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10 *Attorney for Plaintiff United States of America*

11 **UNITED STATES DISTRICT COURT**  
12 **CENTRAL DISTRICT OF CALIFORNIA**  
13 **EASTERN DIVISION**

14 **UNITED STATES OF AMERICA,**  
15 **Plaintiff,**

**Civil Action No. 5:21-cv-01249**

16 **vs.**

17 **ADVANCED FLOW**  
18 **ENGINEERING, INC.,**  
19 **Defendant**

20 **COMPLAINT**

21 The United States of America (“United States”), by authority of the  
22 Attorney General of the United States and at the request of the Administrator of the  
23 United States Environmental Protection Agency (“EPA”), files this Complaint and  
24 alleges as follows:  
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1 **I. NATURE OF THE CASE**

2 1. This is a civil action brought under Sections 203, 204, and 205 of the  
3 Clean Air Act (“CAA”), 42 U.S.C. §§ 7522-24, seeking injunctive relief and the  
4 assessment of civil penalties against Advanced Flow Engineering, Inc. (“aFe” or  
5 “Defendant”) for Defendant’s manufacture, sale and offer to sell aftermarket  
6 products that bypass, defeat, or render inoperative emission controls installed on  
7 motor vehicles or motor vehicle engines in violation of the CAA.  
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11 **II. JURISDICTION**

12 2. This Court has jurisdiction over the subject matter of and the parties to  
13 this action pursuant to Sections 204 and 205 of the CAA, 42 U.S.C. §§ 7523 and  
14 7524, and 28 U.S.C. §§ 1331 (Federal Question), 1345 (United States as Plaintiff),  
15 and 1355 (Fine, Penalty, or Forfeiture).  
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18 3. Venue is proper in the Central District of California pursuant to 28  
19 U.S.C. §§ 1391(b)(2), 1391(c)(2), and 1395(a), as well as Sections 204 and 205 of  
20 the CAA, 42 U.S.C. §§ 7523 and 7524, because it is the judicial district in which  
21 the Defendant is located, resides, is doing business, or in which a substantial part  
22 of the alleged violations in the Complaint occurred.  
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24

25 **III. DEFENDANT**

26 4. Defendant is a corporation incorporated in the state of California.  
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1 5. Defendant's principal place of business is 232 Granite Street, Corona,  
2 CA 92879.

3  
4 6. Defendant is a "person" within the meaning of Section 302(e) of the  
5 CAA, 42 U.S.C. § 7602(e).

#### 6 **IV. BACKGROUND**

7  
8 7. This action arises under Title II of the CAA, as amended, 42 U.S.C.  
9 §§ 7521-90, and the regulations promulgated thereunder relating to the control of  
10 emissions of air pollution from motor vehicles and motor vehicle engines.

##### 11 **A. Statutory and Regulatory Overview**

12  
13 8. Title II of the CAA and the regulations promulgated thereunder  
14 establish standards for the emissions of air pollutants from motor vehicles and  
15 motor vehicle engines that "cause, or contribute to, air pollution which may  
16 reasonably be anticipated to endanger public health or welfare." 42 U.S.C. §  
17 7521(a). These pollutants include nitrogen oxides ("NOx"), particulate matter  
18 ("PM"), non-methane hydrocarbons ("NMHCs"), and carbon monoxide ("CO").  
19

20 9. EPA has also established National Ambient Air Quality Standards for  
21 certain pollutants, including ozone, NOx, PM, and CO. See 40 C.F.R. §§ 50.1-  
22 50.19.  
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1           10. Ozone (ground level) is a highly reactive gas that is formed in the  
2 atmosphere from emissions of other pollutants, including emissions from motor  
3 vehicles.  
4

5           11. PM is a form of air pollution composed of microscopic solids and  
6 liquids suspended in air. PM is emitted directly from motor vehicles and is also  
7 formed in the atmosphere from other pollutants, including pollutants emitted from  
8 motor vehicles.  
9

