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## Technical Paper #3

# The Cost of Non-Compliance: An Objective Analysis of Federal EPA's Enforcement at Ammonia Refrigeration Facilities

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### Introduction

*This paper presents an objective analysis of the Federal Environmental Protection Agency's (EPA's) enforcement of ammonia refrigeration facilities across America conducted using hundreds of publicly available independent inspection reports dating from 2006 through 2021. This paper is divided into three main sections. Section 1 presents a historical review of major events and environmental disasters that resulted in the Federal EPA's formation and highlights the subsequent regulations developed by the EPA that apply to ammonia refrigeration facilities. Section 2 explains how the EPA calculates civil penalties. Finally, section 3 presents an analysis of the collected inspection reports, detailing trends in common findings, differences in the types of settlement agreements, and penalties.*



## **Section 1: A Historical Timeline of Major Events**

### *September 27, 1962 | Rachel Carson published Silent Spring*

The 1960s and '70s were tumultuous times in American history, fraught with division, war, and economic uncertainty. Yet, it was also a period marked by victories for civil liberties, environmental awareness, and a collective desire to do and be better. Rachel Carson's book *Silent Spring*, published in 1962, "warned of the dangers to all natural systems from the misuse of chemical pesticides such as DDT."<sup>1</sup> This book is often cited as the landmark publication that initiated the modern environmental movement.

### *June 22, 1969 | The Cuyahoga River Fire*

With public consciousness awakening to environmental issues, a small oil fire on the Cuyahoga River in Cleveland, Ohio, in June 1969 caught the nation's attention. After the Civil War, Cleveland transformed from a small city into a manufacturing hub. The Cuyahoga River, which drains into Lake Erie, was the most convenient dumping ground for industrial waste and sewage. The fire of '69 was no surprise to the locals, as this was the 10th documented time that the river had caught fire since the Industrial Revolution.<sup>2</sup> It nonetheless became a symbol of a growing environmental crisis. Together with other environmental disasters, such as the largest recorded oil spill to date in Santa Barbara earlier that year,<sup>3</sup> the Cuyahoga River fire would become a routinely cited rationale for necessary regulation.

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<sup>1</sup> [www.rachelcarson.org](http://www.rachelcarson.org)

<sup>2</sup> La Bella, Laura. *Not Enough to Drink: Pollution, Drought, and Tainted Water Supplies*. United States: Rosen Pub., 2009.

<sup>3</sup> <https://www.latimes.com/local/lanow/la-me-ln-santa-barbara-oil-spill-1969-20150520-htmllstory.html>

### *December 2, 1970 | Birth of the Environmental Protection Agency*

Confronted with “decades of rampant and highly visible pollution”<sup>4</sup> and growing public concern, President Richard Nixon signed a bill called the National Environmental Policy Act (NEPA) on January 1, 1970, sent to him by Congress. NEPA’s first three stated purposes were the following:

- “To declare a national policy which will encourage productive and enjoyable harmony between man and his environment.
- “To promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.
- “To enrich our understanding of the ecological systems and natural resources important to the Nation.”<sup>5</sup>

In his State of the Union address on January 22, 1970, Nixon proposed making “the 1970s a historic period when, by conscious choice, [we] transform our land into what we want it to become.”<sup>6</sup> Following the signing of NEPA and his State of the Union address, Nixon proposed a 37-point environmental action plan in February 1970, emphasizing federal programs for water and air pollution. Recognizing that it would be impractical to implement a variety of sweeping environmental reforms through the various existing departments and on the recommendation of his advisors, Nixon proposed that Congress establish a new independent agency called the Environmental Protection Agency (EPA). The EPA was made official on December 2, 1970, with William D. Ruckelshaus as the first administrator.

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<sup>4</sup> EPA Journal, Volume 11, Number 9, November 1985

<sup>5</sup> EPA Journal, Volume 11, Number 9, November 1985 page 7

<sup>6</sup> EPA Journal, Volume 11, Number 9, November 1985 page 7

### *December 31, 1970 | The Clean Air Act (CAA)*

Originally established in 1963, the Clean Air Act is possibly the most influential law in US history related to the environment. On December 31, 1970, Congress transferred the authority of the CAA to the EPA, authorizing it to set national air quality standards, automobile emission standards, and anti-pollution standards.

### *October 21, 1976 | Resource Conservation and Recovery Act (RCRA)*

In October 1976, the Resource Conservation and Recovery Act (RCRA) was established to address increasing industrial and municipal waste issues.

RCRA set national goals for (1) “Protecting human health and the environment from the potential hazards of waste disposal, (2) Conserving energy and natural resources, (3) Reducing the amount of waste generated, [and] (4) Ensuring that wastes were managed in an environmentally sound manner.”<sup>7</sup>

Three primary programs were created to achieve these goals: solid waste, hazardous waste, and underground storage tanks. The solid waste program encouraged each state to create comprehensive plans for non-hazardous industrial and municipal solid waste management and landfills and prohibited the open dumping of solid waste. The hazardous waste program created a system for tracking hazardous waste from the cradle to the grave. Finally, the underground storage tank program created a system for regulating underground tanks storing petroleum products and hazardous substances.<sup>8</sup>

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<sup>7</sup> <https://www.epa.gov/history/epa-history-resource-conservation-and-recovery-act>

<sup>8</sup> <https://www.epa.gov/history/epa-history-resource-conservation-and-recovery-act>

### *August 2, 1978 | Love Canal Disaster*

Just a few years after RCRA was established, the Love Canal Disaster exploded onto the national scene. Love Canal, a neighborhood in Niagara Falls, New York, was used as a dump site for municipal refuse and industrial waste from the 1920s to the 1940s. Hooker Chemical Company (the sole owner of the landfill at the time) ceased operation of the dump site in 1952 and covered it with a clay seal to prevent leakage.<sup>9</sup> The property was subsequently sold to the Niagara Falls School Board, which built a school less than one hundred feet from the landfill.<sup>10</sup> The school district sold the remaining land to private developers and the Niagara Falls Housing Authority. During the construction of the sewers for these new housing developments, the clay walls of the landfill were breached, which allowed toxic waste to enter the soil and groundwater. The entire event “displaced numerous families, leaving them with longstanding health issues and symptoms of high white blood cell counts and leukemia”<sup>11</sup>

### *December 10, 1980 | The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), aka Superfund*

After numerous incidents involving hazardous chemicals and toxic waste, spurred by the State of Emergency declared by President Carter at Love Canal, Congress passed the federal Superfund law, officially known as the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).<sup>12</sup> The Superfund program was to be administered by the Environmental Protection Agency (EPA) and was designed to “investigate and cleanup sites contaminated with hazardous substances.”<sup>13</sup> Additionally, the EPA was to be in charge of investigating responsible

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<sup>9</sup> [https://en.wikipedia.org/wiki/Love\\_Canal](https://en.wikipedia.org/wiki/Love_Canal)

<sup>10</sup> [https://en.wikipedia.org/wiki/Love\\_Canal](https://en.wikipedia.org/wiki/Love_Canal)

<sup>11</sup> [https://en.wikipedia.org/wiki/Love\\_Canal](https://en.wikipedia.org/wiki/Love_Canal)

<sup>12</sup> <https://www.epa.gov/superfund/superfund-history-printable-version>

<sup>13</sup> <https://en.wikipedia.org/wiki/Superfund>



parties for releases of hazardous substances into the environment and to hold such businesses or municipalities responsible through cleanup costs, settlements, or other legal means.<sup>14</sup>

### *December 4, 1984 | Bhopal Disaster*

In December 1984, the world's worst industrial disaster at a chemical facility occurred in Bhopal, India. An American-owned corporation, Union Carbide, failed to maintain and operate its Indian plant in Bhopal in accordance with generally accepted engineering standards. As a result, 45 tons of methyl isocyanate (MIC) were released. The toxic gas traveled over large populated areas, killing 15,000 to 20,000 people. An additional 500,000 suffered directly related chronic health issues, with countless others suffering for years from the contaminated soil and water.<sup>15</sup>

Union Carbide had one other plant at that time that manufactured methyl isocyanate (MIC); it was in West Virginia.

### *October 17, 1986 | Emergency Planning and Community Right-to-Know Act (EPCRA)*

In response to the Bhopal disaster and nearly 7,000 documented chemical accidents in the US, Congress passed the Superfund Amendments and Reauthorization Act of 1986 (SARA), an amendment to CERCLA, which was signed into law by President Ronald Reagan on October 17, 1986.

The Emergency Planning and Community Right-to-Know Act (EPCRA) was created as a free-standing law and is commonly known as SARA Title III. The primary objective of EPCRA is "to encourage and support emergency planning efforts at the state

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<sup>14</sup> <https://en.wikipedia.org/wiki/Superfund>

<sup>15</sup> <https://www.britannica.com/place/Bhopal-India>

and local levels and to provide the public and local governments with information concerning potential chemical hazards present in their communities.”<sup>16</sup>

Three primary sections of EPCRA apply to ammonia refrigeration facilities:

- Sections 301-303 | Emergency Planning
- Section 304 | Emergency Release Notification
- Sections 311-312 | Chemical Inventory Reporting

EPCRA does not limit which chemicals can be stored or used at a facility and in what quantities but requires those facilities to document and report such information.

Under Emergency Planning Sections 301-303, facilities are required to notify the State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC) if they have an extremely hazardous substance at their facility above the Threshold Planning Quantity (TPQ).

Under the Emergency Release Notification Section 304, facilities are required to immediately notify the State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC) of any release of a hazardous substance above the Reportable Quantity (RQ).

Hypothetically, a facility could have an extremely hazardous substance on site at a quantity less than the Threshold Planning Quantity and, therefore, not be required to notify the SERC and LEPC under the Emergency Planning section. However, if that same facility had an accidental release of that same substance over the RQ, they would still be required to make immediate notification of the release.

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<sup>16</sup> [https://en.wikipedia.org/wiki/Emergency\\_Planning\\_and\\_Community\\_Right-to-Know\\_Act](https://en.wikipedia.org/wiki/Emergency_Planning_and_Community_Right-to-Know_Act)

For ammonia, the TPQ and RQ values are as follows:<sup>17</sup>

Threshold Planning Quantity (Section 301-303)	Reportable Quantity (Section 304)
500 lbs	100 lbs

Under the Chemical Inventory Reporting sections (311 and 312), facilities must submit an annual chemical inventory by March 1. There are two types of forms, Tier I and Tier II. Tier I forms are simpler but are no longer accepted by any states. Therefore, all facilities are, by default, required to submit the Tier II form annually.

