Public Health

Air Quality

Exceptional Event Demonstration for September 10-17, 2022 PM_{2.5} Impact due to Mosquito Fire

Submitted to U.S. EPA Region 9 on Date

Public Health

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Acronyms and Abbreviations

| AGL | Above Ground Level |
|-------------------|--|
| AQI | Air Quality Index |
| AQMD | Northern Nevada Public Health - Air Quality Management Division |
| AQS | Air Quality System |
| CAA | Clean Air Act |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| EE | Exceptional Event |
| EER | Exceptional Events Rule |
| EPA | U.S. Environmental Protection Agency |
| °F | Degrees Fahrenheit |
| FCCS | Fuel Characteristic Classification System |
| HA 87 | Hydrographic Area 87 |
| HMS | Hazardous Mapping System |
| HYSPLIT | Hybrid Single-Particle Lagrangian Integrated Trajectory |
| Lbs | Pounds |
| $\mu g/m^3$ | Micrograms per cubic meter |
| MPH | Miles Per Hour |
| NAAQS | National Ambient Air Quality Standards |
| NAM | North American Mesoscale |
| NSPS | New Source Performance Standards |
| NOAA | National Oceanic and Atmospheric Administration |
| NO | Nitric Oxide |
| NO ₂ | Nitrogen Dioxide |
| NOx | Nitrogen Oxides |
| NOy | Reactive Nitrogen Compounds |
| NWS | National Weather Service |
| O ₃ | Ozone |
| PM | Particulate Matter |
| PM _{2.5} | Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter |
| PM_{10} | Particulate Matter less than or equal to 10 microns in aerodynamic diameter |
| PST | Pacific Standard Time |
| SLAMS | State and Local Air Monitoring Station |
| SO_2 | Sulfur Dioxide |
| TSP | Total Suspended Particles |
| VOC | Volatile Organic Compounds |

1.0 Introduction

1.1 Purpose

The analysis in this report demonstrates that the elevated 24-hour PM_{2.5} concentrations recorded September 10 through 17 of 2022 at the Sparks State or Local Air Monitoring Station (SLAMS)were caused by the Mosquito Fire. These elevated PM_{2.5} concentrations recorded between September 10 and 17, 2022 contributed to a violating 2021-2023 PM_{2.5} Annual Design Value of the 2024 Annual PM_{2.5} NAAQS. Pursuant to the Exceptional Event (EE) requirements under the Clean Air Act (CAA), the data may be excluded from regulatory decisions for the PM_{2.5} NAAQS. Northern Nevada Public Health, Air Quality Management Division (AQMD) is requesting to exclude all PM_{2.5} data from the Sparks (AQS ID: 32-031-1005-88101-1) PM_{2.5} primary monitor on the previously mentioned days. Exclusion of the data caused by this exceptional event will have a regulatory significance on the 2024 Annual PM_{2.5} NAAQS designation, resulting in all areas of Washoe County to be designated as Attainment/Unclassifiable for the 2024 Annual PM_{2.5} NAAQS.

1.2 Exceptional Events Rule Procedure

On October 3, 2016, the Environmental Protection Agency (EPA) finalized revisions to the "Treatment of Data Influenced by Exceptional Events", regulations that govern the exclusion of event-influenced air quality data from certain regulatory decisions under the CAA Section 319(b). This rule is known as the Exceptional Events Rule (EER). The EER contains definitions, procedural requirements, requirements for air agency demonstrations, and criteria for EPA approval for the exclusion of air quality data from regulatory decisions. The EER states that the EPA has the authority to exclude air quality monitoring data from regulatory determinations related to exceedances or violations of the NAAQS and avoid designating an area as nonattainment, redesignating an area as nonattainment, or reclassifying an existing nonattainment area to a higher classification if a State adequately demonstrates that an exceptional event has caused an exceedance or violation of a NAAQS. The CAA includes four requirements that, collectively, define an exceptional event:

- 1. The event affected air quality,
- 2. The event was not reasonably controllable or preventable,
- 3. The event was caused by human activity that is unlikely to recur at a particular location or was a natural event,
- 4. There exists a clear causal relationship between the specific event and the monitored exceedance.

EPA regulations in the Code of Federal Regulations (CFR) - 40 CFR 50.14(c)(3)(iv) states that exceptional events demonstrations must address and include the following elements:

- 1. A narrative conceptual model; (See Section 2 of this document)
- 2. A demonstration 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; (See Section 4 of this document)
- 3. Analyses comparing the claimed event influenced concentrations at the monitoring station; (See **Section 4** of this document)
- 4. A demonstration that the event was both not reasonably controllable and not reasonably preventable; (See Section 3 of this document)
- 5. A demonstration that the event was a human activity unlikely to recur at a particular location or was a natural event. (See Section 5 of this document)

For acceptance of any Exceptional Events Demonstration, the submitting agency must also:

- Submit an Initial Notification of Potential Exceptional Event and flagging of the affected data in the EPA's Air Quality System (AQS) as described in 40 CFR §50.14(c)(2)(i)(included in Appendix B),
- 2. Completion and documentation of the public comment process described in 40 CFR §50.14(c)(3)(v) (included in Appendix A), and
- 3. Implementation of any relevant mitigation requirements as described in 40 CFR §51.930.

On February 7, 2024, EPA finalized the 2024 $PM_{2.5}$ NAAQS revision. With the completion of the $PM_{2.5}$ NAAQS revision, EPA also finalized the " $PM_{2.5}$ Wildland Fire Exceptional Events Tiering Document." This document was finalized on April 30, 2024. This document outlines Tier 1, 2, and 3 $PM_{2.5}$ exceptional events for wildland fires where:

- 1. Tier 1 events are values greater than 1.5 times the tiering threshold
- 2. Tier 2 events are values greater than or equal to the tiering threshold and less than 1.5 times the tiering threshold
- 3. Tier 3 events are values less than the tiering threshold

These tiering thresholds provide requirements for the clear causal relationship portion of an exceptional events demonstration. With EPA guidance and tools, this exceptional event demonstration is classified as a Tier 1 wildland fire event. Evidence proving that the event should be classified as a Tier 1 wildland fire event can be found in the clear causal portion of this demonstration. This demonstration will reflect the requirements of a Tier 1 wildland fire event. Further evidence of this is outlined in Section 4.

With finalization of the 2024 PM_{2.5} NAAQS revision, a schedule for exceptional events submissions was released. An agency submitting exceptional events must:

- 1. Have initial notifications for intent to submit exceptional events demonstrations for the purpose of initial area designations recommendations submitted no later than January 1, 2025. Appendix B of this document shows the Initial Notification for this demonstration.
- 2. Submit exceptional events demonstration for design value years 2021, 2022, and 2023 by February 7, 2025. This document was submitted to EPA prior to the February 7, 2025 deadline.

1.3 Public Comment Process

This demonstration was available for public comment from November 18 to December 18, 2024 at the AQMD website (<u>OurCleanAir.com</u>). A hardcopy of the plan was also available at the AQMD office. See Appendix A for AQMD's Public Comment Plan.

1.4 Agency Contacts

For information or questions regarding this Exceptional Events Demonstration, please contact the following individuals of the AQMD.

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2.0 Conceptual Model

2.1 Regional Description

Washoe County is located in the northwest portion of Nevada. It is bounded by California, Oregon, and the Nevada counties of Humboldt, Pershing, Storey, Churchill, Lyon, and Carson City (Figure 2-1). Hydrographic Area 87(HA 87) is approximately 200 square miles in size and situated in the southern portion of Washoe County. It is geographically identified as Hydrographic Area 87 (HA 87) as defined by the State of Nevada, Division of Water Resources. Most of Washoe County's population lives in and around HA 87.

HA 87 sits at an elevation of 4,400 feet above sea level and is surrounded by mountain ranges. To the west, the Sierra Nevada rises to elevations of 9,000 to 11,000 feet. Hills to the east reach 6,000 to 8,000 feet. The Truckee River, flowing from the Sierra Nevada eastward, drains into Pyramid Lake to the northeast of HA 87.

Climate

Average annual wind speed measured at the Reno-Tahoe International Airport is 6.4 miles per hour (mph). January is the calmest month (4.5 mph) with April being the windiest (8.3 mph). Wintertime (November-January) averages 4.9 mph and summertime (June-August) averages 7.2 mph.

Most of Reno's precipitation falls from November through March in the form of rain and snow. Reno receives an average of 7.35 inches of precipitation per calendar year (1991-2020 climate normals). Table 2-1 lists temperature and precipitation normals as measured at the Reno-Tahoe International Airport.

Figure 2-1 Washoe County, Nevada



| | | Precipitation (inches) | | |
|-----------|---------|---------------------------|------|------|
| Month | Maximum | Mean | | |
| January | 47.7 | 26.1 | 36.9 | 1.25 |
| February | 52.1 | 29.0 | 40.6 | 1.03 |
| March | 59.2 | 34.0 | 46.6 | 0.80 |
| April | 64.7 | 38.5 | 51.6 | 0.44 |
| May | 74.1 | 46.6 | 60.3 | 0.55 |
| June | 84.6 | 53.8 | 69.2 | 0.41 |
| July | 93.9 | 60.4 | 77.2 | 0.20 |
| August | 92.1 | 58.1 | 75.1 | 0.24 |
| September | 83.8 | 50.3 | 67.0 | 0.21 |
| October | 70.4 | 39.7 | 55.1 | 0.50 |
| November | 56.7 | 31.0 | 43.8 | 0.62 |
| December | 46.7 | 25.7 | 36.2 | 1.1 |

Table 2-1: Monthly Normal Temperature and Rainfall (1991-2020)

Maximum temperatures of 90 °F or above normally occur between July 3 and August 21. Maximum temperatures typically peak at 94 °F between July 22 and July 29.

Demographics

The 2020 population of Washoe County was 486,492 according to the 2020 US Census. Approximately two-thirds of Washoe County's residents live in HA 87, which includes the cities of Reno and Sparks. Anthropogenic activities such as transportation, manufacturing, freight distribution, and residential wood combustion are also concentrated in HA 87, contributing to ambient PM_{2.5} concentrations.

