AMENDMENT NO. # 2
CBE NO. 606362-22
EXCEPTIONAL EVENTS DEMONSTRATION DEVELOPMENT

THIS AMENDMENT is made and entered into this _____ day of _____ 2024, by and between CLARK COUNTY, NEVADA (hereinafter referred to as "COUNTY"), and SONOMA TECHNOLOGY, INC. (hereinafter referred to as "CONSULTANT").

WITNESSETH:

WHEREAS, the parties entered into an agreement under CBE Number 606362-22, entitled "Exceptional Events Demonstration Development" dated November 30, 2022 (hereinafter referred to as CONTRACT);

WHEREAS, the parties entered into Amendment No.1 under CBE 606362-22, entitled Exceptional Events Demonstration Development dated February 7, 2023; and

WHEREAS, the parties desire to amend the CONTRACT.

NOW, THEREFORE, the parties agree to amend the CONTRACT as follows:

1. Replace Exhibit A, as revised per Amendment No. 1, in its entirety with Exhibit A-2, attached hereto.

2. In the event of a conflict between any provision(s) of the Contract, Amendment No.1, and of this Amendment No. 2, this Amendment No. 2 shall control.

This Amendment No. 2 represents an increase of $880,201.

Except as expressly amended herein, the terms and conditions of the CONTRACT shall remain in full force and effect.

COUNTY:
COUNTY OF CLARK, NEVADA

By: _____
JESSICA COLVIN
Chief Financial Officer

CONSULTANT:
SONOMA TECHNOLOGY, INC.

By: _____
HILARY HAFNER
Chief Operating Officer

APPROVED AS TO FORM:
STEVEN B. WOLFSON, District Attorney

By: Jason Patchett
Jason Patchett (Apr 11, 2024 13:21 PDT)
JASON B. PATCHETT
Deputy District Attorney

EXHIBIT A-2
EXCEPTIONAL EVENTS DEMONSTRATION DEVELOPMENT
SCOPE OF WORK
REVISED PER AMENDMENT NO.2

A. PROJECT TITLE: Exceptional Events Demonstration Development

B. PROJECT OVERVIEW:

The Clark County Department of Environment and Sustainability (hereinafter referred to as COUNTY) is the air pollution control agency for all of Clark County, Nevada. It is tasked with developing and implementing high-quality, effective local programs to fulfill air quality regulatory requirements, thereby ensuring that the quality of the air in Clark County meets National Ambient Air Quality Standards (NAAQS).

Currently, the Las Vegas Valley (Hydrographic Area 212) within Clark County is classified as a maintenance area for the 1987 PM10 NAAQS and a marginal nonattainment area for the 2015 Ozone (O_3) NAAQS. It is expected to be reclassified as a moderate nonattainment area for the 2015 O_3 NAAQS in the near future. Clark County is currently classified as attainment/unclassifiable for the $PM_{2.5}$ NAAQS; however that standard is expected to be lowered, which could present attainment challenges. Exceedances of the NAAQS can jeopardize an area's attainment status. The Exceptional Events Rule authorizes air agencies to petition the U.S. Environmental Protection Agency (EPA) to exclude exceedances influenced by exceptional events from applicable regulatory determinations (e.g., attainment designation status). Exceptional events are unusual or natural events that affect air quality but are not reasonably controllable, e.g., stratospheric intrusions, wildfire, dust from high winds, and (on a case-by-case basis) fireworks events.

To help meet the current and/or future O_3, PM_{10}, and $PM_{2.5}$ NAAQS, COUNTY is seeking to retain an outside consultant (CONSULTANT) to prepare EPA-approvable exceptional events demonstrations (EE demonstrations) in the event that the COUNTY incurs exceedances due to stratospheric intrusions (ozone), wildfire (ozone and $PM_{2.5}$), high wind dust (PM_{10} and $PM_{2.5}$), or fireworks ($PM_{2.5}$) events. Due to the prevalence of these types of events in the southwestern U.S., EE demonstrations will be a critical, ongoing effort in helping the COUNTY address its attainment challenges. Therefore, COUNTY is seeking to retain CONSULTANT to assist in the preparation of EE demonstrations.

C. PROJECT LOCATION(S):

While the program is located in Clark County, Nevada, much of the work can be done remotely. Some work may need to be conducted in Clark County and can be negotiated by task.

D. PROJECT GOALS AND OBJECTIVES:

The overall goal of this project is to complete EPA-approvable EE demonstrations, as needed, for events that may arise in Clark County, Nevada for the duration of the PROJECT.

The following objectives will be used to assess the extent to which the goal has been met:

1. Through collaboration between COUNTY, EPA, and CONSULTANT, appropriate scope and approvability of EE demonstration is thoroughly considered for each event that may occur.
2. EE demonstrations are completed in a timely manner.
3. EE demonstrations meet EPA requirements and include all pertinent content that helps demonstrate the County's argument that the circumstances should be considered an exceptional event.

4. Volatile Organic Compounds (VOC) sampling to support EE data collection and demonstrations.

E. PROJECT TASKS:

1. Project Administration (fixed fee)

a. Conduct basic administrative functions for the project, including progress meetings and close out paperwork.

2. EE Demonstration Planning (fixed fee)

a. Perform a preliminary screening of each event to determine whether a demonstration should be pursued based on its qualifications as an exceptional event, regulatory significance, and approvability considerations.

b. Work collaboratively with DES to draft and submit an initial notification of the potential exceptional event(s) to EPA Region 9, as events occur.

c. Work collaboratively with COUNTY and EPA to determine the appropriate scope of EE demonstration (days and monitors) based on regulatory significance and approvability considerations.

(1) In the case of a stratospheric O_3 intrusion EE demonstration, work collaboratively with COUNTY and EPA to determine if a Tier 1 or 2 clear causal relationship demonstration is required.

(2) In the case of a wildfire EE demonstration, CONSULTANT shall work collaboratively with COUNTY and EPA to determine if a Tier 1, 2, or 3 clear causal relationship demonstration is required.

(3) In the case of a high wind dust demonstration, CONSULTANT shall work collaboratively with COUNTY and EPA to determine if a Tier 1, 2, or 3 not reasonably controllable or preventable demonstration is required.

(4) In the case of a fireworks demonstration, CONSULTANT shall work collaboratively with COUNTY and EPA to determine the analysis required for a fireworks demonstration.

3. EE Demonstration Development (fixed fee)

EPA has developed separate and distinct guidance documents on the preparation of demonstrations for: (a) stratospheric O_3 intrusions, (b) wildfire events that may influence O_3 concentrations, and (c) high wind dust events that may influence PM_{10} and $PM_{2.5}$ concentrations. The following addresses the requirements for each type of EE demonstration. Appendix 1, Exceptional Event Content and Subtasks, provides additional guidance.

a. Stratospheric O_3 Intrusion Demonstration. CONSULTANT must develop and provide an approvable stratospheric O_3 intrusion EE demonstration, as outlined in EPA's "Guidance on the Preparation of Exceptional Events Demonstrations for Stratospheric Ozone Intrusions" (November 2018), unless otherwise agreed upon by COUNTY.

