the case in Augusta. The

sludge is highly corrosive. . . ." AR 1670. The report recommended that the plant be shut down immediately. AR 1671. Neither the USDA nor the EPA asserted that conditions at the Messerly plant had deteriorated since 1990. Indeed, Larson indicated that the plant had "been grossly neglected for years." AR 0986.

Dr. Lewis Goodroad, Plaintiff's expert soil scientist, reported that Augusta manipulated its data by averaging lab results over several months in an attempt to reduce the levels of metals present in the sludge. AR 0681. A former Supervisor of the Messerly Wastewater Treatment Plant, Allen Saxon, confirmed that this was the case. AR 0808. An employee of the USDA, Tommy Weldon, agreed that it "would be hard to come to a conclusion based on [Augusta's] data[,] because of the City's "sloppy record-keeping and inaccurate data." AR 2758.

There is also evidence that the City fabricated data from its computer records in an attempt to distort its past sewage sludge applications. AR 502-03. In January 1999, the City rehired Saxon to create a record of sludge applications that did not exist previously. Saxon prepared sludge spreadsheets in 1999, which showed cumulative loading calculations for the first time in the twenty-year history

of the City's land application program. AR 0798-818, 844-52, & 659-685.

In other instances, there is evidence that Augusta altered its records to show that the sludge was applied to different, incorrect fields. Handwritten notes on the City's records contradict the number of acres involved, and the volume of sludge applied, as those figures are represented in the 1999 spreadsheet developed by Saxon. AR 2598. Other evidence indicates that City officials altered the spreadsheets in 1999 in an attempt to remove any record of the application of hundreds of thousands of gallons of sludge to hundreds of acres on the McElmurrays' farm. AR 0643-47. Goodroad reported that 18.9 million gallons of sludge had been applied to Plaintiffs' fields but was not recorded by Augusta. AR 0650.

Notwithstanding these facts, USDA employee Ronald Carey testified that evidence that Augusta changed its records years after applications were made, to reflect that the sludge was applied to larger plots of land than was actually the case, would not concern him. AR 2590.

The McElmurrays contend that Augusta's records, under-representative though they are, show that Augusta violated federal law in placing the sludge onto their land, citing,

inter alia, 40 C.F.R. § 257.3-5 (2007). This federal regulation governs allowable cadmium and polychlorinated biphenyl ("PCB") limits. Plaintiffs contend that this violation is plain evidence of contamination of Plaintiffs' land and the unsuitability of the property for the production of food-chain crops. AR 658-685. The Court will explore that evidence and regulation below.

## II. The Experts' Responses: Hall and Haaland Describe the Evidence of Contamination

During the administrative proceeding, Plaintiffs presented credible evidence from qualified experts that supported their contention that their farmland was contaminated. That evidence was not considered by the EPA or the USDA, but the McElmurrays' applications were denied anyway.

William L. Hall is a professional engineer and the CEO of NewFields, Inc., an environmental consulting firm based in Atlanta, Georgia. Plaintiffs retained Hall and NewFields as experts in separate litigation against the City of Augusta relating to the sludge applications to their land. On April 1, 2003, Hall signed an affidavit that was submitted to the FSA and included in the administrative

record. AR 0329-0336. Hall has extensive experience with respect to the impact of heavy metals on the environment, and has been the project manager on seven Superfund sites that reached final closure. AR 0329, 0361-68, & 0691-92.

Hall made extensive findings about Augusta's sludge data and the specific instances of contamination on the McElmurrays' farm. Hall opined that about 2,234 acres of the McElmurrays' farm was unusable, due to contamination from the heavy metals contained in the sewage sludge. AR 0330. Hall noted that high contaminant concentrations were based on the limited sampling that had been completed, and opined that there was a correlation between cow mortality and the consumption of silage, which is animal feed made from forage plants, grown on contaminated fields. AR 0331.

Hall reported that Augusta allowed companies to dump industrial waste into an open pit at the Messerly plant, and that the City failed to monitor the amount and type of waste being dumped into the pit while the McElmurrays were receiving sludge. Hall also faulted the plant's managers for failing to keep records showing when and where dangerous contaminants were placed on the McElmurray land. AR 0332 & 0782. Hall recounted that the sludge applications were unpredictable and variable in terms of the kinds and amounts

of contaminants contained in the sludge. This resulted in "hot zones" of extremely high contaminant ratings on random parts of the McElmurray farm. AR 0333.<sup>5</sup>

Of particular concern, Hall noted that over ten percent of samples showed highly elevated cadmium concentrations, at levels up to seven times the limits that had been established at some Superfund sites, which were being remediated under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 6901-6992k (2003).

