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17 UNITED STATES DISTRICT COURT  
18 FOR THE DISTRICT OF ARIZONA

19 UNITED STATES OF AMERICA,

20 Plaintiff,

21 v.

22 APACHE NITROGEN PRODUCTS,  
23 INC.,

24 Defendant.

CASE NO.

COMPLAINT

25 The United States of America, by authority of the Attorney General of the  
26 United States and through the undersigned attorneys, acting at the request of the  
27 Administrator of the United States Environmental Protection Agency ("EPA"), alleges  
28 as follows:

NATURE OF ACTION

1  
2 1. This is a civil action pursuant to Section 113(b) of the Clean Air Act  
3 (the "Act"), 42 U.S.C. § 7413(b).

4 2. The United States seeks civil penalties and injunctive relief against  
5 Defendant Apache Nitrogen Products, Inc. ("Apache" or "ANPI") for violating the  
6 Arizona State Implementation Plan (the "Arizona SIP"), including the requirements  
7 for the Prevention of Significant Deterioration ("PSD"), as set forth in the Arizona  
8 Administrative Code ("AAC") and for violating, a federal standard of performance  
9 for new sources, 40 C.F.R. Part 60 Subpart G, first promulgated in 1974 under  
10 Section 111 of the Act, 42 U.S.C. § 7411 (the "NSPS").

11 3. The violations occurred at a facility in Benson, Cochise County,  
12 Arizona.

13 JURISDICTION, AUTHORITY AND VENUE

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

17 5. The United States Department of Justice has authority to bring this civil  
18 enforcement action under 28 U.S.C. §§ 516 and 519, and under Section 305 of the  
19 Act, 42 U.S.C. § 7605.

20 6. Because the alleged violations occurred in Cochise County, Arizona,  
21 venue for this civil action properly lies in this District under Section 113(b) of the  
22 Act, 42 U.S.C. § 7413(b).

23 NOTICE

24 7. The United States has notified the State of Arizona of the  
25 commencement of this action pursuant to Section 113(b) of the Act, 42 U.S.C. §  
26 7413(b). Notice has been given to the Arizona Department of Environmental Quality  
27 ("ADEQ").  
28



1 regulations implement the general standards for SIP approval established by  
2 Congress in 42 U.S.C. § 7410(a)(2)(A)-(K). Once EPA decides that a SIP meets  
3 these criteria, it codifies its decision in 40 C.F.R. Part 52. Once EPA approves a SIP,  
4 the SIP becomes enforceable as federal law. 42 U.S.C. § 7413.

5 14. Under Section 107(d) of the Clean Air Act, 42 U.S.C. § 7407(d), each  
6 state is required to designate areas within its boundaries in which air quality is better  
7 than the national ambient air quality standard for each listed pollutant, those areas in  
8 which it is worse, and those areas in which it cannot be classified due to insufficient  
9 data. The Administrator is thereafter required to promulgate a list of such areas. An  
10 area which meets the national ambient air quality standards for a particular pollutant  
11 is termed an “attainment” area. An area that does not meet the national ambient air  
12 quality standards is termed a “nonattainment” area.

13 15. Under Section 110(a)(2)(D) of the Clean Air Act, 42 U.S.C. §  
14 7410(a)(2)(D), each SIP must include, inter alia, a program to provide for the  
15 regulation of the modification, construction, and operation of any stationary source  
16 of air pollution, including a permit program as required under Part C of the Clean  
17 Air Act, 42 U.S.C. §§ 7470-7479, relating to prevention of significant deterioration  
18 (“PSD”) in attainment areas. The Part C requirements are designed to protect public  
19 health and welfare, to assure that economic growth will occur in a manner consistent  
20 with the preservation of existing clean air resources, and to assure that any decision  
21 to permit increased air pollution is made only after careful evaluation of all the  
22 consequences of such a decision and after public participation in the decision  
23 making process. 42 U.S.C. § 7470. These provisions and the regulatory provisions  
24 that implement them are referred to as the “PSD program.”

25 16. Section 165(a) of the Act, 42 U.S.C. § 7475(a), among other things,  
26 provides that no construction, including modification, and operation of a “major  
27 emitting facility” may take place in an area designated as attainment or  
28 unclassifiable unless a permit has been issued that comports with the requirements

1 of Section 165, including the best available control technology (“BACT”) for each  
2 pollutant subject to regulation under the Act and emitted from the facility.