CONSULTANT shall assemble and provide to DES an EPA-approvable stratospheric O_3 intrusion demonstration that includes:

(1) A narrative conceptual model (Component 1) that describes the event(s) causing the O_3 exceedance, with a discussion of how O_3 emissions from the event(s) led to the exceedance at the affected monitor(s).

(2) A Tier 1 or 2 clear causal relationship demonstration (Component 2) that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance(s).

(3) A narrative that the stratospheric O_3 intrusion event was both not reasonably controllable and not reasonably preventable.

(4) A narrative that the stratospheric O_3 intrusion event was a natural event.

b. Wildfire Event Demonstration. CONSULTANT must develop and provide an approvable wildfire EE demonstration as outlined in EPA's "Guidance on The Preparation of Exceptional Events Demonstrations for Wildfire Events that May Influence Ozone Concentrations" (September 2016) and supplemented by EPA's "Exceptional Events Guidance: Prescribed Fire on Wildland that May Influence Ozone and Particulate Matter Concentrations" (August 2019).

CONSULTANT shall assemble and provide to DES an EPA-approvable wildfire event(s) DEMONSTRATION that includes:

(1) A narrative conceptual model (Component 1) that describes the event(s) causing the O_3 exceedance(s) and discusses how O_3 emissions from the event(s) led to the exceedance(s) at the affected monitor(s).
(2) A Tier 1, 2, or 3 clear causal relationship demonstration (Component 2) that the event affected air quality in such a way that there exists a clear causal relationship between the specific event(s) and the monitored exceedance(s).
(3) A narrative that the wildfire event was both not reasonably controllable and not reasonably preventable.
(4) A narrative that the wildfire event was a human activity unlikely to recur at a particular location or was a natural event.

c. High Wind Dust Event Demonstration. CONSULTANT must develop and provide an approvable wildfire EE demonstration as outlined in EPA's "Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Influenced by High Wind Dust Events Under the 2016 Exceptional Events Rule" (April 2019).

CONSULTANT shall assemble and provide to DES an EPA-approvable high wind dust event(s) DEMONSTRATION that includes:

(1) A narrative conceptual model (Component 1) that describes the event(s) causing the PM_{10} and/or $PM_{2.5}$ exceedance(s) meets the definition of a "high wind dust event" and discusses how emissions from the event(s) led to the exceedance(s) at the affected monitor(s).
(2) A Tier 1, 2, or 3 not reasonably controllable or preventable demonstration (Component 2) that the event was both not reasonably controllable and not reasonably preventable in accordance with 40 CFR 50.14(b)(5).
(3) A clear causal relationship demonstration (Component 3) that the event affected air quality in such a way that there exists a clear causal relationship between the specific event(s) and the monitored exceedance(s).
(4) A narrative that the high wind dust event was a natural event and all anthropogenic sources were reasonably controlled as determined in accordance with 40 CFR 50.14.(b)(8).

d. Fireworks Event Demonstration. CONSULTANT must develop and provide an approvable fireworks EE demonstration that meets the requirements of the Exceptional Events Rule codified at 40 CFR 50.14 (EPA has not issued any guidance for fireworks demonstrations).

CONSULTANT shall assemble and provide to DES an EPA-approvable fireworks event(s) demonstration that includes:

(1) A narrative conceptual model (Component 1) that describes the event(s) causing the exceedance(s) and how emissions from the event(s) led to the exceedance(s) at the affected

monitor(s). It should also demonstrate that emissions from fireworks displays caused the monitored exceedances(s) and that such use of fireworks is significantly integral to traditional national, ethnic, or other cultural events including, but not limited to, July Fourth celebrations.

(2) A clear causal relationship demonstration (Component 2) that the event affected air quality in such a way that there exists a clear causal relationship between the specific event(s) and the monitored exceedance(s).

4. VOC Sampling

CONSULTANT will carry out VOC sampling to support EE demonstrations and data integration. During wildfire/smoke season, the COUNTY will deploy two VOC Thermal Desorption Tube (TD Tube) samplers and supplemental summa canisters/samplers at existing ambient monitoring sites. CONSULTANT will fully support this effort upon request. One TD Tube Sampler will be deployed at Jerome Mack and one at Sunrise Acres. Summa canisters will be deployed at Jerome Mack, Sunrise Acre, Joe Neal, and Jean. Wildfire/smoke season in the Desert Southwest runs approximately May through September each year. TD Tube Samplers will have samples analyzed using EPA TO-17 method. Summa Canisters samples will have samples analyzed using EPA TO-15 method.

Data generated from sampling will be integrated into existing exceptional events demonstrations per this existing contract.

VOC Sampling: Deliverable and fee schedules are in Appendix 6.1 and Appendix 6.2

5. Miscellaneous Tasks (time and materials)

CONSULTANT may be asked to complete other tasks in addition to defined tasks listed above to further support development of these project tasks. Additional tasks may include, but are not limited to, coordinating peer reviews of work products, addressing EPA, public and other agency comments, augmenting the technical analyses and demonstrations as needed; preparing other relevant supporting analyses; and coordinating project tasks with other project participants (e.g., subcontractors). These miscellaneous tasks shall be coordinated with and approved by COUNTY before CONSULTANT proceeds with beginning work and are to be billed under Time and Materials (T&M) per Appendix 3.

F. STAFFING AND EQUIPMENT:

CONSULTANT shall identify the key staff that will be assigned to this project. CONSULTANT shall inform COUNTY of all changes in project staff. If a change in staffing levels within the term of this contract affects CONSULTANT'S ability to provide deliverables or impacts the deliverable schedule, it is the responsibility of CONSULTANT to notify COUNTY, develop a solution to meet project schedule, and to submit a request for an amendment to the contract for consideration, if necessary.

Upon request by COUNTY, CONSULTANT shall submit to COUNTY credentials of key staff members working on the project.

G. PROJECT SCHEDULE, MILESTONES, AND DELIVERABLES:

This project will be paid on a fixed fee basis and a T&M basis, per the fees and rates listed in Appendices 2 through 6.2, with a **not-to-exceed total amount of $3,268,595.** CONSULTANT shall complete all deliverables and meet all milestones as needed. It is the responsibility of (CONSULTANT) to review all deliverables prepared by subcontractors and to work out details of that review to allow timely submission of all deliverables to COUNTY.