Seasons

Washoe County experiences two distinct air pollution seasons - wintertime particulate matter (PM) and summertime ozone (O_3). Wildfire smoke throughout the year, especially during the summer months, can dramatically increase summertime Particulate Matter (PM) and O_3 .

Wintertime temperature inversions combined with light winds can contribute to elevated levels of Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$), Particulate Matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}), Nitrogen Dioxide (NO_2), and Carbon Monoxide (CO). Inversions are common in mountain valleys such as HA 87. Air pollution episodes persist until stronger winds scour the cold air out of the valley and break the temperature inversion.

Northern Nevada receives an abundant amount of sunshine and solar radiation during the summer months. Mobile sources (i.e., cars and trucks) emit O₃ precursors (NOx and VOCs) and their activity increases during the summer. Ozone concentrations are typically highest between May and September, especially during the months of June, July, and August.

Strong winds can occur at any time of year. Two-minute gusts over 40 mph are not uncommon. These winds lower the gaseous pollutant (O₃, CO, NO₂, and SO₂) concentrations but typically increase PM levels, especially PM₁₀. Hourly PM₁₀ levels can reach more than 500 micrograms per cubic meter (μ g/m³) for several hours.

Attainment Status

All areas of Washoe County currently attain or are unclassifiable for all National Ambient Air Quality Standards (NAAQS). However, portions of Washoe County had previously been designated nonattainment for the following NAAQS: 1) 1971 Total Suspended Particles (TSP) (24-hour and Annual); 2) CO (8-hour); 3) 1979 O₃ (1-hour); and 4) 1987 PM₁₀ (24-hour and Annual). Some pollutants and standards, such as 1-hour O₃ and TSP, have been revoked and no longer apply. For the other pollutants, CO and PM₁₀, the HA 87 planning area was redesignated to attainment by EPA in 2008 for CO¹ and 2016 for PM₁₀².

2.2 Overview of Monitoring Network

In 2022, AQMD operated seven SLAMS in Washoe County (Figure 2-2). The blue boundary delineates HA 87 as defined by the State of Nevada, Division of Water Resources. Table 2-2 lists the parameters monitored in 2022.

| Station | O3 | CO | Trace CO | Trace NO | NO_2 | NO _x | Trace NOy | Trace SO ₂ | PM ₁₀ (manual) | PM ₁₀ (continuous) | PM _{2.5} (manual) | PM _{2.5} (continuous) | PM _{coarse} (manual) | PM _{coarse} (continuous) | PM _{2.5} Speciation | Meteorology |
|-----------------|-----------------------|----|----------|----------|--------|-----------------|-----------|-----------------------|---------------------------|----------------------------------|----------------------------|-----------------------------------|----------------------------------|--------------------------------------|---------------------------------|-------------|
| Incline | ✓ | | | | | | | | | | | | | | | |
| Lemmon Valley | ✓ | | | | | | | | | | | | | | | |
| South Reno | ✓ | | | | | | | | | | | | | | | ✓ |
| Spanish Springs | ✓ | | | | | | | | | ✓ | | ✓ | | ✓ | | ✓ |
| Sparks | ✓ | ✓ | | | | | | | | ✓ | | ✓ | | ✓ | | ✓ |
| Toll | ✓ | | | | | | | | | ✓ | | ✓ | | ✓ | | ✓ |
| Reno4 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Table 2-2: List of Monitoring Stations and Pollutants Monitored in 2022

https://www.federalregister.gov/documents/2008/07/03/E8-15015/approval-and-promulgation-of-implementation-plans-and-designation-of-areas-for-air-quality-planning, Date Accessed, November 12, 2024

¹ Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; Nevada; Wintertime Oxygenated Gasoline Rule; Vehicle Inspection and Maintenance Program; Redesignation of Truckee Meadows to Attainment for the Carbon Monoxide Standard,

² PM10 Plans and Redesignation Request; Truckee Meadows, Nevada; Deletion of TSP Area Designation, <u>https://www.federalregister.gov/documents/2015/12/08/2015-30487/pm10-plans-and-redesignation-request-truckee-meadows-nevada-deletion-of-tsp-area-designation</u>, Date Accessed, November 12, 2024



Figure 2-2: Northern Nevada Public Health - AQMD Ambient Air Monitoring Stations

AQMD's ambient air monitoring network meets the minimum monitoring requirements for all criteria pollutants pursuant to Title 40, Part 58 of the Code of Federal Regulations (CFR), Appendix D. Washoe County's monitoring network is reviewed annually pursuant to 40 CFR 58.10 to ensure the network meets the monitoring objectives defined in 40 CFR 58, Appendix D. Data was collected and quality assured in accordance with 40 CFR 58 and submitted to the Air Quality System (AQS). Additionally, 2022 data was certified on April 13, 2023. (See Appendix C).

2.3 Characteristics of Non-event PM_{2.5} Concentrations

In years without exceptional events, ambient PM_{2.5} concentrations monitored within Washoe County are not violating the 2024 Annual PM_{2.5} NAAQS standard. This is because the PM_{2.5} emissions that Washoe County produces have been regulated through different policy instruments such as a dust control program, New Source Performance Standards (NSPS) for wood-burning devices, and federal motor vehicle emission standards. Figure 2-3 shows that Washoe County produces approximately 18,118 lbs/day of PM_{2.5} emissions as per the 2020 Periodic Emissions Inventory. This includes emissions from wildfires within the Washoe County limits.





Based on non-event $PM_{2.5}$ monitoring data from 2016-2020, below are the characteristics of $PM_{2.5}$ levels throughout the year in HA 87.

- October through March: Ambient PM_{2.5} concentrations are at their maximum during the colder months because some Washoe County residents utilize wood-burning devices for heat. HA 87 experiences inversion layers in which cold air gets trapped at ground level, causing poor atmospheric mixing. This inhibits PM emissions from leaving the air basin and can cause higher concentrations of PM_{2.5}. Despite this, the region rarely experiences 24-hour PM_{2.5} averages greater than 25 µg/m³ during these times.
- 2. April through June: Ambient PM_{2.5} concentrations during this period are usually the lowest of the year. With higher temperatures, there is less residential wood-burning. Additionally, soil and fuels for wildland fire haven't been dried by high temperatures such as what could be seen at the

end of summertime. Wind speeds are higher in the spring which helps with air mixing and vacating any PM_{2.5} buildup from the region.

3. July through September: Ambient PM_{2.5} concentrations can be high during this time period. This coincides with the wildfire season in the western United States. Although wildfire season is sometimes described as June-August, changes in climate in the western United States have caused more wildfire smoke impacts in September rather than June. The Washoe County area has been impacted by wildfire events during these months for nine out of the last ten years (2013-2022). Wildfire events during these months have caused the top 10 highest PM_{2.5} 24-hour concentrations on record in Washoe County.

The wildfire events that have caused 24-hour exceedances occur in the July through September period. For this demonstration, it is worthwhile to evaluate the diurnal pattern of $PM_{2.5}$ concentrations during this time period. Figure 2-4 below shows the 2016-2020 $PM_{2.5}$ diurnal pattern for non-event days from July-September at the Sparks SLAMS $PM_{2.5}$ monitor with the 5th, 50th, and 95th percentile included. For the diurnal pattern shown in Figure 2-4, informationally flagged days are removed from the comparison. Throughout the day, $PM_{2.5}$ concentrations generally rise and peak between the hours of 5:00 PST and 10:00 PST. This is due to limited mixing in the mornings along with emissions associated with the morning traffic commute.



Figure 2-4: 2016-2020 July-September Wildfire Season PM_{2.5} Diurnal Pattern at Sparks

2.4 Description of Fire that Contributed to 2024 Annual PM_{2.5} NAAQS Violation

Mosquito Fire

The Mosquito Fire started on September 6, 2022, in the Tahoe National Forest in Placer County, California, approximately 60 miles southwest of HA 87. The cause of the fire is still under investigation although allegations have been made that the fire was caused by power transmission infrastructure. The fire grew quickly with over 35,000 acres burned in the first five days of the fire. Fire crews fought the fire until it was announced as fully contained on October 22, 2022. In total, the Mosquito Fire burned 76,788 acres with a perimeter illustrated in Figure 2-5.³

An important factor in the start of the fire was dry wildfire fuels. The fire took place in an area that was considered to be either Severe or Extreme Drought based on the U.S. Drought Monitor. Figure 2-6 shows what the U.S. Drought Monitor was on September 13, 2022, and illustrates how dry the wildfire fuels were at that time.⁴

³ Mosquito Fire, <u>https://inciweb.wildfire.gov/incident-information/catnf-mosquito-fire</u>, Date Accessed, November 12, 2024

⁴ U.S. Drought Monitor, Map Archive, <u>https://droughtmonitor.unl.edu/Maps/MapArchive.aspx</u>, Date Accessed, November 12, 2024



Figure 2-5: Mosquito Fire Perimeter⁵ in Relation to Washoe County

⁵ National Interagency Fire Center Historical Fire Perimeters. Wildland Fire Interagency Geospatial Services. <u>https://data-</u>

nifc.opendata.arcgis.com/datasets/5e72b1699bf74eefb3f3aff6f4ba5511_0/explore?location=39.147624%2C-120.288679%2C9.17. Date Accessed: November 13, 2024



2.5.1 Data Requested to be Excluded

As was mentioned in Section 1.1 of this document, the purpose of this demonstration is to request exclusion of air quality data that contributed to the violation of the 2024 Annual $PM_{2.5}$ NAAQS due to exceptional events. Table 2-3 below shows the data that is requested to be excluded as part of this exceptional events demonstration and the corresponding 24-hour $PM_{2.5}$ NAAQS averages. Table 2-4 shows the annual $PM_{2.5}$ design value before and after exclusion of all days shown in Table 2-3. AQMD is requesting exclusion of all hourly $PM_{2.5}$ data points on the days of the wildfire impact from 0000 PST through 2300 PST. For a complete list of each data point to be excluded, see Appendix D of this document.