#### *November 15, 1990 | Clean Air Act Amendments (CAAA)*

Under President George H.W. Bush, Congress passed sweeping revisions to the Clean Air Act (CAA) in November of 1990. The revisions sought to address what were considered three significant threats to Americans: acid rain, urban air pollution, and toxic air emissions.<sup>18</sup>

The amendments included requirements for both the EPA and the Occupational Safety and Health Administration (OSHA) to promulgate rules and standards to prevent chemical releases. As recorded in the Federal Register:

The CAA Amendments of 1990 amend section 112 and add paragraph (r).  
The intent of section 112(r) is to **prevent accidental releases to the air and mitigate the consequences of such releases by focusing prevention measures on chemicals that pose the greatest risk to the public and the environment.**

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<sup>17</sup> Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-To-Know Act (EPCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and Section 112(r) of the Clean Air Act (CAA)

<sup>18</sup> <https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary>

Section 112(r)(3) mandates that EPA promulgate a list of regulated substances, with threshold quantities; this list defines the stationary sources that will be subject to accident prevention regulations mandated by section 112(r)(7) (emphasis mine).<sup>19</sup>

OSHA publication 3132 Process Safety Management states:

Section 304 of the [Clean Air Act Amendments] requires that the Secretary of Labor, in coordination with the Administrator of the Environmental Protection Agency (EPA), promulgate ... a chemical process safety standard to **prevent accidental releases of chemicals that could pose a threat to employees** (emphasis mine).<sup>20</sup>

### *1992 & 1994 | Publication of the PSM and RMP Regulations*

On February 24, 1992, OSHA's Process Safety Management (PSM) Standard was published. It included fourteen Prevention Program Elements:

1. Process Safety Information
2. Process Hazard Analysis
3. Operating Procedures
4. Employee Participation
5. Training
6. Contractors
7. Pre-Startup Safety Review

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<sup>19</sup> Federal Register / Vol. 61, No. 120 / Thursday, June 20, 1996, 31669

<sup>20</sup> Process Safety Management OSHA 3132, 2000 Reprint Edition

8. Mechanical Integrity
9. Hot Work Permit
10. Management of Change
11. Incident Investigation
12. Emergency Planning and Response
13. Compliance Audits
14. Trade Secrets

On June 20, 1996, EPA published its Risk Management Program (RMP), which, according to the Federal Register, included

the requirements of the OSHA PSM standard... with minor wording changes to address statutory differences... **These changes [were] designed to ensure that OSHA retained its oversight of actions designed to protect workers while EPA retained its oversight of actions to protect public health and the environment (emphasis mine).**<sup>21</sup>

In addition, the RMP included a Hazard Assessment and Offsite Consequence Analysis requirement and submission requirements.

## **Section 2: How the EPA Calculates Civil Penalties**

Though it may be surprising to some, the Federal EPA has a reasonably objective standard for calculating penalties for violations of its regulations. This section

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<sup>21</sup> Federal Register / Vol. 61, No. 120 / Thursday, June 20, 1996, 31672

examines the EPA’s published enforcement policies and provides examples of how penalties are calculated for violating the EPCRA, CERCLA, and CAA.

### *1984 EPA Policy on Civil Penalties*

In 1984, EPA published its Policy on Civil Penalties, titled “EPA General Enforcement Policy GM#-21.” This policy set the tone and foundation for all future enforcement. For the purpose of this paper, it is essential to highlight EPA’s three goals for civil penalties: (1) deterrence, (2) fair and equitable treatment of the regulated community, and (3) swift resolutions of environmental problems. The policy explains each of these goals as follows:

#### **Deterrence**

“If a penalty is to achieve deterrence, both the violator and the general public must be convinced that the penalty places the violator in a worse position than those who have complied in a timely fashion.”<sup>22</sup>

#### **Fair and Equitable Treatment of the Regulated Community**

“Fair and equitable treatment requires that the Agency’s penalties must display both consistency and flexibility. The consistent application of a penalty policy is important because otherwise the resulting penalties might be seen as being arbitrarily assessed. Thus, violators would be more inclined to litigate over those penalties. This would consume Agency resources and make swift resolution of environmental problems less likely.”<sup>23</sup>

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<sup>22</sup> Policy on Civil Penalties: EPA General Enforcement Policy #GM - 21. Feb. 16, 1984. Page 3

<sup>23</sup> Policy on Civil Penalties: EPA General Enforcement Policy #GM - 21. Feb. 16, 1984. Page 4

## Swift Resolution of Environmental Problems

“The Agency’s primary mission is to protect the environment. As long as an environmental violation continues, precious natural resources, and possibly public health, are at risk. For this reason, swift correction of the identified environment problems must be an important goal of any enforcement action.”<sup>24</sup>

### *September 30, 1999 | EPA Enforcement Response Policy for EPCRA-CERCLA*

In 1999, the EPA published a revised policy “to ensure that enforcement actions for violations of CERCLA §103(a) and EPCRA §304, §311 and §312 are legally justifiable, uniform and consistent.”<sup>25</sup> Civil penalties for CERCLA and EPCRA violations are calculated in two stages. First, a deterrence (or base) penalty is assessed that considers the nature, circumstances, extent, and gravity of the violation and uses an objective matrix to determine the base penalty amount. After the base penalty has been determined, other factors, such as the ability to pay and prior violation history, are considered in calculating a final proposed penalty.<sup>26</sup>

Because there is subjectivity in the second part of a civil penalty calculation, we will limit our discussion to two common examples of violations and how only the base penalty is calculated for CERCLA and EPCRA violations.

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<sup>24</sup> Policy on Civil Penalties: EPA General Enforcement Policy #GM - 21. Feb. 16, 1984. Page 5

<sup>25</sup> EPA Enforcement Response Policy for Sections 304, 311, 312 of EPCRA and 103 of CERCLA pg. 3

<sup>26</sup> EPA Enforcement Response Policy for Sections 304, 311, 312 of EPCRA and 103 of CERCLA pg. 9

### Example 1 | Failure to make immediate notifications of an ammonia release

CERCLA §103(a) requires facilities to **immediately** (i.e., within 15 minutes)<sup>27</sup> report releases of hazardous substances above the RQ to the National Response Center. For ammonia, the RQ is 100 lbs in a 24-hour period.

EPCRA §304(a) also requires facilities to report releases of extremely hazardous substances (EHS) for any release requiring CERCLA notification to the SERC and LEPC.

Using the matrix below, published in the EPA Enforcement Response Policy for §304, §311, and §312 of EPCRA and §103 of CERCLA, let us imagine the following scenario:

*A cold storage facility with a maximum intended inventory of 30,000 lbs has a release of 700 lbs of ammonia from a pressure relief valve. After the relief valve reseated, an employee began making notifications approximately 1 hour and 45 minutes after the release had been discovered.*

EXTENT (timeliness of notification)	LEVEL A (greater than 10 times the RQ)	LEVEL B (greater than 5 but less than or equal to 10 times the RQ)	LEVEL C (greater than 1 but less than or equal to 5 times the RQ)
LEVEL 1 (more than 2 hours)	\$27,500 \$20,626	\$20,625 \$13,751	\$13,750 \$6,876
LEVEL 2 (between 1 and 2 hours)	\$20,625 \$13,751	<b>\$13,750</b> <b>\$6,876</b>	\$6,875 \$3,439
LEVEL 3 (within 1 hour, after 15 minutes)	\$13,750 \$6,876	\$6,875 \$3,439	\$3,438 \$1,718

<sup>27</sup> “Immediately” has been interpreted with legal precedent to require notification within 15 minutes of when the responsible person becomes aware of the release. [Legislative History of the Superfund Amendments and Reauthorization Act of 1986” (Volume 2, October 1990, pgs. 600-01)]



Because the amount of ammonia released (700 lbs) is seven times the RQ for NH<sub>3</sub> (100 lbs), LEVEL B would be selected on the X axis. Since notification was made 1 hour and 45 minutes after the person in charge was aware of the release, LEVEL 2 would be selected on the Y axis.

Therefore, the proposed base penalty would be between \$6,876 and \$13,750 for failing to make the required notifications within 15 minutes. Anecdotally, it is the author's experience that the EPA typically selects the higher penalty amount initially. With that in mind, it is also important to remember that CERCLA and EPCRA are separate regulations. As such, it is common for a facility to be cited for each regulation. The total base penalty in the scenario for failing to make notifications within 15 minutes of becoming aware of the release would, therefore, likely be:

Description	Penalty
CERCLA §103(a)	\$13,750
EPCRA §304(a)	\$13,750
Total Base Penalty	\$27,500

*Example 2 | Failure to annually complete Tier II chemical inventory submissions*

EPCRA §312, as noted earlier, requires a facility to annually submit a chemical inventory, otherwise known as a Tier II submission. The submission must be completed between January 1 and March 1 each year. Either missing the submission window or submitting an incomplete chemical inventory is a violation of EPCRA §312.

Using the matrix below, published in the EPA Enforcement Response Policy for §304, §311, and §312 of EPCRA, and §103 of CERCLA, let us imagine the following scenario:

*A facility with 30,000 lbs of ammonia failed to submit its Tier II in the previous two years. A new safety director was hired on May 1. Recognizing that the facility had not submitted its chemical inventory in the previous two years, she completes the submission on May 15.*

EXTENT (timeliness of inventory submission)	LEVEL A (greater than 10 times the MTL) <sup>28</sup>	LEVEL B (greater than 5 but less than or equal to 10 times the MTL)	LEVEL C (greater than 1 but less than or equal to 5 times the MTL)
LEVEL 1 (more than 30 days)	<b>\$27,500</b> <b>\$20,626</b>	\$20,625 \$13,751	\$13,750 \$6,876
LEVEL 2 (after 20 but within 30 days)	\$20,625 \$13,751	\$13,750 \$6,876	\$6,875 \$3,439
LEVEL 3 (after 10 but within 20 days)	\$13,750 \$6,876	\$6,875 \$3,439	\$3,438 \$1,718

Because the facility’s 30,000-lb ammonia inventory is 60 times the TPQ for NH<sub>3</sub> for Tier II submission (500 lbs), LEVEL A would be selected on the X axis. Furthermore, the Tier II submission occurred 75 days after the March 1 deadline, so LEVEL 1 would be selected on the Y axis.

