San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

GOVERNING BOARD

Vito Chiesa, Chair
Supervisor, Stanislaus County

Buddy Mendes, Vice Chair
Supervisor, Fresno County

Drew M. Bessinger
Councilmember, City of Clovis

David Couch
Supervisor, Kern County

Christina Fugazi
Vice Mayor, City of Stockton

Deborah Lewis
Councilmember, City of Los Banos

Tania Pacheco-Werner, PhD.
Appointed by Governor

Lloyd Pareira
Supervisor, Merced County

Craig Pedersen
Supervisor, Kings County

Alvaro Preciado
Mayor, City of Avenal

Robert Rickman
Supervisor, San Joaquin County

Alexander C. Sherriffs, M.D.
Appointed by Governor

Amy Shuklian
Supervisor, Tulare County

Tom Wheeler
Supervisor, Madera County

Vacant
Small City

Samir Sheikh
Executive Director
Air Pollution Control Officer

Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400 • FAX (209) 557-6475

Central Region Office
1990 East Gettysburg Avenue
Fresno, CA 93726-0244
(559) 230-6000 • FAX (559) 230-6061

Southern Region Office
34946 Flyover Court
Bakersfield, CA 93308-9725
(661) 392-5500 • FAX (661) 392-5585

www.valleyair.org

DATE: December 15, 2022

TO: SJVUAPCD Governing Board

FROM: Samir Sheikh, Executive Director/APCO
Project Coordinator: Morgan Lambert

RE: **ITEM NUMBER 21: RECEIVE AND FILE DISTRICT'S 2021-2022 ANNUAL OFFSET EQUIVALENCY REPORT TO THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY**

RECOMMENDATION:

Receive and file the District's Final Annual Offset Equivalency Report submitted to the federal Environmental Protection Agency (EPA) for the 12-month period from August 20, 2021 through August 19, 2022.

BACKGROUND:

To achieve the District's mission of improving air quality and public health for all Valley residents, the District has developed and implemented numerous air quality plans to reduce emissions from stationary sources through the adoption of over 600 of the most stringent rules in the nation and strong voluntary incentive programs that have invested more than $3 billion of combined funds in clean-air projects. Over the past several decades, these air quality improvement efforts have reduced NOx emissions (primary precursor for both ozone and PM2.5) from stationary and mobile sources by over 75%, including a greater than 90% reduction from stationary sources under the District's jurisdiction, resulting in significant air quality progress towards meeting the health-based federal ozone and PM2.5 standards.

In addition to the District rules aimed at directly reducing emissions from stationary sources, the District also has a set of rules establishing a permitting program designed under state law to ensure on a regional basis there is no net increase in emissions of nonattainment pollutants or their precursors for new or modified sources.

Under the District's New Source Review (NSR) Rule, new facilities and modifications to existing facilities that result in increases in permitted emissions above specified levels are required to provide offsets as a part of the requirements to obtain an "Authority to Construct" permit. Both federal and state law mandate NSR permitting programs that contain offsetting requirements. Emission reduction credits (ERCs) are the "currency" of offsets. Offsets are intended by both federal and state law to be one part of a comprehensive NSR permitting program that has been specifically designed by Congress and the state legislature to allow for industrial growth while regulating emissions increases. Additionally, any emission increases due to growth in the economy are accounted for in State Implementation Plans that demonstrate how the District's overall air quality control program will require sufficient emissions reductions to attain national ambient air quality standards.

It is important to clarify that ERCs cannot be used in lieu of meeting other air pollution control requirements, such as through market-based systems that other agencies may have in place. Instead, ERCs are required in addition to, and only after, establishing that the new emission units are controlled with the best available control technology (BACT), comply with all applicable prohibitory rules, and will not cause a health risk to surrounding communities. The District's NSR permitting program, including the accompanying ERC program, ensures that new emissions are controlled with the best technologies, prevents the permitting of any operation that will cause a significant health impact, demonstrates that attainment is not endangered, and has historically been found by the state and federal governments to comply with state and federal laws governing NSR/ERC programs.

The purpose of this item is to receive and file the District's 2021-2022 Annual Offset Equivalency Report, which was filed with the federal EPA on November 16, 2022, as required by Rule 2201.

DISTRICT OFFSET EQUIVALENCY PROGRAM:

As allowed by the federal Clean Air Act (CAA), the District's offsetting program for SOx, PM_{10}, $PM_{2.5}$, and CO differs from a direct implementation of the federal offsetting requirements. The District's current NOx and VOC offsetting program for major sources is a direct implementation of the federal offsetting requirements; therefore, the District no longer evaluates federal equivalency for these pollutants.