| Mosquito Fire Data Sparks SLAMS (32-031-1005-81102-4) | | | | | | |
|--|-------------------------|--|--|--|--|--|
| Date Concentration (µg/n | | | | | | |
| 9/10/2022 | 57.6 μg/m ³ | | | | | |
| 9/11/2022 | 81.8 μg/m ³ | | | | | |
| 9/12/2022 | 97.1 μg/m ³ | | | | | |
| 9/13/2022 | 94.8 μg/m ³ | | | | | |
| 9/14/2022 | 179.1 μg/m ³ | | | | | |
| 9/15/2022 | $109.7 \ \mu g/m^3$ | | | | | |
| 9/16/2022 | $111.4 \ \mu g/m^3$ | | | | | |
| 9/17/2022 | $76.5 \ \mu g/m^3$ | | | | | |

Table 2-3: $PM_{2.5}$ Data Requested to be Excluded

| Station (AQS ID) | Design Value (<u>without</u> EPA concurrence on data requested to be excluded) | Design Value (<u>with</u> EPA concurrence on all data requested to be excluded) |
|----------------------|---|--|
| Sparks (32-031-1005) | 9.7 μ g/m ³ | 9.0 μ g/m ³ |

Table 2-4: Sparks Annual PM_{2.5} Design Value with and without Data Requested to be Excluded

2.5.2 Narrative of Air Quality Impacts

In September of 2022, wildfire smoke was transported into HA 87 from the Mosquito Fire which led to various elevated 24-hour $PM_{2.5}$ concentrations at the Sparks (SLAMS). On September 6, before wildfire smoke was present in the area, the 24-hour $PM_{2.5}$ concentration at Sparks was 8.0 µg/m³. Concentrations steadily rose until an exceedance of the 24-hour $PM_{2.5}$ NAAQS at Sparks SLAMS on September 10. Twenty-four hour $PM_{2.5}$ concentrations between September 10 and September 17 were well above both the 24-hour and annual $PM_{2.5}$ NAAQS. An overview of 24-hour average concentrations for $PM_{2.5}$ for the month of September 2022 is shown in Figure 2-7. The data requested to be excluded due to exceptional events are denoted by the red data callouts between September 10 and September 17, 2022.





Satellite imagery also confirms the sequence of events. As can be seen in Figure 2-8 below, smoke from the Mosquito Fire had not entered HA 87 as of September 8, 2022. As wind patterns shifted, smoke from the fire moved into HA 87 causing elevated 24-hour PM_{2.5} concentrations between September 10-17, 2022. This is seen in Figures 2-9 through 2-16 below. The wind then shifted with a more southerly component, causing most of the smoke to vacate HA 87 on September 17, 2022. This is illustrated in Figure 2-16. Wind barbs included in each satellite photo also show how wind shifted each day to transport smoke into HA87 from the Mosquito Fire. Included wind barbs show wind patterns during the peak 1-hour concentration of PM_{2.5} for each day requested to be excluded.

Diurnal patterns (Section 4.3) should also be referenced to understand how smoke entered and vacated HA 87. It is typical for HA 87 to undergo minor inversions overnight during periods of low winds. While wind barbs and satellite imagery may not show that smoke is being transported into HA 87, these periods of highest concentrations may have been recorded overnight (September 13, 14, and 17). On these days, smoke entered HA 87 in mid-afternoon and winds were not great enough to vacate smoke from the area overnight.

Satellite imagery shown in Figures 2-8 to 2-16 were gathered from AirNow Tech Navigator. Satellite imagery in AirNow Tech is taken from the MODIS Terra satellite. The satellite takes a photo over the West between 11 AM and 1 PM daily. Satellite imagery includes "Hazard Mapping System" (HMS) fire hotspots shown by the red triangles on the image. These show fire and thermal anomalies detected by the satellite. The Sparks SLAMS is highlighted by a red star on the image. The images also include the peak 1-hour concentration of PM_{2.5} for each day in white at all regulatory monitoring stations.



Figure 2-8: Satellite Imagery from September 8, 2022



Figure 2-9: Satellite Imagery from September 10, 2022



Figure 2-10: Satellite Imagery from September 11, 2022



Figure 2-11: Satellite Imagery from September 12, 2022



Figure 2-12: Satellite Imagery from September 13, 2022



Figure 2-13: Satellite Imagery from September 14, 2022



Figure 2-14: Satellite Imagery from September 15, 2022



Figure 2-15: Satellite Imagery from September 16, 2022



Figure 2-16: Satellite Imagery from September 17, 2022

3.0 Not Reasonably Controllable or Preventable

Section 40 CFR 50.14 (c)(3)(iv)(D) requires a demonstration that the event was both not reasonably controllable and not reasonably preventable. Wildfires on wildland satisfy both requirements unless there is evidence to the contrary. This is explained in 40 CFR 50.14(b)(4) which states:

The Administrator shall exclude data from use in determinations of exceedances and violations where a State demonstrates to the Administrator's satisfaction that emissions from wildfires caused a specific air pollution concentration in excess of one or more national ambient air quality standard at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Provided the Administrator determines that there is no compelling evidence to the contrary in the record, the Administrator will determine every wildfire occurring predominantly on wildland to have met the requirements identified in paragraph (c)(3)(iv)(D) of this section regarding the not reasonably controllable or preventable criterion.

As was shown in Figure 2-5, the Mosquito Fire, was started in the State of California on US Forest Service land. According to the definition of wildland provided in 40 CFR Part 50, §50.1(o), the Mosquito Fire occurred on wildland because it started in an area in which human activity and development are non-existent.

40 CFR 50.1(o): Wildland means an area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

In addition, since the wildfire was not within the jurisdiction of Washoe County and the pollution impacts were due to interstate transport, there is no reasonable control method that AQMD could have taken to prevent the $PM_{2.5}$ impacts from happening. The elevated concentrations of $PM_{2.5}$ were caused by the excessive $PM_{2.5}$ emissions from the Mosquito fire, not from anthropogenic sources within Washoe County. This is demonstrated in Section 4 of this document, Clear Causal Relationship.

4.0 Clear Causal Relationship

4.1 Evidence Proving Event is Classified as Tier 1

Evidence proving the event is classified as a Tier 1 event as defined in EPA's $PM_{2.5}$ Wildland Fire Exceptional Events Tiering Document can be found in Figure 4-1. In figure 4-1, the Mosquito Fire event is circled in red.

Utilizing EPA's "PM_{2.5} Tiering Tool - for Exceptional Events Analysis,"⁶ it is shown that the most recent 5-year month-specific 98th percentile for 24-hour PM_{2.5} data in September is 9.9 μ g/m³ at the Sparks SLAMS. A tier 1 event must be greater than 1.5 times the 98th percentile value, 14.85 μ g/m³. The threshold for a tier 1 event is also denoted by a dotted red line in Figure 4-25. Table 2-3 on page 19 also shows that all data requested to be excluded in this demonstration is much higher than 14.85 μ g/m³.

⁶ PM_{2.5} Tiering Tool - for Exceptional Events Analysis. United States Environmental Protection Agency. <u>https://www.epa.gov/air-quality-analysis/pm25-tiering-tool-exceptional-events-analysis</u>, Date accessed: November 12, 2024



Figure 4-1: Data as Shown in EPA's PM_{2.5} Tiering Tool - for Exceptional Events Analysis

AQS data last updated 11/4/2024

AQS Site ID 320311005

4.2 Fire Emissions Analysis

As can be seen in Figure 2-9, smoke from the Mosquito fire impacted the Sparks PM_{2.5} monitor starting on September 10, 2022. Between September 10 and September 17, 2022, the wildfire grew quickly and burned through large amounts of fuel, sending thousands of tons of emissions into the air, some of which was transported to HA 87, causing elevated 24-hour PM_{2.5} concentrations. PM_{2.5} emissions from the fire during this time frame were estimated by AQMD using the U.S Forest Service BlueSky Playground tool, Version 3.5. The inputs to the BlueSky Playground modeling tool include 1) Latitude and Longitude of fire origination, 2) Emissions Type, 3) Fuel Moisture Condition, 4) FCCS Fuelbed type and 5) acreage burned. For the fire, the latitude and longitude were (39.006, -120.745), the emissions type was "Wildfire", the Fuel Moisture Condition was "Dry", and the FCCS Fuelbed type was "Fuel bed code 16 – Jeffrey pine-ponderosa pine-Douglas Fir-California black oak forest." The Fuel Moisture Condition was determined to be "Dry" as a conservative estimate based on the U.S. Drought Monitor from September 13, 2022 shown in Figure 2-8. Fire acreage growth for the fire was determined by changes in acreage burned between daily Fire Updates issued by the United States Forest Service and CalFire. Updates were written daily, or more frequently, by the Incident Command Team in charge of the incident. By finding the difference in fire size listed on consecutive daily updates, daily fire growth can be calculated.

As can be seen in Table 4-1, the total $PM_{2.5}$ emissions that resulted from the Mosquito Fire between September 7 and September 17 was approximately 32,479.99 tons. As was mentioned in Section 2.3, and as per the 2020 Emissions Inventory, Washoe County produces approximately 18,118 lbs/day of $PM_{2.5}$. That is approximately 9.9 times Washoe County's annual $PM_{2.5}$ emissions over the course of 11 days of wildfire impact in the HA 87.
| Date | Mosquito Fire Growth (Daily Acres) | Mosquito Fire PM _{2.5} Emissions (Daily Tons) |
|--------------------|---------------------------------------|---|
| September 7, 2022 | 5,705 | 2549.65 |
| September 8, 2022 | 8,000 | 3575.32 |
| September 9, 2022 | 15,880 | 7097.01 |
| September 10, 2022 | 7,741 | 3459.57 |
| September 11, 2022 | 9,261 | 4138.88 |
| September 12, 2022 | 2,113 | 944.33 |
| September 13, 2022 | 1,630 | 728.47 |
| September 14, 2022 | 13,446 | 6009.22 |
| September 15, 2022 | 3,893 | 1739.84 |
| September 16, 2022 | 3,623 | 1619.17 |
| September 17, 2022 | 1,384 | 618.53 |
| Total | 72,676 | 32,479.99 |

Table 4-1: PM_{2.5} Emissions Calculations for the Mosquito Fire During the Event

4.3 Comparison of Event PM2.5 Concentrations to Historical Concentrations

In order to prove that the days requesting to be excluded had abnormally high PM_{2.5} concentrations, AQMD compared the hourly data to what would be expected on a non-event day in wildfire season. AQMD completed a diurnal pattern analysis to do this. Each hour on the requested days were compared to the 5th percentile, 50th percentile, and 95th percentile of historical hourly concentrations. All data flagged with qualifier codes related to wildfires, windblown dust, etc. were removed from comparison. The historical concentrations were from the five-year period from 2016-2020 in the wildfire season of July-September.