Additionally, the enforcement policy states, “For EPCRA §312 violations detected for previous years of non-compliance, a flat penalty of \$1,500 per year shall be proposed.”<sup>29</sup>

Therefore, the likely proposed base penalty for this scenario would be:

Description	Penalty
EPCRA §312	\$27,500
Previous Years of Non-compliance	\$1,500 for first year + \$1,500 for second year = \$3,000
Total Base Penalty	\$30,500

<sup>28</sup> MTL stands for Minimum Threshold Level and is associated with Threshold Planning Quantities

<sup>29</sup> EPA Enforcement Response Policy for §304, §311, §312 of EPCRA and §103 of CERCLA pg. 23

*June 20, 2012 | EPA Combined Enforcement Policy for CAA §112(r) and 40 CFR Part 68*

In June 2012, the EPA revised its enforcement policy to create a consolidated and objective matrix for calculating penalties for violations of the RMP as required under CAA §112(r). Therefore, it is necessary to highlight one of the opening statements of this enforcement policy, which in practical terms, means that the EPA will typically issue a fine for any violation of CAA §112(r):

“In all but rare instances, EPA should seek penalties to address non-compliance, either by initiating a civil administrative action or a civil judicial referral. However, in limited circumstances, EPA may pursue a non-penalty action (emphasis mine).”<sup>30</sup>

The remainder of this section examines the key points of the enforcement policy by discussing the two primary components of the EPA’s calculation: (1) the Economic Benefit of Non-compliance and (2) the Gravity of the Violation.

### **Economic Benefit of Non-compliance**

The Policy begins this section by stating: “An entity that has violated CAA §112(r) should not profit from its actions.”<sup>31</sup> This is called the economic benefit. So, for example, if business owners take home more money at the end of the fiscal year because they failed to reinvest capital funds into their facilities for required maintenance or improvements, they have benefited economically by violating the RMP regulation.

As a practical example, consider that an ammonia refrigeration facility conducts a mechanical integrity inspection and reveals that several piping sections have severe corrosion. The recommendation is to replace these sections of pipe. However, if the

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<sup>30</sup> EPA Combined Enforcement Policy for CAA 112(r) and 40 CFR Part 68, June 20, 2012, Page 4

<sup>31</sup> EPA Combined Enforcement Policy for CAA 112(r) and 40 CFR Part 68, June 20, 2012, Page 7

business owner feels it is too expensive to replace the pipe sections and decides not to do so, the business owner has violated the RMP regulation by not adhering to the mechanical Integrity prevention program element. The business owner will also have more money in the bank account at the end of the year due to not replacing the pipe sections.

The policy explains the economic benefit this way:

“Economic benefit can result from a violator delaying or avoiding compliance costs or when the violator achieves an illegal competitive advantage through its non-compliance. A fundamental premise of the 1984 policy is that economic incentives for non-compliance are to be eliminated.”<sup>32</sup>

To calculate the economic benefit of a given violation, the EPA uses a computer model called BEN 2.0. The model requires various data elements, such as "the date the violation occurred, the date of compliance, the costs of compliance, the year the costs were estimated, and the date the penalty will be paid."<sup>33</sup>

Below is a fictitious example of an Economic Benefit breakdown using actual data points from multiple inspections.

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<sup>32</sup> EPA Combined Enforcement Policy for CAA 112(r) and 40 CFR Part 68, June 20, 2012, Page 7

<sup>33</sup> <https://www.epa.gov/enforcement/penalty-and-financial-models>

Compliance Project	BEN Type	Capital Cost	Violation Start Date	Completed Date	BEN
Process Safety Information (update P & IDs, install signage, alarms, and ventilation study)	Delayed	\$29,500	March 2019	November 2021	\$7,990
Process Safety Information (Relief Valve Termination Piping Analysis)	Delayed	\$10,000	October 2019	March 2021	\$1,276
Process Hazard Analysis: (ER Doors, eyewash stations)	Delayed	\$13,600	March 2019	November 2021	\$1,440
Mechanical Integrity (Vapor barrier repair, painting electrical conduit)	Delayed	\$25,500	April 2019	July 2021	\$3,770
Total BEN Calculation					\$14,476

## Gravity of the Violation

The gravity of a violation is determined by calculating several components:

- Seriousness of the Violation
- Duration Component
- Size of Violator
- + or - Adjustment Factors

Because there is a subjective nature to the adjustment factors, we limit our discussion to the first three components using the following fictitious example:

An ammonia cold storage facility with a net worth of \$7,000,000 and a maximum intended inventory of 12,000 lbs<sup>34</sup> performed a Process Hazard Analysis in January 2017. The study resulted in 12 recommendations, such as installing a machinery room ventilation system (because a ventilation system was non-existent), obtaining U-1A forms for several pressure vessels, and conducting non-destructive testing (NDT) on corroded piping. The due date for these recommendations was one year from the completion of the PHA, January 31, 2018. The EPA performed an inspection in October 2019, and while all other PHA recommendations had been resolved, a ventilation system had still not been installed. The facility completed the ventilation system installation in May 2020.

## Calculating the Gravity of the Violation

### *1) Seriousness of the Violation*

The seriousness of a violation is determined by a matrix based on the Potential for Harm and the Extent of Deviation. The Potential for Harm is categorized as major (undermining the ability to prevent or respond to releases), moderate (potential to affect the ability to prevent or respond to releases), or minor (little potential to affect the ability to prevent or respond to releases). The Extent of Deviation is also categorized as major (substantial non-compliance), moderate (significant deviation, but some requirements are met), or minor (the violator somewhat deviates, but most requirements are met).

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<sup>34</sup> There are “two sets of tables for determining the seriousness of the violation component one for Part 68 violations and one for GDC violations.” This example uses Table I because the inventory is above 10,000 of ammonia which makes it subject to RMP [40 CFR Part 68].

### Part 68 Seriousness Matrix

		Potential for Harm		
		Minor	Moderate	Major
Extent of Deviation	Major	\$25,000	\$30,000	\$37,500
		\$20,000	\$25,000	\$30,000
	Moderate	\$10,000	\$15,000	\$20,000
		\$5,000	\$10,000	\$15,000
	Minor	\$1,000	\$3,000	\$5,000
		\$500	\$1,000	\$3,000

In our example of failing to install a machinery room ventilation system, both the Potential for Harm and the Extent of Deviation would likely be categorized as major. This would result in a civil penalty of between \$30,000 and \$37,500 for the Seriousness of Violation component.

### 2) Duration of Violation

The Combined Enforcement Policy describes the Duration of Violation as follows:

“The duration of a violation is based on the time period from the first day of violation for which the Region has evidence through the last provable date of the violation.... For example, if a facility fails to submit an RMP, the first date of violation is the day the plan was due. The violation continues until the day the facility submits the plan.”<sup>35</sup>

In our example, the Duration of Violation would be calculated using Table III as follows:

<sup>35</sup> EPA Combined Enforcement Policy for CAA 112(r) and 40 CFR Part 68, June 20, 2012, Page 14

### Duration of Violation

Months	Penalty
0–12	\$750/month
13–24	\$1,500/month
25–36	\$2,250/month
37 +	\$3,000/month

The ventilation system was due by January 31, 2018, and was installed in May 2020.

# of Months	Dates of Non-Compliance	Penalty / mo.	Penalty
0–12 months	Feb 2018–Jan 2019	\$750 x 12	\$9,000
13–24 months	Feb 2019–Jan 2020	\$1,500 x 12	\$18,000
25–36 months	Feb 2020–April 2020	\$2,250 x 3	\$6,750
Total Duration of Violation Penalty			\$33,750

### 3) Size of Violator

The combined enforcement policy states on page 15 that the “EPA should scale the penalty to the size of the violator. The size of the violator is based on the company’s net worth.”<sup>36</sup> The following table is used to calculate the Size of Violator penalty.

Net Worth	Size Adjustment
Under \$1,000,000	\$0
\$1,000,000–\$5,000,000	\$10,000
\$5,000,001–\$20,000,000	\$20,000
\$20,000,001–\$40,000,000	\$35,000
\$40,000,001–\$70,000,000	\$50,000
\$70,000,001–\$100,000,000	\$70,000
Over \$100,000,001	\$70,000 + \$25,000 for every additional \$30,000,000

<sup>36</sup> EPA Combined Enforcement Policy for CAA 112(r) and 40 CFR Part 68, June 20, 2012, Page 15



Because the facility in our fictitious scenario has a net worth of \$7,000,000, the Size of Violator penalty would be \$20,000.

In summary, the single PHA violation of failing to install a ventilation system in our fictitious example would result in the following Gravity of Violation Penalty:

Description	Penalty
Seriousness	\$33,250
Duration	\$31,500
Size of Violator	\$20,000
Gravity of Violation Total	\$84,750

### **Section 3: Analysis of EPA Enforcement at Ammonia Facilities**

#### *EPA's 10 Regional Offices*

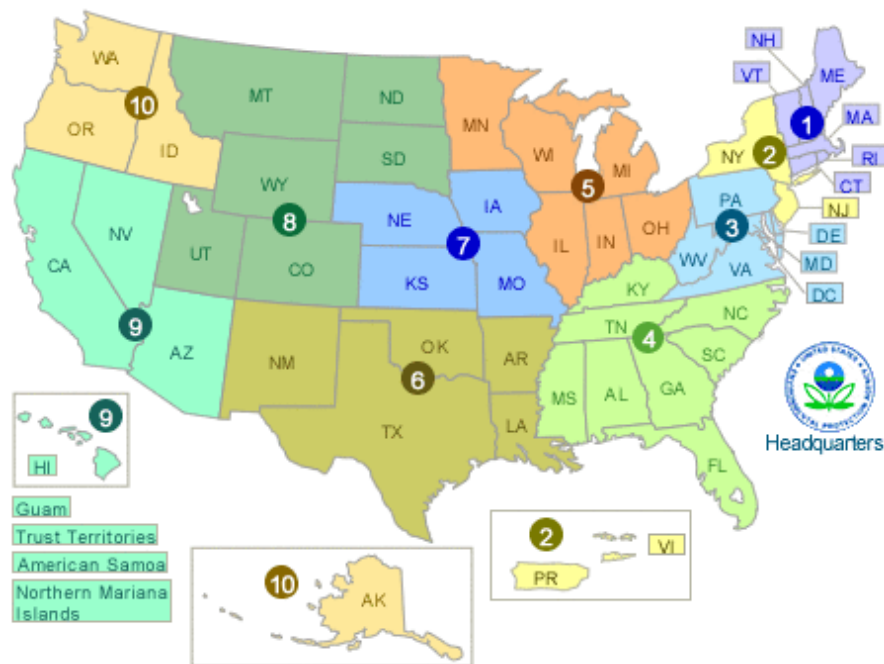
To achieve the EPA's goals nationwide, ten regional offices were created, each with a specific geographic focus. This geographic focus allows each office to address specific health and environmental concerns within its jurisdiction. The regional offices and their geographic jurisdictions are listed as follows on the Federal EPA website.<sup>37</sup>

- Region 1 – Boston (serving CT, ME, MA, NH, RI, and VT)
- Region 2 – New York City (serving NJ, NY, Puerto Rico, the US Virgin Islands, and eight federally recognized Indian Nations)
- Region 3 – Philadelphia (serving DE, DC, MD, PA, VA, WV, and seven federally recognized tribes)
- Region 4 – Atlanta (serving AL, FL, GA, KY, MS, NC, SC, and TN)
- Region 5 – Chicago (serving IL, IN, MI, MN, OH, and WI)
- Region 6 – Dallas (serving AR, LA, NM, OK, and TX)

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<sup>37</sup> <https://www.epa.gov/aboutepa/regional-and-geographic-offices>

- Region 7 - Kansas City (serving IA, KS, MO, and NE)
- Region 8 – Denver (serving CO, MT, ND, SD, UT, and WY)
- Region 9 – San Francisco (serving AZ, CA, HI, NV, American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Marshall Islands, and Republic of Palau)
- Region 10 – Seattle (serving AK, ID, OR, WA, and 271 native tribes)

Map of the 10 Regions<sup>38</sup>


### *Database of Consent Agreements and Final Orders (CAFOs), Expedited Settlement Agreements (ESAs), and Expedited Penalty Action & Consent Agreements (EPACAs)*

Two primary types of settlement agreements, a Consent Agreement and Final Order (CAFO) and Expedited Settlement Agreements (ESA), can be used if the EPA inspects a facility and discovers violations. CAFOs are associated with more considerable

<sup>38</sup> <https://www.epa.gov/aboutepa/visiting-regional-office>

penalties and sometimes with Supplemental Environmental Projects (SEPs). ESAs are used when a facility has violated one (or more) of EPA's regulations but only to a small extent; the process is then expedited, and the penalty amount is significantly reduced.