The federal Environmental Protection Agency (EPA) approved the District's federal offset equivalency approach in 2001 as the District's local NSR program was at least as stringent as the federal program. As included in the District's NSR Rule, to demonstrate equivalency with the federal NSR offsetting requirements the District is required to prepare and submit an annual offset equivalency report to EPA and the California Air Resources Board (CARB) by November 20th that evaluates whether both of the following conditions are met:

- Offset Quantity (Test 1) - the quantity of offsets required by the District from new and modified stationary sources equals or exceeds the quantity of offsets otherwise required under federal regulations; and
- Surplus Value (Test 2) - the amount of reductions, after discounting at the time of use, required by the District from new and modified stationary sources, plus any additional surplus creditable emission reductions, equals or exceeds the amount of offsets otherwise required under federal regulations.

Under the District's NSR rule, if the system cannot demonstrate equivalency with federal requirements, immediate and specified remedies are required to be enacted for each of the above tests.

PUBLIC PROCESS:

On November 10, 2022, the District held a public workshop to present and receive feedback on the draft 2021-2022 offset equivalency demonstration and provide an explanation of the equivalency process. No comments were received by the District following this workshop.

2021-2022 ANNUAL OFFSET EQUIVALENCY REPORT:

During this report's tracking period, there were no projects finalized that resulted in a New Major Source or triggered a Federal Major Modification for any pollutant the District tracks for offset equivalency (SOx, PM_{10}, $PM_{2.5}$, and CO).

In addition to the new projects, each year, prior to conducting the annual equivalency demonstration, it may be necessary to adjust the prior year end carry-over balances to account for cancelled and unimplemented projects, partially implemented projects, and the addition of prior year projects, ERCs, or other creditable emission reductions that were not accounted for previously. Furthermore, the District must review new rules and regulations to determine if adjustments must be made to the surplus creditable reduction carry-over.

Annual Equivalency Demonstration - Offset Quantity Equivalency (Test 1)

As detailed in the report, there were no new major source or federal major modification projects for PM10, PM2.5, SOx, or CO for the 2021-2022 tracking year. Following the year-to-year adjustments to the prior year carry-over balances, all pollutants maintain a positive carry-over balance and thus remain offset quantity (Test 1) equivalent.

Annual Equivalency Demonstration - Surplus Value Equivalency (Test 2)

As detailed in the report, there were no new major source or federal major modification projects for PM10, PM2.5, SOx, or CO for the 2021-2022 tracking year. Following the year-to-year adjustments to the prior year carry-over balances, these pollutants maintain a positive carry-over balance and thus remain surplus value (Test 2) equivalent.

Implications of 2021-2022 Offset Equivalency Demonstration

PM10, PM2.5, SOx, and CO remain both Offset Quantity (Test 1) and Surplus Value (Test 2) equivalent. Therefore, there is no change to the offset quantity and ERC surplus value requirements at this time.

NEXT STEPS:

The District will continue to track new major sources and federal major modifications of SOx, PM_{10}, $PM_{2.5}$, and CO to demonstrate ongoing equivalency with the federal offsetting requirements.

Attachments: Annual Offset Equivalency Report (36 pages)

San Joaquin Valley Unified Air Pollution Control District
Meeting of the Governing Board
December 15, 2022

RECEIVE AND FILE DISTRICT'S ANNUAL OFFSET EQUIVALENCY REPORT TO THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY

Attachment:

ANNUAL OFFSET EQUIVALENCY REPORT
(36 Pages)

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

2021-2022 Annual Offset Equivalency Report

San Joaquin Valley APCD

Annual Offset Equivalency Report

Offset Quantity Equivalency

Summary for 08/20/2021 through 08/19/2022

Pollutant	Number of New Major Sources	Number of Federal Major Mods	Offsets Required under Federal NSR (a)	Offsets Required under District NSR (b)	Current Year Excess or Shortfall (c) = (b) - (a)	Previous Year-End Total Carryover Excess or Shortfall (d)	Year-to-Year Adjustment to Carryover Balance (e)	Year-End Total Carryover Excess or Shortfall (f)=(d)+(e)+(c)
PM10	0	0	0.0	20.3	20.3	336.7	-0.9	356.1
PM2.5	0	0	0.0	0.0	0.0	192.3	0.0	192.3
CO	0	0	0.0	0.0	0.0	198.1	0.0	198.1
SOx	0	0	0.0	0.0	0.0	1,229.6	-0.4	1,229.2

Notes:

