IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF KENTUCKY
LOUISVILLE DIVISION

UNITED STATES OF AMERICA, and LOUISVILLE METRO AIR POLLUTION CONTROL DISTRICT, Plaintiffs v. LOUISVILLE GAS & ELECTRIC COMPANY, Defendant	)	CASE ACTION NO.

COMPLAINT

The United States of America, by authority of the Attorney General of the United States and acting at the request and on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), and the Louisville Metro Air Pollution Control District ("District"), by and through its attorneys, allege the following:

NATURE OF ACTION

1. This is a civil action brought against Louisville Gas & Electric Company ("LG&E" or "Defendant") for the assessment of civil penalties and injunctive relief for violations of the Clean Air Act ("CAA" or "Act"), 42 U.S.C. §§ 7401 to 7671q, and implementing regulations including the Jefferson County portion of the Kentucky State Implementation Plan ("Jefferson County SIP"). The alleged violations occurred at LG&E's Mill Creek coal-fired electrical power plant located in Louisville, Kentucky (hereinafter "Mill Creek Station").

2. The alleged violations of the Jefferson County SIP involve LG&E's failure to control sulfuric acid mist ("SAM") emissions from Mill Creek Station. By 2006, LG&E had publicly acknowledged the potential dangers of emitting sulfuric acid mist and the likelihood that Mill Creek Station would emit high levels of sulfuric acid mist unless it controlled the emissions with specific technology. LG&E sought approval from the Kentucky Public Service Commission ("Kentucky PSC") to fund the installation of sorbent injection control technology through an environmental surcharge tariff, which would be passed on to ratepayers, and the Kentucky PSC granted approval in December 2006. In its briefing to the Kentucky PSC, LG&E acknowledged that clear legal requirements mandated control of sulfuric acid mist emissions and informed the PSC that sorbent injection technology was cost-effective and technically feasible. Despite the 2006 approval from the Kentucky PSC, LG&E did not install sorbent injection on any of its coal-fired units at Mill Creek Station until 2014 or later, resulting in the exposure of residents in the adjacent Valley Village neighborhood to sulfuric acid mist prior to that time. Exposure to sulfuric acid mist can cause difficulty breathing, a burning sensation in the eyes and throat, and tooth decay, among other symptoms. On dozens of occasions from at least 2012 to 2015, residents complained to the District about blue or brown plumes of sulfuric acid mist emanating from Mill Creek Station and complained of symptoms consistent with exposure to sulfuric acid mist.

JURISDICTION AND VENUE

3. This Court has jurisdiction over the subject matter of this action pursuant to Clean Air Act Section 113(b), 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1331, 1345, and 1355.

4. Venue is proper in this district pursuant to Clean Air Act Section 113(b), 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and 1395(a) because the violations of the Act giving rise to this claim occurred in this district and Defendant does business and is found in this district.

NOTICES

5. Pursuant to Clean Air Act Section 113(a)(1), 42 U.S.C. § 7413(a)(1), EPA notified LG&E of the violations in this Complaint more than 30 days prior to this filing.

AUTHORITY

6. Authority to bring this action is vested in the Attorney General of the United States pursuant to 28 U.S.C. §§ 516 and 519 and 42 U.S.C. § 7605.

7. Pursuant to Section 304(a) of the CAA, 42 U.S.C. § 7604(a), the District is authorized to commence a civil action against any person who is alleged to have violated an emission standard or limitation under Chapter 85 of Title 42 of the United States Code.

PARTIES

8. Plaintiff United States of America is acting at the request of the EPA, an agency of the United States.

9. Plaintiff District is a local agency that protects the air quality in the Louisville, Kentucky metropolitan area and implements the Jefferson County SIP.

10. Defendant LG&E is incorporated in the Commonwealth of Kentucky and is registered to do business in Kentucky. LG&E's headquarters and principal place of business is in Louisville, Kentucky. LG&E is a wholly owned subsidiary of LG&E and KU Energy, LLC, which is headquartered in Louisville, Kentucky. LG&E and KU Energy, LLC was formerly

known as E.ON U.S. LLC ("E.ON") until on or about November 1, 2010. As used herein, LG&E means both E.ON and/or LG&E as applicable.

CLEAN AIR ACT STATUTORY AND REGULATORY BACKGROUND

11. The Clean Air Act establishes a regulatory scheme designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. 42 U.S.C. § 7401(b)(1).

State Implementation Plan

12. The Clean Air Act requires EPA to publish and maintain national ambient air quality standards ("NAAQS") for criteria air pollutants. 42 U.S.C. § 7409(a). EPA has promulgated the NAAQS pursuant to the Act, and they are set forth in 40 C.F.R. Part 50.

13. The Clean Air Act requires each state to adopt a plan for the implementation, maintenance, and enforcement of the NAAQS for pollutants, and to submit that plan to EPA for approval. 42 U.S.C. § 7410.