The following list describes the deliverables and milestones associated with each project task:

1. Project Administration

a. Contract Award and Mobilization. COUNTY will issue notice of award in writing, and CONSULTANT may begin work.

b. Project Kick-off Meeting. This meeting shall be conducted in accordance with the rates listed in Appendix 4. CONSULTANT'S Project Manager shall attend and provide exceptional event demonstration strategies to be approved by COUNTY.

c. Progress Meetings. CONSULTANT'S Project Manager and other key staff, as appropriate, shall participate in project progress meetings and other meetings upon request by COUNTY. These meetings can be conducted in person or via teleconference as agreed upon by COUNTY and CONSULTANT and billed at the rates listed in Appendix 4.

d. Coordinating peer and agency reviews of work products, up on request by COUNTY, updating work products, as appropriate.

e. Final Project Review Summary and Claim Release. This product shall be submitted at the completion of the project and in accordance with rates in listed in Appendix 1 through 5 and the deliverables herein. The review summary and claim release form will be provided by COUNTY.

2. Stratospheric O_3 Intrusion Demonstration

a. Preliminary EE Screening. The preliminary screening shall consist of an evaluation of the subject event to determine if it qualifies as an exceptional event and should be selected for a full demonstration analysis. This evaluation includes review of trajectories, air quality data, satellite data, and images and the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

b. EE Demonstration Planning. Work collaboratively with DES to draft and submit an initial notification of a potential exceptional event. Work collaboratively with DES and EPA to determine the scope of the EE demonstration.

c. Conceptual Model. The conceptual model shall conform to EPA guidance and consist of the information described in Section E.2.a. Once the conceptual model is established, the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

d. Draft EE Demonstration. The draft EE demonstration shall conform to EPA guidance and address the required stratospheric O_3 intrusion demonstration components identified in Section E.2.a.

e. Public and EPA Comments. Upon request, CONSULTANT shall assist COUNTY in addressing any public and EPA comments. Assistance shall include responding to comments, augmenting the technical analyses, and revising the demonstration, billed under T&M (per Appendix 3) as needed.

f. Final EE Demonstration. The final EE demonstration shall consist of the information contained in the draft and shall incorporate any revisions based on public, EPA, and COUNTY comments and be delivered in a format suitable for submissions to the EPA.

3. Wildfire Event Demonstration

a. Preliminary EE Screening. The preliminary screening shall consist of an evaluation of the subject event to determine if it qualifies as an exceptional event and should be selected for a full demonstration analysis. This evaluation includes review of trajectories, air quality data, satellite data, and images and the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

b. EE Demonstration Planning. Work collaboratively with DES to draft and submit an initial notification of a potential exceptional event. Work collaboratively with DES and EPA to determine the scope of the EE demonstration.

c. Conceptual Model. The conceptual model shall conform to EPA guidance and consist of the information described in Section E.2.b. Once the conceptual model is established, the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

d. Draft EE Demonstration. The draft EE demonstration shall conform to EPA guidance and address the required wildfire demonstration components identified in Section E.2.b.

e. Public and EPA Comments. Upon request, CONSULTANT shall assist COUNTY in addressing any public and EPA comments. Assistance shall include responding to comments, augmenting the technical analyses, and revising the demonstration, as needed.

f. Final EE Demonstrations. The final EE demonstration shall consist of the information contained in the draft and shall incorporate any revisions based on public, EPA, and COUNTY comments and be delivered in a format suitable for submissions to the EPA.

4. High Wind Dust Event Demonstration

a. Preliminary EE Screening. The preliminary screening shall consist of an evaluation of the subject event to determine if it qualifies as an exceptional event and should be selected for a full demonstration analysis. This evaluation includes review of trajectories, air quality data, satellite data, and images and the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

b. EE Demonstration Planning. Work collaboratively with DES to draft and submit an initial notification of a potential exceptional event. Work collaboratively with DES and EPA to determine the scope of the EE demonstration.

c. Conceptual Model. The conceptual model shall conform to EPA guidance and consist of the information described in Section E.2.c. Once the conceptual model is established, the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

d. Draft EE Demonstration. The draft EE demonstration shall conform to EPA guidance and address the required high wind dust demonstration components identified in Section E.2.c.

e. Public and EPA Comments. Upon request, CONSULTANT shall assist COUNTY in addressing any public and EPA comments. Assistance shall include responding to comments, augmenting the

technical analyses, and revising the demonstration, as needed.

f. Final EE Demonstration. The final EE demonstration shall consist of the information contained in the draft and shall incorporate any revisions based on public, EPA, and COUNTY comments and be delivered in a format suitable for submissions to the EPA.

5. VOC Sampling

CONSULTANT will do the following: Provide two Thermal Desorption (TD) Samplers, including accessories and consumables needed for full operation. Samplers must allow for collection of up to 15 samples (plus one blank) before TD tubes need to be replaced. TD tubes will utilize quick-connect fittings. Additionally, the sampler must not require gas cylinders for operation, and they must use an internal, low-maintenance vacuum pumps to collect VOC samples.

The CONSULTANT must provide:

- One TD tube sampler demonstration unit by March 1, 2023
- Hands-on training. Two 4-hour events (by April 15 or date established by DES). CONSULTANT will coordinate training specifics with DES
- CONSULTANT will coordinate LabView software installations with DES. DES will purchase software.
- CONSULTANT will provide Technical Support, by phone or email upon request. Response is required within 24 hours.
- CONSULTANT will provide 75 TD tubes for use with two TD samplers

CONSULTANT will provide TD Tube samplers and supplies for successful operation as determined by the COUNTY. CONSULTANT will also:

- Ensure TD tubes are pre-packed with good sorbent material.
- Provide testing results from at least 16 of the TD tubes to show good working order.
- Advise on exceptional event sample runs and coordinate with DES staff on run timing.
- Coordinate Chain of Custody (COC) documentation between COUNTY and selected lab.

CONSULTANT will provide canister samplers with exchanges from the lab. CONSULTANT may sub-contract lab work. CONSULTANT will coordinate and provide enough canisters and exchanges for up to four sites and up to 150 runs per year. CONSULTANT will also:

- Ensure all canisters come with timer and regulator/valve
- Provide demonstration test canister with timer and regulator/valve

CONSULTANT will provide Lab Services (See list of Target VOC. Acetonitrile being a primary target VOC):

- EPA Method TO-17 for TD sampler
- EPA Method TO-15 Canister samplers
- Review lab QA paperwork ahead of time

When selecting lab, the CONSULTANT will verify the following lab requirements:

- Lab certifications required
- Analytical Method or equivalent certification recommended
- National/international standards traceability per parameter (NIST preferred)

CONSULTANT will ensure the lab provides the following QA data:

- Test VOC retention time chromatograms
- Numerical VOC testing responses (standard vs. instrument response)

- MDL and lab blank results
- Sample stability testing

For both TD Tube and canister field sampling methods, CONSULTANT will use, to the extent possible, sample event data for all EE demonstrations. Field samples will also include at least 10% samples to be field blanks (one TD tube in each set will be a blank). Lab will provide all data to COUNTY and CONSULTANT.

All labor and technical support will be per COUNTY request basis. Except for canisters, all purchased hardware and resultant data will become the property of COUNTY. Project meetings will be part of and billed under the related EE work. All deliverables must be signed-off by COUNTY for payment.