As can be seen in Figure 4-2 through 4-9 below, the hourly $PM_{2.5}$ concentrations at Sparks on the days of the wildfire impact were much higher than what would be expected based on historical concentrations. Most hourly concentrations were orders of magnitude higher than what would be expected (50th percentile). Additionally, most hourly concentrations were much higher than the 95th percentile of the data set.



Figure 4-2: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks on 9/10/22



Figure 4-3: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks 9/11/22



Figure 4-4: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks 9/12/22



Figure 4-5: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks 9/13/22



Figure 4-6: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks on 09/14/22



Figure 4-7: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks on 9/15/22



Figure 4-8: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks on 9/16/22



Figure 4-9: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks on 9/17/22

4.4 Trajectory Analysis

A trajectory analysis was completed for the event using the Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) model to compute simple air parcel trajectories and determine where the smoke originated from. The HYSPLIT model's calculation method is a hybrid between the Lagrangian approach, which uses a moving frame of reference as the air parcels move from their initial location, and the Eulerian approach, which uses a fixed three-dimensional grid as a frame of reference. The trajectory models in this section were created with the EPA AirNow-Tech Navigator page and the HYSPLIT model was provided by the National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory. The model used the North American Mesoscale Model (NAM) 12-kilometer domain. Each HYSPLIT was completed at 50, 1000, and 2500 meters above ground level (agl). These values were chosen to best illustrate the dynamics of the air mass that affected the Washoe County region before and during the days of the event. According to National Weather Service-Reno, 50 meters agl is a representative proxy for the boundary layer height in the region. The HYSPLIT figures below include the "Hazardous Mapping System (HMS) Fire" layer which shows the location of each fire, the "HMS Smoke" layer which estimates where smoke is at the time, and the 24-hour, midnight to midnight average PM_{2.5} concentration in μ g/m³ for each SLAMS in the region.

4.4.1 Monitoring Station Analysis - Backward Trajectory

In order to accurately understand where the affected airmass originated from, AQMD completed 24-hour backward trajectory HYSPLIT models from the affected $PM_{2.5}$ monitor at Sparks. In the figures below, the green line denotes 50 meters agl, the blue line denotes 1000 meters agl, and the red line denotes 2500 meters agl. The points on each line denote 6-hour increments. Because this section is for backward trajectory HYSPLIT models, the first point on the line would denote 6-hours before the start time of the model. All backward trajectory HYSPLIT models were completed from the peak hourly $PM_{2.5}$ concentration for each day requested to be excluded.



Figure 4-10: Backward Trajectory from Sparks starting September 10, 2022 at 1700 PST



Figure 4-11: Backward Trajectory from Sparks starting September 11, 2022 at 1600 PST



Figure 4-12: Backward Trajectory from Sparks starting September 12, 2022 at 1500 PST



Figure 4-13: Backward Trajectory from Sparks starting September 13, 2022 at 2300 PST



Figure 4-14: Backward Trajectory from Sparks starting September 14, 2022 at 0200 PST



Figure 4-15: Backward Trajectory from Sparks starting September 15, 2022 at 1600 PST



Figure 4-16: Backward Trajectory from Sparks starting September 16, 2022 at 1700 PST



Figure 4-17: Backward Trajectory from Sparks starting September 17, 2022 at 0200 PST

4.4.2 Source Analysis - Forward Trajectory

In order to fully understand where smoke emissions from the Mosquito Fire moved prior to and on the days of the event, an emissions source analysis was done which included 24-hour forward trajectory HYSPLIT models from the Mosquito Fire. In the figures below, the green line denotes 50 meters agl, the blue line denotes 1000 meters agl, and the red line denotes 2500 meters agl. The points on each line denote 6-hour increments. Because this section is for forward trajectory HYSPLIT models, the first point on the line would denote 6-hours after the start time of the model. The Sparks monitoring station is shown with a red star near the center of each photo. $PM_{2.5}$ concentrations shown in white are 24-hour averages, midnight to midnight.



Figure 4-18: Forward Trajectory from Mosquito Fire starting September 9, 2022 at 0000 PST



Figure 4-19: Forward Trajectory from Mosquito Fire starting September 10, 2022 at 0000 PST



Figure 4-20: Forward Trajectory from Mosquito Fire starting September 11, 2022 at 0000 PST



Figure 4-21: Forward Trajectory from Mosquito Fire starting September 12, 2022 at 0000 PST



Figure 4-22: Forward Trajectory from Mosquito Fire starting September 13, 2022 at 0000 PST



Figure 4-23: Forward Trajectory from Mosquito Fire starting September 14, 2022 at 0000 PST



Figure 4-24: Forward Trajectory from Mosquito Fire starting September 15, 2022 at 0000 PST



Figure 4-25: Forward Trajectory from Mosquito Fire starting September 16, 2022 at 0000 PST

4.4.3 Trajectory Analysis Explanation

The methodology behind this section is to bracket the event days with forward and backward HYSPLITs. A 24-hour forward trajectory was completed for September 9-16 of 2022 to accurately depict the characteristics of the wildfire smoke that would have affected HA 87 on the event days. A 24-hour backward trajectory was completed for September 10-17 of 2022 to characterize where the airmass on the event days came from.

As can be seen in the backward trajectory section, the airmasses that affected HA 87 on the days of the event originated at or near the Mosquito Fire on all trajectories besides the September 11, 2022 trajectory at 0000 PST. The difference in the trajectories on September 11, 2022 (Figure 4-10) and September 12, 2022 (Figure 4-11) show how wind patterns changed between the beginning and end of September 11, 2022, thus transporting Mosquito Fire smoke into HA 87. As can be seen in the forward trajectory section, the smoke from the Mosquito fire was transported into HA 87 on the days of the event. Similar to the backward trajectory section, the differences in Figure 4-18 and Figure 4-19 show how wind patterns shifted to push smoke into the region between September 10 and September 11 of 2022. All forward trajectories after September 13, 2022 show a direct impact by the Mosquito Fire on HA 87.

4.5 Conclusion Showing a Clear Causal Relationship

Section 4.0 of this document demonstrates that the elevated $PM_{2.5}$ concentrations that led to the exceedances of the primary and secondary 24-hour $PM_{2.5}$ NAAQS were caused by the Mosquito Fire. The emissions analysis, historical concentration comparison analysis, $PM_{2.5}$ analysis, and trajectory analysis all support this premise. Section 4.0 of this document also shows that this Tier 1 Exceptional Events Demonstration conforms with all requirements of the $PM_{2.5}$ Wildland Fire Exceptional Events Tiering Document.

The comparisons and statistical analyses provided in this section of the document supports AQMD's demonstration that the Mosquito Fire event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored $PM_{2.5}$ exceedances between September 10 and September 17, 2022. Section 4.0 thus satisfies the clear causal relationship criterion as required by the EER, 40 CFR 50.14(c)(3)(iv), and the $PM_{2.5}$ Wildland Fire Exceptional Events Tiering Document.

5.0 Natural Event or Human Activity Unlikely to Recur

Section 40 CFR 50.14(c)(3)(iv)(E) requires that an exceptional event be unlikely to recur at a particular location or be a natural event. The Mosquito Fire qualifies as a natural event because human activity played no direct causal role in the start of the fire. A natural event as per 40 CFR 50.1(k) is defined as:

40 CFR 50.1(k): Natural event means an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions.

As was mentioned in Section 2.4 of this document, the Mosquito Fire was likely started by power transmission infrastructure. AQMD sees no direct causal role by human activity for the Mosquito Fire, thus qualifying it as a natural event.

6.0 Conclusions and Recommendations

The Mosquito Fire started on September 6, 2022 in Tahoe National Forest in Placer County, California, approximately 60 miles southwest of HA 87. The Mosquito Fire's cause is still under investigation but was most likely caused by power transmission infrastructure. The fire emitted large quantities of PM_{2.5} emissions between September 10 and September 17, 2022 which eventually led to a violating 2021-2023 design value for the 2024 annual PM_{2.5} NAAQS at the Sparks PM_{2.5} monitor. The Mosquito Fire EE Demonstration supports the criteria for an exceptional event detailed in the 2016 Exceptional Events Rule and the PM_{2.5} Wildland Fire Exceptional Events Tiering Document. Specifically, the documentation used the following evidence to demonstrate the exceptional event:

- ambient air monitoring data
- statistical analyses of the monitoring data compared to historical concentrations
- analyses of wildfire smoke emissions
- satellite imagery (visible and detected smoke)
- HYSPLIT trajectory analyses

This EE Demonstration demonstrates justification for exclusion of the requested data between September 10 and September 17, 2022, due to an exceptional event under 40 CFR 50.14(c)(3)(iv). The 2022 Mosquito Fire EE Demonstration has provided evidence that:

- 1. Emissions from a wildfire event contributed to a violating annual PM_{2.5} design value for 2021-2023 at the Sparks monitor (32-031-1005-88101-4);
- 2. The event affected air quality in such a way that there exists a clear causal relationship between the event and the elevated PM_{2.5} concentrations between September 10-17, 2022;
- 3. Event-influenced concentrations were unusual and above normal historical concentrations, specifically greater than 1.5 times the latest 5 year monthly 98th percentile;
- 4. The event was related to a wildfire that was a natural event predominately occurring on wildland;
- 5. The event was not reasonably controllable or preventable.

The AQMD recommends that EPA Region 9 concur with the 2022 Mosquito Fire EE Demonstration and exclude the data defined in Table 2-3, from comparison to the NAAQS.



Air Quality

Please contact Ben McMullen for questions or comments at <u>bmcmullen@nnph.org</u>

Appendix A

Public Comment Plan

Public Comment Plan

This Exceptional Event Demonstration was available for public inspection from November 20 to December 20, 2024 at the AQMD website (<u>OurCleanAir.com</u>). AQMD issued a press release (included below) on November 6, 2024 to inform the public of the comment period. The press release provides a web link to the draft demonstration and explains how to submit written comments during the comment period. A hardcopy of the plan was also available at the AQMD office.