14. The Commonwealth of Kentucky has a state implementation plan ("SIP"), which includes a SIP applicable to Jefferson County, Kentucky only. The District promulgated and enforces the Jefferson County SIP. At various times, the District has promulgated and EPA has approved amendments to the Jefferson County SIP, including the versions at issue in this action.[1] *See e.g.*, 66 Fed. Reg. 53660 (Oct. 23, 2001), 67 Fed. Reg. 69688 (Nov. 19, 2002), and 81 Fed. Reg. 87815 (Dec. 6, 2016).

[1] For purposes of this Complaint, "District Regulations" refer to local regulations passed by the District. EPA adopted all of the District Regulations cited in this Complaint into the Jefferson County SIP, except District Regulation 2.16, which is the Jefferson County Title V Permitting program. In this Complaint, the date following a District Regulation is the date EPA adopted it

15. Pursuant to District Regulation 1.01, Section 1.1 (Oct. 23, 2001), "Regardless of any other specific requirements, all air contaminant sources shall, at a minimum, apply the control procedures that are reasonable, available, and practical."

a. From October 23, 2001 to the present, the definition of "air contaminant" has included "smoke, charred paper, dust, soot, grime, carbon, noxious acids, fumes, gases, odors, or particulate matter, or any combination thereof." *See* District Regulation 1.02, Section 1.3 (Oct. 23, 2001); District Regulation 1.02, Section 1.4 (Dec. 6, 2016). "Odor" means "the property of an air contaminant that can be detected by the sense of smell." *See* District Regulation 1.02, Section 1.64 (Oct. 23, 2001); District Regulation 1.02, Section 1.46 (Dec. 6, 2016). "Particulate matter" means "any material, except uncombined water, that exists in a finely divided form as a liquid or a solid." *See* District Regulation 1.02, Section 1.72 (Oct. 23, 2001); District Regulation 1.02, Section 1.53 (Dec. 6, 2016).

b. After November 19, 2002, the Jefferson County SIP did not include "source" as a defined term. However, from November 19, 2002 until September 26, 2017, the Jefferson County SIP provided, "All terms not defined in these regulations shall have the meaning given to them in [Kentucky Revised Statute ("KRS")] 77.005, the Act, or by commonly accepted usage." District Regulation 1.02 (Nov. 19, 2002). From September 26, 2017 to the present, the Jefferson County SIP provides, "All terms not defined in these regulations shall have the meaning given to them in KRS 77.005, the Clean Air Act, or by commonly accepted usage." District Regulation 1.02 (July 28, 2017, effective Sept. 26, 2017).

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into the Jefferson County SIP, or for District Regulation 2.16, the effective date of the regulation in the District.

16. Pursuant to District Regulation 1.05, Section 5 (Oct. 23, 2001):

> At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the District which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspections of the source.

a. From October 23, 2001 until December 6, 2016, the Jefferson County SIP defined an "affected facility" as "a piece of equipment or an operation to which a regulation is applicable or which emits or may emit air contaminants." District Regulation 1.02, Section 1.2 (Oct. 23, 2001). From December 6, 2016 to the present, the Jefferson County SIP defined "affected facility" as "a process or process equipment to which a regulation is applicable." District Regulation 1.02, Section 1.3 (Dec. 6, 2016).

b. From October 23, 2001 to the present, the Jefferson County SIP has defined "regulation" as "a rule or order adopted by the Board pursuant to [Kentucky Revised Chapter] 77 for the control or abatement of air contaminants within the jurisdiction or for the administration of the District." District Regulation 1.02, Section 1.84 (Oct. 23, 2001); District Regulation 1.02, Section 1.67 (Dec. 6, 2016).

c. From December 6, 2016 to the present, the Jefferson County SIP has defined "process" as "an action or operation, or series of actions or operations, from which the emission of an air contaminant may originate." Examples include "[t]he physical change of a material,… [t]he chemical change of a material, … [t]he combustion of a fuel, refuse, or waste material, …

[t]he storage of a material, … [t]he handling of a material, and … [t]he use of a material." District Regulation 1.02, Section 1.61 (Dec. 6, 2016).

d. From December 6, 2016 to the present, the Jefferson County SIP has defined "process equipment" as "all equipment, devices, and auxiliary components, including control equipment and stacks, used in a process." District Regulation 1.02, Section 1.62 (Dec. 6, 2016).

e. From October 23, 2001 until December 6, 2016, the Jefferson County SIP defined "air pollution control equipment" as "equipment which may be required by law or regulation for the control of air pollution but is not vital to production of the normal product of the source or to its normal operation." District Regulation 1.02, Section 1.4 (Oct. 23, 2001). From December 6, 2016 to the present, the Jefferson County SIP defined "air pollution control equipment" as "equipment that may be required by law or regulation for the control of air pollution but is not vital to production of the normal product of the process or process equipment or to its normal operation." District Regulation 1.02, Section 1.5 (Dec. 6, 2016).