3 17. The Administrator of EPA, pursuant to authority under Section 109 of  
4 the Act, 42 U.S.C. § 7409, has promulgated a NAAQS for nitrogen oxides (“NO<sub>x</sub>”),  
5 with nitrogen dioxide (“NO<sub>2</sub>”) as the indicator. 40 C.F.R. § 50.11. Section 169(1)  
6 of the Act, 42 U.S.C. § 7479(1), designates nitric acid plants which emit or have the  
7 potential to emit one hundred tons per year or more of any pollutant to be “major  
8 emitting facilities” subject to the requirements of PSD permitting.

9 18. Pursuant to Section 110 of the Act, 42 U.S.C. § 7410, EPA approved  
10 "The State of Arizona Air Pollution Control Implementation Plan" (the “Arizona  
11 SIP”), which was first officially submitted to EPA on January 28, 1972. 40 C.F.R. §  
12 52.120(a)-(b). Since that time, the Administrator has approved numerous revisions  
13 of the Arizona SIP, as specified at 40 C.F.R. § 52.120(c).

14 19. The Arizona SIP, Arizona Administrative Code Section R18-2-302,  
15 prohibits the modification of any source of air pollutants subject to regulation  
16 without a permit and requires “major sources” to obtain a “Class I” permit and  
17 “minor sources” to obtain a “Class II” permit.

18 20. Under the Arizona Administrative Code Section R18-2-101(64) a  
19 “major source” includes “[a] major stationary source, as defined in Section 302 of  
20 the Act [42 U.S.C. 7602(j)], that directly emits or has the potential to emit, 100 tpy  
21 [tons per year] or more of any air pollutant including any major source of fugitive  
22 emissions of any such pollutant.” Fugitive emissions are expressly included in the  
23 calculation for nitric acid plants. Az. Adm. Code R18-2-101(64)(ix). A “nitric acid  
24 plant” means “any facility producing nitric acid 30% to 70% in strength by either the  
25 pressure or atmospheric pressure process.” Az. Adm. Code R18-2-101(75).

26 21. The Arizona SIP, Arizona Administrative Code Section R18-2-317,  
27 specifies that a facility with a Class I permit (a major source) may make a change to  
28 the facility without a permit revision only if the change is not a “modification” under

1 any provision of Title 1 of the Clean Air Act, and notice of the change is provided to  
2 both the Director of ADEQ and the Administrator of EPA.

3 22. Subchapter 1 (Title 1) of the Clean Air Act defines “modification” as  
4 “any physical change or change in the method of operation of a stationary source  
5 which increases the amount of any air pollutant emitted by such source or which  
6 results in the emission of any air pollutant not previously emitted.” 42 U.S.C. §  
7 7411(a)(4).

8 23. Arizona Administrative Code Section R18-2-402 states generally that  
9 no person shall commence construction of a new major source or major modification  
10 of a source without a permit or permit revision, based on a permit application  
11 demonstrating compliance with any emission limitations applicable to the  
12 modification.

13 24. Arizona Administrative Code Section R18-2-406 entitled “Permit  
14 Requirements for Sources Located in Attainment and Unclassifiable Areas”  
15 specifies the requirements for a PSD permit (a Class I permit in an attainment area)  
16 including the application of Best Available Control Technology (“BACT”) and  
17 performing air impact analysis and monitoring.

18 25. Arizona Administrative Code Section R18-2-406 expressly provides  
19 that the issuance of a permit or permit revision does not relieve the source from  
20 complying with the underlying requirements of the regulations or the Act: “The  
21 issuance of a permit or permit revision under this Article in accordance with this  
22 Section shall not relieve the owner or operator of the responsibility to comply fully  
23 with applicable provisions of the SIP and any other requirements under local, state,  
24 or federal law. . . .” Az. Adm. Code. R18-2-406(G).

25 26. Under the Arizona regulations, “major modification” is defined as  
26 “any physical change or change in the method of operation of a major source that  
27 would result in a significant net emissions increase of any regulated air pollutant . .  
28 .” Az. Adm. Code R18-2-101(63).

1           27. Under Arizona Administrative Code Section R18-2-101 (106) a  
2 “significant” increase in reference to a net emissions increase or the potential of a  
3 source to emit is 40 tons per year (tpy) for nitrogen oxides. The Arizona  
4 Administrative Code, during the relevant period, defined “net emissions increase” in  
5 Section R18-2-101(73) (formerly R18-2-101(69) and now renumbered R18-2-  
6 101(87)) as follows:

7           “Net emissions increase” means:

8           a. The amount by which the sum of subsections (69)(a)(i) and (ii)  
9 [SIC] exceeds zero:

10           i. Any increase in actual emissions from a particular physical  
11 change or change in the method of operation at a stationary source; and

12           ii. Any other increases and decreases in actual emissions at  
13 the source that are contemporaneous with the particular change and are  
14 otherwise creditable. . . .