Further, Hall criticized the City's sampling practices, explaining that Augusta took less than five cubic feet of dirt per million cubic feet of soil, and only within the top eight inches of the soil column. According to Hall, this part of the soil is the least likely to retain contaminants over time, due to leaching. Hall points out that the City's data shows that the sludge contaminant concentrations became highly erratic, with extreme metal concentration spikes, beginning in 1986. Hall opined that this time frame coincided with a significant increase in mortality in the

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Dr. Goodroad reported that former county agent Bill Craven had agreed that sludge applications on the McElmurrays' land were not uniform. AR 0372.

McElmurrays' dairy herd, when compared with the state average. AR 0335.

In an expert report, Hall reported specific shortcomings in Augusta's field update report data, which purport to record "year to date" ("YTD") and "lifetime total" ("LTT") applications of particular heavy metals on the McElmurrays' land. The reports are inconsistent in that they show YTD figures that match LTT figures and, relatedly, subsequent application data that does not account for prior applications in reckoning the LTT data.

In other instances, the field update report data show cumulative LTT figures that decrease from one application to the next. AR 0342 & 0350. Still, Augusta's data indicated that cadmium and molybdenum levels on the McElmurray farm were above regulatory limits in certain instances, in amounts ranging from 37% to 1400%. AR 0352-53. Hall opined that the high concentration of molybdenum in the McElmurrays' silage was particularly serious, given the time that had elapsed since the sludge was placed on the land. The McElmurray samples were taken in 1998, eight years after Plaintiffs halted the land application program. AR 0356.

Additionally, Hall faulted Augusta's data for lacking information. Complete months and years were missing from

the field update reports, which meant that Augusta's sludge application estimates were under-reporting the toxicity of the soil by a wide margin. Hall also called attention to the City's failure to monitor molybdenum, despite evidence of its presence, given that it is a known hazard on land used by dairy cattle. AR 0343.<sup>6</sup> Hall reported that after the City learned about high concentrations of molybdenum in its sludge, it failed to notify researchers at the University of Georgia about the presence of this heavy metal. Because the University scientists failed to test for molybdenum, the researchers' advice to apply lime to raise the soil's pH level, and thereby limit crop toxicity, was faulty or incomplete. AR 0348.

Dr. Ron Haaland, an Auburn University professor in the School of Agriculture, was hired by Augusta's attorney as an

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To the extent it has any relevance, Hall noted that even though 40 C.F.R. Part 503 limits concentrations of molybdenum to 75 parts per million ("ppm"), the sample concentrations on the McElmurrays' land ranged from 25 ppm to almost 140 ppm. AR 0344. Hall drew attention to the fact that the USDA expressed concern about the molybdenum levels permitted in the EPA's Part 503 Rules. The USDA recommended that the EPA reduce the ceiling concentration limit for molybdenum in biosolids to 54 ppm. Even under the EPA's more relaxed limit, 75 ppm, Hall pointed out that Augusta's sludge was applied at about twice that level in some cases. AR 0756. Nonetheless, it is not apparent that this particular test result shows contamination of the soil, in light of the McElmurrays' protestations that Part 503 does not apply in the instant case.

expert witness in the Superior Court litigation. AR 0423. Haaland performed testing at the McElmurrays' farm, and concluded that the soil was not unsafe for growing food-chain crops. Haaland blamed any ill effects from the sludge on the McElmurrays' failure to pay attention to detail and oversee the sludge application program properly. AR 0420 & 1374.

The McElmurrays took issue with Haaland's soil-testing methodology before the State Committee. Plaintiffs asserted that Haaland attempted to find a way to discredit the McElmurrays' samples and show no contamination on their property. The McElmurrays claimed that Haaland set up their property using a nine acre grid system, and pulled one sample from each acre in the nine acre grid. Plaintiffs submit that Haaland then combined the samples together to dilute any results showing the presence of contaminants. AR 1868.

Although Haaland is the only expert that the parties have disclosed that tested the McElmurrays' soil and disagreed with Plaintiffs' experts' conclusions of contamination, the agency never responded to this criticism of Dr. Haaland's methodology. At oral argument, the government's lawyer declined to address this point, leaving

lingering doubt about there being any evidence that supports the government's determination that the land was not contaminated.