In addition to data on CAFOs and ESAs, the database analyzed in this study contains data on Expedited Penalty Action & Consent Agreements (EPACAs). This type of agreement is only associated in the database with Region 3. This type of agreement also typically includes a small fine (< \$5,000) and a larger “fix it” type of penalty. The author is not aware of other regions implementing this type of agreement. In other regions, it is common to require a SEP, which serves the same purposes. Specifically, the facility must spend a certain amount of money on specific projects to bring the facility into compliance. However, sometimes a SEP is required as part of a settlement, but the project benefits local emergency responders rather than producing direct upgrades to the facility.

### *Analysis of the Database*

At the time of this paper's publication, the database includes more than 450 inspection reports: 254 CAFOs, 185 ESAs, and 14 EPACAs. It includes inspection reports from 46 of the 50 states and all ten regions. CAA Section 112(r) - 40 CFR §68 “RMP” was cited 346 times, EPCRA 94 times, CERCLA 75 times, and the CAA Section 112(r)(1) - General Duty Clause 31 times.<sup>39</sup>

### **Categorizing Citations by Regulatory Reference**

While the EPA inspection reports typically do not assign individual penalty amounts to each citation, the reports usually detail which sections of a particular regulation

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<sup>39</sup> Many inspection reports cite multiple regulations.

were violated. The database tracks the number of times each section of the RMP regulation was cited, as well as the number of times the applicable sections of CERCLA and EPCRA were cited. This helps analyze which sections are cited more frequently than others. Below is a list of the number of times a section was cited, in order from highest to lowest:

Number of times cited	Regulatory Reference
124	Process Hazard Analysis
122	RAGAGEP
119	Mechanical Integrity
112	Operating Procedures
101	Failure to Submit RMP
98	Compliance Audits
94	Process Safety Information
74	Failure / Late Notification after NH <sub>3</sub> Release to NRC and LEPC
73	Training
58	Hazard Assessment
44	Failure to Timely Submit Tier II
37	MOC / PSSR
31	Failure to Update Emergency Contact
29	Contractors
24	Emergency Planning and Response
23	Incident Investigation

## Analysis of Penalties

There are numerous ways to analyze penalty amounts recorded in the database. Below is a summary of six penalty categories, with four data elements for each: (1) the total amount of all citation penalties in that category, (2) the average individual penalty amount for a single facility, (3) the median individual penalty amount for a single facility, and (4) the largest individual penalty amount for a single facility.

**Table 1: CAFOs citing CAA Section 112(r) - 40 CFR §68 RMP**

Total Penalties Assessed	\$12,132,184
Average Civil Penalty	\$82,533
Median Civil Penalty	\$58,000
Largest Civil Penalty	\$356,010

**Table 2: ESAs citing CAA Section 112(r) - 40 CFR §68 RMP**

Total Penalties Assessed	\$509,867.00
Average Civil Penalty	\$2,771.02
Median Civil Penalty	\$2,000.00
Largest Civil Penalty	\$13,500.00

**Table 3: Penalties associated with violating EPCRA**

Total Penalties Assessed	\$2,351,655.96
Average Civil Penalty	\$29,395.70
Median Civil Penalty	\$18,604.50
Largest Civil Penalty	\$270,000.00

**Table 4: Penalties associated with violating CERCLA**

Total Penalties Assessed	\$620,104.01
Average Civil Penalty	\$14,764.38
Median Civil Penalty	\$11,506.00
Largest Civil Penalty	\$75,000.00

**Table 5: CAFOs citing CAA Section 112(r)(1) General Duty Clause**

Total Penalties Assessed	\$1,721,419.04
Average Civil Penalty	\$57,380.63
Median Civil Penalty	\$40,200.00
Largest Civil Penalty	\$179,146.00

**Table 6: Supplemental Environmental Projects (SEPs)**

Total Penalties Assessed	\$3,815,072.10
Average Civil Penalty	\$90,835.05
Median Civil Penalty	\$54,272.00
Largest Civil Penalty	\$425,000.00

## Examples and Summaries of Real Inspection Reports

This last section reviews several examples of individual inspection reports representing common findings and penalty amounts from multiple regions. The purpose of this review is to help facility owners and operators better understand the cost of non-compliance. The complete database can be viewed in Appendix A for more detailed information.

### *Example 1: Region 3 | PHA Recommendations*

In April 2018, the EPA inspected a facility in Maryland. The ammonia refrigeration system had a maximum intended inventory of 22,000 lbs. The inspection report identified a single violation of the Process Hazard Analysis section of the RMP regulation (40 CFR §68.67(e)). The violation reads in part:

“Facility documents provided to EPA by Respondent subsequent to the inspection show that several significant findings and recommendations gathered during the Facility’s 2016 PHA had not been implemented as of the date of EPA’s inspection on April 18 2018.”<sup>40</sup>

The case was settled in March 2020, and the civil penalty assessed for this violation was \$17,000.

<sup>40</sup> US EPA Docket No. CAA-03-2020-0065

*Example 2: Region 3 | RAGAGEP and Mechanical Integrity*

In October 2017, the EPA led an inspection at a facility in Pennsylvania. The ammonia system had a maximum intended inventory of 12,000 lbs. The inspection report identified two counts violating the RMP regulation: one related to process safety information requirements and the other related to mechanical integrity requirements. The violations read in part:

Count 1 - Failure to Comply with Process Safety Information Requirements

The RMP Regulations require an owner or operator to comply with process safety information requirements at 40 CFR §68.65(d)(1)(2) i.e. to compile process safety information pertaining to design codes and standards relevant to the equipment and to document that the equipment in the process complies with recognize and generally accepted good engineering practices.

One recognized and generally accepted good engineering practice applicable to the anhydrous ammonia is... IIAR 2.

Section 5.17.1 of IIAR 2 states that “where ammonia-containing equipment is installed in a location subject to physical damage, guarding or barricading shall be provided.” At the time of the Inspection, EPA determined that Respondent had numerous pieces of ammonia-containing equipment, namely evaporators, at the Facility in locations subject to forklift hazards.

Section 6.7.1 of IIAR 2 states, “Each machinery room shall have access to a minimum of two eyewash/safety shower units, one located inside the machinery room and one located outside of the machinery room.” At the time of the inspection, EPA determined that the respondent did not have an eyewash/safety shower unit located outside of the machinery room.

## Count 2 - Failure to Comply with Mechanical Integrity Requirements

During the Inspection, EPA identified several mechanical integrity deficiencies documented in the Facility's 2013 System Mechanical Integrity Evaluation that had not been corrected, including the needed repair of rusted piping under condensers, and the cleaning and repair of ammonia piping.<sup>41</sup>

The case was settled in February 2019. The civil penalty assessed for these violations was \$59,857.

### *Example 3: Region 4 | Multiple Facilities*

In November 2016, the EPA opened an inspection by issuing a "Notice of Concern" letter to a corporation doing business in the States of Alabama, Arkansas, and Mississippi, totaling five separate facilities.<sup>42</sup> Onsite inspections were conducted at each facility, along with documentation review, resulting in the identification of numerous violations related to RAGAGEP, Process Hazard Analysis, Mechanical Integrity, and Training, among others.

The case was settled in February 2020. The civil penalty assessed was \$106,250. Additionally, the corporation was required to spend \$398,438 on a SEP benefiting local fire departments. In total, the civil penalty plus the SEP averaged approximately \$100,000 per facility (\$500,000 / 5). Each facility was required to spend the necessary capital to correct the various deficiencies cited in the inspection report, including but

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<sup>41</sup> EPA Docket No. CAA-03-2019-2021

<sup>42</sup> Even though Arkansas is technically part of Region 6, EPA region 4 took the lead to facilitate more efficient communication. This is instructive for corporations doing business in multiple states. Even if facilities are located in different EPA regions, that will not deter EPA from conducting a consolidated inspection.



not limited to insulation and piping damage, labeling, installing of e-stops, and relief valve termination piping, among many others.<sup>43</sup>

#### *Example 4: Region 4 | Tier II Submission*

In 2012, a facility in Georgia with more than 10,000 lbs of ammonia failed to submit Tier II forms by March 1 of the reporting year per Section 312 of EPCRA. As a result, following the EPA Enforcement Response Policy described earlier in this paper, a civil penalty of \$24,375 was assessed.<sup>44</sup>

#### *Example 5: Region 5 | Failure to make Immediate Notifications after Release*

In June 2018, the EPA filed a complaint against a facility in Minnesota regarding two ammonia releases in June 2013 and September 2014. The facility failed to notify the National Response Center and the SERC immediately, violating both the CERCLA and EPCRA regulations.

The case was settled in December 2018. Civil penalties of \$75,000 for violating CERCLA and \$75,000 for violating EPCRA were assessed, totaling \$150,000. Additionally, the facility was required to spend \$425,000 on a SEP to update its ammonia detection system, alarms, and controls within one year.<sup>45</sup>

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<sup>43</sup> EPA Docket No. CAA-04-2019-9960(b)

<sup>44</sup> EPCRA-04-2012-2043(b)

<sup>45</sup> EPA Docket No. MM -05-2018-0002, CERCLA-05-2018-0005, EPCRA -05-2018-0009

### *Example 6: Region 6 | Failure to Submit an RMP for New Facility*

In May 2011, the EPA conducted an inspection at a facility in Texas. The ammonia system had a maximum intended inventory of 18,000 lbs. The inspection report reads in part:

“In July of 2005, Respondent completed construction on its new facility and put it into service. At that time the refrigeration system was charged with 18,000 lbs of anhydrous ammonia. Respondent filed its initial RMP on August 11, 2009, more than 4 years after exceeding the threshold quantity.”