15           Az. Adm. Code R18-2-101(73) (recently renumbered R18-2-101(87)).

16           28. Under the Arizona regulations “actual emissions” is defined as follows:  
17 “Actual emissions” means the actual rate of emissions of a pollutant from  
18 an emissions unit, as determined in sub-sections (a) through (e).

19           a. In general, actual emissions as of a particular date shall equal the  
20 average rate, in tons per year, at which the unit actually emitted the  
21 pollutant during a two-year period that precedes the particular date and  
22 that is representative of normal source operation. The Director may allow  
23 the use of a different time period upon a demonstration that it is more  
24 representative of normal source operation. Actual emissions shall be  
25 calculated using the unit's actual operating hours, production rates, and  
26 types of materials processed, stored or combusted during the selected time  
27 period.  
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b. If there is inadequate information to determine actual historical emissions, the Director may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

c. For any emissions unit at a Class I source, other than an electric utility steam generating unit in subsection (e), that has not begun normal operations on the particular date, actual emissions shall equal the unit's potential to emit on that date.

d. For any emissions unit at a Class II source that has not begun normal operations on the particular date, actual emissions shall be based on applicable control equipment requirements and projected conditions of operation. . . .

Az. Adm. Code R18-2-101(2) (recently renumbered R18-2-101(87)).

29. The regulations define “emissions unit” to mean “any part of a stationary source which emits or would have the potential to emit any regulated air pollutant.” AZ Adm. Code R18-2-101(38) (renumbered R18-2-101(48)).

“Potential to emit” is defined as follows:

“Potential to emit” or “potential emission rate” means the maximum capacity of a stationary source to emit a pollutant, excluding secondary emissions, under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

Az. Adm. Code R18-2-101(91) (renumbered R18-2-101(109)).

30. Section 113(b)(1) of the Act, 42 U.S.C. § 7413(b)(1), provides that the Administrator is authorized to commence a civil action for appropriate relief, including injunctive relief and civil penalties, against any person who has violated or

1 is in violation of any requirement or prohibition of an applicable state  
2 implementation plan. With regard to the violation of any requirement or prohibition  
3 of an applicable state implementation plan, the Administrator may commence such  
4 civil action at any time after the expiration of thirty days following the  
5 Administrator's issuance of a Notice of Violation.

6 31. Section 167 of the Act, 42 U.S.C. § 7477, authorizes the Administrator  
7 to initiate an action for injunctive relief, as necessary to prevent the construction,  
8 modification or operation of a major emitting facility which does not conform to the  
9 PSD requirements in Part C of the Act.

#### 10 New Source Performance Standards

11 32. Section 111 of the Act, 42 U.S.C. § 7411, directs the Administrator to  
12 promulgate Federal standards of performance for new sources within particular  
13 industrial categories. Standards of performance become effective upon  
14 promulgation. The Act further directs the Administrator to review and, if necessary,  
15 revise the standards at least once every 8 years. These provisions are referred to  
16 herein as the "NSPS program."

17 33. Section 111(e) of the Act, 42 U.S.C. § 7411(e), prohibits any owner or  
18 operator of a new source from operating such source in violation of any standard of  
19 performance applicable to that source.

20 34. According to the NSPS regulations, any new or revised standard of  
21 performance promulgated pursuant to section 111(b) of the Act shall apply to the  
22 owner or operator of any stationary source which contains an affected facility, if the  
23 construction or modification of the affected facility is commenced after the date of  
24 publication of such new or revised standard (or, if earlier, the date of publication of  
25 any proposed standard) applicable to that facility. 40 C.F.R. § 60.1(b).

26 35. Nitric acid plants are affected facilities under either Subpart G, 40  
27 C.F.R. Part 60.70, or the more recent 2012 Subpart Ga, 40 C.F.R. Part 60.70(a).

28



1 further compressed. The high pressure gas and the acid condensed earlier in the  
2 process are then introduced into an absorption tower. The NO<sub>x</sub> gas is absorbed into  
3 water to form liquid nitric acid as a finished product.

4 41. The process gas, after being stripped of NO<sub>x</sub> (referred to as tail gas) is  
5 then reheated in heat exchangers to capture additional waste heat to drive high and  
6 low pressure expanders in order to drive the air and process gas compressors. The  
7 gas stream exiting the low pressure expander passes through additional exchangers  
8 to extract energy before the tail gas exits through a stack.