Appendix B

Exceptional Event Initial Notification



June 14, 2024

Dena Vallano Manager, Air Quality Analysis Office U.S. Environmental Protection Agency, Region 9 75 Hawthorne Street, AIR2-3 San Francisco, CA 94105

Subject: Exceptional Event Initial Notification for Calendar Year 2022

Dear Ms. Vallano:

See Attachment A: Initial Notification of Potential Exceptional Event Information Summary for $PM_{2.5}$. Please review this notification and determine if a comprehensive EE demonstration should be submitted because of the potential impact on the 2024 PM2.5 Annual National Ambient Air Quality Standard (NAAQS) attainment determination. Feel free to contact Mr. Craig Petersen at 775-784-7233 if you have any questions or comments.

Sincerely,

Azariora Vega

Francisco Vega, P.E., MBA Director, Air Quality Management Division Northern Nevada Public Health

cc (via email): Michael Dorantes, EPA Region 9 Laura Barry, EPA Region 9 Craig Petersen, AQMD Brendan Schnieder, AQMD Matt McCarthy, AQMD Ben McMullen, AQMD
Appendix A

Initial Notification of Potential Exceptional Event Information Summary for PM_{2.5}

Initial Notification of Potential Exceptional Event Information Summary for PM2.5

<u>Submitting Agency</u>: Northern Nevada Public Health, Air Quality Management Division <u>Agency Contact</u>: Craig Petersen, Supervisor, Monitoring and Planning <u>Date Submitted</u>: June 14, 2024 <u>Applicable NAAQS</u>: 2024 PM2.5 Annual <u>Affected Regulatory Decision¹</u>: Attainment Determination <u>Area Name/Designation Status</u>: Washoe County / Attainment <u>Design Value Period</u>: 2021-2023

<u>Narrative</u>: Wildfire smoke from the Mosquito Fire in California impacted ambient air quality in Washoe County from September 10 through September 17, 2022. The smoke impacts contributed to eight exceedances of the National Ambient Air Quality Standards (NAAQS) for Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5}) at the Sparks SLAMS in the Northern Nevada Public Health Air Quality Management Division's (AQMD) monitoring network. The AQMD requests that the Regional Administrator for Region 9 of the U.S. Environmental Protection Agency (EPA) accept this Initial Notification so Exceptional Event Demonstration document can be prepared to petition for the exclusion of the air quality monitoring data affected by this fire from the planning and regulatory requirements including the 2024 PM_{2.5} Annual NAAQS Initial Designation under the Clean Air Act (CAA) in accordance with the Exceptional Events Rule (EER).

Table A: Information specific to each flagged site day that may be submitted to EPA in support of the affected regulatory decision listed above.

| | | Type of Event (high | | | | | Monitor |
|------------------|-------|-----------------------------|----------|-------------|-----|-----------|---------------|
| | | wind, volcano, | | | | | Concentration |
| | | wildfires/prescribed | | | | | (24-hour avg; |
| Date(s) of Event | NAAQS | burns, other ²) | AQS Flag | Site AQS ID | POC | Site Name | $\mu g/m^3$) |
| 09/10/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 57.6 |
| 09/11/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 81.8 |
| 09/12/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 97.1 |
| 09/13/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 94.8 |
| 09/14/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 179.1 |
| 09/15/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 109.7 |
| 09/16/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 111.4 |
| 09/17/2022 | PM2.5 | Wildfires | RT | 32-031-1005 | 1 | Sparks | 76.5 |

Table B: Violating Sites Information for Annual PM_{2.5} (listing of all violating sites³ in the planning area, regardless of operating agency, and regardless of whether or not they are affected by EEs)

| Site (AQS ID) | Design Value (<u>without</u> EPA concurrence on all events listed in Table A) | Design Value (<u>with</u> EPA concurrence on all events listed in Table A) |
|----------------------|---|--|
| Sparks (32-031-1005) | 9.7 μg/m ³ | 9.0 μg/m ³ |

Table C: Summary of Maximum Design Value (DV) Site Information for Annual PM_{2.5} (Effect of EPA Concurrence on Maximum Design Value Site Determination)

| | Design Value | Design Value Monitor(s) | Comment(s) |
|---|----------------------|-------------------------|------------|
| Maximum DV site (AQS ID) <u>without</u> EPA concurrence on any of the events listed in Table A | 9.7 μ/m^3 | 32-031-1005-1 | |
| Maximum DV site (AQS ID) <u>with</u> EPA concurrence on all events listed in Table A | 9.0 μ/m ³ | 32-031-1005-1 | |

Table D: Site(s) with Invalid PM_{2.5} Design Values

| Site Name (AQS ID) | Parameter(s) | Reason for Invalid Design Value(s) | Comments |
|--------------------|--------------|------------------------------------|----------|
| n/a | n/a | n/a | |

¹ Designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call
² Provide additional information for types of event described as "other"
³ Note if violating monitor is a near-road monitor



REGION 9 SAN FRANCISCO, CA 94105

August 8, 2024

Francisco Vega Director, Air Quality Management Division Northern Nevada Public Health 1001 East Ninth Street, Building B-171 Reno, Nevada 89512

Dear Director Vega:

This letter provides a response to the Northern Nevada Public Health (NNPH) Air Quality Management Division (AQMD) exceptional event (EE) Initial Notification of Intent (INI) submittal on June 14, 2024, regarding exclusion of particulate matter 2.5 microns or less (PM_{2.5}) data affected by EEs. The INI submittal stated that emissions from wildfires on September 10-17, 2022, caused exceedances of the 2024 annual PM_{2.5} National Ambient Air Quality Standard (NAAQS) at the Sparks monitoring site (Air Quality System (AQS) ID: 32-031-1005), located in the Reno-Sparks Metropolitan Statistical Area (MSA).

Based on discussions with NNPH/AQMD, the EPA determined that data identified in the INI submittal may affect regulatory actions for the 2024 annual PM_{2.5} NAAQS and could be considered under the Exceptional Events Rule. Specifically, the EPA understands that Nevada anticipates recommending the Reno-Sparks MSA to be designated as in attainment of the 2024 annual PM_{2.5} NAAQS by February 7, 2025, and the attainment recommendation will be based on the 2023 design value. The INI indicated that the 2023 design value in the Reno-Sparks MSA would change from violating to attaining based on exclusion of the EE-affected data. This response to your INI is based on the calendar years 2021-2023 certified data currently available in AQS and the information provided in your INI submittal. The EPA requests formal submittal of the demonstration(s) necessary to achieve an attaining 2023 design value for the area no later than February 7, 2025, so that the relevant regulatory actions can take these EEs into consideration.

The EPA is committed to providing timely guidance and input to NNPH/AQMD should any questions arise as you work toward submitting the demonstrations by the above deadline. We appreciate the coordination to date and look forward to continued communication throughout the development and submittal of these demonstrations. If you have any questions regarding this letter, please feel free to contact me at (415) 317-3744, or our staff lead Laura Barry at (415) 972-3874. We appreciate your partnership in working through implementation of the Exceptional Events Rule.

Sincerely,

Matthew Lakin Director, Air and Radiation Division

cc (via email): Craig Petersen, NNPH/AQMD Brendan Schnieder, NNPH/AQMD Matthew McCarthy, NNPH/AQMD Ben McMullen, NNPH/AQMD

Appendix C

2022 Data Certification Letter



April 13, 2023

Dena Vallano Manager, Air Quality Analysis Office U.S. Environmental Protection Agency, Region 9 75 Hawthorne Street, AIR-4-2 San Francisco, CA 94105

Re: CY2022 Ambient Air Monitoring Data Certification

Dear Ms. Vallano:

Attached please find a copy of the Washoe County Health District, Air Quality Management Division's (AQMD) AQS AMP600 Data Certification Report and AMP450NC Quick Look summary report for ambient air monitoring data for all State and Local Air Monitoring Stations (SLAMS) which meet criteria in 40 CFR 58 Appendix A operated from January 1 to December 31, 2022. Included is data from Federal Reference Method (FRM) and Federal Equivalent Method (FEM) monitors for CO, NO₂, ozone, PM₁₀, PM_{10-2.5}, PM_{2.5}, and SO₂ (hourly and 5-minute average data).

This letter certifies that the ambient concentration data and the quality assurance data are completely submitted to AQS, and the ambient data are accurate to the best of my knowledge taking into consideration the quality assurance findings.

Please contact Mr. Daniel Timmons or me at (775) 784-7200 with any questions or concerns.

Sincerely,

Ctanioba Vega

Francisco Vega, P.E., MBA Director, Air Quality Management Division Washoe County Health District

Attachments:

AMP600 Data Certification Report 2022 AMP450NC Quick Look All Parameters Report 2022

cc: Fletcher Clover, Air Quality Analysis Office, U.S. EPA, Region 9



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

| User ID: BMCMULLEN | | | | C | CERTIFICATION | I EVALU | JATION A | ND CONCUI | RRENCE | | | | |
|---|----------------------------------|------------|----------|-------------|-----------------------|---------|------------------|-----------|--------|------|-----|---------------|-------------|
| Report Request ID: | 2095169 | | | R | eport Code: | A | 1P600 | | | | | | Apr. 11, 20 |
| | | | | | GEO | GRAPHIC | C SELECT | IONS | | | | | |
| | Tribal Code | State | County | Site | Parameter | POC | City | AQCR | UAR | CBSA | CSA | EPA Region | |
| | | 32 | 031 | | | | | | | | | | |
| PROT Parameter Classification CRITERIA | TOCOL SELECTIONS Parameter Me | 5 ethod | Duration | Washo | AGENC e County Dis | Y SELE | CTIONS Health | Departmer | it | | | | |
| | SELECTED OPTIONS | 5 | | | | | | | | | | | |
| Option Type | e | | | Option | Value | | | | | | | | |
| MERGE PDF FI AGENCY ROL | LES LE | | | YI CERTI | ES FYING | | | | | | | | |
| DAT | CRITERIA | | 7 | | | | | | | | | | |
| Start Date | End Date | e | | | | | | | | | | | |
| 2022 | 2022 | | | | | | | | | | | | |