Evidence related to the pH level of the soil also supports Plaintiffs' position that the land was too polluted to grow crops for human consumption. Food-chain crops may not be grown when the pH of the sludge and soil mixture is less than 6.5 and the cadmium level therein exceeds 2 ppm. 40 C.F.R. § 257.3-5(a)(1)(i) (2007). Nor may such crops be grown where the annual application of cadmium from solid waste exceeds 0.5 kilograms per hectare, or .45 pounds per acre. 40 C.F.R. § 257.3-5(a)(1)(ii) (2007).

Plaintiffs' evidence shows that sewage sludge with cadmium concentrations of between 4.2 ppm (January 1980) and 1200 ppm (February 1990) were deposited on Plaintiffs' farmland for ten years. Many fields contained annual cadmium deposits that were two or three times the federal limit. AR 1132-1157. According to the information supplied by Augusta, the pH level of the sludge and soil mixture at the McElmurrays' farm was below the 6.5 minimum consistently. These figures were accepted as credible by Plaintiffs and their experts, and the EPA, which relied on

Augusta's data only in reaching its conclusions in this case. AR 892-913.

Another factor supporting Plaintiffs' argument that the land was contaminated is that certain metals react to the soil's pH level differently. Augusta advised the McElmurrays to keep the pH level of their soil elevated, to attenuate the effect that certain heavy metals would have on their crops. Generally, most metals will accumulate from the soil into the plants grown thereon when the soil has a low pH level. However, molybdenum and arsenic are the exception to this rule. AR 1783. According to experts retained by both parties, molybdenum accumulates in plants more easily and directly when soil pH levels are high. AR 0345 & 0411. As a result, Augusta's suggestion that applying lime to raise the pH level would mollify any contamination concerns was misleading or incomplete. AR 0348.

Other specific evidence showed that heavy metals were found at levels that were above the regulatory limits on the McElmurrays' farm, making the land unfit for food grown for human consumption. On one piece of property alone, antimony levels registered at 96.8 ppm, while the regulatory limit was 4 ppm. Arsenic registered at 44.2 ppm, more than twice

the amount allowed by law. Cadmium was found at a level of 6.41 ppm, which was more than three times the level deemed safe under the law. Selenium registered at 5.4 ppm, although the cleanup standard provided under the law was set at 2 ppm. Thallium was found at 51.6 ppm on that particular piece of property, although the regulatory limit is 2 ppm.<sup>7</sup> AR 1801-03. The levels were similar on other parcels farmed by the McElmurrays. AR 1803-06.<sup>8</sup>

At oral argument, the McElmurrays noted that the administrative record showed that Augusta's lab reports demonstrated that PCBs were placed on their land at a level in excess of 5,000 ppm, even though the allowable limit under EPA standards was 2 ppm. See 40 C.F.R. § 257.3-5

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<sup>7</sup> According to the evidence contained in the administrative record, Thallium is quite dangerous to dairy herds. AR 0916. Plaintiffs maintain that Thallium was used as a catalyst by NutraSweet in making its sweetener, and NutraSweet was the largest user of the Augusta sewer system during the 1980s. AR 1808. The McElmurrays contend that the City did nothing to limit large or illegal dumping, like that by NutraSweet. A 1998 EPD audit provided some support for this contention, finding that "[t]here are no local limits for conventional pollutants" at the Messerly plant. AR 1669.

<sup>8</sup> This portion of the administrative record discusses the limits allowed under Georgia law. At oral argument, Plaintiffs' attorney conceded that federal law controlled, but reported that Georgia law was coextensive with federal requirements in this respect. Although counsel for Defendant expressed no opinion about the applicability or the relevance of state law, the Government's lawyer did not disagree that the relevant state and federal standards were the same.

(2007). The government has not disputed that characterization of the evidence, and it is supported by the administrative record. AR 0535.

Moreover, Plaintiffs submitted evidence that the sludge contained hazardous levels of chlordane, and that it was applied to their land from 1980 to 1985, even though it was banned in 1978. AR 843-883 & 1109-57; Velsicol Chemical Co., et al.: Consolidated Heptachlor/Chlordane Cancellation Proceedings, 43 Fed. Reg. 12,372, 12,373 (March 24, 1978). Plaintiffs cite the following additional sources as evidence that the sludge was applied to their land in violation of federal law: AR 0329-85, 0623-837, 1064-1073; see 40 C.F.R. Part 257, 40 C.F.R. Part 261, 40 C.F.R. Part 258, Appendix I and II.

The evidence in the administrative record shows that the McElmurrays' land is contaminated and unfit for growing food-chain crops. Plaintiffs maintain that they would have violated the law by planting crops, putting human health and welfare at risk. The McElmurrays submit that the high mortality level experienced by their dairy herd is proof of the dangers associated with planting food crops on their land.

