

Application for Federal Assistance SF-424		
* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application	* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision	* If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify): <input type="text"/>
* 3. Date Received: <input type="text"/> Completed by Grants.gov upon submission.	4. Applicant Identifier: <input type="text"/>	
5a. Federal Entity Identifier: <input type="text"/>	5b. Federal Award Identifier: <input type="text"/>	
State Use Only:		
6. Date Received by State: <input type="text"/>	7. State Application Identifier: <input type="text"/>	
8. APPLICANT INFORMATION:		
* a. Legal Name: <input type="text"/> Virginia Department of Environmental Quality		
* b. Employer/Taxpayer Identification Number (EIN/TIN): <input type="text"/> 54-1661753	* c. UEI: <input type="text"/> LWLXBA1A6NJ9	
d. Address:		
* Street1: <input type="text"/> 1111 East Main Street, Suite 1400	Street2: <input type="text"/>	
* City: <input type="text"/> Richmond	County/Parish: <input type="text"/>	
* State: <input type="text"/> VA: Virginia	Province: <input type="text"/>	
* Country: <input type="text"/> USA: UNITED STATES	* Zip / Postal Code: <input type="text"/> 23219-3531	
e. Organizational Unit:		
Department Name: <input type="text"/> Air Monitoring	Division Name: <input type="text"/> Air Quality	
f. Name and contact information of person to be contacted on matters involving this application:		
Prefix: <input type="text"/> Mr.	* First Name: <input type="text"/> Charles	
Middle Name: <input type="text"/> L.	* Last Name: <input type="text"/> Turner	
Suffix: <input type="text"/>	Title: <input type="text"/> Manager, Office of Air Quality Monitoring	
Organizational Affiliation: <input type="text"/> Virginia Department of Environmental Quality		
* Telephone Number: <input type="text"/> (804) 517-2394	Fax Number: <input type="text"/> (804) 698-4178	
* Email: <input type="text"/> charles.turner@deq.virginia.gov		

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act

*** 12. Funding Opportunity Number:**

EPA-CEP-01

* Title:

EPA Mandatory Grant Programs

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

VADEQ - NATTS FY22-24 - Funding Request

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="381,478.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="381,478.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

BUDGET INFORMATION - Non-Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. VADEQ - NARTS FY22-24 - Funding Request	66.034	\$ 0.00	\$ 0.00	\$ 381,478.00	\$ 0.00	\$ 381,478.00
2.						
3.						
4.						
5. Totals		\$ 0.00	\$ 0.00	\$ 381,478.00	\$ 0.00	\$ 381,478.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	VADEQ - NATTS FY22-24 - Funding Request				
a. Personnel	\$ 121,329.00	\$	\$	\$	121,329.00
b. Fringe Benefits	57,024.00				57,024.00
c. Travel	3,000.00				3,000.00
d. Equipment	17,000.00				17,000.00
e. Supplies	14,210.00				14,210.00
f. Contractual	122,337.00				122,337.00
g. Construction	0.00				0.00
h. Other	12,000.00				12,000.00
i. Total Direct Charges (sum of 6a-6h)	346,900.00				\$ 346,900.00
j. Indirect Charges	34,578.00				\$ 34,578.00
k. TOTALS (sum of 6i and 6j)	\$ 381,478.00	\$	\$	\$	\$ 381,478.00
7. Program Income	\$ 0.00	\$	\$	\$	\$ 0.00

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Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1A

SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. N/A	\$		\$		\$
9.					
10.					
11.					
12. TOTAL (sum of lines 8-11)	\$		\$		\$

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 136,026.00	\$ 29,756.00	\$ 29,756.00	\$ 46,758.00	\$ 29,756.00
14. Non-Federal	\$				
15. TOTAL (sum of lines 13 and 14)	\$ 136,026.00	\$ 29,756.00	\$ 29,756.00	\$ 46,758.00	\$ 29,756.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT				
(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16. VADEQ - NATTS FY22-24 - Funding Request	\$ 122,726.00	\$ 122,726.00	\$ 0.00	\$ 0.00
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	\$ 122,726.00	\$ 122,726.00	\$ 0.00	\$ 0.00

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges: \$346,900	22. Indirect Charges: Fixed rate; Base = \$121,329; IC = 34,578

23. Remarks: Indirect costs are calculated by applying DEQ's federally approved indirect cost rate of 28.5% to a base of Personnel cost only.
 * We request the authority to incur "pre-award costs" (per 2 CFR 200.458) as of the project period start date. *



Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name:

Address:

City:

State: Zip Code:

B. Unique Entity Identifier (UEI):

C. Applicant/Recipient Point of Contact

Name:

Phone:

Email:

Title:

II. Is the applicant currently receiving EPA Assistance? Yes No

III. List all pending civil rights lawsuits and administrative complaints filed under federal law against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that alleged discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

V. List all civil rights compliance reviews of the applicant/recipient conducted under federal nondiscrimination laws by any federal agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

Yes No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

Yes No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

- VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)** Yes No
- a. Do the methods of notice accommodate those with impaired vision or hearing?** Yes No
- b. Is the notice posted in a prominent place in the applicant's/recipient's website, in the offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?** Yes No
- c. Does the notice identify a designated civil rights coordinator?** Yes No
- VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or disability status of the population it serves? (40 C.F.R. 7.85(a))** Yes No
- IX. Does the applicant/recipient have a policy/procedure for providing meaningful access to services for persons with limited English proficiency? (Title VI, 40 C.F.R. Part 7, *Lau v Nichols* 414 U.S. (1974))** Yes No
- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.**

Yes.

Renee L. Wilson, Human Resources Director (Position 4530)

Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218

Email: Renee.Wilson@deq.virginia.gov
Fax: 804 698 4178
Phone: 804 698 4317

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or applicant's/recipient's website address for, or a copy of, the procedures.**

The grievance procedures authorized by the agencies below apply to those seeking to file a complaint alleging DEQ has engaged in activity that violates 40 C.F.R. Parts 5 and 7:

Virginia Department of Human Resources Management -- <http://www.dhrm.virginia.gov/employmentdisputeresolution>

Virginia Office of the Attorney General Division of Human Rights (OAG DHR) -- <https://www.oag.state.va.us/programs-initiatives/human-rights>

(Authority for the OAG-DHR derives from Va. Code § 2.2-522 and the accompanying regulation, 1 VAC 45-20, et seq. Both cite the Virginia Human Rights Act, which closely follows language used in 40 CFR 5 and 40 CFR 7 (Va. Code 2.2-3901). Va. Code § 2.2-522 also provides, in part, that "Filing of a written complaint with the Division of Human Rights shall be deemed filing with any state agency for the purpose of complying with any time limitation on the filing of a complaint, provided the time limit for filing with the other agency has not expired.")

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Completed by Grants.gov upon submission.

B. Title of Authorized Official

Director of Finance

C. Date

Completed by Grants.gov upon submission.

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

Instructions for EPA FORM 4700-4 (Rev. 04/2021)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any State or its political subdivision, any instrumentality of a State or its political subdivision, any public or private agency, institution, organizations, or other entity, or any person to which Federal financial assistance is extended directly or through another recipient, including any successor, assignee, or transferee of a recipient, but excluding the ultimate beneficiary of the assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means: any federal agency-initiated investigation of a particular aspect of the applicant's and/or recipient's programs or activities to determine compliance with the federal non-discrimination laws. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification.



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name: Prefix: First Name: Middle Name:
Last Name: Suffix:
Title:
Complete Address:
Street1:
Street2:
City: State:
Zip / Postal Code: Country:
Phone Number: **Fax Number:**
E-mail Address:

Payee: *Individual authorized to accept payments.*

Name: Prefix: First Name: Middle Name:
Last Name: Suffix:
Title:
Complete Address:
Street1:
Street2:
City: State:
Zip / Postal Code: Country:
Phone Number: **Fax Number:**
E-mail Address:

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name: Prefix: First Name: Middle Name:
Last Name: Suffix:
Title:
Complete Address:
Street1:
Street2:
City: State:
Zip / Postal Code: Country:
Phone Number: **Fax Number:**
E-mail Address:

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: Prefix: **First Name:** **Middle Name:**
Last Name: **Suffix:**
Title:

Complete Address:

Street1:
Street2:
City: **State:**
Zip / Postal Code: **Country:**
Phone Number: **Fax Number:**
E-mail Address:

Project Narrative File(s)

* **Mandatory Project Narrative File Filename:**

[Add Mandatory Project Narrative File](#)

[Delete Mandatory Project Narrative File](#)

[View Mandatory Project Narrative File](#)

To add more Project Narrative File attachments, please use the attachment buttons below.