17. District Regulation 1.09 (Oct. 23, 2001), states:

> No person shall permit or cause the emission of air pollutants which exceed the requirements of District regulations or which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury to damage to business or property.

a. From October 23, 2001 to the present, the definition of "person" has included any individual, firm, association, corporation, or any group or combination acting as a unit. District Regulation 1.02, Section 1.75 (Oct. 23, 2001); District Regulation 1.02, Section 1.56 (Dec. 6, 2016).

b. The definition of "air pollutant" is the same as "air contaminant" set forth in part in paragraph 15.a.

Title V of the CAA and Jefferson County Title V Rules

18. Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), provides that no major source may operate without a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act.

19. Section 502(d) of the CAA, 42 U.S.C. § 7661a(d) requires that each State "develop and submit to the Administrator a permit program under State or local law or under an interstate compact meeting the requirements of [Title V]."

20. EPA approved Jefferson County, Kentucky's Title V operating permit program, effective April 22, 1996. 61 Fed. Reg. 11738 (Mar. 22, 1996). EPA approved Jefferson County's December 20, 2000, revisions to the program, effective April 22, 2002. 67 Fed. Reg. 7973 (Feb. 21, 2002).

21. Jefferson County's Title V regulations are contained in District Regulation 2.16.

22. Jefferson County's Title V rules apply to all major sources in Jefferson County. District Regulation 2.16, Section 2.1.1. (Apr. 22, 2002).

23. A "major source" means "a stationary source, or a group of stationary sources, that are located on one property or two or more contiguous or adjacent properties under common control of the same person (or persons) and that belong to a single industrial grouping," and that "emits or has the potential to emit 100 [tons per year] or more of an air pollutant . . . ." District Regulation 2.16, Section 1.25. (Apr. 22, 2002).

24. A "stationary source" means "a building, structure, facility or installation that emits or may emit a regulated air pollutant or any pollutant listed under the [CAA] Section 112(b)." District Regulation 2.16, Section 1.40. (Apr. 22, 2002).

25. A stationary source in Jefferson County subject to Title V is not allowed to operate, except in compliance with a Title V permit. District Regulation 2.16, Section 5.2. (Apr. 22, 2002).

26. The District issued a Title V permit to LG&E to operate Mill Creek Station effective June 1, 2003. The District issued a revised Title V permit to LG&E to operate Mill Creek Station effective July 31, 2014 to the present. (Collectively, these are referred to as the "Mill Creek Permits"). General Condition 36 of the Mill Creek Permits states that LG&E "shall comply with all applicable requirements of the following: Regulation 1.01, General Application of Regulations and Standards . . . Regulation 1.05, Compliance with Emissions Standards And Maintenance Requirements . . . Regulation 1.09, Prohibition of Air Pollution . . . [and] Regulation 2.16, Title V Operating Permits."

27. Jefferson County Regulations defines "applicable requirement" to mean a "federally enforceable standard or other requirement, or District origin requirement or standard," including "[s]tandards or other requirements in the District's part of the Kentucky SIP." District Regulation 2.16, Sections 1.7, 1.7.2. (Apr. 22, 2002).

28. The Mill Creek Permits state, "Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether a person is in compliance with, has violated, or is

in violation of any such plan." General Condition 1, Mill Creek Permits; *see* District Regulation 2.16, Section 4.1.13.7. (Apr. 22, 2002).

Enforcement Provisions

29. Failure to comply with any approved regulatory provision of a SIP renders the person so failing to comply in violation of a requirement of the SIP and subject to enforcement action under Section 113 of the Clean Air Act, 42 U.S.C. § 7413. 42 U.S.C. § 7413(a)(1)(C); 40 C.F.R. § 52.23.

30. Failure to comply with a requirement or prohibition of Title V of the CAA or a permit issued pursuant to Title V is actionable under Section 113 of the Clean Air Act, 42 U.S.C. § 7413(b). 42 U.S.C. § 7413(a)(3)(C).

31. Section 113(b)(1) of the Clean Air Act, 42 U.S.C. § 7413(b)(1), authorizes EPA to initiate a judicial enforcement action for a permanent or temporary injunction and/or for a civil penalty against any person whenever such person has violated, or is in violation of, any requirement or prohibition of an applicable implementation plan or permit.

32. Section 113(b)(2) of the Clean Air Act, 42 U.S.C. § 7413(b)(1), authorizes EPA to initiate a judicial enforcement action for a permanent or temporary injunction and/or for a civil penalty against any person whenever such person has violated, or is in violation of any requirement or prohibition under Title V of the Act.