10           12. NO<sub>x</sub> and NMHCs are reactive gases that contribute to the formation  
11 of ozone and PM.  
12

13           13. Exposure to ozone and PM is linked to respiratory and cardiovascular  
14 health problems as well as premature death. Children, older adults, people who are  
15 active outdoors (including outdoor workers), and people with heart or lung disease  
16 are particularly at risk for health effects related to ozone or PM exposure.  
17

18           14. CO is a toxic gas that forms when the carbon in fuel does not burn  
19 completely. CO is harmful to human health because it reduces oxygen delivery to  
20 the body's organs and tissues. CO can cause headaches, dizziness, vomiting,  
21 nausea, loss of consciousness, and death. Long-term exposure to CO has been  
22 associated with an increased risk of heart disease.  
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1 **B. EPA’s Certificate of Conformity Program for New Motor**  
2 **Vehicles and Motor Vehicle Engines**

3 15. Manufacturers of new motor vehicles or motor vehicle engines must  
4 apply for and obtain a certificate of conformity (“COC”) from EPA to sell, offer to  
5 sell, or introduce or deliver for introduction into commerce any new motor vehicle  
6 or motor vehicle engine in the United States. 42 U.S.C. § 7522(a)(1).  
7  
8

9 16. “Motor vehicle” is defined in the CAA as “any self-propelled vehicle  
10 designed for transporting persons or property on a street or highway.” 42 U.S.C. §  
11 7550(2); 40 C.F.R. § 85.1703.  
12

13 17. To obtain a COC, the original equipment manufacturer (“OEM”) must  
14 demonstrate that the motor vehicle or motor vehicle engine will conform to  
15 established emissions standards for NO<sub>x</sub>, PM, NMHCs, and CO, and other  
16 pollutants during the motor vehicle or motor vehicle engine’s useful life. 42  
17 U.S.C. § 7525(a)(2); see 40 C.F.R. §§ 86.007-30(a)(1)(i), 86.1848-01(a)(1).  
18  
19

20 18. The COC application must include a description of the motor  
21 vehicle’s emission control system and fuel system components. 40 C.F.R.  
22 §§ 86.094-21(b)(1), 86.1844-01(d)-(e).  
23

24 19. Once issued by EPA, a COC covers only those new motor vehicles or  
25 motor vehicle engines that conform in all material respects to the specifications  
26  
27  
28

1 provided to EPA in the COC application for such vehicles or engines. 40 C.F.R.  
2 § 86.1848-01(c)(6).  
3

#### 4 **C. Acts Prohibited by Section 203(a)(3)(B) of the Clean Air Act**

5  
6 20. Section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), states  
7 that the following acts are prohibited:

8 for any person to manufacture or sell, or offer to sell, or install any part or  
9 component intended for use with, or as a part of, any motor vehicle or motor  
10 vehicle engine, where a principal effect of the part or component is to  
11 bypass, defeat, or render inoperative any device or element of design  
12 installed on or in a motor vehicle or motor vehicle engine in compliance  
13 with regulations [promulgated under Title II of the CAA], and where the  
14 person knows or should know that such part or component is being offered  
15 for sale or installed for such use or put to such use.

16 21. Section 203(a) also prohibits any person from causing a violation of  
17 Section 203(a)(3)(B). 42 U.S.C. § 7522(a).

18 22. Each part or component manufactured, sold, offered for sale, or  
19 installed in violation of Section 203(a)(3)(B) of the CAA, 42 U.S.C.  
20 § 7522(a)(3)(B), is a separate violation of Section 203(a)(3)(B), 42 U.S.C.  
21 § 7522(a)(3)(B); 42 U.S.C. § 7524(a).  
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23

#### 24 **D. Emissions-Related Elements of Design**

25  
26 23. EPA has defined “element of design” as “any control system (i.e.,  
27 computer software, electronic control system, emission control system, computer  
28