Data Evaluation and Concurrence Report Summary

Certification Year: 2022

Certifying Agency (CA): Washoe County District Health Department (1138)

| Pollutants in Report: | | Monitors | Monitors Re | ecommended for | Monitors NOT Recommended |
|---|---------------------------|------------------------|-------------------------------------|---------------------------|--------------------------|
| Parameter Name | Code | Evaluated | Concurrence | e by AQS | for Concurrence by AQS |
| Carbon monoxide | 42101 | 2 | 2 | | 0 |
| Nitrogen dioxide (NO2) | 42602 | 1 | 1 | | 0 |
| Ozone | 44201 | 7 | 7 | | 0 |
| PM10 Total 0-10um STP | 81102 | 4 | 4 | | 0 |
| PM2.5 - Local Conditions | 88101 | 5 | 5 | | 0 |
| Sulfur dioxide | 42401 | 1 | 1 | | 0 |
| PQAOs in Report: | | | | | |
| PQAO Name | | | PQAO Code | TSA Date | |
| Washoe County District Health Department | | | 1138 | 08/15/19 | |
| Summary of 'N' flags for all pollutants: Parameter <u>PQAO</u> <u>Code</u> <u>AQS Site-ID</u> <u>PO</u> | AC Re <u>DC</u> Fla | QS ecommended ag | Cert. Agency Recommended Flag | d <u>Reason for AQ</u> | S Recommendation |

Signature of Monitoring Organization Representative:

| Certifyiı Certifyiı | ng Yea ng Age | r ncy Code | 2022 Wash | ioe Co | unty Di | strict F | lealth I | Departm | ent (1 | 138) | | | | | | | | |
|------------------------|-------------------|---------------|---------------|----------------|------------------|------------------|----------------|------------|-----------|---------|------|----------|------|------------------------|---------------|-----------------|----------------|---------------|
| Parame | ter | | Carbo | on mor | noxide (| 42101 |) (ppn | n) | | | | | | | | | | |
| PQAO N QAPP A | lame Approva | al Date | Wash 12/12 | oe Co /2019 | unty Di | strict F | lealth I | Departm | ent (1 | 138) | | | | | | | | |
| NPAP A | udit Sum | mary: | Number | of Passe | ed Audits | NP | AP Bias | Criteria I | Met | | | | | | | | | |
| | | | 1 3.20599 Y | | | | | | | | | | | | | | | |
| | | Rou | tine Data | | | | | One Point | Quality (| Check | An | nual PE | | NPAP | | Co | ncur. Fl | ag |
| AQS F Site ID | POC Monit Type | or Mean | Min | Мах | Exceed. Count | Outlier Count | Perc. Comp. | Precision | Bias C | omplete | Bias | Complete | Bias | PQAO Level Criteria | QAPP Appr. | Aqs Rec Flag | CA Rec Flag | Epa Concur |
| 32-031-0031 | I 1 SLAM | 6 0.238 | - 0.001 | 3.256 | 0 | 0 | 98 | 2.20 | +2.13 | 100 | 0.35 | 100 | | Y | Y | Y | Y | S |
| 32-031-1005 | 5 1 SLAM | 6 0.372 | 0.000 | 2.700 | 0 | 0 | 99 | 1.35 | +/-1.62 | 100 | 1.65 | 100 | 3.21 | Y | Y | Y | Υ | S |

| Certifying Year | 2022 | | | | | | | | | | | | | | | |
|--------------------------------------|------------|------------|------------------|------------------|----------------|------------|--------|----------|--------|----------|------|------------------------|---------------|-----------------|----------------|---------------|
| Certifying Agency Code | Wash | ioe Co | unty Di | strict H | -lealth | Departm | ent (| 1138) | | | | | | | | |
| Parameter | Nitrog | gen dio | xide (N | IO2) (4 | 42602) | (ppb) | | | | | | | | | | |
| PQAO Name | Wash | ioe Co | unty Di | strict I | -lealth | Departm | ent (| 1138) | | | | | | | | |
| QAPP Approval Date | 12/12 | 2/2019 | | | | | | | | | | | | | | |
| NPAP Audit Summary: | Number | r of Passe | d Audits | NP | AP Bias | Criteria I | Met | | | | | | | | | |
| | | | | | | Y | | | | | | | | | | |
| Ro | utine Data | | | | | One Point | Qualit | y Check | An | nual PE | | NPAP | | Co | oncur. F | ag |
| AQS POC Monitor Mean Site ID Type | Min | Мах | Exceed. Count | Outlier Count | Perc. Comp. | Precision | Bias | Complete | Bias | Complete | Bias | PQAO Level Criteria | QAPP Appr. | Aqs Rec Flag | CA Ree Flag | Epa Concur |
| 32-031-0031 1 SLAMS 11.8 | 0.0 | 51.4 | | 0 | 97 | 4.55 | -5.18 | 100 | - 5.53 | 100 | | Y | Y | Y | Y | S |

| Certify Certify Param PQAO QAPP | /ing /ing leter Nar App | Year Agenc ne proval [| y Code Date | 2022 Wash Ozon Wash 12/12 | ioe Co e (442 ioe Co /2019 | unty Di <u>01) (p</u> r unty Di | strict H om) strict H | Health Health | Departm Departm | nent (1 ⁻ nent (1 ⁻ | 138) 138) | | | | | | | | |
|---|-------------------------------------|---------------------------------|----------------|---------------------------------------|-------------------------------------|---------------------------------------|-----------------------------|------------------|--------------------|--|--------------|--------|----------|------|------------------------|---------------|-----------------|---------------|-----------------|
| <u>NPAP</u> | <u>Audi</u> | t Summa | ary: | Number | of Passe | ed Audits | NP | AP Bias | Criteria Y | Met | | | | | | | | | |
| | | [| Rout | ine Data | | | | | One Point | t Quality (| Check | Anı | nual PE | | NPAP | | Co | oncur. F | lag |
| AQS Site ID | POC | Monitor Type | Mean | Min | Max | Exceed. Count | Outlier Count | Perc. Comp. | Precision | n Bias Co | omplete | Bias | Complete | Bias | PQAO Level Criteria | QAPP Appr. | Aqs Rec Flag | CA Re Flag | c Epa Concur |
| 32-031-00 | 20 1 | SLAMS | 0.049 | 0.017 | 0.082 | 0 | 0 | 99 | 2.05 | +/-1.49 | 100 | - 0.81 | 100 | | Y | Y | Y | Y | S |
| 32-031-00 | 25 1 | SLAMS | 0.047 | 0.021 | 0.076 | 0 | 0 | 99 | 1.84 | +/-1.50 | 100 | - 0.19 | 100 | | Y | Y | Y | Y | S |
| 32-031-00 | 31 1 | SLAMS | 0.048 | 0.015 | 0.080 | 0 | 0 | 98 | 1.54 | +/-1.13 | 100 | - 0.86 | 100 | | Y | Y | Y | Y | S |
| 32-031-10 | 05 1 | SLAMS | 0.046 | 0.011 | 0.077 | 0 | 0 | 98 | 2.86 | +/-2.37 | 100 | 0.59 | 100 | | Y | Y | Y | Y | S |
| 32-031-10 | 07 1 | SLAMS | 0.048 | 0.020 | 0.079 | 0 | 0 | 99 | 0.96 | +/-0.89 | 100 | 0.48 | 100 | | Y | Y | Y | Y | S |
| 32-031-20 | 02 1 | SLAMS | 0.051 | 0.033 | 0.080 | 0 | 0 | 99 | 2.55 | +/-1.96 | 100 | 5.81 | 100 | | Y | Y | Y | Y | S |
| 32-031-20 | 09 1 | SLAMS | 0.048 | 0.022 | 0.071 | 0 | 0 | 99 | 3.30 | +/-2.55 | 100 | 1.53 | 100 | | Y | Y | Y | Y | S |

| Certifying Year | 2022 | | | | | | | | | | | | | |
|--------------------------------------|-----------|--------------------|---------------------|----------------|-----------------|----------|--------|----------|------|------------------------|---------------|-----------------|----------------|---------------|
| Certifying Agency Code | Wash | oe County | District I | Health | Department | (1138) | | | | | | | | |
| Parameter | Sulfur | dioxide (42 | .401) (p | opb) | • | · , | | | | | | | | |
| PQAO Name | Wash | oe County | District I | Health | Department | (1138) | | | | | | | | |
| QAPP Approval Date | 12/12/ | /2019 | | | | | | | | | | | | |
| NPAP Audit Summary: | Number | of Passed Audi | s NF | PAP Bias | Criteria Met | | | | | | | | | |
| | | | | | Y | | | | | | | | | |
| Rou | tine Data | | | | One Point Quali | ty Check | An | nual PE | | NPAP | | Co | oncur. Fl | ag |
| AQS POC Monitor Mean Site ID Type | Min | Max Excee Count | d. Outlier Count | Perc. Comp. | Precision Bias | Complete | Bias | Complete | Bias | PQAO Level Criteria | QAPP Appr. | Aqs Rec Flag | CA Reo Flag | Epa Concur |
| 32-031-0031 1 SLAMS 0.4 | - 0.5 | 4.0 | 0 | 98 | 5.10 +/-4. | 16 100 | - 2.37 | 100 | | Y | Y | Y | Y | S |