33. Section 113(b) of the Act, 42 U.S.C. § 7413(b), authorizes the Administrator to initiate a judicial enforcement action for a permanent or temporary injunction, and/or for a civil penalty of up to $25,000 per day for each violation. This civil penalty amount has been adjusted under the Federal Civil Penalties Inflation Adjustment Act of 1990 (Pub. L. 101-410),

as amended by the Debt Collection Improvement Act of 1996 (Pub. L. 104-134, Sec. 31001(s)), and under the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (28 U.S.C. § 2461 note; Pub. L. 114-74, Sec. 701), at 40 C.F.R. Part 19, which provide that penalties of up to $37,500 per day may be assessed for each violation occurring after January 12, 2009 through November 2, 2015. 40 C.F.R. § 19.4.

GENERAL ALLEGATIONS

Mill Creek Station Operations and the Creation of Sulfuric Acid Mist

34. LG&E is a corporation and therefore is a "person" as defined in Clean Air Act Section 302(e), 42 U.S.C. § 7602(e), District Regulation 1.02, Section 1.75 (Oct. 23, 2001), and District Regulation 1.02, Section 1.56 (Dec. 6, 2016).

35. Mill Creek Station consists of four coal-fired electricity generating units with a combined electrical generating capacity of 1,472 megawatts. It is located at 14460 Dixie Highway, Louisville, Kentucky.

36. LG&E owns and operates, controls, and/or supervises four electricity generating units at Mill Creek Station known as Units 1, 2, 3, and 4. LG&E is a public utility that generates, distributes, purchases, and sells electricity.

37. Mill Creek Station is subject to the Jefferson County SIP, including District Regulation 1.01, 1.05, and 1.09 (Oct. 23, 2001), and Jefferson County Title V program set forth in District Regulation 2.16 (Apr. 22, 2002). These District Regulations are "regulations" within the meaning of District Regulation 1.02, Section 1.84 (Oct. 23, 2001) and Section 1.67 (Dec. 6, 2016) because they are rules adopted by the Louisville Metro Air Pollution Control Board pursuant to KRS Chapter 77.

38. Mill Creek Station emits thousands of tons per year (tpy) each of NOx, SO_2, and particulate matter less than 10 microns size (PM10).

39. Since at least 2005, LG&E has burned "high sulfur" coal in Mill Creek Station Units 1, 2, 3, and 4. That high sulfur coal includes approximately three to three and one-half percent of sulfur by weight.

40. The combustion of sulfur-containing coal generates SO_2. Some of that SO_2 converts to sulfur trioxide (SO_3) under high temperatures during and after the combustion process. Sulfuric acid mist (condensed H_2SO_4) forms when SO_3 enters a cooler environment and water is present, such as when SO_3 passes through the unit and exits the stack. Sometimes SO_3 and sulfuric acid mist are used interchangeably because the precise chemical form depends on where the sulfur combustion-product is found, in the boiler or downstream of the boiler.

41. Various factors affect the generation of SO_3 and sulfuric acid mist, including:

a. Sulfur content of the coal being combusted;

b. Operational parameters of the selective catalytic reduction ("SCR") technology on a unit, including the type and amount of catalyst used, the location of the catalyst, and the amount of ammonia injected in the SCRs, among others;

c. Atmospheric conditions; and

d. Operational parameters of a unit's boiler, including the temperature in and downstream of the boiler, which can be affected by the cleanliness and efficiency of the air heater, economizer, and electrostatic precipitator, or by the tilt of the burners.

42. A plume of sulfuric acid mist can be visible to the naked eye, often as a blue or orange-brown plume.

43. Exposure to sulfuric acid mist can be harmful to human health and the environment. Such exposure can cause respiratory tract irritation, make it more difficult to breathe, cause a burning sensation in eyes, and cause tooth erosion. These effects may be more likely to occur in individuals with asthma, people who are exercising, and in children rather than adults.

LG&E's Sulfuric Acid Mist Concerns in 2006 and Installation of Controls in 2014

44. At least as early as 2006, LG&E was concerned about sulfuric acid mist emissions from Mill Creek Station and the potential adverse health effects from such emissions. In public documents, LG&E acknowledged that federal and local environmental laws required controlling sulfuric acid mist emissions.

45. In 2006, LG&E sought, pursuant to Kentucky law, approval from the Kentucky Public Services Commission of an environmental surcharge tariff for the costs of installing and operating sorbent injection technology to control sulfuric acid mist emissions at Mill Creek Station Units 3 and 4. The environmental surcharge tariff would allow LG&E to pass certain costs of compliance to customers by charging them a tariff on their monthly bill. To grant approval for a surcharge tariff, the Kentucky PSC must find "the rate surcharge [is] reasonable and cost-effective for compliance with the applicable environmental requirements. . . ." Ky. Rev. Stat. Ann. § 278.183(2)(a).