1 logic), and/or control system calibrations, and/or the results of systems interaction,  
2 and/or hardware items on a motor vehicle or motor vehicle engine.” 40 C.F.R. §§  
3  
4 86.094-2 and 86.1803-01 (General Compliance Provisions for Control of Air  
5 Pollution from New and In-Use Light-Duty Vehicles, Light-Duty Trucks, and  
6 Heavy-Duty Vehicles).  
7

8 24. An “emission control system” is a “unique group of emission control  
9 devices, auxiliary emission control devices, engine modifications and strategies,  
10 and other elements of design designated by the Administrator [of EPA] used to  
11 control exhaust emissions of a vehicle.” 40 C.F.R. § 86.1803-01.  
12

13  
14 25. OEMs install a variety of software and hardware elements of design  
15 and emission control systems in motor vehicles and motor vehicle engines to  
16 monitor and control emissions of pollutants in order to comply with the CAA and  
17 the regulations promulgated thereunder and to obtain a COC. These elements of  
18 design and emission control systems are hereinafter referred to in this Complaint as  
19 “Emissions-Related Elements of Design.”  
20  
21

22 26. “Emissions-Related Elements of Design” consist of hardware items  
23 and software that is programmed into one or more vehicle Electronic Control Units  
24 (“ECU”) that monitor and operate vehicle and engine functions, including emission  
25 controls.  
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1           27. Diesel engines produce high combustion temperatures that result in  
2 the production of NOx. OEMs typically install an Exhaust Gas Recirculation  
3 System (“EGR System”) which reduces NOx emissions by recirculating a portion  
4 of engine exhaust gas back through the engine’s cylinders, thereby lowering  
5 combustion temperature and reducing NOx formation. The EGR System includes  
6 but is not limited to the EGR cooler, throttle valve, other valves, piping, flanges  
7 and gaskets as well as various other hardware, parts, sensors, subassemblies,  
8 auxiliary emission control devices, software (calibrations) and other components  
9 that collectively constitute the system for implementing this emissions control  
10 strategy. The EGR System is a “device or element of design installed on or in a  
11 motor vehicle or motor vehicle engine in compliance with [CAA] regulations”  
12 within the meaning of Section 203(a)(3)(B) of the CAA, 42 U.S.C. §  
13 7522(a)(3)(B), and is also an “Emissions-Related Element of Design.”  
14  
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19           28. As an alternative or in addition to EGRs, OEMs typically equip motor  
20 vehicles with one or more Aftertreatment Systems “whose design function is to  
21 reduce emissions in the engine exhaust before it is exhausted to the environment.”  
22 See 40 C.F.R. § 1068.30. A motor vehicle’s Aftertreatment System consists of  
23 hardware installed in the stock exhaust system installed by the OEM, as well as  
24 software that runs on one or more ECUs and directs operation of the hardware  
25 components. Aftertreatment Systems that OEMs employ to control the emission of  
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1 pollutants include Diesel Particulate Filters (“DPFs”), Diesel Oxidation Catalysts  
2 (“DOCs”), Selective Catalytic Reduction (“SCR”) Systems, and NOx Adsorption  
3 Catalysts (“NACs”).  
4

5 a. A DPF is a filter that captures soot from engine exhaust,  
6 thereby decreasing PM emissions. By design, soot that collects in the DPF is  
7 periodically burned off by elevated exhaust temperatures in a process referred to as  
8 active or passive regeneration. The DPF includes all hardware, parts, sensors,  
9 subassemblies, AECDs, ECU software (calibrations), and other components that  
10 collectively constitute the system for implementing this emissions control strategy.  
11 The DPF is a “device or element of design installed on or in a motor vehicle or  
12 motor vehicle engine in compliance with [CAA] regulations” within the meaning  
13 of Section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), and is also an  
14 Emissions-Related Element of Design.  
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19 b. A DOC (a type of “catalytic converter” or “catalyst”) is a  
20 precious-metal coated, flow-through honeycomb structure. As exhaust gas passes  
21 through the DOC, the coating of precious metal causes a catalytic reaction that  
22 breaks down CO and NMHCs in the exhaust into their less harmful components.  
23 The DOC includes all hardware, parts, sensors, subassemblies, AECDs, ECU  
24 software (calibrations), and other components that collectively constitute the  
25 system for implementing this emissions control strategy. The DOC is a “device or  
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1 element of design installed on or in a motor vehicle or motor vehicle engine in  
2 compliance with [CAA] regulations” within the meaning of Section 203(a)(3)(B)  
3 of the CAA, 42 U.S.C. § 7522(a)(3)(B), and is also an Emissions-Related Element  
4 of Design.  
5