- All values are in tons per year

San Joaquin Valley APCD

Annual Offset Equivalency Report

Surplus Value Equivalency

Summary for 08/20/2021 through 08/19/2022

Pollutant	Number of New Major Sources	Number of Federal Major Mods	Offsets Required under Federal NSR (a)	Surplus Reductions Used for Equivalency This Year (b)	Current Year Excess or Shortfall (c) = (b) - (a)	Previous Year-End Total Carry-over Creditable Reductions (d)	Year-to-Year Adjustment to Carryover Balance (e)	Current Year New Creditable Reductions (f)	Year-End Total Carry-over Creditable Reductions (g)=(d)+(e)+(c)+(f)
PM10	0	0	0.0	0.0	0.0	341.7	-0.9	20.7	361.5
PM2.5	0	0	0.0	0.0	0.0	203.3	0.0	15.6	218.9
CO	0	0	0.0	0.0	0.0	763.0	0.0	0.0	763.0
SOx	0	0	0.0	0.0	0.0	343.0	-0.2	0.0	342.8

Notes:

- All values are in tons per year

Table of Contents

I. Summary 1
II. Background 1
A. District Offset Equivalency Program 2
B. Public Workshop 3
III. Federal Offsets Required During 2021-2022 Tracking Period 3
A. New Major Source (NMS): 3
B. Federal Major Modification (FMM): 3
C. Total Federal Offset Quantity Required 4
IV. District Offsets Required During 2021-2022 Tracking Period 4
V. Creditable Emission Reductions Generated During 2021-2022 Tracking Period 5
A. Emission Reduction Credits Reserved/Withdrawn 5
B. Emission Reduction Credits Surrendered 5
C. Air Quality Improvement Deduction 6
D. Orphan Shutdowns 6
E. Actual Emission Reductions from Implementing BACT on Existing Equipment at Minor Sources 6
VI. Adjustments to Prior Year End Carry-Over Balances 6
A. Offset Quantity (Test 1) Carry-Over Balance Adjustments 7
1. District and Federal Offset Quantity Adjustments 7
B. Surplus Creditable Reductions (Test 2) Carry-Over Balance Adjustments 8
1. Re-surplusing of Surplus Carry-Over Creditable Reductions 8
2. District and Federal Offset Quantity Adjustments 8
VII. Annual Equivalency Demonstration - Offset Quantity Equivalency (Test 1) 10
VIII. Annual Equivalency Demonstration - Surplus Value Equivalency (Test 2) 11
IX. Implications of 2020-2021 Offset Equivalency Demonstration 11
A. SOx, $PM_{10,}$ $PM_{2.5,}$ and CO 11

List of Acronyms

AER: Actual Emission Reductions
AG-ICE: Agricultural Internal Combustion Engine Conversion Incentive Program
AQID: Air Quality Improvement Deduction
ATC: Authority to Construct
BACT: Best Available Control Technology
CAA: Clean Air Act
CARB: California Air Resources Board
CFR: Code of Federal Regulations
DOQ: District Offsets Quantity
EPA: Environmental Protection Agency
ERC: Emission reduction credits
FMM: Federal Major Modification
FOQ: Federal Offsets Quantity
NMS: New Major Source
NSR: New Source Review
NOx: Nitrogen Oxide
VOC: Volatile Organic Compound
PM10: Particulate Matter (10 micron or less)
PM2.5: Particulate Matter (2.5 micron or less)
CO: Carbon Monoxide
SOx: Sulfur Oxide

I. Summary

Pursuant to Rule 2201 (*New and Modified Stationary Source Review NSR Rule*), the San Joaquin Valley Air Pollution Control District (District) has completed its annual offset equivalency report for the twelve-month period from August 20, 2021, to August 19, 2022. The individual elements that contributed to this year's offset equivalency determination are presented in this annual offset equivalency report.

A summary of the results from the 2021-2022 offset equivalency demonstration is shown in the following table:

Table 1: 2021-2022 Offset Equivalency Demonstration Report Summary

Equivalent?	PM10	PM2.5	CO	SOx
Test 1: Offset Quantity	Yes	Yes	Yes	Yes
Test 2: Surplus Value	Yes	Yes	Yes	Yes

II. Background

To achieve the District's mission of improving air quality and public health for all Valley residents, the District has developed and implemented numerous air quality plans to reduce emissions from stationary sources through the adoption of nearly 650 of the most stringent rules in the nation and strong voluntary incentive programs that have invested more than $3 billion of combined funds in clean-air projects. Over the past several decades, these air quality improvement efforts have reduced NOx emissions (primary precursor for both ozone and PM2.5) from stationary and mobile sources by over 75%, including a greater than 90% reduction from stationary sources under the District's jurisdiction, resulting in significant air quality progress towards meeting the health-based federal ozone and PM2.5 standards.