The Court concludes that the evidence of contamination on the McElmurrays' land was substantial, and the data provided by Augusta was flawed.

### III. The EPA's Contributions: Mehan, Brobst, Kaufman, and Breen

The USDA submits that applications for prevented planting subsidies, like the one submitted by Plaintiffs, are usually based on the effects of natural disaster to land and crops. Because Plaintiffs' claim had a more unusual basis, alleged contamination of the land, the USDA had to consider the alleged biological effects of sewage sludge on Plaintiffs' land.

Therefore, in evaluating Plaintiffs' application, the USDA sought the opinions of officials at the EPA. The USDA recognized that it possessed limited knowledge regarding the biological effects of sewage sludge on soil, and it sought the advice of the EPA. An FSA handbook allowed it to do so, in certain instances where it lacked the expertise to make proper findings:

If a reviewing authority receives a request for review involving a technical determination by a Federal Agency other than FSA and NRCS, the reviewing authority shall . . . contact a representative of the applicable Agency to

discuss and clarify the technical findings, as needed[,] . . . [and] accept as binding, written factual findings or technical determinations of the other Agency.

AR 1495.

The USDA received varying responses from EPA officials about the safety of the sewage sludge land application program and the McElmurrays' applications. Finally, the EPA declared that its official position as to the McElmurrays' petition was set out in a letter written by EPA's Assistant Administrator, G. Tracy Mehan, III. Consequently, the Court will focus on Mehan's letter first.

On December 24, 2003, Mehan wrote a letter responding to a petition from the Center for Food Safety seeking a nationwide moratorium on the land application of sewage sludge. Mehan's letter was broad in scope and only mentioned the McElmurrays' situation in a brief aside. Instead, Mehan considered a number of other issues in rejecting the proposed moratorium, concluding that "[p]etitioners do not present scientifically-based evidence or documentation that links the land application of sewage sludge or chemical pollutants allegedly contained in sewage sludge to human health and environmental impacts that are described in the petition." AR 1521.

Mehan did address Augusta's sludge application program, but all of his specific remarks focus on the Boyce dairy farm's litigation against Augusta, which was a companion case to the Superior Court lawsuit that the McElmurrays had filed against the municipality. For any opinions that Mehan does express about the Messerly treatment plant, Mehan relies on Augusta's sludge data only, which has been called into question by representatives of both parties in this case, as well as disinterested third parties, and Augusta's own representatives. AR 0023, 0332-35, 0342-43, 0350-56, 502-03, 0643-47, 0650, 0681, 0782, 0798-818, 0844-52, 0985-86, 1512-15, 1668-71, 2604-05, 2758, & 2598.

Specifically, Mehan recounts the Center for Food Safety's assertion that, "On June 24, 2003, a court in Georgia ruled that the land application of sewage sludge was the legal cause of the damage to the farmland and the deaths of the farm's prize-winning cattle[.]" AR 1512. Mehan commented that the "EPA understands that the jury awarded \$550,000 of the \$12.5 million in damages sought by the plaintiffs without any findings of fact." AR 1512.

Mehan quoted from a letter written by Augusta's lawyer, James Ellison, to the EPA about the verdict. According to Ellison,

[o]ne of the breaches contended by the Boyces was an alleged failure to keep and maintain good records. Unfortunately and regrettably in the early days of Augusta's land application program, record-keeping was a problem, mostly due to programming problems with the biosolids application software used by Augusta. The verdict may well have represented the jury's dissatisfaction with the records maintained by Augusta.

AR 1512.<sup>9</sup>

Plaintiffs argue that Defendant is wrong to rely on Mehan's letter as a factual finding or a technical determination by the EPA that Plaintiffs' land was not contaminated because Mehan's letter was not written in response to Plaintiff's applications. Mehan's letter contains no factual findings regarding Plaintiffs' land, and is not addressed to the USDA. Rather, Mehan wrote in response to a petition from a public interest group seeking

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Not surprisingly, Hallman, who also represented the Boyce family in the Superior Court case, takes issue with Ellison's characterization of the verdict. Hallman asserts that, under Georgia law, a general verdict ratifies the claims contained in the operative complaint. AR 1556 (citing Ga. Code Ann. § 9-12-1). What motivates any particular jury verdict (and the amount of damages awarded) is subject to endless speculation, and what happened in the Boyce case is not particularly germane to whether the McElmurrays' land was contaminated. Still, the information is material to the extent that it shows the basis for the EPA's opinion.

a moratorium on the land application of sewage sludge in the United States.