Data Evaluation and Concurrence Report for Particulate Matter

| Certifying Certifying | Yea Age | ar:202 ency:\ | 2 Washoe | County | / Dist | rict Health | Departm | nent (113 | 8) | | | | | | | | | |
|-------------------------------------|-----------------|------------------|---------------------------------------|------------------------------------|--------------------------------|---|-----------------------------|---------------------------------|--------------------|---------------------------------|-----------------------|-------------------|----------------|-----------------------|-----------------------|---------------------------|-------------------------|-----------------|
| Parameter PQAO Nar Quality As | : ne: sur | ance | PM10 To Washoe Project I | tal 0-1 County Plan A | 0um 3 / Dist ppro | STP (81102 rict Health val Date: | 2) CONT Departm 12/1 | FINUOUS ient (1138 2/2019 | 8) | | | | | | | | | |
| Monitors S | Sum | nmarie | s | | | | | | | | | | | | | | | |
| | | | | | | Routine Data | ug/m3) | | Flow Ra | ate Verification | n Flow | Rate Audit | | Coll 6ca | ticon renc | e Flag | | |
| AQS Site ID | PO | <u>c</u> | Monito <u>Type</u> | r <u>Mean</u> | <u>Min</u> | Excee <u>Max</u> Cour | d.Outlier t <u>Count</u> | · % Complete | Bias | % Complete | <u>Bias</u> | % Complete | QAPP Appr. | AQS Re <u>Flag</u> | ec CA F <u>Fla</u> | Rec EPA g <u>Concu</u> | <u>ır</u> | |
| 32-031-0025 | 2 | | SLAMS | 21.67 | -3.0 | 985.0 | 0 | 98 | +0.66 | 100 | +0.44 | 4 100 | Y | Y | Y | S | | |
| 32-031-0031 | 2 | | SLAMS | 21.91 | -5.0 | 558.0 | 0 | 98 | +/-0.81 | 100 | -0.49 | 100 | Y | Y | Y | S | | |
| 32-031-1005 | 4 | | SLAMS | 26.32 | -5.0 | 587.0 | 0 | 98 | +/-0.76 | 100 | -0.41 | 100 | Y | Y | Y | S | | |
| 32-031-1007 | 1 | | SLAMS | 19.97 | -3.0 | 820.0 | 0 | 95 | +/-0.87 | 100 | -0.59 | 100 | Y | Y | Y | S | | |
| Collo Metho | cati | on Su | mmary # Sites Req C | # Sites | id C | % Collocated E | V st CV L | Criteria JB Met? | PEP a i Meti | Summar # # Aud hods Metho | y ited # ods Re | PEP # | PEP | % Compl | lete | Bias | Criteria Met? | |
| 170 | <u> </u> | 4 | 1 | 1 | | 100 11 | .49 12.7 | '3 Y | | 1 1 | | 5 | 3 | 60 | | +13.06 | Y | |
| Monitors S | Sum | nmarie | s | | | | | | | | | | | | | | | |
| | | | | | | Routine Data | ug/m3) | | Flow | Rate Audit | | Collocation | | PEP | | Con | currence F | lag |
| AQS Site ID | <u>P0</u> | <u>C Meth</u> | Monito <u>od Type</u> | r <u>Mean</u> | <u>Min</u> | Excee <u>Max</u> <u>Cour</u> | d.Outlier t <u>Count</u> | . % <u>Complete</u> | Bias | % Complete | <u>CV Co</u> | % P omplete Cr | QAO it. Met | PQAO Crit. Met | QAPP <u>Appr.</u> | AQS Re <u>Flag</u> | c CA Rec <u>Flag</u> | ; EPA Concur |
| 32-031-0025 | 1 | 170 | SLAMS | 6.72 | -6.0 | 432.0 | 0 | 99 | -0.55 | 100 | | | Y | Y | Y | Y | Y | S |
| 32-031-0031 | 1 | 545 | SLAMS | 7.76 | .8 | 129.7 | 0 | 100 | -0.04 | 100 | | | Υ | Y | Y | Y | Y | S |
| 32-031-0031 | 2 | 170 | SLAMS | 8.16 | -9.0 | 435.0 | 0 | 94 | -0.73 | 100 | 12.73 | 100 | Y | Y | Y | Y | Y | S |
| 32-031-1005 | 1 | 170 | SLAMS | 10.15 | -8.0 | 439.0 | 0 | 99 | +0.00 | 100 | | | Y | Y | Y | Y | Y | S |
| 32-031-1007 | 1 | 170 | SLAMS | 7.79 | -5.0 | 391.0 | 0 | 98 | +0.12 | 100 | | | Y | Υ | Y | Y | Υ | S |

Data Concurrence and Evaluation Report for Lead

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: BMCMULLEN

2022

2022

QUICKLOOK ALL PARAMETERS

| Report Request II | 2093798 | | | Report Code: AMP450N | IC | | Apr. 6, 2023 |
|-----------------------------|----------------|--------|-------------|-----------------------------|---------------|----------------|----------------------|
| PI | ROTOCOL SELECT | IONS | | AGENCY SELECTIO | NS | | |
| Parameter Classification | Parameter | Method | Duration | Washoe County District Heal | th Department | | |
| ALL | 86101 | | | 1 | | | |
| ALL | 42401 | | Н | | | | |
| | SELECTED OPT | IONS | | | | SORT ORDER | SCR GROUP SELECTIONS |
| Option T | ype | | | Option Value | Order | Column | Washoe Co,NV |
| EVENTS PROC | ESSING | E | EXCLUDE REG | IONALLY CONCURRED EVENTS | 1 | STATE_CODE | |
| MERGE PDF | FILES | | | YES | 2 | COUNTY_CODE | |
| AGENCY R | OLE | | | PQAO | 3 | SITE_ID | |
| | | | | | 4 | PARAMETER_CODE | |
| | | | | | 5 | POC | |
| | | | | | 6 | DATES | |
| | | | | | 7 | EDT_ID | |
| D | ATE CRITERIA | | | | | APPLIC | ABLE STANDARDS |
| Start Date | End | Date | | | | Standa | rd Description |

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

EXCEPTIONAL DATA TYPES

| EDT DESCRIPTION |
|-----------------|
|-----------------|

- 0 NO EVENTS
- 1 EVENTS EXCLUDED
- 2 EVENTS INCLUDED
- 5 EVENTS WITH CONCURRENCE EXCLUDED

QUICKLOOK ALL PARAMETERS

Ρ 1st Max 2nd Max 3rd Max 4th Max Arith. Cert& F # 0 Value Value Value Mean Value С POAO Year Meth Obs Duration Eval Ă Parameter Unit Site ID: 32-031-0025 City: Reno County: Washoe Address: 684A STATE ROUTE 341, RENO NV 89521 86101 PM10-2.5 - Local Conditions Micrograms/cubic meter 1 1138 2022 185 8612 817.0 492.0 407.0 379.0 12.36 1 HOUR 0 (LC) Site ID: 32-031-0031 City: Reno County: Washoe Address: 1260-A Stewart St. 42401 Sulfur dioxide Parts per billion 2022 600 98911 5.8 4.6 4.6 4.4 .44 5 MINUTE 0 2 1138 86101 PM10-2.5 - Local Conditions Micrograms/cubic meter 1 1138 2022 247 118 31.1 24.3 23.8 21.5 10.59 24 HOUR 0 (LC) PM10-2.5 - Local Conditions Micrograms/cubic meter 2 1138 2022 185 8209 305.0 210.0 204.0 125.0 11.59 1 HOUR 0 86101 (LC) Site ID: 32-031-1005 City: Sparks County: Washoe Address: 750 4TH ST, SPARKS, NV 89431 86101 PM10-2.5 - Local Conditions Micrograms/cubic meter 1 1138 2022 185 8600 503.0 440.0 396.0 262.0 13.21 1 HOUR 0 (LC) City: Sparks Site ID: 32-031-1007 County: Washoe Address: 7200 Pyramid Hwy, Sparks, NV, 89441 86101 PM10-2.5 - Local Conditions Micrograms/cubic meter 1 1138 2022 185 8376 623.0 452.0 326.0 265.0 9.94 1 HOUR 0 (LC)

Apr. 6, 2023

QUICKLOOK ALL PARAMETERS

METHODS USED IN THIS REPORT

| | METHOD | | |
|-----------|--------|---|-------------------------------------|
| PARAMETER | CODE | COLLECTION METHOD | ANALYSIS METHOD |
| 42401 | 600 | Instrumental | Ultraviolet Fluorescence API 100 EU |
| 86101 | 185 | Met One BAM-1020 System | Paired Beta Difference |
| 86101 | 247 | Met One E-SEQ-FRM PM10-2.5 sampler pair | Paired Gravimetric |

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

PQAOS USED IN THIS REPORT

| PQAO | AGENCY DESCRIPTION | |
|------|--|--|
| 1138 | Washoe County District Health Department | |

QUICKLOOK ALL PARAMETERS

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

| FLAG | MEANING |
|------|--|
| М | The monitoring organization has revised data from this monitor since the |
| | most recent certification letter received from the state. |
| Ν | The certifying agency has submitted the certification letter and required |
| | summary reports, but the certifying agency and/or EPA has determined |
| | that issues regarding the quality of the ambient concentration data cannot |
| | be resolved due to data completeness, the lack of performed quality |
| | assurance checks or the results of uncertainty statistics shown in the |
| | AMP255 report or the certification and quality assurance report. |
| S | The certifying agency has submitted the certification letter and required |
| | summary reports. A value of "S" conveys no Regional assessment regarding |
| | data quality per se. This flag will remain until the Region provides an "N" or |
| | "Y" concurrence flag. |
| U | Uncertified. The certifying agency did not submit a required certification |
| | letter and summary reports for this monitor even though the due date has |
| | passed, or the state's certification letter specifically did not apply the |
| | certification to this monitor. |
| Х | Certification is not required by 40 CFR 58.15 and no conditions apply to be |
| | the basis for assigning another flag value |
| Y | The certifying agency has submitted a certification letter, and EPA has no |
| | unresolved reservations about data quality (after reviewing the letter, the |
| | attached summary reports, the amount of quality assurance data |
| | submitted to AQS, the quality statistics, and the highest reported |
| | concentrations). |