In addition to the District rules aimed at directly reducing emissions from stationary sources, the District also has a set of rules establishing a permitting program designed under state law to ensure on a regional basis there is no net increase in emissions of nonattainment pollutants or their precursors for new or modified sources.

Under the District's New Source Review (NSR) Rule, new facilities and modifications to existing facilities that result in increases in permitted emissions above specified levels are required to provide offsets as a part of the requirements to obtain an "Authority to Construct" permit. Both federal and state law mandate NSR permitting programs that contain offsetting requirements. Emission reduction credits (ERCs) are the currency of offsets. Offsets are intended by both federal and state law to be one part of a comprehensive NSR permitting program that that has

been specifically designed by Congress and the state legislature to allow for industrial growth while regulating any emissions increases. Additionally, any emission increases due to growth in the economy are accounted for in State Implementation Plans that demonstrate how the District's overall air quality control program will require sufficient emissions reductions to attain national ambient air quality standards.

It is important to clarify that ERCs cannot be used in lieu of meeting other air pollution control requirements, such as through market-based systems that other agencies may have in place. Instead, ERCs are required in addition to, and only after, establishing that the new emission units are controlled with the best available control technology (BACT), comply with all applicable prohibitory rules, and will not cause a health risk to surrounding communities. The District's NSR permitting program, including the accompanying ERC program, ensures that new emissions are controlled with the best technologies, prevents the permitting of any operation that will cause a significant health impact, demonstrates that attainment is not endangered, and has historically been found by the state and federal governments to comply with state and federal laws governing NSR/ERC programs.

A. District Offset Equivalency Program

As allowed by the federal Clean Air Act (CAA), the District's offsetting program differs from a direct implementation of the federal offsetting requirements. The federal Environmental Protection Agency (EPA) approved the District's approach in 2001 as the District's local NSR program was at least as stringent as the federal program. As included in the District's NSR Rule, to demonstrate equivalency with the federal NSR offsetting requirements the District is required to prepare and submit an annual offset equivalency report to EPA and the California Air Resources Board (CARB) by November 20th that evaluates where both of the following conditions are met:

- Offset Quantity (Test 1) – the quantity of offsets required by the District from new and modified stationary sources equals or exceeds the quantity of offsets otherwise required under federal regulations; and
- Surplus Value (Test 2) - the amount of reductions, after discounting at the time of use, required by the District from new and modified stationary sources, plus any additional surplus creditable emission reductions, equals or exceeds the amount of offsets otherwise required under federal regulations.

Under the District's NSR rule, if the system cannot demonstrate equivalency with federal requirements, immediate and specified remedies are required to be enacted for each of the above tests.

For additional information regarding the District offset equivalency program, please see Rule 2201, Section 7.0: http://www.valleyair.org/rules/currntrules/r2201.pdf.

B. Public Workshop

Consistent with a commitment by the District to enhance the public engagement and transparency in the offset equivalency process, on November 10, 2022, the District held of public workshop to present the draft 2021-22 offset equivalency demonstration and provide detailed explanations of the equivalency process and the significant adjustments that were being made as part of this year's demonstration.

III. Federal Offsets Required During 2021-2022 Tracking Period

Federal offsetting requirements are stated in 40 CFR 51.165, and part D of Title I of the CAA. Pursuant to these requirements, New Major Sources or Federal Major Modifications must provide a sufficient quantity of surplus-at-time-of-use ERCs to satisfy offsetting requirements. The amount of Federal Offsets Quantity (FOQ) required for ATC projects finalized during this report's tracking period is discussed in the following sections.

A. New Major Source (NMS):

Pursuant to 40 CFR 51.165 (a)(1)(iv)(A)(3), a New Major Source is created if emission increases for a given pollutant at a new source or existing non-major source equals or exceeds the major source threshold for that pollutant, i.e. the project by itself would result in a net emission increase exceeding the major source threshold. The major source emission threshold for each criteria pollutant is specified in Rule 2201, Table 3-3 (8/15/19).

During this report's tracking period, there were no NMS projects finalized. Therefore, there will be no NMS projects mitigation in this year's equivalency demonstration.

B. Federal Major Modification (FMM):

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is any physical change in, or change in the method of operation of, a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the federal Clean Air Act. The significant net emission increase threshold for each criteria pollutant is specified in Rule 2201, Table 3-1 (8/15/19).

There were no projects finalized during this reporting period that triggered a FMM for the pollutants that the District continues to track for equivalency (SOx, PM10, and PM2.5). Therefore, there will be no FMM projects mitigated in this year's equivalency demonstration.