The procedure described in the FSA Handbook for obtaining a technical determination from another agency requires a representative of an agency to "contact a representative of the applicable Agency to discuss and clarify the technical findings, as needed . . . ." AR 1495. Such was not done by the USDA's representatives with Mehan. In addition, Mehan makes clear that the petition relates only to the application of sludge under Part 503. AR 1504. As has been discussed, this law does not apply to the McElmurrays, whose land applications of sludge ceased before the enactment of the regulation in 1993. In short, Mehan's letter is largely irrelevant to the McElmurrays' applications before the USDA.

USDA employees Ronald Carey and Tommy Weldon also asked Robert Brobst, a member of the EPA's Biosolids Incident Response Team ("BIRT"), about the contamination averments made by the McElmurrays. AR 1227-1229. In response, Brobst opined in a letter that the McElmurrays' land was not contaminated. AR 1230-1240.

Because Brobst concluded that Augusta's data sets were the most "complete and reliable," he used its information,

and did not consider (or find any particular fault with) the information provided by the McElmurrays. Brobst's letter focused on cadmium levels at the farm, and at least in his letter, he found that cadmium levels there were within normal national background ranges. Notably, the data, which Brobst claims was obtained in 1999, puts cadmium concentrations on the Plaintiffs' land at .41 mg/kg, which is twice the national average cited by Brobst, .175 mg/kg. AR 1281-1283. Brobst also stated that other metals found in the sludge, or on the land, were within normal background ranges. AR 1238.

On December 11, 2003, Brobst further explained his results to the FSA State Committee. AR 1876-1899. Plaintiffs emphasize that on that day, Brobst made an important qualification to his earlier representation, when he conceded that his original conclusions, which were based on national background concentrations, should not, or need not, be used because those levels are dissimilar to the characteristics present in soil located in Burke County, Georgia. AR 1888, 1477, & 1567-68. Perhaps more importantly, Brobst admitted that one of the McElmurrays' fields contained about forty to fifty times the allowable lifetime loading level of cadmium. AR 2652.

Brobst provides scant support for his determination that the land was not contaminated. Although his letter cites to some data in support of that conclusion, he never explains where such data were found, or how he arrived at such figures. AR 1237-38. It is difficult, if not impossible, to evaluate the trustworthiness of such a conclusion without this information.

As Plaintiffs note, Brobst's letter does not address information contained in Plaintiffs' applications, but exclusively addressed data obtained from the City of Augusta in 1999. Brobst admitted that he did not evaluate the data presented in support of Plaintiffs' applications for prevented planting credit. Because Brobst concedes that his conclusion is based on Augusta's unreliable, and to some extent, invented, data, Brobst's finding has little merit on its own.

On December 31, 2003, Plaintiffs submitted an affidavit from Hugh Kaufman, a senior policy analyst at the EPA, to the State Committee in an effort to rebut Brobst's position. Kaufman explained that he had been involved with testing and evaluating the McElmurrays' land, and opined that the McElmurrays' land was contaminated, and unfit for growing food-chain crops. AR 1478, 1487-1489, & 1548.

On January 28, 2004, Barry Breen, the EPA's Principal Deputy Administrator, wrote a letter to the FSA explaining that Kaufman's affidavit was not the official view of the EPA, and that Mehan's letter was the agency's position. AR 1545. Indeed, the FSA relied on Mehan's letter as the official position of the EPA. AR 2600. Yet, there is no evidence that Mehan ever reviewed the Plaintiffs' applications, other data in the administrative record, or any of the reports detailing the sewage sludge applications on Plaintiffs' land from 1979 to 1990. AR 2663. USDA employee Carey allowed that Mehan made no specific finding that the McElmurrays' land was not contaminated. AR 2664-66.

The EPA's unexplained rejection of Kaufman's position, in favor of the largely irrelevant Mehan letter shows that the decision was not based on substantial evidence. It was arbitrary and capricious for the USDA to defer to Mehan's letter as a technical determination or a written factual finding. Sierra Club v. Martin, 168 F.3d 1, 4-7 (11th Cir. 1999). To the extent that the USDA relied on Brobst's opinions, that was arbitrary and capricious because Brobst did not consider all the relevant data. Motor Vehicle Mfrs. Ass'n, 463 U.S. at 43.