46. In the course of those proceedings, LG&E informed the Kentucky PSC, "With the installation of an SCR facility, sulfur trioxide levels within the flue gas stream will increase due to the SCR catalyst's reaction with sulfur dioxide." Sulfur trioxide "converts readily and naturally to sulfuric acid as it exits a generating unit's stack." The sulfuric acid mist "may

discolor a plant's plume or even descend to ground level under certain circumstances. . . . Plume 'touchdowns' can potentially pose a hazard to human health or the environment." LG&E described this as "[t]he basic environmental regulatory concern regarding SO_3 emissions."

47. In or around 2006, LG&E acknowledged factors that affect SO_3 generation other than SCR, including the amount of sulfur in the coal supply and the operating parameters of other equipment. One such operating parameter is the combustion gas temperature of a unit's boiler.

48. LG&E retained engineering firm Sargent & Lundy to evaluate available SO_3 reduction technologies, and on or about March 29, 2006, Sargent & Lundy issued an "SO_3 Mitigation Study" about Mill Creek Station Units 3 and 4, among other units operated by LG&E and an affiliated company.

49. The SO_3 Mitigation Study reviewed "technical feasibility of each technology with capital costs of the feasible alternatives" with an aim of providing LG&E the data necessary to "select the most cost-effective SO_3 mitigation technologies for each unit." Sargent & Lundy noted that the target SO_3 concentration at the stack exit was set at 5 parts per million (ppm), which it described as the "recommended level for low stack opacity (no visible plume)." The study concluded that injection of sorbents both into the furnace and downstream of the air preheater would be a "lower capital cost option with a good probability of success."

50. After reviewing commercially available SO_3 reduction technologies evaluated by Sargent & Lundy, LG&E selected sorbent injection technology as the "lowest cost and least risk operational alternative." LG&E informed the Kentucky PSC in 2006 that installation of

sorbent injection technology at Mill Creek Station Units 3 and 4 was reasonable and cost-effective, and would ensure its compliance with environmental law.

51. Following Sargent & Lundy's SO_3 Mitigation Study, LG&E created an SO_3 Mitigation Strategy in April 2006. The SO_3 Mitigation Strategy noted, "An economic evaluation was performed of the viable [SO_3 control] technologies to determine the best compliance option." The SO_3 Mitigation Strategy considered technological risks and engineering evaluations of the various available SO_3 reduction technologies, including potential risks they posed to LG&E's equipment. The SO_3 Mitigation Strategy recommended sorbent injection for generating units with cold-side electrostatic precipitators, like Mill Creek Station Units 3 and 4.

52. Sorbent injection technology controls the emission of sulfuric acid mist by injecting sorbent into the flue gas path where the sorbent will react with SO_3 to form salts or sulfates, which can be removed through a filtration device called an electrostatic precipitator.

53. LG&E informed the Kentucky PSC that even if its request for the environmental surcharge recovery was denied, LG&E nevertheless would be compelled to install sorbent injection to "ensure that [it remains] in continuous compliance with the relevant environmental regulations." LG&E explained that it must mitigate the "highly visible 'blue plume'" coming from the flue of the Units.

54. On or around December 21, 2006, the Kentucky PSC found that LG&E had "sufficiently established that it needs to mitigate SO_3 and sulfuric acid in response to requirements from federal, state, and local environmental authorities." The Kentucky PSC approved LG&E's request for the environmental surcharge tariff regarding certain costs related

to sorbent injection technology and found that LG&E's plan to install sorbent injection technology was reasonable and cost-effective.

55. LG&E did not install sorbent injection controls on any Unit at Mill Creek Station until it tested temporary, portable sorbent injection controls on Unit 4 in April 2010. LG&E ran the test from April 19 to April 23, 2010. During the test, sorbent injection controls reduced sulfuric acid emissions by more than 80 percent depending on the amount of sorbent injected and the location of the injection.

56. LG&E did not install permanent sorbent injection technology at any of the Mill Creek Station Units until 2014. LG&E completed its installation of sorbent injection technology on or around December 1, 2014 for Unit 4; on May 2 and 15, 2015 for Units 2 and 1, respectively; and June 13, 2016 for Unit 3, although LG&E had installed temporary controls on Unit 3 on or around April 15, 2015.

Sulfuric Acid Mist Emissions from Mill Creek Station

57. From 2012 through 2015, the District received approximately 56 citizen complaints on approximately 32 separate dates relating to blue haze or smoke, brown smoke, smog, sulfur odor, metallic odor, "nasty odor," "pickle odor," throat irritation, or difficulty breathing. The complainants lived in or near the Valley Village neighborhood. The approximate dates of the citizen complaints are listed in Appendix A.

58. Valley Village is a residential neighborhood near Mill Creek Station. It includes the former Frost Middle School, located at 13700 Sandray Boulevard, Louisville, KY 40272, which is immediately adjacent to Mill Creek Station, and Watson Lane Elementary School, located at 7201 Watson Lane, Louisville, Kentucky, 40272, which is less than one mile from

Mill Creek Station. An air monitoring device rests on the roof of Watson Lane Elementary School, where it collects ambient air data.