6           c.       An SCR system (a type of “catalytic converter” or “catalyst”)  
7 reduces NOx emissions by chemically converting exhaust gas that contains NOx  
8 into nitrogen and water through the injection of diesel exhaust fluid, typically  
9 composed of urea. The SCR includes all hardware, parts, sensors, subassemblies,  
10 AECDs, ECU software (calibrations) and other components, that collectively  
11 constitute the system for implementing this emissions control strategy. The SCR is  
12 a “device or element of design installed on or in a motor vehicle or motor vehicle  
13 engine in compliance with [CAA] regulations” within the meaning of Section  
14 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), and is also an Emissions-  
15 Related Element of Design.  
16

17           d.       A NAC (a type of “catalytic converter” or “catalyst” a/k/a  
18 “NOx trap”) reduces NOx emissions by chemically adsorbing NOx from exhaust  
19 gas. The NAC includes all hardware, parts, sensors, subassemblies, AECDs, ECU  
20 software (calibrations) and other components that collectively constitute the system  
21 for implementing this emissions control strategy. The NAC is a “device or  
22 element of design installed on or in a motor vehicle or motor vehicle engine in  
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1 compliance with [CAA] regulations” within the meaning of Section 203(a)(3)(B)  
2 of the CAA, 42 U.S.C. § 7522(a)(3)(B), and is also an Emissions-Related Element  
3 of Design.  
4

5 **E. Types of Aftermarket Products at Issue in this Case**  
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7 29. Third-parties, including Defendant, have manufactured, sold, and  
8 offered to sell products for use with motor vehicles and motor vehicle engines that  
9 are designed to enhance the vehicle’s power, performance, or fuel economy. In  
10 some cases, these products achieve their purpose by replacing, modifying,  
11 bypassing, rendering inoperative, facilitating deletion or partial deletion of,  
12 interfering with, and/or over-writing OEM-installed Emissions-Related Elements  
13 of Design. In such cases, these products “bypass, defeat, or render inoperative”  
14 Emissions-Related Elements of Design within the meaning of Section 203(a)(3)(B)  
15 of the CAA, 42 U.S.C. § 7522(a)(3)(B). The aftermarket products relevant to this  
16 Complaint fall into two categories: EGR Delete Products and Aftertreatment  
17 System Delete Products.  
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22 30. EGR Delete Products. Some aftermarket products physically replace,  
23 modify, bypass, render inoperative, facilitate deletion or partial deletion of, and/or  
24 interfere with, components of the EGR System. These include but are not limited  
25 to kits that enable removal of the EGR cooler, plates that block the EGR system  
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28

1 (known as “blocker plates”), and sensor plugs that replace removed sensors which  
2 are critical for EGR function. These products are collectively referred to in this  
3  
4 Complaint as “EGR Delete Products.”

5       31. Aftertreatment System Delete Products. Some aftermarket hardware  
6 products physically alter some or all components of a motor vehicle’s  
7  
8 Aftertreatment System by replacing, modifying, bypassing, rendering inoperative,  
9  
10 facilitating deletion or partial deletion of, or interfering with essential physical  
11 elements of the DPF, DOC, SCR, or NAC. These products consist of exhaust  
12 system replacement pipes that require removal of, and replace the Aftertreatment  
13  
14 System installed by the OEM. The replacement hardware does not contain the  
15 Aftertreatment Systems such as DPF, SCR, DOC, and NAC that the OEM exhaust  
16 hardware contained. These pipes are commonly called “race pipes,” CAT or DPF  
17  
18 “delete” pipes, and “straight pipes” because they do not have a bulge in the pipe  
19 for an Aftertreatment System. These products are collectively referred to in this  
20  
21 Complaint as “Aftertreatment System Delete Products.”