9 42. The production of nitric acid takes place in two steps. The first step is the  
10 formation of nitric oxide from the oxidation of ammonia with air, and the second is a  
11 series of reactions that use water to dissolve nitrogen oxide gases to form nitric acid.  
12 The oxidation process is most efficient at a relatively low pressure, but the absorption  
13 of the resulting gases into water is more efficient at higher pressure. Nitric acid plants  
14 can be mono pressure or dual pressure. AOP-3 is a mono pressure plant and AOP-4 is  
15 a dual pressure plant.

16 43. A mono pressure plant like AOP-3 operates at a single pressure, whereas  
17 the dual pressure plant like AOP-4 at the ANP Facility operates the oxidation and  
18 absorption sections at different pressures with the introduction of a NO<sub>x</sub> compressor  
19 before the absorption section.

20 44. There are preferred reactions in the process of making nitric acid, but  
21 several side reactions also take place, and the design of the nitric acid plants, including  
22 operating pressures, temperatures, catalyst selection, among other things, seek to  
23 minimize unwanted reactions. However, even from the preferred reactions, the  
24 resulting acid coming out of the absorption column will contain quantities of nitrous  
25 acid ("HNO<sub>2</sub>"), dinitrogen tetroxide ("N<sub>2</sub>O<sub>4</sub>"), and the exiting gas stream will contain  
26 varying concentrations of NO, NO<sub>2</sub>, N<sub>2</sub>O among other gases. The NO<sub>x</sub> content of the  
27 exiting gas stream (tail gas) can be treated with selective catalytic reduction units  
28 ("SCR"). AOP-3 has an SCR.

1           45.    The nitric acid must be “bleached” with an oxygen source, usually air.  
2 This air is taken as a secondary air source from the discharge of the compressor, and  
3 the secondary, or bleach air, can be added to the bottom of the absorption column,  
4 turning the bottom trays into an internal bleaching section. In the case of AOP-4,  
5 however, the bleach air is added to the acid from the absorption column in a separate  
6 vessel known as the “bleacher.”

7           46.    The purpose of bleaching the acid from the absorption column is to  
8 transform the nitrous acid, and dinitrogen tetroxide into nitric acid, and this is achieved  
9 by passing air up the bleacher against a downward flow of acid from the absorption  
10 column. Trays are used to retain a level of liquid to increase the contact time between  
11 the air and the liquid.

12           47.    The original bleacher on AOP-4 was a two sieve tray design. In this  
13 design, the trays had weirs at one side, and holes in the trays. The air flowed upwards  
14 through the holes into the liquid level controlled by the weir. Under this design, if the  
15 air flow (pressure) falls below that necessary to retain the liquid on the tray, the trays  
16 empty and little or no bleaching occurs. This presents a limitation for the operator, as  
17 there is limited flexibility in how much air is sent to the bleacher.

18           48.    In 2001, ANPI personnel submitted an internal request for capital  
19 expenditure to management replace the sieve tray design (two trays) with a new  
20 bleacher containing seven “bubble cap” trays. Bubble cap trays work differently from  
21 sieve trays in that the level of liquid on the tray is not dependent on the air flow  
22 through the tray, thus allowing a greater turn down rate. The redesign was done as part  
23 of a debottlenecking study for AOP4. In the bubble cap design, the simple holes in the  
24 tray were replaced with small upstands fitted with a cap that allows better aeration of  
25 the liquid, and maintains a minimum level on the tray at all times.

26           49.    The air for the bleacher represents air that is not being used to oxidize  
27 ammonia at the front of the plant to increase production. Anything that an operator can  
28 do to lower, minimize or replace the bleacher air will make more air available to the

1 front end, ultimately allowing more acid to be manufactured. Ultimately, a more  
2 efficient bleacher with a controllable air supply gives the operator more freedom of  
3 operation. Because the new bleacher is operating more efficiently, the reduced the air  
4 flow to the bleacher allows for extra air to increase production.

5 50. Apache implemented the change in the bubble cap trays in 2001, but did  
6 not notify ADEQ of the proposed physical change and change in the method of  
7 operation of AOP-4 and did not obtain a permit for the change.