Appendix D

AQS Report Showing RT Flags Applied

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

| User ID: BMCMULLEN | | | | | RAW DATA QUALIFIER REPORT | | | | | | | | | | | | |
|--------------------|-----------------------|-------|-----------|----------------|---------------------------|-----------|---------|--------------|--------|---------|----------|-----|------|-----|---------------|--|---------------|
| Report | Request | ID: | 223855 | 9 | | | R | eport Code: | A | MP360 | | | | | | | Nov. 12, 2024 |
| | GEOGRAPHIC SELECTIONS | | | | | | | | | | | | | | | | |
| | | | | Tribal Code | State | County | Site | Parameter | POC | City | AQCR | UAR | CBSA | CSA | EPA Region | | |
| | | | | | 32 | 031 | 1005 | | | | | | | | | | |
| | | PROTO | COL SELI | ECTIONS | | | | AGENC | Y SELF | ECTIONS | | | | | | | |
| Par Class | rameter ificatio | n | Paramete | er Me | thod I | Duration | Washo | e County Dis | trict | Health | Departme | nt | | | | | |
| CRI | ITERIA | | 88101 | | | | 1 | | | | | | | | | | |
| | | SE | ELECTED (| OPTIONS | | | | | | | | | | | | | |
| | Option | Туре | | | | | Option | Value | | | | | | | | | |
| 1 | MERGE PD | F FIL | ES | | | | Y | ES | | | | | | | | | |
| | AGENCY | ROLE | | | | | PQ | AO | | | | | | | | | |
| CO | NCURRENC | E STA | ATUS | | All | Data (Cor | ncurred | and Non-con | curre | d) | | | | | | | |
| Ç | QUALIFIE | R TYP | ES | | REQUES | ST EXCLUS | ION (E | VENT) QUALIF | IERS O | NLY | | | | | | | |
| | QUALIFIE | R COI | DE | | | RT - Wil | Ldfire- | U. S. (REQEX | (C) | | | | | | | | |
| QUALIFI | IER COUN | IS BY | MONITOR | t | | | YI | ES | | | | | | | | | |
| | | DATE | CRITERI | A | | | | | | | | | | | | | |
| St | art Date | 9 | E | nd Date | • | | | | | | | | | | | | |
| 202 | 22 01 0 | 1 | 202 | 2 12 | 31 | | | | | | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: Nov. 12, 2024

| Monitor Key / | | Sample | Qual | ifier | Action | | Concurrence |
|---------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-10 | 00:00 12 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 01:00 12 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 02:00 9 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 03:00 14 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 04:00 9 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 05:00 7 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 06:00 11 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 07:00 20 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 08:00 29 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 09:00 32 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 10:00 37 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | | | Action | | Concurrence |
|------------------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-10 | 11:00 29 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 12:00 33 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 13:00 33 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 14:00 24 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 15:00 25 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 16.00 33 | RТ | Wildfire-U S | 2022-12-14 | | |
| 750 4TH ST. SPARKS | NV | Event: | 111 | Mosquito Wildfire | 2022 12 11 | | |
| 89431 | | livene. | | nosquito mitarire | 2021 00 11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 17:00 165 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 18:00 151 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 19:00 162 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 20:00 114 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-10 | 21:00 141 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | 2 | | Action | | Concurrence |
|---------------------|-------------|--------------|-------------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | <u>Code</u> | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-10 | 22:00 142 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-10 | 23:00 139 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 00:00 132 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 01:00 112 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 02:00 105 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 03:00 101 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 04:00 98 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 05:00 90 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 06:00 83 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 07:00 87 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 08:00 84 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Samp | le | | Action | | Concurrence |
|--------------------|---------------|---------------------|-------------|-------------------|------------|----------------|-------------|
| Site Address | Sample Dat | <u>e-Time</u> Value | <u>Code</u> | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101 | -1 2022-09-11 | 09:00 67 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 10:00 64 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 11:00 56 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 12:00 42 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 13:00 25 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 14:00 18 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 15:00 10 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 16:00 220 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 17:00 184 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 18:00 131 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101- | -1 2022-09-11 | 19:00 83 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | | | Action | | Concurrence |
|---------------------|-------------|--------------|------|--------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | <u>Description</u> | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-11 | 20:00 54 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 21:00 45 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 22:00 38 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-11 | 23:00 35 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 00:00 30 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 01:00 64 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 02:00 73 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 03:00 70 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 04:00 84 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 05:00 66 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 06:00 86 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample |) | | Action | | Concurrence |
|------------------------------|-------------|---------------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time <u>Value</u> | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-12 | 07:00 81 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 08:00 68 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 09:00 63 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 10:00 58 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 11:00 47 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 12:00 23 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 13:00 120 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 14:00 402 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 15:00 439 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 16:00 95 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-12 | 17:00 166 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | | | Action | | Concurrence |
|---------------------|-------------|--------------|------|--------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | <u>Description</u> | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-12 | 18:00 83 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 19:00 73 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 20:00 39 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 21:00 32 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 22:00 44 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-12 | 23:00 26 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 00:00 29 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 01:00 31 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 02:00 37 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 03:00 32 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 04:00 37 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | | | Action | | Concurrence |
|---------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-13 | 05:00 37 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 06:00 54 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 07:00 71 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 08:00 90 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 09:00 34 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 10:00 23 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 11:00 17 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 12:00 10 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 13:00 8 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 14:00 9 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-13 | 15:00 51 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sampl | .e | | Action | | Concurrence |
|------------------|-----------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-8810 |)1-1 2022-09-13 | 16:00 139 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-13 | 17:00 170 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAR | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-13 | 18:00 178 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAR | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-13 | 19:00 240 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAR | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-13 | 20:00 231 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-13 | 21:00 238 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 | 01-1 2022-09-13 | 22:00 255 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 | 01-1 2022-09-13 | 23:00 256 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 | 01-1 2022-09-14 | 00:00 308 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-14 | 01:00 320 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAF | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-8810 |)1-1 2022-09-14 | 02:00 334 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPAR | RKS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | | | Action | | Concurrence |
|-----------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-12 | 2022-09-14 | 03:00 313 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 04:00 301 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 05:00 275 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 06:00 290 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 2 | 2022-09-14 | 07:00 226 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 08:00 198 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 09:00 162 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 2 | 2022-09-14 | 10:00 101 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 11:00 60 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | - | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 12:00 39 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-12 | 2022-09-14 | 13:00 25 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | | | Action | | Concurrence |
|------------------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-14 | 14:00 27 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 15:00 116 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 16:00 134 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 17:00 199 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 18:00 183 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 19:00 158 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 20:00 146 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 21:00 130 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 22:00 129 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-14 | 23:00 126 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 00:00 145 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sampl | e | | Action | | Concurrence |
|-------------------|---------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Dat | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101 | -1 2022-09-15 | 01:00 142 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | IS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 02:00 157 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 03:00 170 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 04:00 175 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 05:00 152 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 06:00 145 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 07:00 117 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 08:00 99 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 09:00 123 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 10:00 114 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | S, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101 | -1 2022-09-15 | 11:00 76 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARK | IS, NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | 2 | | Action | | Concurrence |
|------------------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-15 | 12:00 63 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 13:00 59 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 14:00 54 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 15:00 105 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 16:00 228 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 17:00 161 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 18:00 90 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 19:00 131 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 20:00 52 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 21:00 24 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-15 | 22:00 23 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key | 1 | | 5 | Sample | | | Action | | Concurrence |
|--------------|---------|-------------|----------|----------------|-----|-------------------|------------|----------------|-------------|
| Site Addres | s | Sample Date | e-Time N | <u>/alue C</u> | ode | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005- | 88101-1 | 2022-09-15 | 23:00 | 28 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 00:00 | 27 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 01:00 | 33 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 02:00 | 45 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 03:00 | 61 1 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 04:00 | 61 1 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 05:00 | 89 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 06:00 | 100 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 07:00 | 136 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 08:00 | 150 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |
| 32-031-1005- | 88101-1 | 2022-09-16 | 09:00 | 124 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, | SPARKS, | NV | Event: | | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sa | mple | | Action | | Concurrence |
|---------------------------|-------------|------------------|-----------------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time <u>Va</u> | lue <u>Code</u> | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-16 | 10:00 5 | 9 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-16 | 11:00 5 | 5 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | _ | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 12:00 7 | 9 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-16 | 13:00 5 | 6 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-16 | 14:00 5 | 3 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 15:00 5 | 4 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 16:00 2 | 52 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 17:00 2 | 62 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 18:00 2 | 13 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 19:00 2 | 37 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-16 | 20:00 1 | 64 RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | 3 | | Action | | Concurrence |
|------------------------------|-------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-16 | 21:00 128 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-16 | 22:00 107 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-16 | 23:00 129 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 00:00 175 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 01:00 181 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 02:00 163 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 03:00 143 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 04:00 147 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 05:00 161 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 06:00 162 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 32-031-1005-88101-1 | 2022-09-17 | 07:00 179 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, 89431 | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

| Monitor Key / | | Sample | • | | Action | | Concurrence |
|---------------------|-------------|--------------|------|--------------------|------------|----------------|-------------|
| Site Address | Sample Date | e-Time Value | Code | <u>Description</u> | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 | 2022-09-17 | 08:00 160 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 09:00 152 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 10:00 76 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 11:00 42 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 12:00 23 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 13:00 6 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 14:00 5 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 15:00 4 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 16:00 5 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 17:00 5 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 | 2022-09-17 | 18:00 8 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, | NV | Event: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Air Quality System

Raw Data Qualifier Report (v 1.1)

Parameter: PM2.5 - Local Conditions (88101)
Standard Units: Micrograms/cubic meter (LC) (105)

| Report | Date: | Nov. | 12, | 2024 |
|--------|-------|------|-----|------|
|--------|-------|------|-----|------|

| Monitor Key / | | Sample | | | Action | | Concurrence |
|-----------------------|--------------|--------------|------|-------------------|------------|----------------|-------------|
| Site Address Sa | ample Date- | Time Value (| Code | Description | Date | NAAQS Standard | Ind Date |
| 32-031-1005-88101-1 2 | 022-09-17 1 | 9:00 16 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, N | IV E | vent: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 2 | 022-09-17 2 | 0:00 11 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, N | IV E | vent: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 2 | 022-09-17 2 | 1:00 8 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, N | IV E | vent: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 2 | 022-09-17 23 | 2:00 4 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, N | IV E | vent: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |
| 32-031-1005-88101-1 2 | 022-09-17 2 | 3:00 1 | RT | Wildfire-U. S. | 2022-12-14 | | |
| 750 4TH ST, SPARKS, N | IV E | vent: | | Mosquito Wildfire | 2024-06-11 | | |
| 89431 | | | | | | | |

Monitor Qualifier Counts: RT Wildfire-U. S.

Count: 192

All Qualifiers Utilized:

| Qualifier | | Qualifier |
|--------------|------------------------|---------------|
| <u>Code:</u> | Qualifier Description: | <u>Count:</u> |
| RT | Wildfire-U. S. | 192 |