59. On the dates of citizen complaints, emissions from Mill Creek Station traveled to the Valley Village neighborhood.

60. On or around June 19, 2014, the District informed LG&E of a haze "in the neighborhoods near the LG&E Mill Creek facility." The District received citizen complaints that were verified by District staff and noted higher than expected concentrations of particulate matter less than 2.5 microns in size (PM 2.5) and SO_2 at the Watson Lane Elementary School's air monitor.

61. A letter dated June 26, 2014 and signed by LG&E's Director of Environmental Affairs acknowledged that a blue haze extending to both sides of Watson Lane originated at Mill Creek Station and descended to ground level.

62. The June 26, 2014 letter stated that until LG&E installs permanent equipment designed to control sulfuric acid mist emissions at Mill Creek Station, certain steps would be effective at minimizing the creation of a visible plume. Those steps included limiting the use of SCRs, "[a]djusting the amount of ammonia injected in Unit 3 and 4 SCRs to lower SO_3 production," and examining whether LG&E could modify other operational parameters.

63. In correspondence dated August 13, 2014, LG&E's Director of Environmental Affairs set forth other potential causes of sulfuric acid mist plume formation and actions LG&E was implementing to prevent sulfuric acid mist plume formation:

a. The SCR for Mill Creek Station Units 3 and 4 operated to convert SO_2 to SO_3, which LG&E planned to limit by running the SCRs at levels that would reduce such conversion during the remaining summer and fall months;

b. Mill Creek Station Units 1 and 2 experienced higher than normal boiler temperatures, which LG&E planned to reduce by washing the economizer – and eventually replacing it – and the air heater, and lowering the burner tilts;

c. LG&E committed to burn "lower sulfur fuel on Units 1 and 3" during the remaining summer and fall months; and

d. During periods when plume formation may occur, LG&E would make operational adjustments to lower the boiler temperatures.

FIRST CLAIM FOR RELIEF

(Violations of District Regulation 1.01, Section 1.1)

64. Paragraphs 1 through 63 are incorporated herein by reference.

65. Pursuant to District Regulation 1.01, Section 1.1, regardless of any other specific requirements, all air contaminant sources shall, as a minimum, apply the control procedures that are reasonable, available, and practical.

66. Since at least May 18, 2012, Defendant LG&E's Mill Creek Station has emitted "air contaminants" as defined in District Regulation 1.02, Section 1.5 because it emits and has emitted NOx, SO_2, SO_3, PM10, VOCs, and sulfuric acid mist, among other air contaminants.

67. Since at least May 18, 2012, Defendant LG&E's Mill Creek Station has been an "air contaminant source" because its activities and operations emit, and are the source of, air contaminants, including smoke, noxious acids, gases, odors, and particulate matter.

68. Sorbent injection technology is a "control procedure" because it controls the incidence and level of sulfur trioxide and sulfuric acid mist in emissions.

69. Since at least May 18, 2012, application of sorbent injection technology at Mill Creek Station to limit emissions on a continuous basis to a near-stack concentration of no more than 5 ppm of SO_3 or SAM has been reasonable, available, and practical because the technology has been commercially available, economic and cost-effective, and technically effective at limiting those emissions to no more than 5 ppm.

70. From at least May 18, 2012 through on or around April 15, 2015, LG&E violated District Regulation 1.01, Section 1.1 because it did not apply and operate sorbent injection technology at Unit 3 of Mill Creek Station in a manner that was reasonable, available, and practical.

71. From at least May 18, 2012 through on or around December 1, 2014, LG&E violated District Regulation 1.01, Section 1.1 because it did not apply and operate sorbent injection technology at Unit 4 of Mill Creek Station in a manner that was reasonable, available, and practical.

72. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), 40 C.F.R. § 19.4, LG&E is liable for penalties in an amount up to $37,500 per day for each violation that occurred after January 12, 2009 through November 2, 2015.

SECOND CLAIM FOR RELIEF

(Violations of District Regulation 1.05, Section 5)

73. Paragraphs 1 through 63 are incorporated herein by reference.

74. Pursuant to District Regulation 1.05, Section 5, at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the District which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspections of the source.

75. Defendant LG&E is the owner and operator of Mill Creek Station Units 1, 2, 3, and 4.

76. From at least May 18, 2012 to December 6, 2016, operation of each of Mill Creek Station Units 1, 2, 3, and 4 was an "affected facility" as defined in District Regulation 1.02, Section 1.2 (Oct. 23, 2001) because such operations were subject to regulations in the Jefferson County SIP and Jefferson County Title V program and because such operations emitted NOx, SO_2, SAM, PM, and other air contaminants.