Fireworks Event Demonstration

a. Preliminary EE Screening. The preliminary screening shall consist of an evaluation of the subject event to determine if it qualifies as an exceptional event and should be selected for a full demonstration analysis. This evaluation includes review of trajectories, air quality data, satellite data, and images and the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

b. EE Demonstration Planning. Work collaboratively with DES to draft and submit an initial notification of a potential exceptional event. Work collaboratively with DES and EPA to determine the scope of the EE demonstration.

c. Conceptual Model. The conceptual model shall conform to EPA guidance and consist of the information described in Section E.2.d. Once the conceptual model is established, the results will be discussed and delivered to COUNTY as an informal presentation. This presentation can be conducted in person or via teleconference.

d. Draft EE Demonstration. The draft EE demonstration shall conform to EPA guidance and address the required fireworks demonstrations components identified in Section E.2.d.

e. Public and EPA Comments. Upon request, CONSULTANT shall assist COUNTY in addressing any public and EPA comments. Assistance shall include responding to comments, augmenting the technical analyses, and revising the demonstration, as needed.

f. Final EE Demonstrations. The final EE demonstration shall consist of the information contained in the draft and shall incorporate any revisions based on public, EPA, and COUNTY comments and be delivered in a format suitable for submissions to the EPA.

H. DOCUMENT SUBMITTAL:

All deliverables must be submitted via email to: Yousaf Hameed, (hameed@ClarkCounty.gov), Principal Air Quality Specialist (Project Manager) unless otherwise specified.

Deliverables submitted electronically may not exceed 30MB file size.

If submitting a document in a format other than Microsoft Word, Microsoft Excel, Microsoft PowerPoint, or Adobe Acrobat, CONSULTANT shall contact COUNTY Project Manager to determine if the software is

acceptable and if the document can be submitted via email.

If CONSULTANT is unable to submit deliverables via email, and COUNTY project manager has agreed, then deliverables may be submitted via U.S. mail or commercial courier or parcel service. Only one deliverable should be submitted per flash drive, and CONSULTANT should ensure that each flash drive is labeled with the project title and project number listed in this scope of work.

Deliverables submitted via email to hameed@ClarkCounty.gov, or U.S. mail or commercial courier or parcel service shall be mailed to the following address:

Yousaf Hameed, Principal Air Quality Specialist
Clark County Department of Environment and Sustainability
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

Within thirty (30) calendar days of receipt of a deliverable, COUNTY'S Project Manager will approve or reject the deliverable and notify CONSULTANT in writing. If more time is needed for review of deliverables, as in the case of a peer review, COUNTY will notify CONSULTANT in writing and provide an estimated number of days for review. If the deliverable is not approved, the notification will include the reasons for the disapproval, including, but not limited to, the quality and substance of the deliverable based on standard professional practice and applicable terms of this Agreement/Contract. CONSULTANT shall correct the deficiencies and resubmit an acceptable deliverable to COUNTY within ten (10) calendar days for approval, unless otherwise directed by COUNTY. Upon CONSULTANT'S request and justification, COUNTY may grant CONSULTANT more time for corrections. Invoice payment will be withheld pending deliverable approval.

I. INVOICING SCHEDULE AND REQUIREMENTS:

For fixed fee per deliverable work (as defined in Sections G), CONSULTANT shall invoice COUNTY only upon submission and acceptance of deliverables and completion of milestones and in accordance with the fees listed in Appendices 1 through 5.

For the time and materials work (as defined in Section E.4) CONSULTANT shall be paid for time and material costs in accordance with the rate sheet included in Appendix 3 of this Scope of Work. Rates provided in Appendix 3 will be adjusted on an annual basis (starting on January 1) to reflect a 4 percent per year rate increase.

It is the responsibility of CONSULTANT to ensure all deliverables for the invoice period have been delivered and accepted, and all milestones have been completed, **before submitting an invoice**. CONSULTANT shall cite the deliverable and/or milestone number being invoiced for the work in Appendices 1 through 5. For time and materials work, CONSULTANT shall provide a descriptive line for the work being invoiced.

COUNTY, at its discretion, may not approve or issue payment on invoices if CONSULTANT fails to provide the following information required on each invoice:

a. The Title of the Project as stated in this Scope of Work, Project Number, Deliverable and/or Milestone Number being invoiced, Purchase Order Number, the Invoice Date, the Invoice Number, and the Payment Address.
b. For time and materials contracts, time is to be defined as an hourly rate prorated to the 1/4 hour for invoicing purposes. If applicable, copies of all receipts, bills, statements, and/or invoices pertaining to reimbursable expenses such as: airline itineraries, car rental receipts,

cab and shuttle receipts, and statement of per diem rate being requested must accompany any invoice containing travel expenses. Maximum reimbursable travel expenses under this contract shall be defined and set at the current U.S. GSA's CONUS rates at the time of travel. Expenses not defined in this Scope of Work, or expenses greater than the per diem rates will not be paid without prior written authorization by COUNTY.

c. A "BUDGET SUMMARY COMPARISON" sheet, which outlines the total amount CONSULTANT was awarded, the amount expended to date, the current invoice amount, the total expenditures, and the remaining award balance must accompany all invoices.

Invoices shall be submitted via email to hameed@ClarkCounty.gov or by United States mail or commercial courier/parcel service addressed as follows:

Yousaf Hameed, Principal Air Quality Specialist
Clark County Department of Environment and Sustainability
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

PLEASE DO NOT SEND INVOICES VIA EMAIL AND MAIL, please select **one submission option** or the other and submit invoices only once.

Per Chapter 244.250 of the Nevada Revised Statutes, COUNTY shall not provide payment on any invoice CONSULTANT submits after six months from the date CONSULTANT performs services, provides deliverables, and or meets milestones, as agreed upon in this scope of work.

J. SUBCONTRACTS:

CONSULTANT may use subcontractors to perform and further support the tasks of this contract. All subcontractors must be approved by COUNTY in writing.

REVISED PER AMENDMENT NO. 2

Appendix 1

Exceptional Event Content and Subtasks

Below are detailed descriptions of the elements needed for each type of exceptional event package as well as the complicating factors for non-simple and/or multi-day events. Each section summarizes pricing by tier and type for 2022 through 2028.