[Add Optional Project Narrative File](#)

[Delete Optional Project Narrative File](#)

[View Optional Project Narrative File](#)

**National Air Toxics Trends Station
Work Plan Template**
Revised: April 2022

Section 1: Project Description

1.1 Overview and Project Objectives

There are currently 188 hazardous air pollutants (HAPs), or air toxics, regulated under the Clean Air Act (CAA) that have been associated with a wide variety of adverse health effects, including cancer and neurological effects. These air toxics are emitted from multiple sources, including major stationary, area, and mobile sources, resulting in population exposure to these pollutants.

The National Air Toxics Trends Station (NATTS) program was developed to fulfill the need for long-term HAP monitoring data of consistent quality. This site (MathScience Innovation Center AQS ID 51-087-0014) is part of a national network of air toxics monitoring stations. The primary purpose of the NATTS network is tracking trends in ambient air toxics levels to facilitate measuring progress toward emission and risk reduction goals. The monitoring network is intended, over a multi-year period, to be able to detect a 15% difference (trend) between successive 3-year annual mean concentrations within acceptable levels of decision error.

1.2 Project Outputs, Outcomes, and Linkage to the U.S. EPA's Strategic Goals

Outputs:

Successful annual NATTS site operation will result in the collection of a year's worth of quality-assured ambient air toxics measurements for selected HAPs that are submitted to the EPA's Air Quality System (AQS) data repository.

Outcomes:

Short-Term Outcomes

- Characterizing ambient levels of air toxics within communities, areas, or regions.
- Providing quality assured HAP data for trends determination.

Intermediate Outcomes

- Directly evaluating public exposure & environmental impacts in the vicinity of monitors.
- Providing quality assured HAPs data for risk characterization.

Long-Term Outcomes

- Assessing the effectiveness of specific emission reduction activities.
- Evaluating and subsequently improving air toxics emission inventories and model performance.

Linkage to U.S. EPA's Strategic Goals:

The goals of the National Air Toxics Trends Sites support EPA's FY 2022-2026 Strategic Plan, Goal 4: Ensure Clean and Healthy Air for All Communities; protecting human health and the environment from the harmful effects of air pollution. The strategic plan can be found at:

<https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf> .

Section 2: Project Network Design Plan

2.1 Site Selection

The NATTS network is a collaboration between EPA (including the Office of Air Quality Planning and Standards [OAQPS] and the Regional Offices) and State, Local, and Tribal (SLT) air pollution control agencies. The network is comprised of ambient air monitoring stations in urban, suburban, and rural locations which are representative of different parts of the country. NATTS monitoring is typically established at sites representative of neighborhood, urban, or regional scales.

The Virginia DEQ NATTS site is located at the MathScience Innovation Center in Henrico County (AQS No. 51-087-0014). The site has been in operation since July of 2008. The NATTS site is collocated with the NCore site and is composed of an ATEC 2200 VOC sampler, an ATEC 8000 carbonyl cartridge sampler, a Wedding and Associates Hi-Vol metals sampler and a Tisch PUF sampler. In addition the site is co-located with a suite of meteorological equipment.

2.2 Meteorological Measurements

Measurement of site-specific meteorological parameters is not a requirement of the NATTS Program but is highly desirable if it can be accomplished. Further information regarding in situ meteorological measurements is available in the NATTS Technical Assistance Document (<https://www.epa.gov/amtic/air-toxics-ambient-monitoring#guidance>). If site specific meteorological monitoring is conducted, each site must provide parameter measurement details. If site specific meteorological monitoring is not conducted, each site must provide location and parameter details of the closest off-site meteorological monitoring station (i.e., National Weather Service site, local airport, etc.).

2.3 Measured Pollutants. At a minimum, recipient agrees to the following:

- Acrolein ^a
- Benzene
- 1,3-Butadiene
- Carbon tetrachloride
- Chloroform
- Ethylene oxide ^{**}
- Perchloroethylene (Tetrachloroethylene)
- Trichloroethylene
- Vinyl chloride
- Acetaldehyde
- Formaldehyde
- Benzo(a)pyrene
- Naphthalene
- Arsenic compounds (PM₁₀)
- Beryllium compounds (PM₁₀)
- Cadmium compounds (PM₁₀)
- Lead compounds (PM₁₀)
- Manganese compounds (PM₁₀)
- Nickel compounds (PM₁₀)

^a Guidance regarding acrolein sampling, analysis, and data reporting (Data Quality Evaluation Guidelines for Ambient Air Acrolein Measurements) is available at <https://www.epa.gov/sites/default/files/2021-03/documents/finacrolein.pdf>.