The case was settled in January 2012, and the civil penalty assessed was \$45,750.<sup>46</sup>

### *Example 7: Region 9 | Common California Example*

In June 2018, the EPA inspected a California facility where the ammonia refrigeration system had a maximum intended inventory of more than 10,000 lbs. The inspection report identified multiple violations of the RMP regulation. Noteworthy examples include but are not limited to (1) inaccurate P&IDs, (2) failure to address engineering and administrative controls in the PHA study, (3) inadequate oil draining procedures, (4) lack of documented training, (5) failure to correct equipment operating outside of acceptable operating limits, and (6) failure to update the emergency contact information.

The case was settled in July 2021 with a civil penalty assessed at \$203,445.<sup>47</sup>

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<sup>46</sup> CAA 06-2012-3510

<sup>47</sup> CAA (112r)-09-2021-0043

## Conclusion

The Federal EPA and its body of regulations are not likely to go away anytime soon. While it is hypothetically possible that the EPA's reach could be limited through defunding and/or deregulation, neither scenario seems likely. Therefore, owners and operators of ammonia refrigeration facilities must be aware of EPA's historical enforcement and make informed decisions regarding their compliance programs.

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USEPA. (2012, June 20). EPA Combined Enforcement Policy for CAA 112(r) and 40 CFR Part 68.

## Appendix A: Cost of Non-Compliance Database

The following pages contain the primary contents of the database assembled and used as the foundation for this paper. Notably, facility names have been excluded for the sake of privacy. Instead, EPA Docket Numbers can be used for reference.

EPA Docket No.	State	Date Citation Issued	EPA Region	Agreement Type	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA	General Duty Clause	Total Civil Penalty
EPCRA-01-2012-0020	Massachusetts	4/30/2012	Region 01	CAFO		EPCRA			\$17,000.00
CAA-01-2012-0115	Road Island	12/20/2012	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$117,000.00
CAA-01-2014-0051	Connecticut	9/17/2014	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$124,181.00
CAA-01-2014-0052	Massachusetts	9/25/2014	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$114,118.00
CAA-01-2014-0020	Massachusetts	7/16/2015	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$41,000.00
CAA-01-2016-0020	Massachusetts	12/23/2015	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$255,000.00
CAA-01-2016-0014	New Jersey	3/9/2016	Region 01	CAFO		EPCRA	CERCLA	CAA Section 112(r)(1) - General Duty Clause	\$100,000.00
CAA-01-2016-0021	Connecticut	6/24/2016	Region 01	CAFO		EPCRA		CAA Section 112(r)(1) - General Duty Clause	\$65,000.00
CAA-01-2017-0018	Maine	11/30/2016	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"		CERCLA		\$108,723.00
CAA-01-2016-0073	Connecticut	1/5/2017	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$78,184.00
CAA-01-2017-0024	Massachusetts	3/22/2017	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$184,717.00
CAA-01-2017-0011	Massachusetts	8/10/2017	Region 01	CAFO		EPCRA		CAA Section 112(r)(1) - General Duty Clause	\$132,183.00
CAA-01-2018-0003	Connecticut	1/29/2018	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"		CERCLA		\$157,214.00
CAA-01-2018-0030	Maine	5/29/2018	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$53,000.00
EPCRA-01-2018-0045	Connecticut	8/14/2018	Region 01	CAFO		EPCRA	CERCLA		\$27,095.00
CAA-01-2018-0051	Maine	8/17/2018	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$225,000.00
CAA-01-2018-0019	Massachusetts	9/25/2018	Region 01	CAFO		EPCRA		CAA Section 112(r)(1) - General Duty Clause	\$89,140.00
CAA-01-2019-0005	Connecticut	4/11/2019	Region 01	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$40,600.00
CAA-01-2019-0033	New Hampshire	6/11/2019	Region 01	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$78,200.00
CAA-01-2019-0020	Massachusetts	9/17/2019	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA		CAA Section 112(r)(1) - General Duty Clause	\$30,000.00
CAA-01-2020-0005	Massachusetts	9/17/2020	Region 01	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$103,000.00
CAA-01-2021-0046	Massachusetts	4/28/2021	Region 01	ESA				CAA Section 112(r)(1) - General Duty Clause	\$5,000.00
CAA-01-2022-0024	Massachusetts	5/2/2022	Region 01	CAFO					\$170,000.00
CERCLA-02-2007-2019	Puerto Rico	8/8/2008	Region 02	CAFO		EPCRA	CERCLA		\$28,000.00
CAA-02-2014-1213	New York	2/11/2011	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,680.00
CAA-02-2014-1212	New York	3/10/2011	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$7,760.00
CAA-02-2013-1210	Puerto Rico	9/19/2013	Region 02	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$55,537.00
CAA-02-2013-1209	Puerto Rico	9/19/2013	Region 02	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$55,537.00
CAA-02-2014-1211	New York	1/21/2014	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,300.00
CAA-02-2014-1214	New York	2/20/2014	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,700.00
CAA-02-2014-1215	New York	2/20/2014	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,800.00
CAA-02-2014-1216	New York	2/20/2014	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,080.00
CAA-02-2015-1203	Puerto Rico	5/6/2015	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,500.00
CAA-02-2015-1204	New York	6/17/2015	Region 02	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,000.00
CAA-02-2018-1204	New York	10/2/2018	Region 02	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$34,350.00
CAA-02-2019-1205	New York	12/23/2019	Region 02	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$98,900.00
EPCRA-03-2008-0381	Pennsylvania	11/5/2008	Region 03	CAFO		EPCRA	CERCLA		\$85,000.00
EPCRA-03-2008-0379	Virginia	1/29/2009	Region 03	CAFO		EPCRA			\$9,408.00
EPCRA-03-2009-0084	Delaware	3/18/2009	Region 03	CAFO		EPCRA	CERCLA		\$22,980.00
EPCRA-03-2009-0111	Virginia	7/23/2009	Region 03	CAFO		EPCRA			\$5,000.00
EPCRA-03-2010-0320	Pennsylvania	7/10/2010	Region 03	CAFO		EPCRA			\$55,809.00
EPCRA-03-2010-0361	Pennsylvania	9/17/2010	Region 03	CAFO		EPCRA	CERCLA		\$18,540.00
EPCRA-03-2011-0061	Pennsylvania	12/29/2010	Region 03	CAFO		EPCRA	CERCLA		\$38,495.00
EPCRA-03-2011-0038	Pennsylvania	3/21/2011	Region 03	CAFO		EPCRA	CERCLA		\$40,491.00
EPCRA-03-2011-0101	Pennsylvania	5/12/2011	Region 03	CAFO		EPCRA	CERCLA		\$40,963.00
EPCRA-03-2011-0204	Pennsylvania	6/28/2011	Region 03	CAFO		EPCRA	CERCLA		\$76,518.00
CERC-03-2012-0029	Virginia	12/5/2011	Region 03	CAFO			CERCLA		\$28,209.00
EPCRA-03-2012-0152	Virginia	6/1/2012	Region 03	CAFO		EPCRA	CERCLA		\$10,631.00
CAA-03-2012-0198	Pennsylvania	8/7/2012	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$45,830.00
EPCRA-03-2012-0213	Pennsylvania	9/26/2012	Region 03	CAFO		EPCRA	CERCLA		\$59,810.00
EPCRA-03-2012-0233	Maryland	9/26/2012	Region 03	CAFO		EPCRA	CERCLA		\$21,580.00
CAA-03-2012-0257	Pennsylvania	9/28/2012	Region 03	CAFO		EPCRA	CERCLA	CAA Section 112(r)(1) - General Duty Clause	\$20,049.04
EPCRA-03-2013-0017	Virginia	12/13/2012	Region 03	CAFO		EPCRA	CERCLA		\$89,609.00
CERC-03-2013-0112	Virginia	9/26/2013	Region 03	CAFO			CERCLA		\$12,500.00
EPCRA-03-2014-0083	Virginia	3/20/2014	Region 03	CAFO		EPCRA	CERCLA		\$32,550.00
EPCRA-03-2015-0032	Maryland	12/8/2014	Region 03	CAFO		EPCRA	CERCLA		\$365,000.00
CAA-03-2015-0023	Pennsylvania	1/30/2015	Region 03	CAFO		EPCRA		CAA Section 112(r)(1) - General Duty Clause	\$13,685.00
CAA-03-2016-0162	Virginia	8/9/2015	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-03-2016-0034	Pennsylvania	1/5/2016	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CERC-03-2016-0008	Pennsylvania	1/7/2016	Region 03	CAFO		EPCRA	CERCLA		\$32,000.00
EPCRA-03-2016-0076	Virginia	3/1/2016	Region 03	CAFO		EPCRA	CERCLA		\$103,032.00
CAA-03-2016-0056	Pennsylvania	3/16/2016	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$52,087.00
CAA-03-2016-0027	West Virginia	3/17/2016	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-03-2016-0092	Pennsylvania	3/31/2016	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,100.00
CAA-03-2016-0033	Pennsylvania	5/13/2016	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-03-2016-0056	Pennsylvania	5/19/2016	Region 03	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$35,991.00
CAA-03-2016-0125	Virginia	6/2/2016	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA		\$179,074.00