77. From at least May 18, 2012 to December 6, 2016, each of the boilers, air heaters, economizers, bag houses, stacks, SCRs (at Mill Creek Station Units 3 and 4), and sorbent injection equipment at Mill Creek Station Units 1 through 4 was an "affected facility" as defined in District Regulation 1.02, Section 1.2 (Oct. 23, 2001) because each piece of equipment was subject to regulations in the Jefferson County SIP or Jefferson County Title V program and because each emitted NOx, SO_2, SAM, PM, and other air contaminants.

78. From at least May 18, 2012 until the date sorbent injection technology was installed on each of Mill Creek Station Units 1, 2, 3, and 4, LG&E violated District Regulation 1.05, Section 5 because it failed to operate and maintain the process of combusting coal at each Unit in a manner consistent with good air pollution control practices for minimizing emissions to the extent practicable because the operational parameters used in the coal combustion process and failure to apply sorbent injection technology resulted in significant SAM emissions. Such operational parameters included but were not limited to operating the boilers at Units 1 and 2 at excessively high temperatures, burning of high-sulfur coal at each Unit, and operating the SCRs at Units 3 and 4 in a manner that exacerbated SO_3 and SAM emissions.

79. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), 40 C.F.R. § 19.4, LG&E is liable for penalties in an amount up to $37,500 per day for each violation that occurred after January 12, 2009 through November 2, 2015.

THIRD CLAIM FOR RELIEF

(Violations of District Regulation 1.09)

80. Paragraphs 1 through 63 are incorporated herein by reference.

81. Pursuant to District Regulation 1.09, no person shall permit or cause the emission of air pollutants which exceed the requirements of District regulations or which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

82. LG&E, a corporation, is a "person" as defined by District Regulation 1.02, Section 1.75 (Oct. 23, 2001); District Regulation 1.02, Section 1.56 (Dec. 6, 2016).

83. Sulfuric acid mist is an "air pollutant" as defined by District Regulation 1.02, Section 1.3 (Oct. 23, 2001); District Regulation 1.02, Section 1.4 (Dec. 6, 2016) because it is a smoke, noxious acid, gas, odor, or particulate matter, or a combination thereof.

84. At least on or around the dates of citizen complaints set forth in Appendix A, LG&E violated District Regulation 1.09 because it permitted or caused the emission of sulfur trioxide and sulfuric acid mist which caused injury, detriment, nuisance, or annoyance to community members nearby the Mill Creek Station or which endangered the comfort, repose, health, or safety of community members nearby the Mill Creek Station.

85. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), 40 C.F.R. § 19.4, LG&E is liable for penalties in an amount up to $37,500 per day for each violation that occurred after January 12, 2009 through November 2, 2015.

FOURTH CLAIM FOR RELIEF

(Violations of General Condition 36 of the Mill Creek Permits)

86. Paragraphs 1 through 63 are incorporated herein by reference.

87. Pursuant to District Regulation 2.16, Section 5.2, a stationary source in Jefferson County is not allowed to operate, except in compliance with a Title V permit. General Condition 36 of the Mill Creek Permits states that LG&E "shall comply with all applicable requirements of the following: Regulation 1.01, General Application of Regulations and Standards . . . Regulation 1.05, Compliance with Emissions Standards And Maintenance Requirements . . . Regulation 1.09, Prohibition of Air Pollution . . . [and] Regulation 2.16, Title V Operating Permits."

88. Mill Creek Station is a "stationary source" within the meaning of District Regulation 2.16, Section 1.40 because it is a building, structure, facility, or installation that emits NOx, SO_2, and PM, among other regulated air pollutants.

89. The requirements in District Regulations 1.01, Section 1.1; 1.05, Section 5; and 1.09 are "applicable requirements" within the meaning of District Regulation 2.16, Section 1.7 and 1.7.2 because they are federally enforceable standards or other requirements and are in the Jefferson County portion of the Kentucky SIP promulgated in 40 C.F.R. Part 52.

90. Each violation of District Regulation 1.01, Section 1.1; District Regulation 1.05, Section 5; and District Regulation 1.09 is also a violation of General Condition 36 of the Mill Creek Permits, which requires compliance with applicable requirements of those District Regulations.

91. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), 40 C.F.R. § 19.4, LG&E is liable for penalties in an amount up to $37,500 per day for each violation that occurred after January 12, 2009 through November 2, 2015.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs United States of America and Louisville Metro Air Pollution Control District respectfully pray that this Court:

A. Enter judgment against Defendant and in favor of the United States.

B. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), 40 C.F.R. § 19.4, enter judgment that LG&E is liable for penalties in an amount up to $37,500 per day for each violation that occurred after January 12, 2009 through November 2, 2015.