Wildfire Ozone or $PM_{2.5}$[1]

Simple Single Day

1. Conceptual Model
2. Historical and Non-Event Model
3. Characteristics of Non-Event Historical Ozone and/or $PM_{2.5}$
4. Clear Causal Relationship Analysis
    a. Tier 1 Analyses
        i. Comparison of Event with Historical Data
        ii. Ozone, Fire, and Smoke Maps
        iii. HYSPLIT Trajectories
        iv. Media Coverage and Ground Images
    b. Tier 2 Analyses
        i. Key Factor #1: Q/d Analysis
        ii. Key Factor #2: Comparison of Event Concentrations with Non-Event Concentrations
        iii. Satellite Retrievals of Pollutant Concentrations
        iv. Supporting Pollutant Trends and Diurnal Patterns
    c. Tier 3 Analyses
        i. Total Column and Meteorological Conditions
        ii. Meteorologically Similar Matching Day Analysis
        iii. GAM Statistical Modeling

Moderate Single Day

Complicating Factors:

- Additional HYPSLIT Trajectories (matrix, forward, long-range, etc.)
- Additional Q/d analysis of multiple fires
- Identifying the specific fires contributing to smoke in Clark County
- Additional analysis of ground-level pollutants and if they're significant
- Providing additional satellite and ground-based measurements

Complex Single Day

Complicating Factors:

- Additional HYPSLIT Trajectories (matrix, forward, long-range, etc.)
- Dispersion Modeling
- Additional Q/d analysis of multiple fires

1. _____

1 The cost per Exceptional Event report would increase by $5,000 when adding $PM_{2.5}$ or ozone to an existing report.

- Identifying the specific fires contributing to smoke in Clark County
- Additional analysis of ground-level pollutants and if they're significant
- Additional LVG and $PM_{2.5}/PM_{10}$ analysis, e.g., narrative historical analysis of typical and abnormal LVG and $PM_{2.5}/PM_{10}$ concentrations for comparison with the EE including additional figures and tables
- Providing additional satellite and ground-based measurements
- Additional meteorological and total column analyses
- More in-depth Meteorologically Similar Day analysis

Simple Multi-Day

Complicating Factors:

- Multiple HYSPLIT Trajectories for each day
- Multiple Q/d analyses for each day
- Additional satellite, HMS, and ground images for each day
- Additional total column and meteorological analyses for each day
- Additional supporting pollutant trends for each day
- Additional Meteorologically Similar Analyses for each day

Moderate Multi-Day

Complicating Factors:

- Multiple HYSPLIT Trajectories for each day
- Multiple Q/d analyses for each day
- Additional satellite, HMS, and ground images for each day
- Additional total column and meteorological analyses for each day
- Additional supporting pollutant trends for each day
- Additional Meteorologically Similar Analyses for each day
- Additional HYPSLIT Trajectories (matrix, forward, long-range, etc.)
- Additional Q/d analysis of multiple fires
- Identifying the specific fires contributing to smoke in Clark County
- Additional analysis of ground-level pollutants and if they're significant
- Providing additional satellite and ground-based measurements

Complex Multi-Day

Complicating Factors:

- Multiple HYSPLIT Trajectories for each day
- Multiple Q/d analyses for each day
- Additional satellite, HMS, and ground images for each day
- Additional total column and meteorological analyses for each day
- Additional supporting pollutant trends for each day
- Additional Meteorologically Similar Analyses for each day
- Additional HYPSLIT Trajectories (matrix, forward, long-range, etc.)
- Dispersion Modeling using BlueSky Pipeline and HYSPLIT dispersion
- Additional Q/d analysis of multiple fires over multiple days
- Identifying the specific fires contributing to smoke in Clark County
- Additional analysis of ground-level pollutants and if they're significant
- In-depth LVG and $PM_{2.5}/PM_{10}$ analysis, e.g., narrative historical analysis of typical and abnormal

LVG and $PM_{2.5}/PM_{10}$ concentrations for comparison with the EE including additional figures and tables
- Providing additional satellite and ground-based measurements
- Additional meteorological and total column analyses
- More in-depth Meteorologically Similar Day analysis, e.g., additional day analysis by creating more statistics, maps, and meteorological analyses

Stratospheric Ozone

Simple (assuming Tier 1 or 2 required)

1. Conceptual Model
2. Historical and Non-Event Model
3. Characteristics of Non-Event Historical Ozone
4. Clear Causal Relationship Analysis
   a. Comparison of Event with Historical Data
   b. Evidence of Stratospheric-Tropospheric Exchange
      i. Satellite Imagery
      ii. Model Results
   c. Evidence of Stratospheric Air Reaching the Surface
      i. HYSPLIT Trajectories
      ii. Measurements of Tropospheric Mixing
      iii. Model Results of Meteorological Conditions
   d. Impacts of the Stratospheric Intrusion at the Surface
   e. Additional Evidence
      i. Meteorologically Similar Matching Day Analysis
      ii. GAM Statistical Modeling

Complex (assuming Tier 2 required)

Complicating Factors:
- Additional HYPSLIT Trajectories (matrix, forward, long-range, etc.)
- Additional Model and Satellite results (RAQMS, GFS, MERRA-2, etc.)
- Track stratospheric ozone along the trajectory (important if transport is >48 hours)
- Additional analysis of ground-level pollutants and stratospheric ozone tracers
- Investigate the influence of Los Angeles pollution on event date
- Additional meteorological analyses, e.g., more meteorological maps and associated analyses pinpointing the specific transport from an SOI
- Determine stratospheric ozone mixing into Clark County
- More in-depth Meteorologically Similar Day analysis, e.g., additional day analysis by creating more statistics, maps, and meteorological analyses

High Wind PM_{10}[2]

Simple (assuming Tier 1 or 2 required)

1. _____

2 The first Exceptional Event for each High Wind PM_{10} tier would be an additional $7,000 to create an infrastructure and knowledge base that can be leveraged for subsequent events.

1. Conceptual Model
2. Historical and Non-Event Model
3. Characteristics of Non-Event Historical PM_{10}
4. Climatological Conditions Effecting a Dust Event
5. SIP Evaluation
6. Clear Causal Relationship Analysis
    a. Comparison of Event with Historical Data
    b. Spatial and Temporal Variability of PM_{10}
    c. High Wind Dust Event Origin
        i. Satellite Imagery
        ii. Meteorological Analysis
        iii. Model Results
    d. High Wind Transport of Dust to Clark County
        i. HYSPLIT Trajectories
        ii. Satellite Imagery
        iii. Meteorological Analyses
        iv. Total Column and Model Results
    e. Impacts of the High Wind Dust Event at the Surface
        i. Pollutant Concentrations and Diurnal Profiles
        ii. Particulate Matter Speciation
        iii. Meteorologically Similar Matching Day Analysis
        iv. Media Coverage and Ground Images
    f. Controls Analysis
        i. Contribution of natural & anthropogenic sources and existing controls
        ii. Evidence of Effective Implementation and Enforcement of Controls

Complex (assuming Tier 3 Required)
Complicating Factors:

- Additional HYPSLIT Trajectories
- Additional Model and Satellite results during transport and in Clark County
- Additional Meteorological analyses
- Additional Controls analyses
- More in-depth Meteorologically Similar Day analysis, e.g., additional day analysis by creating more statistics, maps, and meteorological analyses
- Upwind dust speciation analysis

Fireworks $PM_{2.5}$ or PM_{10}[3]