EPA Docket No.	State	Date Citation Issued	EPA Region	Agreement Type	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA	General Duty Clause	Total Civil Penalty
CAA-03-2016-0120	Virginia	7/7/2016	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,440.00
EPCRA-03-2016-0153	Maryland	7/13/2016	Region 03	CAFO		EPCRA	CERCLA		\$83,548.00
CAA-03-2016-0198	Virginia	8/16/2016	Region 03	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$8,910.00
CAA-03-2017-0007	Virginia	11/30/2016	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,800.00
EPCRA-03-2017-0045	Pennsylvania	1/5/2017	Region 03	CAFO		EPCRA			\$14,397.00
EPCRA-03-2017-0081	Virginia	1/12/2017	Region 03	CAFO		EPCRA			\$24,843.00
CAA-03-2017-0080	Pennsylvania	1/13/2017	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-03-2017-0088	Pennsylvania	3/22/2017	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-03-2017-0105	Maryland	4/5/2017	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-03-2017-0098	Pennsylvania	4/13/2017	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$900.00
CAA-03-2017-0074	Maryland	4/25/2017	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$56,226.00
CAA-03-2018-0064	Virginia	4/18/2018	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$58,549.00
CAA-03-2018-0137	Maryland	9/12/2018	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$65,502.00
CAA-03-2018-0141	Pennsylvania	9/12/2018	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$23,226.00
EPCRA-03-2018-0156	Pennsylvania	9/20/2018	Region 03	CAFO		EPCRA	CERCLA		\$63,000.00
CAA-03-2018-0097	Pennsylvania	9/26/2018	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$70,648.00
CAA-03-2019-2021	Pennsylvania	2/27/2019	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$59,857.00
CAA-03-2019-0091	Pennsylvania	8/27/2019	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$55,000.00
CAA-03-2020-0047	Maryland	12/30/2019	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$52,170.00
CAA-03-2020-0065	Maryland	3/10/2020	Region 03	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$17,000.00
CAA-03-2020-0090	Pennsylvania	5/27/2020	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-03-2021-0011	Maryland	11/2/2020	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,440.00
CAA-03-2021-0008	Georgia	11/3/2020	Region 03	EPA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,440.00
EPCRA-03-2019-0067	Pennsylvania	4/11/2021	Region 03	CAFO		EPCRA	CERCLA		\$23,339.00
EPCRA-04-2007-2008(b)	Georgia	12/5/2006	Region 04	CAFO		EPCRA	CERCLA		\$2,620.00
EPCRA-04-2007-2011(b)	South Carolina	1/17/2007	Region 04	CAFO		EPCRA			\$10,477.00
CAA-04-2008-8003(b)	Tennessee	2/12/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$450.00
CAA-04-2008-8006(b)	Alabama	3/17/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$630.00
CAA-04-2008-8008(b)	Tennessee	3/17/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$810.00
CAA-04-2008-8018(b)	Tennessee	7/29/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,810.00
CAA-04-2008-8014(b)	Alabama	7/29/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$360.00
CAA-04-2009-8001(b)	Tennessee	11/13/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-04-200-8003(b)	Tennessee	12/9/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,170.00
CAA-04-2009-8002(b)	Tennessee	12/9/2008	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
EPCRA-04-2009-2017(b)	Alabama	1/3/2009	Region 04	CAFO		EPCRA	CERCLA		\$36,841.00
EPCRA-04-2009-2016(b)	North Carolina	2/5/2009	Region 04	CAFO		EPCRA			\$36,146.00
EPCRA-04-2009-2013(h)	North Carolina	2/24/2009	Region 04	CAFO		EPCRA			\$22,100.00
EPCRA-04-2009-2024(b)	South Carolina	3/8/2009	Region 04	CAFO		EPCRA			\$13,590.00
CAA-04-2008-8009(b)	Alabama	3/27/2009	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$810.00
EPCRA-04-2009-2025(b)	Kentucky	4/22/2009	Region 04	CAFO		EPCRA			\$2,390.00
EPCRA-04-2009-2027(b)	South Carolina	5/1/2009	Region 04	CAFO		EPCRA	CERCLA		\$36,841.00
EPCRA-04-2009-2036(b)	North Carolina	7/15/2009	Region 04	CAFO		EPCRA			\$500.00
EPCRA-04-2009-2041(b)	Georgia	8/13/2009	Region 04	CAFO		EPCRA	CERCLA		\$23,574.00
EPCRA-04-2010-2013(b)	North Carolina	3/2/2010	Region 04	CAFO		EPCRA	CERCLA		\$23,014.00
CAA-04-2010-8012(b)	Tennessee	4/15/2010	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,260.00
CAA-04-2010-8011(b)	Tennessee	4/15/2010	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,835.00
EPCRA-04-2010-2008(b)	South Carolina	7/2/2010	Region 04	CAFO		EPCRA	CERCLA		\$15,938.00
CERCLA-04-2011-2032(b)	South Carolina	1/19/2011	Region 04	CAFO			CERCLA		\$17,300.00
CERCLA-04-2011-2044(b)	Florida	6/8/2011	Region 04	CAFO			CERCLA		\$24,400.00
EPCRA-04-2011-2057(b)	Florida	6/9/2011	Region 04	CAFO		EPCRA	CERCLA		\$14,365.00
CERCLA-04-2011-2060(b)	North Carolina	6/27/2011	Region 04	CAFO		EPCRA	CERCLA		\$23,010.00
CERCLA-04-2011-2062(b)	Florida	7/22/2011	Region 04	CAFO			CERCLA		\$8,850.00
CERCLA-04-2011-2061(b)	Tennessee	8/5/2011	Region 04	CAFO			CERCLA		\$24,375.00
EPCRA-04-2012-2011(b)	Georgia	10/25/2011	Region 04	CAFO		EPCRA	CERCLA		\$17,700.00
CAA-04-2012-8007(b)	Kentucky	1/19/2012	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,000.00
EPCRA-04-2012-2043(b)	Georgia	5/3/2012	Region 04	CAFO		EPCRA			\$24,375.00
CAA-04-2012-8016(b)	Alabama	8/16/2012	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,000.00
CAA-04-2012-8018(b)	Alabama	10/9/2012	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-04-2012-8019(b)	Alabama	12/4/2012	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,440.00
EPCRA-04-2013-2046(b)	North Carolina	9/3/2013	Region 04	CAFO		EPCRA	CERCLA		\$66,754.00
EPCRA-04-2013-2060(b)	North Carolina	9/3/2013	Region 04	CAFO		EPCRA	CERCLA		\$34,515.00
EPCRA-04-2013-2069(b)	Kentucky	9/19/2013	Region 04	CAFO		EPCRA	CERCLA		\$35,880.00
EPCRA-04-2013-2067(b)	North Carolina	11/19/2013	Region 04	CAFO		EPCRA			\$20,250.00
CAA-04-2014-1501(b)	Alabama	1/15/2014	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$20,973.00
CAA-04-2014-1502(b)	Alabama	1/15/2014	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$109,200.00
EPCRA-04-2014-2003(b)	Alabama	2/5/2014	Region 04	CAFO		EPCRA	CERCLA		\$18,281.00
EPCRA-04-2014-2006(b)	Kentucky	2/20/2014	Region 04	CAFO		EPCRA	CERCLA		\$4,425.00
CAA-04-2014-1507(b)	Alabama	3/26/2014	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$43,500.00
CAA-04-2014-1500(b)	Kentucky	4/15/2014	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$19,397.00
EPCRA-04-2013-2059(b)	Delaware	5/2/2014	Region 04	CAFO		EPCRA	CERCLA		\$60,135.00
EPCRA-04-2014-2013(b)	North Carolina	6/10/2014	Region 04	CAFO		EPCRA	CERCLA		\$17,290.00
EPCRA-04-2014-2015(b)	Alabama	6/10/2014	Region 04	CAFO		EPCRA	CERCLA		\$5,753.00
EPCRA-04-2014-2016(b)	Florida	6/10/2014	Region 04	CAFO		EPCRA			\$10,350.00
EPCRA-04-2014-2005(b)	Kentucky	6/24/2014	Region 04	CAFO		EPCRA	CERCLA		\$1,522.00
CAA-04-2015-1504(b)	Kentucky	1/15/2015	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,202.00
CAA-04-2015-1507(b)	Kentucky	3/11/2015	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$26,197.00
CAA-04-2015-1506(b)	Tennessee	3/25/2015	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$36,662.00
CAA-04-2015-8000(b)	Tennessee	9/24/2015	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,200.00
CAA-04-2015-8005(b)	Kentucky	1/28/2016	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-04-2016-8002(b)	Kentucky	3/10/2016	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$43,500.00
CAA-04-2016-8007(b)	Kentucky	6/30/2016	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$62,600.00
CAA-04-2015-8011(b)	Kentucky	7/19/2016	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,200.00
CAA-04-2016-8016(b)	Kentucky	7/26/2016	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$121,800.00

*The Cost of Non-Compliance:  
An Objective Analysis of Federal EPA's Enforcement at Ammonia Refrigeration Facilities*