^{**} The 2016 updated EPA unit risk estimate for ethylene oxide (EtO) identified EtO as a key cancer risk driver. The NATTS network began sampling for EtO in July of 2019. The EPA has been, and will continue, to work with partner agencies in support of successful implementation of the improved analytical method for EtO.

Section 3: Monitoring Protocols

3.1 Sampling Methods and Minimum Detection Limits (MDLs).

Recipient agrees to the following:

- TO-15/TO-15A for all VOCs to include (at a minimum) acrolein, benzene, 1,3-butadiene, carbon tetrachloride, chloroform, ethylene oxide, perchloroethylene, trichloroethylene, and vinyl chloride.
- TO-11A for all carbonyls to include (at a minimum) acetaldehyde and formaldehyde.
- TO-13A / ASTM D 6209 for PAHs to include at a minimum benzo(a)pyrene and naphthalene.
- IO 3.5 for all PM₁₀ metals to include (at a minimum) arsenic compounds, beryllium compounds, cadmium compounds, lead compounds, manganese compounds and nickel compounds.

Pollutant	Cancer Risk 10 ⁻⁶ (µg/m ³) As of 12/2017 ¹	Noncancer at HQ=0.1 (µg/m ³) As of 12/2017 ¹	Required MDLs (µg/m ³)
Acrolein	---	0.00200	0.09000
Benzene	0.13	3.00000	0.13000
1,3-Butadiene	0.03	0.20000	0.10000
Carbon tetrachloride	0.17	10.00000	0.17000
Chloroform	---	9.80000	0.50000
Ethylene oxide	0.0002	---	0.05400
Perchloroethylene (Tetrachloroethylene)	3.8462	4.00000	0.17000
Trichloroethylene	0.2083	0.2000	0.20000
Vinyl Chloride	0.11	10.00000	0.11000
Acetaldehyde	0.45	0.90000	0.45000
Formaldehyde	0.08	0.98	0.08000
Benzo(a)pyrene	0.00057	---	0.00091
Napthalene	0.0294	0.4	0.02900
Arsenic compounds (PM ₁₀)	0.00023	0.0015	0.00023
Beryllium compounds (PM ₁₀)	0.00042	0.00200	0.00042
Cadmium compounds (PM ₁₀)	0.00056	0.001	0.00056
Lead compounds (PM ₁₀)	---	0.01500	0.01500
Manganese compounds (PM ₁₀)	---	0.03	0.00500
Nickel compounds (PM ₁₀)	0.0021	0.00900	0.00210

Because of methodological uncertainties surrounding the measurement of acrolein in ambient air, data quality evaluation guidelines were developed and are available at <https://www.epa.gov/sites/default/files/2021-03/documents/finacrolein.pdf>. Acrolein health benchmark is the ATSDR MRL which was derived for intermediate-duration inhalation exposure (15–364 days)

3.2 Sampling Frequency, Duration, and Quantity.

Recipient agrees to monitor for all pollutants at a 1-in-6-day frequency for one year. The minimum numbers of samples required for the grant period of July 1, 2022 through June 30, 2023 is indicated in the table below.

¹ Based on unit risk values and reference concentrations used in the 2017 National Air Toxics Assessment (NATA) See the NATA Technical Support Document posted at www.epa.gov/nata for more information.

	1 in 6	Field Blanks	Base Total
Carbonyls	61	12	73
VOCs	61	0	61
Metals	61	12	73
PAHs	61	12	73

3.3 Precision Measurements.

For method precision measurements, if capability for duplicate or collocated monitoring exists for any pollutant categories (carbonyls, VOCs, metals and PAHs), a minimum of 10% (6 samples) as shown in the table below is required. All analytical labs are required to perform replicate analysis for all pollutant categories to demonstrate analytical precision (6 replicate analyses).

Duplicates or Collocates *	Replicates
6	6

* For sites with collocated or duplicate monitors, a minimum of six samples (10% of annual number of samples arising from 1 in 6 sampling frequency) is necessary for method precision calculations. In the absence of collocated or duplicate monitors, the base total in table 3.2 applies.