Simple

1. Conceptual Model
2. Historical and Non-Event Model
3. Characteristics of Non-Event Historical $PM_{2.5}$ or PM_{10}
4. Clear Causal Relationship Analysis
    a. Characterization of Fireworks Displays

1. _____

3 The first Exceptional Event for each Fireworks tier would be an additional $7,000 to create an infrastructure and knowledge base that can be leveraged for subsequent events.

i. Map and list of all displays
ii. List of display length
iii. Discussion of any non-scheduled fireworks displays
iv. Types of fireworks used in each display and characteristic tracers
v. Media Coverage, Air Quality Alerts, NWS weather discussion including smoke, etc.

b. Impacts of Fireworks emissions
i. Time series or $PM_{2.5}$ or PM_{10} matching the fireworks display
ii. Comparison of $PM_{2.5}$ or PM_{10} with Historical Data
iii. $PM_{2.5}/PM_{10}$ ratios – historical and fireworks analysis
iv. Time series of co-emitted gaseous pollutants
v. Analysis of chemical speciation data including historical background levels
vi. $PM_{2.5}$ mass reconstruction based on speciation data

c. Meteorological Analyses
i. Local/regional meteorological analysis (winds, temp, inversion, etc.)
ii. Skew-T data, ceilometer data, etc.

d. Additional Evidence
i. Meteorologically Similar Matching Day Analysis

Complex
Complicating Factors:

- Additional meteorological analysis linking nearby or regional fireworks displays with enhanced $PM_{2.5}$ or PM_{10} concentrations
- Additional analysis of speciation data if the ratios of $PM_{2.5}/PM_{10}$ or historical speciation data is not significantly different from the event
- More in-depth Meteorologically Similar Day analysis, e.g., additional day analysis by creating more statistics, maps, and meteorological analyses
- Disentangling wildfire events for $PM_{2.5}$ or dust events for PM_{10} events from the effects of fireworks emissions. We would need to prove "but for" the fireworks event alone, $PM_{2.5}$ or PM_{10} would not have exceeded the standard.
- Most of the fireworks were not officially planned in the area of enhanced $PM_{2.5}$ or PM_{10}. Investigation of illegal/unplanned fireworks would be required.

REVISED PER AMENDMENT NO.2
Appendix 2

Exceptional Event Billing Cost Lists per Year

Table 1. Condensed cost list for all Exceptional Event types and tiers in **2022**. Notes provide caveats and extra cost for additional types of Exceptional Event reports.

Exceptional Event Type	Tier	2022 Cost	Notes
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$28,000	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,000.
	Moderate	$44,000	
	Complex	$65,000	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$44,000	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,000.
	Moderate	$60,000	
	Complex	$81,000	
Stratospheric Ozone	Simple	$33,000	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$65,000	
High Wind PM_{10}	Simple (1st event) Subsequent events	$33,000 $26,000	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $7,000 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM_{10} reports will have the same cost increase as the Wildfire reports.
	Complex (1st event) Subsequent events	$54,000 $47,000	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1st event) Subsequent events	$33,000 $26,000	The first Exceptional Event for each Fireworks tier will be an additional $7,000 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1st event) Subsequent events	$54,000 $47,000	

Table 1. Condensed cost list for all Exceptional Event types and tiers in **2023**. Notes provide caveats and extra cost for additional types of Exceptional Event reports. The mark-up for the first High Wind PM_{10} or Fireworks demonstration will only be applied if a simple or complex demonstration was not completed in 2022.

Exceptional Event Type	**Tier**	**2023 Cost**	**Notes**
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$29,120	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,200.
	Moderate	$45,760	
	Complex	$67,600	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$45,760	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,200.
	Moderate	$62,400	
	Complex	$84,240	
Stratospheric Ozone	Simple	$34,320	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$67,600	
High Wind PM_{10}	Simple (1st event) Subsequent events	$34,320 $27,040	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $7,280 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM_{10} reports will have the same cost increase as the Wildfire reports.
	Complex (1st event) Subsequent events	$56,160 $48,880	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1st event) Subsequent events	$34,320 $27,040	The first Exceptional Event for each Fireworks tier will be an additional $7,280 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1st event) Subsequent events	$56,160 $48,880	

Table 2. Condensed cost list for all Exceptional Event types and tiers in **2024**. Notes provide caveats and extra cost for additional types of Exceptional Event reports. The mark-up for the first High Wind PM_{10} or Fireworks demonstration will only be applied if a simple or complex demonstration was not completed in 2022-2023.

Exceptional Event Type	**Tier**	**2024 Cost**	**Notes**
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$30,285	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,408.
	Moderate	$47,590	
	Complex	$70,304	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$47,590	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,408.
	Moderate	$64,896	
	Complex	$87,610	
Stratospheric Ozone	Simple	$35,693	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$70,304	
High Wind PM_{10}	Simple (1st event) Subsequent events	$35,693 $28,122	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $7,571 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM_{10} reports will have the same cost increase as the Wildfire reports.
	Complex (1st event) Subsequent events	$58,406 $50,835	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1st event) Subsequent events	$35,693 $28,122	The first Exceptional Event for each Fireworks tier will be an additional $7,571 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1st event) Subsequent events	$58,406 $50,835	

Table 3. Condensed cost list for all Exceptional Event types and tiers in **2025**. Notes provide caveats and extra cost for additional types of Exceptional Event reports. The mark-up for the first High Wind PM_{10} or Fireworks demonstration will only be applied if a simple or complex demonstration was not completed in 2022-2024.

Exceptional Event Type	**Tier**	**2025 Cost**	**Notes**
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$31,496	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,624
	Moderate	$49,494	
	Complex	$73,116	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$49,494	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,624
	Moderate	$67,492	
	Complex	$91,114	
Stratospheric Ozone	Simple	$37,121	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$73,116	
High Wind PM_{10}	Simple (1st event) Subsequent events	$37,121 $29,246	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $7,874 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM_{10} reports will have the same cost increase as the Wildfire reports.
	Complex (1st event) Subsequent events	$60,743 $52,869	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1st event) Subsequent events	$37,121 $29,246	The first Exceptional Event for each Fireworks tier will be an additional $7,874 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1st event) Subsequent events	$60,743 $52,869	

Table 4. Condensed cost list for all Exceptional Event types and tiers in **2026**. Notes provide caveats and extra cost for additional types of Exceptional Event reports. The mark-up for the first High Wind PM_{10} or Fireworks demonstration will only be applied if a simple or complex demonstration was not completed in 2022-2025.