An agency may discredit the uncontradicted witness testimony based on credibility grounds, but only if the agency provides reasons for its credibility determination. Tieniber v. Heckler, 720 F.2d 1251, 1254-55 (11th Cir. 1983); NLRB v. Walton Mfg. Co., 369 U.S. 404, 406-07 (1962). Breen failed to justify why the EPA accepted Mehan's letter over Kaufman's affidavit, or even attempt to explain how Mehan's letter could qualify as a written factual finding or technical determination of the McElmurray matter. Moreover, no one at the EPA ever took the time to evaluate Plaintiffs' applications or their experts' conclusions.

Likewise, Breen failed to investigate the findings made by Kaufman. Carey asked Breen what the basis was for Kaufman's statement that the McElmurrays' land had received sludge applications making the land unsuitable for growing food-chain crops. Breen replied "I do not have information with which to answer this question." AR 1545.

As the Supreme Court has stated, "[t]he substantiality of evidence must take into account whatever in the record fairly detracts from its weight. This is clearly the significance of the requirement . . . that courts consider the whole record." Universal Camera Corp. v. NLRB, 340 U.S. 474, 488 (1951).

Other evidence of record calls into question the fairness and objectivity of the EPA's opinions with respect to the sludge land application program. The administrative record contains evidence that senior EPA officials took extraordinary steps to quash scientific dissent, and any questioning of the EPA's biosolids program.

On February 4, 2004, Dr. David Lewis, a former EPA employee, testified before the House of Representatives' Subcommittee on Energy and Mineral Resources about improper use of the scientific peer review process by senior EPA officials, with respect to a University of Georgia study relating to the Messerly plant, and the deficiencies in the agency's position in support of land application of sewage sludge. AR 1610 & 1616.<sup>10</sup> Lewis criticized the EPA for its handling of the allegations involving the Messerly plant in Augusta, especially its reliance on the dubious data provided by the City. AR 1622-24.

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<sup>10</sup>

Lewis' work as a microbiologist first drew national and international attention in the early 1990s when six dental patients of the same dentist in Florida contracted HIV. Lewis published a series of articles in the leading British medical journal The Lancet, showing that blood trapped in lubricants inside dental devices can escape disinfection and spread HIV, the virus that causes AIDS. This research prompted new heat sterilization guidelines worldwide. AR 1625.

Lewis explained that he had worked at the EPA for thirty-one years, and was forced to resign in May 2003 because his biosolids research was at odds with official EPA policy. AR 1619. Lewis testified before Congress that the EPA had politicized scientific research at the agency, and utilized unreliable and fraudulent data to support the continuation of the sludge land application program. AR 1619. Lewis recounted to the Committee that he researched adverse health consequences of sewage sludge from 1996 to 2003. Specifically, Lewis wrote a research paper with University of Georgia scientists that linked chemical irritants from airborne dusts, as a result of sewage sludge applications, to children's illnesses. AR 1620.

Lewis reported that a senior EPA official, Dr. John Walker, acted unethically in protecting the Part 503 sludge Rule, which Walker had helped to create. Lewis claimed that Walker had stated that he was qualified to review Lewis' microbiological research, although Walker was untrained in the field. Lewis stated that Walker approached a friend who was a corporate executive at a company involved in the sewage sludge business to help come up with criticisms of Lewis' paper. In addition, according to Lewis' testimony, Walker asked a USDA microbiologist for help with a technical

review, and then plagiarized the USDA official's work as his own. Thereafter, Lewis stated that Walker distributed the critique widely, within the EPA, to trade associations, and among regulated businesses in the industry. AR 1621.

Walker also distributed an anonymous twenty-eight page critique of Lewis' research, which had not been peer reviewed, and contained false scientific arguments aimed at discrediting Lewis. Lewis told the Congressional panel that a colleague at the National Academy of Sciences, Ellen Harrison, testified in a separate proceeding that the paper damaged Lewis' reputation. AR 1621-22. Thereafter, Walker's associates attempted to pressure EPA Administrator Christine Todd Whitman to end Lewis' research immediately. AR 1627. Walker faced no discipline for his actions by the EPA. AR 1620-21.

On May 28, 2003, the EPA forced Lewis to resign for publishing articles in the leading scientific journal Nature, which were critical of the EPA's biosolids policies. During his Congressional testimony, Lewis detailed how EPA administrators attempted to force him out after his article, "EPA Science: Casualty of Election Politics," was published in Nature in 1996. Lewis described how further retaliation in 1999 by senior EPA officials, against him and his

supervisor, Dr. Rosemarie Russo, prompted a separate hearing before Congress and helped spur enactment of the "No Fear" Act, a law protecting federal employees against retaliation. AR 1625-27.