C. Order any appropriate injunctive relief, including mitigation of prior SAM emissions.

D. Grant such other relief as this Court may deem just and proper.

Respectfully submitted,

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Appendix A

Date of Complaint(s)	Number of Complaints	Time of complaint and specific concern expressed to the District
May 28, 2012	1	3:25 p.m.: Sulfur odor, frequently around holiday weekends and at night coming from the Station
July 4, 2012	1	2:20 p.m.: Sulfur odor coming from the Station
July 15, 2012	1	4:02 p.m.: Sulfur odor coming from the Station
July 24, 2012	1	11:37 a.m.: Thick clouds of blue smoke and dust coming from the Station
July 26, 2012	1	9:30 a.m.: Strong sulfur odors from the Station irritating complainant's throat and preventing her from being able to go outside
August 21, 2012	1	12:03 p.m.: Strong sulfur smell and visible emissions
October 5, 2012	1	3:15 p.m.: Strong sulfur odor coming from the Station
April 22, 2013	1	3:11 p.m.: Station stack causing air to turn blue in Valley Village neighborhood
June 25, 2013	1	2:20 p.m.: Sulfur odor and smog coming from the Station
July 16, 2013	2	7:45 a.m.: Dark brown haze coming from the Station 10:48: Dark brown haze coming from the Station instead of the usual white clouds.
July 22, 2013	2	3:57 p.m.: Blue haze in residential area near the Station 4:05 p.m.: Blue haze in residential area near the Station At 3:49 p.m., the fire department was dispatched and reported light blue smoke throughout subdivision.
July 23, 2013	1	7:02 a.m.: Blue haze in residential area near the Station
July 28, 2013	2	4:41 p.m.: Blue haze coming from the Station for 4 to 5 hours 4:50 p.m.: Blue haze and sulfur and metallic odor coming from Station
August 3, 2013	1	2:57 p.m.: Blue haze and nasty smell in the area
August 26, 2013	2	9:40 a.m.: Blue cloud in subdivision. 5:01 p.m.: Smoke, smog or pollution over Valley Village. First noticed at 10AM. Haze still present around 11:30 on Dixie Highway to Ashby Lane. Whole neighborhood covered in haze at 1:00. At 2:20, haze still present despite nice breeze. Caller reported a headache for two days and dust covering vehicles, paint, and glass overnight.

August 27, 2013	1	4:10 p.m.: Blue haze and metallic odor coming from the Station.
June 16, 2014	4	12:35: Really thick blue haze with sulfur odor 4:24 p.m.: Blue haze with sulfur odor in neighborhood 4:25 p.m.: blue haze with metal odor 4:33 p.m.: Smog-like blue haze throughout Valley Village neighborhood on-and-off today
June 17, 2014	3	12:45 p.m.: Blue haze and sulfur odor 1:00 p.m.: Blue haze and difficulty breathing 5:03 p.m.: Horrible haze in the area
June 18, 2014	5	11:52 a.m.: horrible haze making it difficult to breathe; no odor. 11:53 a.m.: Blue haze in the area. 12:01 p.m.: Heavy haze currently in area and was present the previous night 12:30 p.m.: Blue haze is back but no odor present 5:26 p.m.: Blue haze on Watson Lane; haze has reached Watson Lane Elementary
June 19, 2014	4	11:06 a.m.: Blue haze all day long 4:52 p.m.: Blue haze coming from the Station and hovering low to the ground 4:55 p.m.: Blue haze in neighborhood coming from the Station 4:59 p.m.: Haze is present but no odor; haze has improved since June 16, 2014
June 20, 2014	4	11:30 a.m.: Blue haze continued from June 6, 2014. 12:15 p.m.: Blue haze in neighborhood. 1:38 p.m.: Blue haze with no odor. 2:03 p.m.: Blue haze making it hard to breathe.
June 22, 2014	2	5:12 p.m.: Haze over Valley Village. 5:54 p.m.: Blue haze coming from the Station but it's dissipating.
June 23, 2014	1	4:10 p.m.: Blue smoke coming from the Station's smoke stacks and then dropping low to the ground. Complainant noted she made calls to LG&E who did not provide her with any information.
June 29, 2014	1	1:39 p.m.: Blue haze returned to area.
July 1, 2014	1	1:15 p.m.: Emissions from the Station's stack that could create low-ground level haze.
July 7, 2014	1	7:32 p.m.: Nasty pickle odor in the area.
July 8, 2014	1	3:15 p.m.: Blue haze and sulfur odor coming from the Station.

July 13, 2014	1	2:39 p.m.: Blue haze throughout Valley Village coming from the Station.
August 10, 2014	1	4:29 p.m.: Blue haze came into neighborhood from Station while he was working in his yard; left sulfur taste in mouth.
August 21, 2014	1	6:18 p.m.: Blue haze with light sulfur odor.
August 22, 2014	2	12:04 p.m.: Blue haze with faint sulfur odor hovering over rooftops. 1:45 p.m.: Blue haze with sulfur odor and metallic/sulfur taste since 9:00 a.m. 6:18 p.m.: Blue haze with light sulfur odor.
January 20, 2015	1	10:21 a.m.: Brown emissions coming from the Station.