Section 4: Quality Assurance Project Plan

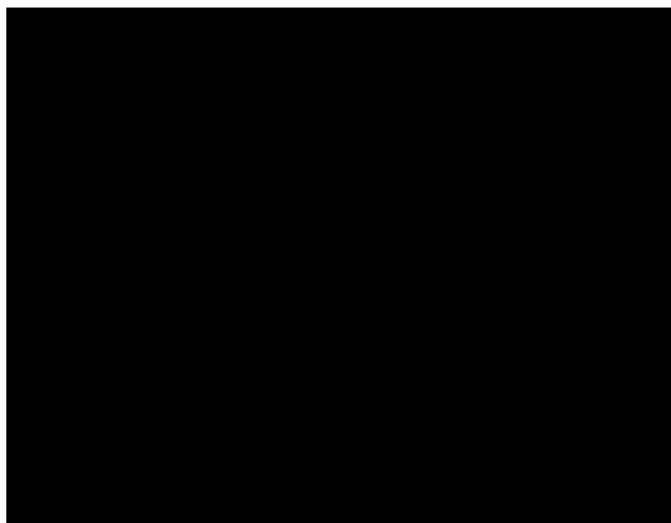
Quality Assurance is an integral part of the NATTS program. OAQPS and the EPA Regional Offices review and track QA information in order to comply with the performance measures (i.e., Data Quality Objectives and Measurement Quality Objectives) that have been established for the program. The DQO and MQOs for the program are in the following document: The National Air Toxics Trends Stations - Quality Management Plan Final, located at <https://www.epa.gov/sites/default/files/2021-03/documents/nattsqmp.pdf>. Outside of your normal quality assurance checks, the EPA requires that the State and Local agencies that support the NATTS participate in the following activities:

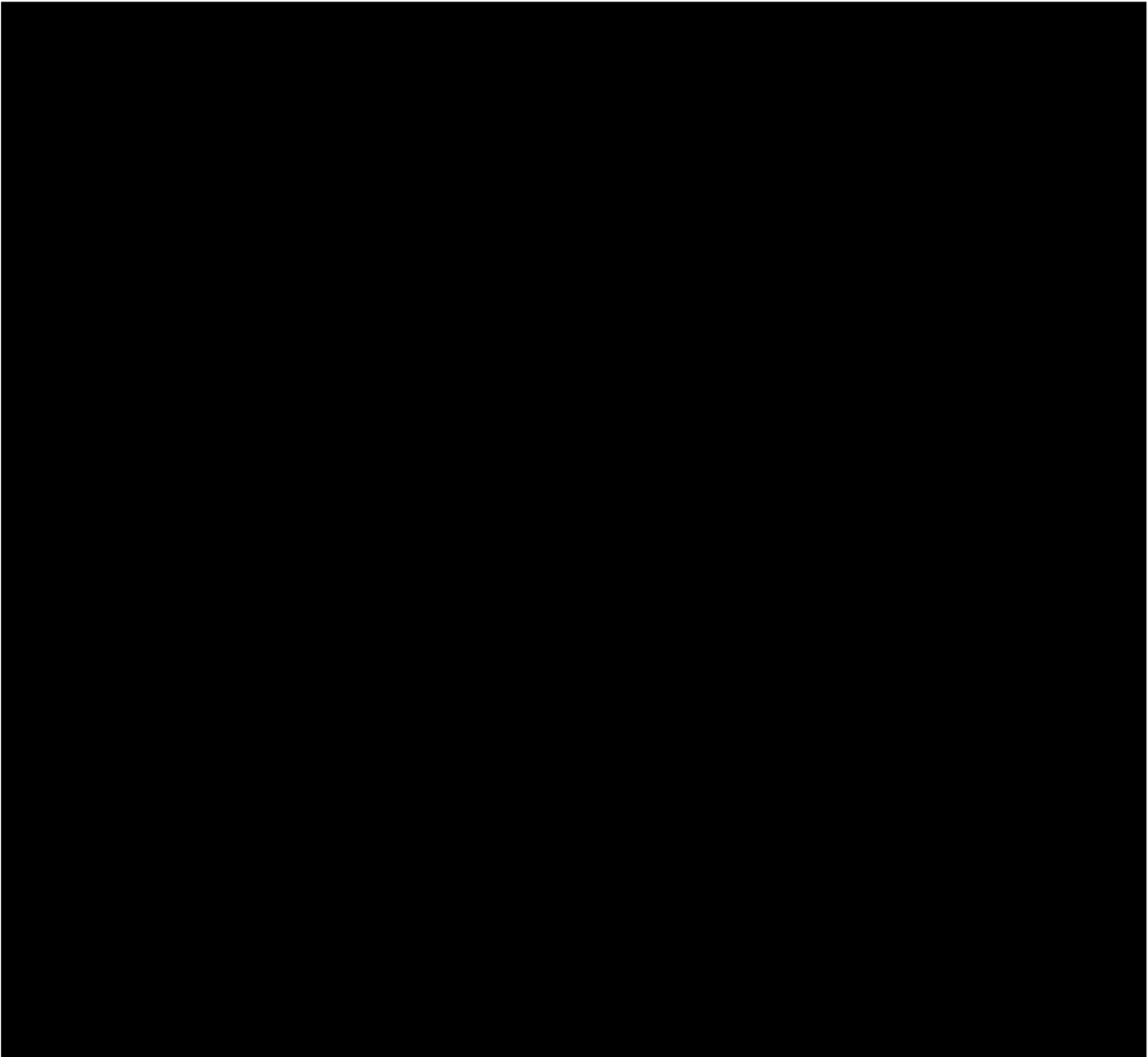
1. Follow all quality control guidance and requirements as detailed in the NATTS Technical Assistance Document's data validation tables.
2. Analyze the quarterly Proficiency Testing (PT) samples that are provided by the designated EPA contractor.
3. Annually review and update the prior year Quality Assurance Project Plans (QAPPs) and associated Standard Operating Procedures (SOPs). The QAPP shall provide a level of detail and organization that is consistent with EPA QA/R5, EPA Requirements for Quality Assurance Project Plans, located at <https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans>.
4. The recipient agrees to comply with the requirements of Quality Policy (CIO 2105.1) and Quality Procedure (CIO 2105-P-01.1), <https://www.epa.gov/irmpoli8/environmental-information-quality-policy>.
5. Submit air toxics collocated, duplicate and replicate data, as applicable, to the AQS database within 180 days after the end of the quarter.
6. Participate in NATTS teleconference calls that are initiated by OAQPS.
7. Participate in Regional air toxics monitoring teleconferences.
8. Provide OAQPS and/or their QA contractor with updated (not less than annually) method detection limits (MDLs) as required in the NATTS PT program.
9. Participate in OAQPS-instituted Technical Systems Audit.
10. Participate in providing corrective action plans to address audit findings resulting from the technical systems audits.