C. Total Federal Offset Quantity Required

As stated above, during this report's tracking period, there were no NMS projects or projects triggering a FMM for the pollutants that the District continues to track for equivalency (SOx, PM10, and PM2.5). Therefore, there are no FOQ to be mitigated in this year's offset equivalency demonstration.

IV. District Offsets Required During 2021-2022 Tracking Period

During this report's tracking period, five (5) ATC projects triggered offsets under the District's local NSR rule for the pollutants that the District continues to track for equivalency (SOx, PM10, and PM2.5), and ERCs were required to satisfy the offsetting requirements for these projects.

Table 2: Total District Offsets Required (tpy)

SOx	PM10	PM2.5
0.0	20.3	0.0

The total amount of District offsets required for projects finalized during this report's tracking period and the surplus value of those ERCs used to satisfy the offset obligation are used to determine both Offset Quantity (Test 1) and Surplus Value (Test 2) equivalency.

All ERCs reserved for District offset projects are individually identified in Appendix A.

V. Creditable Emission Reductions Generated During 2021-2022 Tracking Period

To satisfy surplus value (test 2) equivalency, the District may use the surplus at time-of-use value of various categories of creditable emission reductions, including ERCs reserved/withdrawn, surrendered ERCs, Air Quality Improvement Deduction (the district portion of newly issued ERCs), orphan shutdowns, and BACT on existing minor sources.

Surplus reductions generated during a tracking year excess of federal NSR requirements are allowed to be carried forward and used to demonstrate equivalency with federal offsetting requirements in future years provided the reductions remain surplus at time-of-use.

The new surplus reductions generated and added as part of this equivalency demonstration are summarized in the following table.

Table 5: 2021-2022 New Surplus Reduction Summary (tpy)

Category	SOx	PM10	PM2.5
ERC Reserved/Withdrawn	0.0	20.3	15.2
ERCs Surrendered	0.0	0.0	0.0
ERCs Newly Issued (AQID)	0.0	0.4	0.4
Orphan Shutdowns	0.0	0.0	0.0
BACT on Minor Sources	0.0	0.0	0.0
Total	**0.0**	**20.7**	**15.6**

A. Emission Reduction Credits Reserved/Withdrawn

During this report's tracking period, there were five (5) ATC projects for which ERC certificates were reserved/withdrawn to satisfy the offsetting requirements of District Rule 2201, for the pollutants that the District continues to track for equivalency (SOx, PM10, and PM2.5).

A detailed list of these ERC certificates is included in Appendix B-1.

B. Emission Reduction Credits Surrendered

During this report's tracking period, there were no ERC certificates surrendered to satisfy requirements not required by District Rule 2201. Therefore, there were no creditable emission reductions generated from ERC certificates surrendered in this year's equivalency demonstration.

C. Air Quality Improvement Deduction

During this report's tracking period, there was one (1) new ERC banking project finalized. Pursuant to District Rule 2201, Section 4.12, prior to banking Actual Emission Reductions (AER) for ERC certificates, the AER shall be discounted by 10 percent for Air Quality Improvement Deduction (AQID). The AQID is surplus of all federal rules and regulations at the time of banking and is included in the District's offset equivalency system as a surplus additional creditable reduction.

Individual ERC banking project is included in Appendix B-2.

D. Orphan Shutdowns

On September 17, 2020, the District's Governing Board removed emission reductions from unbanked facility shutdowns ("orphan shutdowns") from the District's offset equivalency system. The District intends to work through a public process to develop EPA and CARB accepted mechanisms and methodologies to credit actual emission reductions from future orphan facility shutdowns and allow the use of these credits by facilities to satisfy federal offsetting requirements or to aid in demonstrating equivalency, as applicable.

No mechanisms and methodologies to credit these reductions have been approved as of the date of this report. Therefore, the surplus reductions from orphan shutdowns will not be considered in the equivalency demonstration for this tracking period.

E. Actual Emission Reductions from Implementing BACT on Existing Equipment at Minor Sources

Pursuant to District Rule 2201, actual emission reductions in excess of any federal requirement, generated from control technologies required by the District's Best Available Control Technology (BACT) requirements for existing equipment at minor sources, are identified as surplus reductions. The District has never used these surplus reductions to demonstrate offset equivalency as no mechanisms or methodologies to quantify the surplus value of these reductions have been approved as of the date of this report. Therefore, the surplus reductions from the implementation of BACT on existing equipment at minor sources will not be considered in the equivalency demonstration for this tracking period.