The distribution of the false scientific reports by Walker caused University of Georgia officials to scrap their plans to hire Lewis after he left the EPA. Even letters from United States Senators James Inhofe and Charles Grassley, in an attempt to save Lewis' job at the EPA, were ineffective. AR 1627-28. Lewis reported that he had been blacklisted by Walker, and that he remained unemployed since he left the EPA. Lewis indicated that he had taken up an unrelated area of research without compensation because of the EPA's actions, stating that he was directing research on hepatitis C infections in Egypt. AR 1628.

#### IV. Summary Findings and the Appropriate Remedy

Any data that was considered by Mehan and Brobst that related to the McElmurrays' farm was that collected as of 1999. Neither official considered Goodroad's 2001 analysis detailing the deficiencies in the data collected as of 1999. The men did not discuss or acknowledge the serious

limitations and deficiencies of Augusta's data. Neither official considered Plaintiffs' applications or the reports of their experts contained therein. AR 1235.

Neither Mehan nor Brobst made either a written factual finding or a technical determination about Plaintiffs' applications. Mehan, who represented the EPA's official position, did not find any material facts as to the application, and his letter was not a technical determination, but a statement of policy. Brobst may have attempted to produce a technical determination, but he did not consider the McElmurrays' applications, just old data, and he failed to consider anything the McElmurrays or their experts had to say to the contrary. Breen's conclusory rejection of the specific findings contained in Kaufman's affidavit was not binding on the USDA.

The administrative record indicates that the members of the FSA State Committee reviewed the Plaintiffs' applications thoroughly. The members of the State Committee were familiar with Plaintiffs' expert reports, and the import of that evidence. That committee voted in favor of the applications for credit. Likewise, EPA employee Kaufman was familiar with the McElmurrays' applications, expert reports, and the testing on their land. He had conducted an

investigation by visiting Augusta and looking into the problems at the Messerly treatment plant. Kaufman's affidavit indicates that the land is unfit for growing crops for human consumption. AR 1487-1489. Hearing Officer Jones also considered the evidence in the case, but his comments indicated that he felt he was bound by EPA opinions to which he ought not have deferred. AR 2144. See infra, note 4.

In short, it appears that the only persons to consider Plaintiffs' applications ended up ruling in their favor, or did not believe they had the authority to rule in the McElmurrays' favor. The USDA's decision to accept a contrary decision, based on no review of the applications by the EPA, was arbitrary and capricious. The conclusions of the EPA were not based on substantial evidence, and the USDA was not compelled by their handbook to rely on the letters presented in this case.<sup>11</sup>

An administrative determination cannot be upheld without an articulated, rational connection between the facts before the agency and the agency's decision. Zahnd v. Sec'y of Dep't of Agric., 479 F.3d 767, 773 (11th Cir. 2007).

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Contrary to the McElmurrays' suggestion, that is not to say that the USDA could not defer to a sister agency if that agency made appropriate findings.

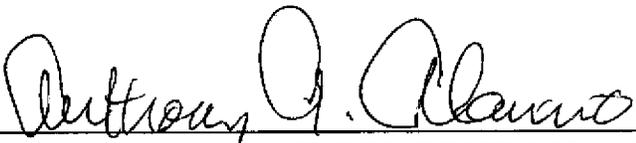
Because the record supports Plaintiffs' petition for farm subsidies, the Court reinstates the original decision of the FSA State Committee, and directs the USDA to grant the McElmurrays' application for prevented planting credits. Remand is inappropriate because the record was unevaluated or ignored by agency officials at the USDA and the EPA. In other words, while the record was inadequate to support the agency's decision, it is adequate to support Plaintiffs' applications.

The Court has the obligation under the APA to conduct judicial review of administrative decisions. That statute requires the Court to "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary and capricious." 5 U.S.C. § 706(2)(A). The agency "is not entitled to a second bite of the apple just because it made a poor decision--if that were the case, administrative law would be a never ending loop from which aggrieved parties would never receive justice." McDonnell Douglas Corp. v. NASA, 895 F. Supp. 316, 319 (D.D.C. 1995); Nelson v. United States, 64 F. Supp. 2d 1318, 1326 (N.D. Ga. 1999); Florida Power & Light Co. v. Lorion, 470 U.S. 729, 744 (1985).

**CONCLUSION**

For the reasons explained above, the USDA's motion for judgment on the administrative record is **DENIED**, and the McElmurrays' cross-motion is **GRANTED**. Dkt. Nos. 54 & 57, respectively. The Court hereby **DIRECTS** the USDA to grant the McElmurrays' application for prevented planting credits.