Exceptional Event Type	**Tier**	**2026 Cost**	**Notes**
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$32,756	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,849.
	Moderate	$51,474	
	Complex	$76,041	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$51,474	When adding $PM_{2.5}$ or Ozone to an existing report, add $5,849.
	Moderate	$70,192	
	Complex	$94,759	
Stratospheric Ozone	Simple	$38,605	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$76,041	
High Wind PM_{10}	Simple (1st event) Subsequent events	$38,605 $30,416	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $8,189 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM_{10} reports will have the same cost increase as the Wildfire reports.
	Complex (1st event) Subsequent events	$63,172 $54,983	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1st event) Subsequent events	$38,605 $30,416	The first Exceptional Event for each Fireworks tier will be an additional $8,189 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1st event) Subsequent events	$63,172 $54,983	

Table 5. Condensed cost list for all Exceptional Event types and tiers in **2027**. Notes provide caveats and extra cost for additional types of Exceptional Event reports. The mark-up for the first High Wind PM_{10} or Fireworks demonstration will only be applied if a simple or complex demonstration was not completed in 2022-2026.

Exceptional Event Type	**Tier**	**2027 Cost**	**Notes**
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$34,066	When adding $PM_{2.5}$ or Ozone to an existing report, add $6,083.
	Moderate	$53,533	
	Complex	$79,082	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$53,533	When adding $PM_{2.5}$ or Ozone to an existing report, add $6,083.
	Moderate	$72,999	
	Complex	$98,549	
Stratospheric Ozone	Simple	$40,150	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$79,082	
High Wind PM_{10}	Simple (1^{st} event) Subsequent events	$40,150 $31,633	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $8,517 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM10 reports will have the same cost increase as the Wildfire reports.
	Complex (1^{st} event) Subsequent events	$65,699 $57,183	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1^{st} event) Subsequent events	$40,150 $31,633	The first Exceptional Event for each Fireworks tier will be an additional $8,517 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1^{st} event) Subsequent events	$65,699 $57,183	

Table 7. Condensed cost list for all Exceptional Event types and tiers in 2028. Notes provide caveats and extra cost for additional types of Exceptional Event reports. The mark-up for the first High Wind PM10 or Fireworks demonstration will only be applied if a simple or complex demonstration was not completed in 2022-2027.

Exceptional Event Type	Tier	2028 Cost	Notes
Wildfire Ozone or $PM_{2.5}$ Single-Day	Simple	$35,429	When adding $PM_{2.5}$ or Ozone to an existing report, add $6,327.
	Moderate	$55,674	
	Complex	$82,246	
Wildfire Ozone or $PM_{2.5}$ Multi-Day	Simple	$55,674	When adding $PM_{2.5}$ or Ozone to an existing report, add $6,327.
	Moderate	$75,919	
	Complex	$102,491	
Stratospheric Ozone	Simple	$41,756	Multi-day Stratospheric Ozone reports will have the same cost increase as the Wildfire reports.
	Complex	$82,246	
High Wind PM_{10}	Simple (1st event) Subsequent events	$41,756 $32,898	• The first Exceptional Event for each High Wind PM_{10} tier will be an additional $8,857 to create an infrastructure and knowledge base that can be leveraged for subsequent events. • Multi-day High Wind PM10 reports will have the same cost increase as the Wildfire reports.
	Complex (1st event) Subsequent events	$68,327 $59,470	
Fireworks $PM_{2.5}$ or PM_{10}	Simple (1st event) Subsequent events	$41,756 $32,898	The first Exceptional Event for each Fireworks tier will be an additional $8,857 to create an infrastructure and knowledge base that can be leveraged for subsequent events.
	Complex (1st event) Subsequent events	$68,327 $59,470	

REVISED PER AMENDMENT NO.2
Appendix 3

Time and Materials Rate Schedule for 2022-2028

The Time and Materials (T&M) hourly rate schedule for all Sonoma Technology staff is shown below in Table 1 with a yearly increase by 4% for each year. Highlighted labor categories indicate staff that have worked on Clark County Exceptional Events analyses in the past (2020-2021), for reference.
Table 1. T&M Rate schedule for all Sonoma Technology staff for 2022-2028.

Table 1

Labor Categories	2022 Rate	2023 Rate	2024 Rate	2025 Rate	2026 Rate	2027 Rate	2028 Rate
Intern 1	$44.44	$46.22	$48.07	$49.99	$51.99	$54.07	$56.23
Intern 3	$49.73	$51.72	$53.79	$55.94	$58.18	$60.50	$62.92
Intern 5	$55.02	$57.22	$59.51	$61.89	$64.37	$66.94	$69.62
Staff 2	$59.25	$61.62	$64.08	$66.65	$69.31	$72.09	$74.97
Staff 4	$66.66	$69.33	$72.10	$74.98	$77.98	$81.10	$84.34
Staff 6	$73.01	$75.93	$78.97	$82.13	$85.41	$88.83	$92.38
Staff 7	$76.18	$79.23	$82.40	$85.69	$89.12	$92.68	$96.39
Staff 8	$79.36	$82.53	$85.84	$89.27	$92.84	$96.55	$100.41
Staff 9	$84.65	$88.04	$91.56	$95.22	$99.03	$102.99	$107.11
Staff 10	$87.82	$91.33	$94.99	$98.79	$102.74	$106.85	$111.12
Staff 11	$93.11	$96.83	$100.71	$104.74	$108.93	$113.28	$117.81
Staff 12	$96.29	$100.14	$104.15	$108.31	$112.65	$117.15	$121.84
Staff 13	$102.63	$106.74	$111.00	$115.44	$120.06	$124.87	$129.86
Staff 14	$106.87	$111.14	$115.59	$120.21	$125.02	$130.02	$135.22
Staff 15	$112.16	$116.65	$121.31	$126.16	$131.21	$136.46	$141.92
Associate Staff 1	$117.45	$122.15	$127.03	$132.12	$137.40	$142.90	$148.62
Associate Staff 2	$124.85	$129.84	$135.04	$140.44	$146.06	$151.90	$157.98
Associate Staff 3	$130.15	$135.36	$140.77	$146.40	$152.26	$158.35	$164.68
Associate Staff 4	$138.61	$144.15	$149.92	$155.92	$162.15	$168.64	$175.39
Associate Staff 5	$143.90	$149.66	$155.64	$161.87	$168.34	$175.08	$182.08
Associate Staff 6	$151.31	$157.36	$163.66	$170.20	$177.01	$184.09	$191.45
Associate Staff 7	$158.71	$165.06	$171.66	$178.53	$185.67	$193.09	$200.81