VI. Adjustments to Prior Year End Carry-Over Balances

Prior to conducting the annual equivalency demonstration, it may be necessary to adjust the prior year end carry-over balances to account for cancelled and unimplemented projects, partially implemented projects, and the addition of prior year projects, ERCs, or other creditable emission reductions that were not accounted for previously. Additionally, the District must review new rules and

regulations to determine if adjustments must be made to the surplus creditable reduction carry-over.

This year the District has conducted a review of the projects and entries in the system, and made adjustments to the carry-over balances as part of the 2021-2022 demonstration.

All adjustments made to the prior year end carry-over balances are presented below.

A. Offset Quantity (Test 1) Carry-Over Balance Adjustments

Table 4: Adjustments to Offset Quantity Carry-Over Balance (tpy)

Category		SOx	PM10	PM2.5
(a)	Adjustments to District Offset Quantity	-0.4	-0.9	0.0
(b)	Adjustments to Federal Offset Quantity	0.0	0.0	0.0
(c) = (a) – (b)	**Net Adjustment to Unused Carry-over**	**-0.4**	**-0.9**	**0.0**

1. *District and Federal Offset Quantity Adjustments*

Adjustments to the offset quantity carry-over balances will only be made to the pollutants that the District continues to track for equivalency (SOx, PM10, and PM2.5). For this year's offset equivalency demonstration, the District identified two (2) project entries in the equivalency system that needed to be re-evaluated due to cancelled/unimplemented ATCs. Once validated, the District Offset Quantity (DOQ) and FOQ for these projects' entries were adjusted, where necessary, and are reflected in the changes to the carry-over balances. Additional information on the two (2) adjusted project is discussed below.

Seneca Resources (Project S-1171563): The District issued an ATC and included the emissions in the tracking system for the proposed installation of a natural gas-fired heater treater during the 2017-2018 reporting period. However, the heater treater ATC was never implemented and the ATC was cancelled.

TRC Operating Company (Project S-1193387): The District issued an ATC and included the emissions in the tracking system for the proposed installation of natural gas-fired process heater during the 2019-2020

reporting period. However, the project was never implemented and the ATC was cancelled.

A list of adjustments to the DOQ and FOQ values for the Offset Quantity Carry-Over Balance is provided in Appendices C-1 and C-2.

B. Surplus Creditable Reductions (Test 2) Carry-Over Balance Adjustments

Table 5: Adjustments to Unused Surplus Carry-over Creditable Reductions (tpy)

Category		SOx	PM10	PM2.5
(a)	Re-surplusing of Prior Year Carry-over	0.0	0.0	0.0
(b)	Adjustments to District Offset Quantity	-0.2	-0.9	0.0
(c)	Adjustments to Federal Offset Quantity	0.0	0.0	0.0
(d) = (b) - (a) - (c)	**Net Adjustment to Unused Carry-over**	**-0.2**	**-0.9**	**0.0**

1. *Re-surplusing of Surplus Carry-Over Creditable Reductions*

Each year the District must review changes to rules and regulations to determine if adjustments must be made to the surplus carry-over creditable reduction balance. During this report's tracking period, there was no surplus value discounting required.

2. *District and Federal Offset Quantity Adjustments*

Adjustments to the surplus value carry-over balances will only be made to the pollutants that the District continues to track for equivalency (SOx, PM10, and PM2.5). For this year's offset equivalency demonstration, the District identified two (2) project entries in the equivalency system that needed to be re-evaluated for potential adjustments to DOQ and FOQ due to cancelled/unimplemented ATCs. Once validated, the DOQ and FOQ for these projects' entries were adjusted, where necessary, and are reflected in the changes to the carry-over balances. For purposes of surplus value (Test 2) equivalency, the adjustments to DOQ must be translated to the impact on the surplus value of those credits. Therefore, using the validated DOQ, the corresponding surplus value adjustments were determined for each impacted project and utilized in evaluating surplus value (Test 2)

equivalency as reflected in Table 5 above. Additional information on the two (2) projects requiring an adjustment to surplus value is discussed below.

Seneca Resources (Project S-1171563): The District issued an ATC and included the emissions in the tracking system for the proposed installation of a natural gas-fired heater treater during the 2017-2018 reporting period. However, the heater treater ATC was never implemented and the ATC was cancelled.

TRC Operating Company (Project S-1193387): The District issued an ATC and included the emissions in the tracking system for the proposed installation of natural gas-fired process heater during the 2019-2020 reporting period. However, the project was never implemented and the ATC was cancelled.

A list of adjustments to the DOQ values for the Surplus Carry-Over Creditable Reduction Balance is provided in Appendix C-3.