8 51. Under the Arizona SIP a “major modification” is defined to include any  
9 physical change that would result in a significant net emissions increase of any  
10 regulated air pollutant. Az. Adm. Code § R18-2-101. A “net emissions increase” is  
11 calculated by netting the actual emissions before the physical change and the actual  
12 emissions after the change, including any contemporaneous increases or decreases  
13 within a five year period that are otherwise creditable. Az. Adm. Code § R18-2-1012.  
14 For emissions before the change “actual emissions” means in general the actual  
15 emissions as of a particular date, in tons per year, at which the unit actually emitted the  
16 pollutant during the preceding two-year period, representing normal source operations.  
17 For the “actual” emissions after the change, if the proposed change is to a unit that is  
18 not an electric utility steam generating unit, actual emissions are equal to the unit's  
19 potential to emit. Az. Adm. Code § R18-2-101(2).

20 52. The highest allowable emissions rate that is allowed under Apache's  
21 permit is 3 pounds of NO<sub>x</sub> per ton of acid per day.

22 53. The bleacher upgrade project was commenced and completed in  
23 September 2001. Therefore, the two-year baseline period was September 1999 to  
24 August 2001. The baseline of actual NO<sub>x</sub> emissions was 81.5 tons NO<sub>x</sub>/yr.

25 54. Apache's nameplate capacity before the unit was upgraded was 300 tons  
26 of acid per day, but according to the project documentation, Apache anticipated a post-  
27 project increase of 25 tons acid per day to the capacity, for a total of 325 tons per day.  
28 Thus, the post-project potential to emit would be calculated as 178 tons of NO<sub>x</sub> per

1 year. (325 tons acid/day x 365 days/yr x 3 lbs NOx/ton acid). This is more than the  
2 regulatory significance level of 40 tpy.

3 55. If Apache had presented this information to the Arizona permitting  
4 authority before the project, as required by law, the bleacher replacement project  
5 would have been subject to PSD review under the Arizona SIP and the Clean Air Act.

6 FIRST CLAIM FOR RELIEF  
7 (Failure to Obtain an Air Permit)

8 56. Paragraphs 1 through 55 are realleged and incorporated herein by  
9 reference.

10 57. Apache is a major source located in an attainment area. Since January  
11 2001 when Apache commenced construction of the project resulting in physical  
12 changes to and changes in the method of operation of emissions unit AOP-4, and  
13 continuing to the present date, Apache has been in violation of the Act and the  
14 Arizona SIP by failing to have obtained a Class I permit after PSD review.

15 58. In the alternative, even if Apache were not subject to PSD review,  
16 Apache failed to obtain a Class II permit.

17 SECOND CLAIM FOR RELIEF  
18 (Failure to Provide Notice of Revision)

19 59. Paragraphs 1 through 55 are realleged and incorporated herein by  
20 reference.

21 60. Apache was a major source in an attainment area with a Class I  
22 permit and made changes to the facility without providing written notice to  
23 ADEQ and EPA stating when the proposed changes would occur, a description  
24 of the changes; or any changes in emissions of regulated air pollutants, all in  
25 violation of the Arizona SIP as set forth in Arizona Administrative Code Section  
26 R18-2-317.  
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UNITED STATES DISTRICT COURT  
DISTRICT OF ARIZONA

**Civil Cover Sheet**

This automated JS-44 conforms generally to the manual JS-44 approved by the Judicial Conference of the United States in September 1974. The data is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. The information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is authorized for use only in the District of Arizona.

**The completed cover sheet must be printed directly to PDF and filed as an attachment to the Complaint or Notice of Removal.**

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**Plaintiff(s): United States of America**

County of Residence: Outside the State of Arizona

County Where Claim For Relief Arose: Cochise

Plaintiff's Atty(s):

**James Roberston MacAyeal**  
**U.S Dept. Justice**  
**P.O. Box 7611**  
**Washington, DC 20044-7611**  
**202-616-8777**

**Defendant(s): Apacge Nitrogen Products, Inc.**

County of Residence: Cochise

Defendant's Atty(s):

**Chris Leason**  
**Gallagher & Kennedy, PA**  
**2575 East Camelback Rd**  
**Phoenix, Arizona 85016**

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**II. Basis of Jurisdiction: 1. U.S. Government Plaintiff**

**III. Citizenship of Principal Parties**

**(Diversity Cases Only)**

Plaintiff:- N/A

Defendant:- N/A

**IV. Origin : 1. Original Proceeding**

**V. Nature of Suit: 893 Environmental Matters**

**VI.Cause of Action: action for civil penalties and injunctive relief under Clean Air Act 42 USC 7413**

**VII. Requested in Complaint**

Class Action: No

Dollar Demand:

Jury Demand: No

**VIII. This case is not related to another case.**

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**Signature: /s James R. MacAyeal**

**Date:** 11/19/17

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Revised: 01/2014