EPA Docket No.	State	Date Citation Issued	EPA Region	Agreement Type	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA	General Duty Clause	Total Civil Penalty
CAA-04-2015-8008(b)	Kentucky	9/20/2016	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$57,400.00
CAA-04-2016-8021(b)	Tennessee	1/10/2017	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$72,800.00
CAA-04-2016-8014(b)	Kentucky	3/2/2017	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$49,000.00
CAA-04-2017-8003(b)	Kentucky	3/7/2017	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$40,250.00
CAA-04-2017-8010(b)	Tennessee	4/6/2017	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$133,000.00
CAA-04-2017-8014(b)	Tennessee	4/11/2017	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$81,200.00
CAA-04-2017-8017(b)	Alabama	9/19/2017	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$23,031.00
CAA-04-2018-8004(b)	North Carolina	1/23/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$6,100.00
CAA-04-2018-8002(b)	North Carolina	3/1/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,980.00
CAA-04-2018-8005(b)	Kentucky	3/1/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,800.00
CAA-04-2018-8008(b)	Kentucky	3/1/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,500.00
CAA-04-2018-8003(b)	Kentucky	3/8/2018	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$51,101.00
CAA-04-2017-8000(b)	Tennessee	3/22/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,440.00
CAA-04-2018-8010(b)	Georgia	4/17/2018	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$107,961.00
CAA-04-2018-8009(b)	Tennessee	5/8/2018	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$33,108.00
CAA-04-2018-8011(b)	Kentucky	5/8/2018	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$43,184.00
CAA-04-2018-8015(b)	Tennessee	7/12/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,200.00
CAA-04-2018-8007(b)	Kentucky	8/14/2018	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-04-2018-8022(b)	Tennessee	2/5/2019	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$34,336.00
CAA-04-2019-8005(b)	Tennessee	3/5/2019	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$18,195.00
CAA-04-2019-8007(b)	Alabama	4/25/2019	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,500.00
CAA-04-2019-9978(b)	Georgia	8/20/2019	Region 04	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$90,693.00
CAA-04-2019-8015(b)	Alabama	9/13/2019	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$6,960.00
CAA-04-2019-9958(b)	Georgia	11/15/2019	Region 04	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$101,890.00
CAA-04-2019-9960(b)	Alabama	2/25/2020	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$106,250.00
CAA-04-2020-0100(b)	Georgia	3/16/2020	Region 04	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$179,146.00
CAA-04-2019-8014(b)	Alabama	8/19/2020	Region 04	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,300.00
CAA-04-2019-8018(b)	Alabama	9/2/2020	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$104,502.00
CAA-04-2020-8010(b)	Alabama	9/23/2020	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$84,924.00
CAA-04-2021-0210(b)	Wisconsin	2/8/2021	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$37,381.00
CAA-04-2021-0201(b)	Kentucky	5/5/2021	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$26,872.00
CAA-04-2021-0205(b)	Alabama	7/22/2021	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$31,151.00
CAA-04-2021-0206(b)	Alabama	8/18/2021	Region 04	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$66,080.00
CERCLA-05-2007-000422	Indiana	12/6/2006	Region 05	CAFO			CERCLA		\$13,203.00
EPCRA-05-2007-0016	Ohio	5/2/2007	Region 05	CAFO		EPCRA	CERCLA		\$27,500.00
EPCRA-05-2007-0017	Michigan	5/3/2007	Region 05	CAFO		EPCRA	CERCLA		\$29,250.00
CAA-05-2007-0022	Illinois	5/7/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,000.00
CAA-05-2007-0019	Illinois	5/7/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,020.00
CAA-05-2007-0025	Illinois	5/7/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$945.00
CAA-05-2007-0010	Michigan	5/24/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,170.00
CAA-05-2007-0009	Michigan	6/7/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,620.00
EPCRA-05-2007-0019	Indiana	6/9/2007	Region 05	CAFO		EPCRA	CERCLA		\$37,623.00
EPCRA-05-2007-0026	Wisconsin	6/27/2007	Region 05	CAFO		EPCRA	CERCLA		\$36,060.00
EPCRA-05-2007-0028	Illinois	7/19/2007	Region 05	CAFO		EPCRA	CERCLA		\$27,000.00
CAA-05-2007-0017	Michigan	7/31/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,365.00
CAA-05-2007-0016	Michigan	7/31/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$787.00
CAA-05-2007-0015	Illinois	7/31/2007	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,845.00
CERCLA-05-2007-0017	Minnesota	8/21/2007	Region 05	CAFO			CERCLA		\$11,223.00
EPCRA-05-2007-0032	Illinois	9/21/2007	Region 05	CAFO		EPCRA	CERCLA		\$18,763.00
EPCRA-05-2007-0011	Wisconsin	10/12/2007	Region 05	CAFO		EPCRA	CERCLA		\$4,500.00
CERCLA-05-2008-0004	Illinois	3/3/2008	Region 05	CAFO			CERCLA		\$10,478.00
EPCRA-05-2008-0006	Michigan	3/17/2008	Region 05	CAFO		EPCRA	CERCLA		\$18,797.00
CAA-05-2010-0009	Illinois	1/14/2010	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,650.00
CAA-05-2010-0021	Illinois	6/9/2011	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,750.00
CAA-05-2010-0026	Michigan	6/22/2010	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-05-2010-0031	Michigan	6/22/2010	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-05-2010-0029	Michigan	6/22/2010	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,260.00
CAA-05-2011-0025	Indiana	1/26/2011	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-05-2011-0043	Michigan	7/8/2011	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$39,900.00
CAA-05-2011-0044	Michigan	7/12/2011	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$28,350.00
CAA-05-2011-0045	Michigan	8/9/2011	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,260.00
CERCLA-05-2013-0003	Minnesota	11/5/2012	Region 05	CAFO			CERCLA		\$3,990.00
CAA-05-2013-0008	Michigan	2/19/2013	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$119,000.00
CAA-05-2013-0012	Michigan	3/12/2013	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-05-2013-0029	Michigan	7/9/2013	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$96,000.00
CAA-05-2014-0005	Wisconsin	12/20/2013	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$9,000.00
CAA-05-2014-0028	Michigan	5/21/2014	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$54,600.00
CAA-05-2015-0012	Illinois	10/10/2014	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,360.00
CAA-05-2015-0005	Michigan	10/28/2014	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$7,600.00
CAA-05-2015-0021	Illinois	2/24/2015	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$62,780.00
CAA-05-2016-0004	Michigan	11/12/2015	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,400.00
EPCRA-05-2016-0010	Michigan	2/17/2016	Region 05	CAFO		EPCRA	CERCLA		\$80,329.00
EPCRA-05-2017-0002	Michigan	9/9/2016	Region 05	CAFO		EPCRA	CERCLA		\$45,000.00
CAA-05-2017-0016	Illinois	3/24/2017	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$43,500.00
CAA-05-2017-0022	Illinois	4/28/2017	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,820.00
CAA-05-2017-0025	Illinois	6/2/2017	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$79,165.00
CAA-05-2017-0037	Illinois	8/9/2017	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$270,000.00
EPCRA-05-2017-0024	Michigan	9/22/2017	Region 05	CAFO		EPCRA	CERCLA		\$54,000.00
EPCRA-05-2019-0001	Minnesota	11/13/2018	Region 05	CAFO		EPCRA	CERCLA		\$35,000.00
EPCRA-05-2018-0009	Minnesota	12/14/2018	Region 05	CAFO		EPCRA	CERCLA		\$150,000.00
CAA-05-2019-0023	Michigan	5/24/2019	Region 05	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,840.00
CAA-05-2020-0002	Minnesota	2/3/2020	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$53,979.00
EPCRA-05-2020-0006	Ohio	3/23/2020	Region 05	CAFO		EPCRA	CERCLA		\$40,306.00



EPA Docket No.	State	Date Citation Issued	EPA Region	Agreement Type	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA	General Duty Clause	Total Civil Penalty
CAA-05-2020-0022	Minnesota	6/30/2020	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$120,000.00
CAA-05-2020-0035	Illinois	9/25/2020	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$244,709.22
EPCRA-05-2021-0001	Minnesota	11/18/2020	Region 05	CAFO		EPCRA	CERCLA		\$65,000.00
CERCLA-05-2021-0003	Minnesota	7/23/2021	Region 05	CAFO			CERCLA		\$5,262.00
CAA-05-2021-0038	Michigan	9/30/2021	Region 05	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$87,261.00
CAA-06-2009-3567	Louisiana	3/17/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$180.00
CAA-06-2009-3577	Texas	4/30/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,155.00
CAA-06-2009-3612	Texas	8/19/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,000.00
CAA-06-2009-3604	Louisiana	8/19/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$400.00
CAA-06-2009-3602	Arkansas	8/19/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$337.00
CAA-06-2009-3613	Texas	8/19/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$450.00
CAA-06-2009-3608	Arkansas	8/19/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$400.00
CAA-06-2009-3607	Arkansas	8/19/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-06-2009-3606	Arkansas	9/2/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,720.00
CAA-06-2009-3624	Texas	10/16/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,710.00
CAA-06-2009-3623	Arkansas	11/18/2009	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$810.00
CAA-06-2011-3555	Texas	5/23/2011	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,400.00
CAA-06-2011-3567	Oklahoma	7/6/2011	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-06-2011-3579	Texas	8/24/2011	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,100.00
CAA-06-2011-3577	Arkansas	9/29/2011	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$720.00
CAA-06-2012-3514	Texas	1/12/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,800.00
CAA-06-2012-3515	Texas	1/12/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,100.00
CAA-06-2012-3502	Texas	1/12/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$900.00
CAA-06-2012-3510	Texas	1/18/2012	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$45,750.00
CAA-06-2012-3535	Louisiana	4/4/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,980.00
CAA-06-2011-3538	Louisiana	4/23/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,980.00
CAA-06-2012-3559	Arkansas	7/17/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,260.00
CAA-06-2012-3561	Texas	8/6/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,800.00
CAA-06-2012-3566	Arkansas	8/15/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,500.00
CAA-06-2011-3567	Arkansas	8/22/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,400.00
CAA-06-2011-3585	Oklahoma	8/22/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$7,300.00
CAA-06-2012-3588	Oklahoma	9/6/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,260.00
CAA-06-2012-3571	Oklahoma	9/6/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,300.00
CAA-06-2012-3589	Texas	11/6/2012	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,120.00
CAA-06-2013-3502	Texas	1/15/2013	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-06-2013-3508	Louisiana	1/16/2013	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-06-2013-3510	Louisiana	2/14/2013	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,080.00
CAA-06-2014-3312	Texas	4/24/2014	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"			CAA Section 112(r)(1) - General Duty Clause	\$32,004.00
CAA-06-2011-3535	Louisiana	3/4/2015	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,700.00
CAA-06-2015-3505	Arkansas	7/27/2015	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,500.00
CAA-06-2015-3516	Texas	8/12/2015	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$900.00
CAA-06-2016-3304	Texas	3/25/2016	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"			CAA Section 112(r)(1) - General Duty Clause	\$37,500.00
CAA-06-2016-3308	Louisiana	6/6/2016	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"			CAA Section 112(r)(1) - General Duty Clause	\$37,500.00
CAA-06-2016-3349	Arkansas	10/12/2016	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$106,894.00
CAA-06-2017-3306	Texas	1/12/2017	Region 06	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$30,000.00
CAA-06-2017-3336	Texas	3/9/2017	Region 06	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$40,000.00
CAA-06-2017-3338	Texas	3/14/2017	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$40,000.00
CAA-06-2017-3356	Arkansas	4/27/2017	Region 06	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$35,600.00
CAA-06-2017-3358	Texas	5/11/2017	Region 06	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$35,631.00
CAA-06-2017-3514	Oklahoma	12/5/2017	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$49,176.00
CAA-06-2020-3502	Texas	12/5/2019	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,700.00
CAA-06-2020-3328	Texas	1/18/2020	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$37,900.00
CAA-06-2020-3303	Louisiana	2/20/2020	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$168,500.00
CAA-06-2021-3323	New Mexico	3/24/2021	Region 06	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$40,000.00
CAA-06-2021-3345	Oklahoma	6/3/2021	Region 06	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$39,010.00
CAA-06-2021-3354	Texas	9/2/2021	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-06-2021-3343	Arkansas	9/13/2021	Region 06	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$356,010.00
CAA-06-2021-3374	Oklahoma	12/7/2021	Region 06	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-07-2007-0003	Kansas	9/19/2007	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA		\$33,760.00
CAA-07-2008-0017	Missouri	4/29/2008	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$12,000.00
CAA-07-2008-0014	Nebraska	5/7/2008	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,165.00
CAA-07-2008-0013	Kansas	5/8/2009	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA		\$37,500.00
CAA-07-2008-0027	Kansas	7/17/2008	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,080.00
CAA-07-2008-0019	Iowa	8/5/2009	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$11,466.00
CAA-07-2011-0008	Missouri	2/14/2011	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$54,922.00
CAA-07-2011-0019	Iowa	9/7/2011	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,100.00
CAA-07-2011-0026	Missouri	9/20/2011	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$39,000.00
CAA-07-2015-0035	Nebraska	9/21/2015	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$98,153.00
CAA-07-2015-0043	Kansas	11/16/2015	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,800.00
CAA-07-2015-0036	Nebraska	12/2/2015	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,680.00
CAA-07-2016-0005	Iowa	12/21/2015	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$7,200.00
CAA-07-2016-0006	Iowa	1/12/2016	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,700.00
CAA-07-2016-0008	Kansas	1/12/2016	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,200.00
CAA-07-2016-0007	Nebraska	2/1/2016	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-07-2016-0018	Iowa	6/20/2016	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,800.00
CAA-07-2016-0010	Nebraska	6/26/2016	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$16,200.00
CAA-07-2017-0003	Kansas	5/17/2017	Region 07	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$54,588.00
CAA-07-2017-0205	Iowa	7/15/2017	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$49,890.00
CAA-07-2017-0216	Iowa	7/31/2017	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$80,470.00
CAA-07-2018-0295	Iowa	9/14/2018	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$59,900.00
CAA-07-2018-0288	Missouri	9/25/2018	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$48,000.00
CAA-07-2018-0331	Missouri	9/27/2018	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$114,450.00
CAA-07-2018-0328	Missouri	11/27/2018	Region 07	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,800.00