VII. Annual Equivalency Demonstration - Offset Quantity Equivalency (Test 1)

The table below outlines the District's 2021-2022 equivalency demonstration for the Offset Quantity (Test 1) requirements specified in Section 7.2.1 of Rule 2201. This table only includes the pollutants that the District continues to track for equivalency.

Table 6: Offset Quantity Equivalency Demonstration (tpy)

San Joaquin Valley APCD

Annual Offset Equivalency Report

Offset Quantity Equivalency

Summary for 08/20/2021 through 08/19/2022

Pollutant	Number of New Major Sources	Number of Federal Major Mods	Offsets Required under Federal NSR (a)	Offsets Required under District NSR (b)	Current Year Excess or Shortfall (c) = (b) - (a)	Previous Year-End Total Carryover Excess or Shortfall (d)	Year-to-Year Adjustment to Carryover Balance (e)	Year-End Total Carryover Excess or Shortfall (f)=(d)+(e)+(c)
PM10	0	0	0.0	20.3	20.3	336.7	-0.9	356.1
PM2.5	0	0	0.0	0.0	0.0	192.3	0.0	192.3
CO	0	0	0.0	0.0	0.0	198.1	0.0	198.1
SOx	0	0	0.0	0.0	0.0	1,229.6	-0.4	1,229.2

Notes:

- All values are in tons per year

SOx, PM_{10}, $PM_{2.5}$, and CO:

As shown in the table, there is a current year offset quantity excess, or zero (0) shortfall, for the current year. Following the year-to-year adjustments to the prior year carry-over balances, all pollutants maintain a positive carry-over balance and thus remain offset quantity (Test 1) equivalent.

An explanation of the categories in the table is provided in Appendix D.

VIII. Annual Equivalency Demonstration - Surplus Value Equivalency (Test 2)

The table below outlines the District's 2021-2022 equivalency demonstration for the Surplus Value (Test 2) requirements specified in Section 7.2.2 of Rule 2201. This table only includes the pollutants that the District continues to track for equivalency.

Table 7: Surplus Value Equivalency Demonstration (tpy)

San Joaquin Valley APCD

Annual Offset Equivalency Report

Surplus Value Equivalency

Summary for 08/20/2021 through 08/19/2022

Pollutant	Number of New Major Sources	Number of Federal Major Mods	Offsets Required under Federal NSR (a)	Surplus Reductions Used for Equivalency This Year (b)	Current Year Excess or Shortfall (c) = (b) - (a)	Previous Year-End Total Carry-over Creditable Reductions (d)	Year-to-Year Adjustment to Carryover Balance (e)	Current Year New Creditable Reductions (f)	Year-End Total Carry-over Creditable Reductions (g)=(d)+(e)+(c)+(f)
PM10	0	0	0.0	0.0	0.0	341.7	-0.9	20.7	361.5
PM2.5	0	0	0.0	0.0	0.0	203.3	0.0	15.6	218.9
CO	0	0	0.0	0.0	0.0	763.0	0.0	0.0	763.0
SOx	0	0	0.0	0.0	0.0	343.0	-0.2	0.0	342.8

Notes:

- All values are in tons per year

SOx, PM_{10}, $PM_{2.5}$, and CO:

As shown in the table, there were no NMS or FMM projects this tracking year. Following the year-to-year adjustments to the prior year carry-over balances, all remaining pollutants maintain a positive carry-over balance and thus remain surplus value (Test 2) equivalent.

An explanation of the categories in the table is provided in Appendix D.

IX. Implications of 2020-2021 Offset Equivalency Demonstration

A. SOx, PM_{10}, $PM_{2.5}$, and CO

As demonstrated above, PM10, PM2.5, CO and SOx remain both Offset Quantity (Test 1) and Surplus Value (Test 2) equivalent. Therefore, there is no change to the offset quantity and ERC surplus value requirements at this time.

Appendices

A. ERCs Reserved/Withdrawn During the 2021-2022 Tracking Period

B. Surplus Reductions Generated by the District NSR Rule
   - B-1: ERCs Reserved or Withdrawn
   - B-2: AQID

C. Adjustments to Offset Equivalency Carry-Over Balances
   - C-1: District Offset Quantity Adjustments
   - C-2: Federal Offset Quantity Adjustments
   - C-3: Surplus Adjustments Due to District Offset Quantity Adjustments

