

Office of Regulatory Management

Economic Review Form

Agency name	State Air Pollution Control Board
Virginia Administrative Code (VAC) Chapter citation(s)	9VAC5-220
VAC Chapter title(s)	Variance for Rocket Motor Test Operations at Atlantic Research Corporation Orange County Facility
Action title	Periodic Review
Date this document prepared	November 7, 2022

Cost Benefit Analysis

Table 1a must be completed for all actions. Tables 1b and 1c must be completed for actions (or portions thereof) where the agency is exercising discretion, including those where some of the changes are mandated by state or federal law or regulation. Tables 1b and 1c are not needed if **all** changes are mandated, and the agency is not exercising any discretion. In that case, enter a statement to that effect.

- (1) Direct Costs & Benefits: Identify all specific, direct economic impacts (costs and/or benefits), anticipated to result from the regulatory change. (A direct impact is one that affects entities regulated by the agency and which directly results from the regulatory change itself, without any intervening steps or effects. For example, the direct impact of a regulatory fee change is the change in costs for these regulated entities.) When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo. One bullet has been provided, add additional bullets as needed.
- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of total (overall) direct costs described above.
 - (b) Enter estimated dollar value of total (overall) direct benefits described above.
 - (c) Enter the present value of the direct costs based on the worksheet.
 - (d) Enter the present value of the direct benefits based on the worksheet.
- (3) Benefits-Costs Ratio: Calculate d divided by c OR enter it from the worksheet.
- (4) Net Benefit: Calculate d minus c OR enter it from the worksheet.
- (5) Indirect Costs & Benefits: Identify all specific, indirect economic impacts (costs and/or benefits), anticipated to result from the regulatory change. (An indirect impact is one that results from responses to the regulatory change, but which are not directly required by the regulation. Indirect impacts of a regulatory fee change on regulated entities could include a change in the prices they charge, changes in their operating procedures or employment levels, or decisions to enter or exit the regulated profession or market. Indirect impacts also include responses by other entities that have close economic ties to the regulated entities, such as suppliers or partners.) If there are no indirect costs or benefits, include a specific statement to that effect.

- (6) Information Sources: Describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why they are not.
- (7) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

(1) Direct Costs & Benefits	<ul style="list-style-type: none"> No changes are proposed. 		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) None.	(c) None.	
Direct Benefits	(b) None.	(d) None.	
(3) Benefits-Costs Ratio	None.	(4) Net Benefit	None.
(5) Indirect Costs & Benefits	See Table 1b.		
(6) Information Sources	See Table 1b.		
(7) Optional			

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

This table addresses current requirements and the implications of not making any changes. In other words, describe the costs and benefits of maintaining the current regulatory requirements as is.

(1) Direct Costs & Benefits	<ul style="list-style-type: none"> Retain regulation without amendment. <p>Direct Costs: This variance was adopted in order to relieve the Aerojet Rocketdyne, Inc. (formerly Atlantic Research Corporation) rocket test facility located in Orange County from compliance with standards for visible emissions. The standards for particulate matter with which the facility had to comply required the company to certify compliance through a determination made using an EPA test method that was inappropriate because most of its tests lasted less</p>
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	<p>than the 6-minute minimum specified for the opacity readings that demonstrate a source's compliance with the standards. Thus, an inspector could not observe the source's normal performance for the required duration of the test. In addition, the EPA-approved alternate method could not be substituted. A variance eliminated this problem by replacing the opacity standards with a particulate matter limit. Thus, the company was relieved from the problem of demonstrating compliance with the opacity standards while still meeting state air quality standards. The direct benefit to ARC cannot be quantified; however, the variance enables the facility to continue operation without undue additional regulatory burden. No negative comment on the retention of this regulation was received.</p> <p>Direct Benefits: This regulation protects public health and welfare from air pollution. As with costs, the benefits cannot be quantified directly. The company provided positive comments supporting the retention of the regulation.</p>		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) None.	(c) None.	
Direct Benefits	(b) None.	(d) None.	
(3) Benefits-Costs Ratio	None.	(4) Net Benefit	None.
(5) Indirect Costs & Benefits	Maintaining this regulation has the indirect benefit of enabling Virginia to retain control over its air pollution control program rather than ceding this authority to the federal government.		
(6) Information Sources	Clean Air Act, Air Pollution Control Law of Virginia		
(7) Optional	The affected facility is owned by Aerojet Rocketdyne, which employs 5,000 persons and thus does not qualify as a small business under Virginia law.		

Impact on Local Partners

- (1) Describe the direct costs and benefits (as defined on page 1) for local partners in terms of real monetary costs and FTEs. Local partners include local or tribal governments, school divisions, or other local or regional authorities, boards, or commissions. If local partners are not affected, include a specific statement to that effect and a brief explanation of the rationale.

- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of total (overall) direct costs described above.
 - (b) Enter estimated dollar value of total (overall) direct benefits described above.
- (3) Indirect Costs & Benefits: Describe any indirect benefits and costs (as defined on page 1) for local partners that are associated with all significant changes. If there are no indirect costs or benefits, include a specific statement to that effect.
- (4) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why they are not.
- (5) Assistance: Identify the amount and source of assistance provided for compliance in both funding and training or other technical implementation assistance.
- (6) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

Table 2: Impact on Local Partners

(1) Direct Costs & Benefits	None identified beyond those in Table 1b.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) None.
Direct Benefits	(b) None.
(3) Indirect Costs & Benefits	None identified beyond those in Table 1b.
(4) Information Sources	
(5) Assistance	
(6) Optional	

Economic Impacts on Families

- (1) Describe the direct costs and benefits (as defined on page 1) to a typical family of three (average family size in Virginia according to the U. S. Census) arising from any proposed

regulatory changes that would affect the costs of food, energy, housing, transportation, healthcare, and education. If families are not affected, include a specific statement to that effect and a brief explanation of the rationale.

- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of direct costs.
 - (b) Enter estimated dollar value of direct benefits.
- (3) Indirect Costs & Benefits: Describe any indirect costs and benefits (as defined on page 1) to a typical family of three that are most likely to result from the proposed changes.
- (4) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why not.
- (5) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

Table 3: Impact on Families

(1) Direct Costs & Benefits	None identified beyond those in Table 1b.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) None.
Direct Benefits	(b) None.
(3) Indirect Costs & Benefits	None identified beyond those in Table 1b.
(4) Information Sources	
(5) Optional	

Impacts on Small Businesses

- (1) Describe the direct costs and benefits (as defined on page 1) for small businesses. For purposes of this analysis, “small business” means the same as that term is defined in § 2.2-4007.1. If small businesses are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:

- (a) Enter estimated dollar value of direct costs.
- (b) Enter estimated dollar value of direct benefits.
- (3) Indirect Costs & Benefits: Describe the indirect benefits and costs (as defined on page 1) for small businesses that are most likely to result from the proposed changes.
- (4) Alternatives: Add a qualitative discussion of any equally effective alternatives that would make the regulatory burden on small business more equitable compared to other affected business sectors, and how those alternatives were identified.
- (5) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why not.
- (6) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

Table 4: Impact on Small Businesses

(1) Direct Costs & Benefits	None identified beyond those in Table 1b.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) None.
Direct Benefits	(b) None.
(3) Indirect Costs & Benefits	None identified beyond those in Table 1b.
(4) Alternatives	
(5) Information Sources	
(6) Optional	The affected facility is owned by Aerojet Rocketdyne, which employs 5,000 persons and thus does not qualify as a small business under Virginia law.

Changes to Number of Regulatory Requirements

None.