22                   **F. CAA Enforcement Authorities**

23  
24       32. Any person violating Section 203(a)(3)(B) of the CAA, 42 U.S.C.  
25 § 7522(a)(3)(B), or who causes a violation thereof, is subject to injunctive relief  
26  
27 and civil penalties of up to \$3,750 for each violation occurring after December 6,  
28

1 2013 through November 2, 2015, and up to \$4,876 for each violation occurring  
2 after November 2, 2015, and assessed on or after December 23, 2020, in  
3  
4 accordance with Section 205(a) of the CAA. 42 U.S.C. § 7523, 7524(a) as  
5 modified by 40 C.F.R. § 19.4 (2020); 85 Fed. Reg. 83818, 83820 (Dec. 23, 2020).  
6

7 **FIRST CLAIM FOR RELIEF**

8 ***Violations for the Manufacture, Sale and/or Offer to Sell EGR Delete Products***

9 33. The United States re-alleges Paragraphs 1 through 32 above as if fully  
10 set forth herein.  
11

12 34. From January of 2014 through June of 2019, Defendant  
13 manufactured, sold and/or offered to sell, and/or caused the manufacture, sale  
14 and/or offer for sale of, EGR Delete Products that bypass, defeat and/or render  
15 inoperative a motor vehicle's EGR System. Defendant's EGR Delete Products  
16 include but are not limited to blocker plates, EGR cooler delete kits and sensor  
17 plugs.  
18  
19

20 35. In response to EPA information requests issued pursuant to Section  
21 208 of the CAA, Defendant admitted that its "EGR Cooler delete kits are designed  
22 to remove the stock EGR cooler" and "render the exhaust gas recirculation part of  
23 the emissions system inoperative."  
24  
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1           36. Defendant’s descriptions and installation instructions for its EGR  
2 Delete Products indicate that such products bypass, defeat and render inoperative  
3 the EGR System. For example,

4           a. Defendant’s installation instructions for its “EGR Cooler Delete  
5 System” (Product Nos. 46-90071) explained how to remove EGR-related parts.  
6

7           b. Defendant’s description of its aFe EGR Track Kit (Product No.  
8 46-90076) stated that the kit “allows for the removal of the EGR system.”  
9

10           c. Some of the product descriptions for certain of Defendant’s  
11 EGR Delete Products state that the product must be used with software (“tunes”)  
12 that disables the EGR System.  
13

14           37. A motor vehicle’s EGR System is “a device or element of design  
15 installed on or in a motor vehicle or motor vehicle engine in compliance with  
16 [CAA] regulations” within the meaning of Section 203(a)(3)(B) of the CAA, 42  
17 U.S.C. § 7522(a)(3)(B).  
18

19           38. Each of Defendant’s EGR Delete Products is, and at all relevant times  
20 herein was, intended for use with certified motor vehicles including Ford and  
21 Dodge vehicles.  
22

23           39. A principal effect of each of Defendant’s EGR Delete Products is, and  
24 at all relevant times herein was, to bypass, defeat, or render inoperative a motor  
25 vehicle’s EGR System.  
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28

1 40. Defendant knew or should have known that each of Defendant's EGR  
2 Delete Products was being offered for sale or installed for such use or put to such  
3 use.  
4

5 41. Each unit of Defendant's EGR Delete Products that Defendant  
6 manufactured, sold, and/or offered to sell, or that Defendant caused to be  
7 manufactured, sold, or offered to sell, is a separate violation of Section  
8 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). 42 U.S.C. § 7524(a).  
9  
10