Labor Categories	2022 Rate	2023 Rate	2024 Rate	2025 Rate	2026 Rate	2027 Rate	2028 Rate
Associate Staff 8	$167.18	$173.87	$180.82	$188.05	$195.58	$203.40	$211.54
Associate Staff 9	$173.53	$180.47	$187.69	$195.20	$203.01	$211.13	$219.58
Associate Staff 10	$183.05	$190.37	$197.99	$205.91	$214.14	$222.71	$231.62
Associate Staff 11	$191.51	$199.17	$207.14	$215.42	$224.04	$233.00	$242.32
Associate Staff 12	$202.10	$210.18	$218.59	$227.34	$236.43	$245.89	$255.73
Associate Staff 13	$212.68	$221.19	$230.03	$239.24	$248.81	$258.76	$269.11
Associate Staff 14	$222.20	$231.09	$240.33	$249.94	$259.94	$270.34	$281.15
Associate Staff 15	$234.90	$244.30	$254.07	$264.23	$274.80	$285.79	$297.22
Senior Staff 1	$245.48	$255.30	$265.51	$276.13	$287.18	$298.66	$310.61
Senior Staff 2	$258.17	$268.50	$279.24	$290.41	$302.02	$314.10	$326.66
Senior Staff 3	$271.93	$282.81	$294.12	$305.88	$318.12	$330.84	$344.07
Senior Staff 4	$283.57	$294.91	$306.71	$318.98	$331.74	$345.01	$358.81
Senior Staff 5	$299.44	$311.42	$323.87	$336.83	$350.30	$364.31	$378.88
Senior Staff 6	$313.19	$325.72	$338.75	$352.30	$366.39	$381.04	$396.28
Senior Staff 7	$330.12	$343.32	$357.06	$371.34	$386.19	$401.64	$417.71
Senior Staff 8	$347.05	$360.93	$375.37	$390.38	$406.00	$422.24	$439.13
Senior Staff 9	$362.92	$377.44	$392.53	$408.24	$424.57	$441.55	$459.21
Senior Staff 10	$381.97	$397.25	$413.14	$429.66	$446.85	$464.72	$483.31

REVISED PER AMENDMENT NO.2
Appendix 4

Fixed Price: Meetings with Clark County & EPA

We anticipate regular meetings with Clark County during our work on Exceptional Events demonstrations to provide screening results, collaborate with Clark County staff, iterate on methodology, and provide results. We also anticipate meetings with EPA to present results and discuss their comments on the submitted Exceptional Events demonstrations. In both meetings, we anticipate involvement by multiple staff from Sonoma Technology and some associated preparation time, especially for the EPA meetings. Both meetings will be billed at a fixed price by meeting, provided in Table 1. These costs increase by 4% per year for the duration of the contract.

Table 1. Fixed price schedule for routine project update and status meetings.

Type	2022 Cost	2023 Cost	2024 Cost	2025 Cost	2026 Cost	2027 Cost	2028 Cost
30-min status meeting	$616.50	$641.50	$667.00	$693.50	$721.50	$750.50	$780.35
1-hour status meeting	$1,233	$1,283	$1,334	$1,387	$1,443	$1,501	$1,561
1-hour meeting with EPA	$2,396	$2,492	$2,592	$2,695	$2,803	$2,915	$3,032

REVISED PER AMENDMENT NO.2
Appendix 5

Exceptional Event Screening Costs

Table 6. Potential Exception Events screening fixed price costs for all pollutants by level and year; costs increase by 4% per year. The spin-up charge is only applicable to screening five or fewer potential Exception Event dates at a time.

Difficulty Level	2022 Cost	2023 Cost	2024 Cost	2025 Cost	2026 Cost	2027 Cost	2028 Cost
Simple	$200	$208	$216	$225	$234	$243	$253
Moderate	$240	$250	$260	$270	$281	$292	$304
Complex	$295	$307	$319	$332	$345	$359	$373
Not Suitable	$285	$296	$308	$321	$333	$347	$373
Meeting on findings and recommendations	$1,233	$1,283	$1,333	$1,387	$1,443	$1,500	$1,560
Spin-up charge if screening 5 or fewer EE dates	$370	$385	$400	$416	$433	$450	$468

REVISED PER AMENDMENT NO.1

Appendix 6.1

MILESTONE/DELIVERABLE/INVOICING SCHEDULE TABLE
Project Name: VOC Sampling (Project Amendment)
Project Manager: Yousaf Hameed

Anticipated Due Date (on or before)	Deliverable (D) or Milestone (M)	Description of Deliverable or Milestone	Not-to-Exceed Amount
2/1/2023	M	Contract Award and Mobilization	No fee allowed
2/15/2023	D	Final Work Plan & Project Kick-Off	$2,000
3/1/2023	D	Provide TD Tube Sampler First/Demonstration Unit	$19,039
4/1/2023	D	Provide TD Tube Sampler Second/Operational Unit	$19,039
11/1/2023	D	TO-17: 12-Compound Analysis	$211,200
11/1/2023	D	TO-17: Tube Cost/Rental	$14,080
11/1/2023	D	TO-15: 12-Compound Analysis	$65,000
11/1/2023	D	TO-15: 12 Canister Rental	$26,000
10/1/2023	D	Labor: Sample and Equipment Handling	$10,000
10/1/2023	D	Technical Support	$19,500
5/1/2023	D	Training on TD Tube Samplers, Canister Samplers, Sample Handling	$1,560
6/2/2023	D	Travel Costs (2 events)	$2,976
		Total Not to Exceed Amount:	**$390,394**

REVISED PER AMENDMENT NO.2
Appendix 6.2

MILESTONE/DELIVERABLE/INVOICING SCHEDULE TABLE
Project Name: VOC Sampling
Project Manager: Yousaf Hameed

Anticipated Due Date: Close of Calendar Year, each year (YY)	Deliverable (D) or Milestone (M)	Description of Deliverable or Milestone	Not-to-Exceed Amount 2024	Not-to-Exceed Amount 2025	Not-to-Exceed Amount 2026	Not-to-Exceed Amount 2027	Not-to-Exceed Amount 2028	Total Not-to-Exceed Amount
4/1/2024	M	Contract Award and Mobilization	No fee allowed					No fee allowed
5/1/2024	D	Final Work Plan & Project Kick-Off	$2,000					$2,000
12/1/YY	D	TO-15: 12-Compound Analysis including shipping	$41,010	$42,600	$44,280	$46,075	$47,960	$221,925
12/1/YY	D	TO-17: 12-Compound Analysis including shipping and rental	$53,750	$55,840	$57,935	$60,185	$62,595	$290,305
12/1/YY	D	TO-15: Flow Controller Rental	$6,950	$7,240	$7,530	$7,820	$8,145	$37,685
12/31/2028	D	TO-15: Flow Controller Purchase	$22,400					$22,400
12/31/YY	D	Sonoma Tech TO-15 Support	$17,400	$18,096	$18,820	$19,572	$20,355	$94,243
12/31/YY	D	Sonoma Tech TO-17 Support	$21,128	$21,973	$22,852	$23,766	$24,717	$114,436
12/31/YY	D	Analysis Reporting and Presentation	$9,943	$10,340	$10,754	$11,184	$21,325	$63,546
12/31/YY	D	Project Support	$6,214	$6,463	$6,722	$6,991	$7,271	$33,661
		Yearly Not to Exceed Amount:	**$180,795**	**$162,552**	**$168,893**	**$175,593**	**$192,368**	
							2024-2028 Total Not to Exceed Amount	**$880,201**