*The Cost of Non-Compliance:  
An Objective Analysis of Federal EPA's Enforcement at Ammonia Refrigeration Facilities*



EPA Docket No.	State	Date Citation Issued	EPA Region	Agreement Type	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA	General Duty Clause	Total Civil Penalty
CAA-07-2018-0304	Missouri	2/12/2019	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$229,456.00
CAA-07-2019-0186	Iowa	5/20/2019	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$49,736.00
CAA-07-2019-0159	Nebraska	7/1/2019	Region 07	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$40,400.00
CAA-07-2019-0279	Nebraska	10/29/2019	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$45,796.00
CAA-07-2019-0269	Iowa	10/31/2019	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$20,000.00
CAA-07-2020-0058	Kansas	1/15/2020	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$71,652.00
CAA-07-2020-0034	Kansas	3/4/2020	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$19,999.00
CAA-07-2020-0129	Iowa	4/1/2020	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$37,063.00
CAA-07-2017-0348	Iowa	8/17/2021	Region 07	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$55,104.00
CAA-08-2013-0003	Colorado	12/19/2012	Region 08	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,400.00
CAA-08-2013-0006	Utah	12/19/2012	Region 08	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,790.00
CAA-08-2013-0010	Colorado	5/22/2013	Region 08	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$61,500.00
CAA-08-2013-0012	South Dakota	9/10/2013	Region 08	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$6,480.00
CAA-08-2013-0013	Colorado	9/18/2013	Region 08	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,840.00
CAA-08-2014-0010	North Dakota	9/12/2014	Region 08	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$57,000.00
CAA-08-2015-0016	Utah	9/16/2015	Region 08	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,800.00
CAA-08-2018-0012	North Dakota	9/27/2018	Region 08	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$72,530.00
CAA-08-2019-0011	Utah	9/4/2019	Region 08	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$10,000.00
CAA-08-2020-0010	Colorado	9/3/2020	Region 08	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$156,081.00
CAA-09-2007-0005	California	6/6/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$200.00
CAA-09-2007-0007	California	6/18/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-09-2007-0008	California	7/10/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$200.00
CAA-09-2007-0009	California	7/10/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$300.00
CAA-09-2007-0012	California	8/1/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$300.00
CAA-09-2007-0013	California	8/1/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-09-2007-0014	California	8/27/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-09-2007-0016	California	8/29/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$300.00
CAA-09-2007-0018	California	8/29/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-09-2007-0017	California	8/29/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$800.00
CAA-09-2007-0019	California	9/7/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$800.00
CAA-09-2007-0020	California	9/7/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-09-2007-0022	California	9/7/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$800.00
CAA-09-2007-0021	California	9/7/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-09-2007-0023	California	9/7/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
CAA-09-2007-0025	California	9/20/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$300.00
CAA-09-2007-0024	California	9/20/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-09-2007-0026	California	9/20/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$400.00
CAA-09-2008-0001	California	10/18/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,400.00
CAA-09-2008-0002	California	11/2/2007	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$200.00
CAA-09-2012-0004	California	3/29/2012	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-09-2012-0005	California	4/11/2012	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,800.00
CAA-09-2013-0002	California	4/29/2013	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,100.00
CAA-112R-09-2014-0001	Nevada	2/7/2014	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$100,800.00
CAA-09-2014-0004	California	8/5/2014	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,500.00
CAA-09-2014-0006	California	9/30/2014	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,500.00
CAA-09-2015-000X	California	5/28/2015	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-09-2015-0003	California	7/6/2015	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,600.00
CAA-09-2015-0001	California	7/6/2015	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
EPCRA-09-2015-0003	California	9/30/2015	Region 09	CAFO		EPCRA			\$80,850.00
CAA-112R-09-2016-0007	California	9/30/2016	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,000.00
CAA-112R-09-2016-0008	California	9/30/2016	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,000.00
CAA-112R-09-2016-0005	California	9/30/2016	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,000.00
CAA-112R-09-2016-0006	California	9/30/2016	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$5,000.00
CAA-112R-09-2017-0001	California	2/2/2017	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA		\$242,980.00
CAA-09-2017-0002	California	8/8/2017	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-09-2017-0004	California	8/31/2017	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-09-2017-0006	Arizona	9/21/2017	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$9,300.00
CAA-09-2017-0007	Arizona	9/21/2017	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$13,500.00
CAA-09-2017-0008	California	9/26/2017	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,340.00
CAA-09-2018-0006	California	9/7/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-09-2018-0008	Hawaii	9/12/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,900.00
CAA-09-2018-0010	California	9/14/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-09-2018-0013	California	9/26/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,200.00
CAA-09-2018-0012	California	9/26/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,700.00
CAA-09-2018-0014	California	9/26/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,340.00
CAA-09-2019-0009	California	11/15/2018	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$6,600.00
CAA-09-2019-0017	California	2/12/2019	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-09-2019-0021	California	2/21/2019	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,620.00
CAA-112R-09-2019-0024	California	2/25/2019	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$57,839.00
CAA-09-2019-0037	California	4/19/2019	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,400.00
CAA-09-2019-0036	California	4/19/2019	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$600.00
MM-09-2019-0039	California	4/26/2019	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$86,960.00
CAA-112R-09-2019-0030	California	5/17/2019	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA		\$80,000.00
CAA-09-2019-0053	California	7/23/2019	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,600.00
CAA-112R-09-2019-0079	California	9/30/2019	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$30,000.00
CAA-112R-09-2019-0083	California	9/30/2019	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$168,043.00
CAA-112R-09-2019-0017	Arizona	3/4/2020	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$26,250.00
CAA-09-2020-0045	California	7/14/2020	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$8,100.00
CAA (112r)-09-2020-0058	Hawaii	9/23/2020	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$210,564.00
CAA(112r)-09-2020-0073	Arizona	9/29/2020	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$268,406.00
CAA(112r)-09-2021-0012	California	12/21/2020	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$186,975.00
CAA(112r)-09-2021-0020	California	2/9/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$80,000.00
CAA-09-2021-0034	California	5/4/2021	Region 09	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$115,012.00

EPA Docket No.	State	Date Citation Issued	EPA Region	Agreement Type	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA	General Duty Clause	Total Civil Penalty
CAA(112r)-09-2021-0035	Hawaii	5/7/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$199,725.00
CAA (112r)-09-2021-0042	California	6/22/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"			CAA Section 112(r)(1) - General Duty Clause	\$206,621.00
CAA (112r)-09-2021-0039	California	7/15/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA	CERCLA		\$127,000.00
CAA (112r)-09-2021-0048	California	7/16/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$301,066.00
CAA (112r)-09-2021-0043	California	7/23/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$203,445.00
CAA (112r)-09-2021-0043	California	7/23/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$203,445.00
CAA(112r)-09-2021-0063	Hawaii	8/18/2021	Region 09	CAFO				CAA Section 112(r)(1) - General Duty Clause	\$82,613.00
CAA-09-2021-0066	California	8/18/2021	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$800.00
CAA-09-2021-0074	California	9/23/2021	Region 09	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$800.00
CAA(112R)-09-2021-0071	California	9/29/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$89,002.00
CAA (112R)-09-2021-0072	California	9/29/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$89,002.00
CAA(112R)-09-2022-0004	California	12/1/2021	Region 09	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"	EPCRA			\$188,882.00
CAA-10-2008-0049	Idaho	1/30/2008	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$3,045.00
CAA-10-2008-0054	Washington	2/22/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$58,000.00
CAA-10-2008-0062	Washington	4/1/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$89,067.00
CAA-10-2008-0097	Washington	7/25/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$81,193.00
CAA-10-2008-0060	Washington	8/13/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$29,320.00
CAA-10-2008-0104	Washington	8/29/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$16,746.00
CAA-10-2008-0105	Washington	9/8/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$25,942.00
CAA-10-2008-0156	Washington	9/18/2008	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$98,241.00
CAA-10-2009-0030	Washington	1/30/2009	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$20,554.00
CAA-10-2009-0123	Oregon	3/19/2009	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$998.00
CAA-10-2009-0200	Washington	8/4/2009	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,080.00
CAA-10-2010-0149	Washington	6/18/2010	Region 10	CAFO		EPCRA			\$35,000.00
CAA-10-2013-0014	Washington	10/22/2012	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$33,964.00
CAA-10-2014-0049	Washington	2/25/2014	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,560.00
CAA-10-2014-0094	Washington	7/12/2014	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-10-2014-0140	Idaho	8/7/2014	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$101,000.00
CAA-10-2014-0154	Alaska	8/14/2014	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$142,175.00
CAA-10-2014-0129	Washington	9/2/2014	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,160.00
CAA-10-2014-0175	Idaho	9/30/2014	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$88,000.00
CAA-10-2015-0004	Washington	10/28/2014	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$4,200.00
CAA-10-2015-0007	Washington	1/15/2015	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2017-0161	Alaska	9/25/2017	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$11,940.00
CAA-10-2017-0084	Alaska	9/27/2017	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$45,743.00
CAA-10-2019-0046	Alaska	2/26/2019	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$9,900.00
CAA-10-2019-0090	Oregon	8/16/2019	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-10-2019-0135	Oregon	9/16/2019	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2019-0149	Alaska	9/26/2019	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2020-0013	Washington	10/25/2019	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-10-2020-0017	Washington	12/6/2019	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2020-0036	Oregon	1/17/2020	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$61,955.00
CAA-10-2020-0041	Washington	2/6/2020	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$800.00
CAA-10-2020-0019	Washington	2/27/2020	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$10,600.00
CAA-10-2020-0106	Oregon	6/17/2020	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$11,100.00
CAA-10-2020-0110	Oregon	9/1/2020	Region 10	CAFO	CAA Section 112(r) - 40 CFR §68 "RMP"				\$146,000.00
CAA-10-2021-0060	Washington	4/20/2021	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$1,200.00
CAA-10-2021-0087	Washington	4/27/2021	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2021-0102	Oregon	5/6/2021	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$8,900.00
CAA-10-2021-0077	Washington	5/17/2021	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2021-0120	Washington	5/26/2021	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$2,000.00
CAA-10-2021-0108	Washington	6/9/2021	Region 10	ESA	CAA Section 112(r) - 40 CFR §68 "RMP"				\$8,800.00

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