SO ORDERED, this 25<sup>th</sup> day of February, 2008.

  
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JUDGE, UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF GEORGIA

**ATTACHMENT B**  
**To East Penn Township Response Letter**

## Jarecki, Paul

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**From:** Derstine, Terry  
**Sent:** Wednesday, March 02, 2011 4:04 PM  
**To:** Jarecki, Paul  
**Subject:** FW: Johnstown WWTP biosolids

Keep in mind that the disposal guidelines below are not our regulations.

**Terry W. Derstine** | Radiation Protection Program Manager  
Department of Environmental Protection  
Southeast Regional Office  
2 East Main Street | Norristown, PA 19401  
Phone: 484.250.5854 | Fax: 484.250.5951  
[www.depweb.state.pa.us](http://www.depweb.state.pa.us)

-----Original Message-----

**From:** Derstine, Terry  
**Sent:** Wednesday, January 26, 2011 2:03 PM  
**To:** Dudley, Keith; Everett, Alan; Sansoni, Nancy; Haneiko, Andrew  
**Subject:** RE: Johnstown WWTP biosolids

Hi all:

What we're primarily concerned with is the concentration of Radium-226. Based on the chart below, we had a high of 7,000 pCi/kg and an average of around 4,000 pCi/kg. Most of limits are expressed in pCi/g, so we're talking **7 pCi/g** as a high and **4 pCi/g** average.

Radium exists naturally in soil, rocks, surface water, groundwater, plants, and animals in generally low concentrations – on the order of one part per trillion, or 1 pCi/g.

### **Some generic limits for Ra-226:**

Dust, Debris, or Recyclable Materials Limits - 5 pCi/g of radium-226 **above the natural background concentration.**

Surficial Soils Limits -5 pCi/g of radium-226 **above the local background concentration.**

### Disposal Guidelines

1. For disposal of radium-226 contaminated materials in the form of bulk waste, such as contaminated soil or contaminated debris, materials containing a radium-226 concentration not exceeding 50 picocuries per gram, averaged over any single shipment, can be accepted in a landfill.
2. For disposal of radium-226 contaminated waste materials at concentrations above 50 picocuries per gram, the contaminated wastes should be transferred to a licensed radioactive waste disposal facility.

I wouldn't be too alarmed about the concentrations below, but it is something that we should definitely keep an eye on.

Terry W. Derstine | Radiation Protection Program Manager  
Department of Environmental Protection  
Southeast Regional Office  
2 East Main Street | Norristown, PA 19401  
Phone: 484.250.5854 | Fax: 484.250.5951  
[www.depweb.state.pa.us](http://www.depweb.state.pa.us)

-----Original Message-----

**From:** Dudley, Keith  
**Sent:** Wednesday, January 26, 2011 1:09 PM  
**To:** Everett, Alan; Sansoni, Nancy; Haneiko, Andrew; Derstine, Terry  
**Subject:** RE: Johnstown WWTP biosolids

Thanks Alan.

Terry - looks like frac water may be contributing some level of radioactivity to treated sewage sludge that is being land applied as a fertilizer amendment. Can you take a quick look at the numbers in the data below and let us know if this concerns you?

Thanks, Keith

-----Original Message-----

**From:** Everett, Alan  
**Sent:** Wednesday, January 26, 2011 12:14 PM  
**To:** Sansoni, Nancy  
**Cc:** Dudley, Keith  
**Subject:** FW: Johnstown WWTP biosolids

Nancy,

My counterpart in SC sent this along. Data might be of interest. Particularly if we start seeing frac water in the region.

alan

-----Original Message-----

**From:** Sweeney, Thomas  
**Sent:** Wednesday, January 26, 2011 11:50 AM  
**To:** Schott, Robert; Sigouin, Mark  
**Cc:** Laur, Eric  
**Subject:** Johnstown WWTP biosolids

From sludge samples collected by my counterpart in SWRO. This facility takes frac water. The sludge is lime stabilized then land applied. We have one farm in Bedford Co. that received some this past year. We have no standards for Ba or Sr. We have no standards because EPA set standards based on what was typically found in municipal sewage sludge. A sample I took from Lititz had a Sr concentration of 94 mg/kg and Ba of 183 mg/kg.

10,000mg/kg is 1% by weight.

Pre-lime

	Strontium mg/kg	barium mg/kg
11/3/2008	2,602	13,813