11 42. For each violation of Section 203(a)(3)(B), Defendant is each liable to  
12 the United States for injunctive relief and civil penalties of up to the amounts set  
13 forth in Paragraph 32 above.  
14

15 **SECOND CLAIM FOR RELIEF**

16 ***Violations for the Manufacture, Sale, and/or Offer to Sell Aftertreatment System***  
17 ***Delete Products***

18 43. The United States re-alleges Paragraphs 1 through 32 above as if fully  
19 set forth herein.  
20

21 44. From January 1, 2014, through the present, Defendant has  
22 manufactured, sold, and/or offered for sale and/or caused the manufacture, sale or  
23 offer for sale of, Aftertreatment System Delete Products that bypass, defeat and/or  
24 render inoperative one or more Aftertreatment Systems on a motor vehicle.  
25  
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28

1 Defendant's Aftertreatment System Delete Products include but are not limited to  
2 pipes that completely replace a vehicle's Aftertreatment System.  
3

4 45. Defendant's response to EPA information requests issued pursuant to  
5 Section 208 of the CAA states that some of its Aftertreatment System Delete  
6 Products "are designed to replace the OEM catalytic converter(s) or the DPF unit"  
7 and that "removal of catalytic converter and or other emissions control devices is  
8 required."  
9  
10

11 46. Defendant's descriptions and installation instructions for its  
12 Aftertreatment System Delete Products indicate that such products bypass, defeat  
13 and render inoperative Aftertreatment Systems. For example,  
14

15 a. The installation instructions for Product No. 49-04022 refers to  
16 that product as a "delete pipe" and for Product No. 49-03012 as a "4" DPF-CAT-  
17 Delete."  
18

19 b. Defendant's website stated that Product No. 49-44038  
20 "eliminates the use of the restrictive catalytic converter for maximum  
21 performance" and that Product No. 49-44037 "eliminates the use of the restrictive  
22 diesel particulate filter (DPF) for maximum performance."  
23  
24

25 c. The installation instructions for Defendant's Product Nos. 49-  
26 03010 and 49-22008RP instruct the buyer to "remove CAT/DPF section of your  
27 trucks [sic] exhaust."  
28



1 d. Installation instructions and/or descriptions for certain of  
2 Defendant's Aftertreatment System Delete Products state that they must be used  
3  
4 with software that deletes Aftertreatment System functions.

5 47. A motor vehicle's Aftertreatment System such as DPF, SCR, NAC  
6 and DOC, is "a device or element of design installed on or in a motor vehicle or  
7  
8 motor vehicle engine in compliance with [CAA] regulations" within the meaning  
9  
10 of Section 203(a)(3)(B) of the CAA, 42U.S.C. § 7522(a)(3)(B).

11 48. Each of Defendant's Aftertreatment System Delete Products is, and at  
12  
13 all relevant times herein was, intended for use with certified motor vehicles and  
14  
15 motor vehicle engines, including Ford, GM, Dodge, Nissan, Toyota, Porsche,  
16  
17 Audi, BMW, Mazda, and Volkswagen, Subaru and Hyundai vehicles.

18 49. A principal effect of each of Defendant's Aftertreatment System  
19  
20 Delete Products is, and at all relevant times herein was, to bypass, defeat, or render  
21  
22 inoperative a motor vehicle's Aftertreatment System.

23 50. Defendant knew or should have known that each of Defendant's  
24  
25 Aftertreatment System Delete Products was being offered for sale or installed for  
26  
27 such use or put to such use.

28 51. Each unit of Defendant's Aftertreatment System Delete Products is a  
separate violation of Section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B).  
42 U.S.C. § 7524(a).



1 D. Award the United States its costs and disbursements in this action;

2 and

3  
4 E. Award such other and further relief as the Court may deem just and

5 proper.

6

7

Respectfully submitted,

8

JEAN E. WILLIAMS

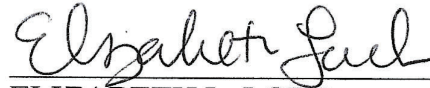
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