Section 5: Reporting Requirements

VADEQ receives analytical information from DCLS (Virginia State Lab) and initially reviews the data to ensure that the data appears reasonable and that there are no unexplained variations in that data and that all instances of no data are investigated and explained. This is the Level 1 review. Once completed, the Data Quality Officer then reviews the data and finalizes the appropriate conditional flagging for the data prior to the upload to AQS. The Data Quality Officer then uploads the data to AQS. This data is uploaded within 180 days of the end of each quarter. VADEQ meets data reporting requirements of the current TAD as shown below.

- Report all quality assured ambient monitoring data to the U.S. EPA's Air Quality System (AQS) Database (<https://www.epa.gov/aqs>) on a quarterly schedule within 180 days of completing a data collection quarter.
- Follow all guidelines and procedures as detailed in the NATTS Technical Assistance Document (available on AMTIC, <https://www.epa.gov/amtic/air-toxics-ambient-monitoring#guidance>) which include, but are not limited to, the following:
 - Report values below MDL; under no circumstances are data value substitutions (e.g., 1/2 MDL) acceptable. Values reported below MDL must be flagged appropriately.
 - Sample-specific "alternate" MDLs (the unique MDL generated for each individual sample) must be included with data reported to AQS.
 - Reporting units for all data, to include MDLs, must be as specified in the NATTS TAD (i.e., ppbv, $\mu\text{g}/\text{m}^3$, ng/m^3) specific to each target pollutant.
 - Units of mass per cartridge or filter are not acceptable.
 - For each monitor, in addition to the AQS required "Reporting" agency and "PQAO", report the "Collecting" and "Analyzing" agencies.
 - Thereafter, only subsequent changes need be entered.
- Submit quality assurance data (collocated, duplicate and replicate), as applicable, to the AQS database within 180 days after the end of the quarter.
 - Definitions for collocated, duplicate, and replicate data (*as well as associated requisite reporting procedures*) are provided in the NATTS TAD.





Section 7: Measures of Success

NATTS sites are expected to operate over not less than a six year period for assessments of national trends. Within a given year, data quality objectives will be met at a particular monitoring site if samples are collected on a 1-in-6 day sampling schedule with at least an 85% quarterly completeness. Monitoring data should be submitted to the Air Quality System (AQS) within 180 days of completing a data collection quarter.