D. Offset Equivalency Report Summary Table Glossary

Appendix A

ERCs Reserved/Withdrawn During the 2021-2022 Tracking Period

2020-2021 Projects with ERCs Reserved/Withdrawn

Region	Facility ID	Project	Facility Name	ERC Certificate	Track Number	PM10
C	2282	1210060	CENTRAL VALLEY MEATS CO	C-1528-4	7439	4.4
S	1188	1210722	NESTLE PURINA PETCARE CO	C-1542-4	7440	0.9
C	2106	1212200	NAS LEMOORE	C-1558-4	7441	0.3
C	2282	1210060	CENTRAL VALLEY MEATS CO	N-1588-4	7442	6.6
S	2018	1203974	CRIMSON RESOURCE MANAGEMENT	S-3392-4	7443	1.7
N	1919	1203844	FRITO-LAY INC	S-5254-4	7444	6.4
Total						20.3

Field Key:

- [pollutant] – quantity of ERC provided to satisfy offset obligations (valued at time of banking)

Appendix B

Surplus Reductions Generated by the District NSR Rule

Appendix B-1

ERCs Reserved or Withdrawn

2021-2022 ERCs Reserved/Withdrawn Surplus Value

Region	Project	ERC Certificate	Track Number	PM10	PM2.5	SOx	Surplus PM10	Surplus PM2.5	Surplus SOx
C	1210060	C-1528-4	7439	4.4	0.7	0.0	4.4	0.7	0.0
S	1210722	C-1542-4	7440	0.9	0.1	0.0	0.9	0.1	0.0
C	1212200	C-1558-4	7441	0.3	0.3	0.0	0.3	0.3	0.0
C	1210060	N-1588-4	7442	6.6	6.0	0.0	6.6	6.0	0.0
S	1203974	S-3392-4	7443	1.7	1.7	0.0	1.7	1.7	0.0
N	1203844	S-5254-4	7444	6.4	6.4	0.0	6.4	6.4	0.0
Total				20.3	15.2	0.0	20.3	15.2	0.0

Field Key:

- [pollutant] – quantity of ERC provided to satisfy offset obligations (valued at time of banking)
- Surplus [pollutant] – surplus value of ERC at time of ATC issuance (time of use)

Appendix B-2

AQID

AQID from ERCs issued in 2021-2022

Region	Facility ID	Project	Facility Name	Track Number	Surplus PM10	Surplus PM25	Surplus SOx
S	5256	1211795	UPF CORP	7445	0.4	0.4	0.0

Field Key:

- Surplus [pollutant] – surplus value of ERC

Appendix C

Adjustments to Offset Equivalency Carry-Over Balances

Appendix C-1

District Offset Quantity Adjustments

District Offset Quantity Adjustments in 2021-2022

Region	Facility ID	Project	DOQ SOx	DOQ PM10	DOQ PM25	adj DOQ SOx	adj DOQ PM10	adj DOQ PM25	Reason For Evaluation
S	1114	1171563	0.2	0.5	0.0	-0.2	-0.5	0.0	Cancelled/Expired ATCs
S	3088	1193387	0.2	0.4	0.0	-0.2	-0.4	0.0	Cancelled/Expired ATCs
Total			0.4	0.9	0.0	-0.4	-0.9	0.0	

Field Key:

- DOQ [pollutant] – initial District Offset Quantity used in equivalency system
- adj DOQ [pollutant] – adjustment necessary to initial District Offset Quantity; reflected in adjustment to the carry-over balance

Appendix C-2

Federal Offset Quantity Adjustments

Federal Offset Quantity Adjustments in 2021-2022

Region	Facility ID	Project	FOQ SOx	FOQ PM10	FOQ PM25	adj FOQ SOx	adj FOQ PM10	adj FOQ PM25	Reason For Evaluation
S	1114	1171563	0.0	0.0	0.0	0.0	0.0	0.0	Cancelled/Expired ATCs
S	3088	1193387	0.0	0.0	0.0	0.0	0.0	0.0	Cancelled/Expired ATCs
Total			0.0	0.0	0.0	0.0	0.0	0.0	

Appendix C-3

Surplus Adjustments Due to District Offset Quantity Adjustments

Surplus Adjustments Due to District Offset Quantity Adjustments

Adjustments to PM10 Surplus Carry-over:

Region	Facility Id	Project	DOQ PM10	adj DOQ PM10	adj Percent	PM10 Balance	PM10 Used	adj Surplus PM10
S	1114	1171563	0.5	-0.5	-100.0%	0.5	0.0	-0.5
S	3088	1193387	0.4	-0.4	-100.0%	0.4	0.0	-0.4
Total			0.9	-0.9		0.9	0.0	-0.9

Field Key:

- DOQ PM10 – initial District Offset Quantity used in equivalency system
- adj DOQ PM10 – adjustment necessary to initial District Offset Quantity; reflected in adjustment to the carry-over balance
- PM10 Balance – value in surplus carry-over balance
- PM10 Used – value previously used a surplus value mitigation in past equivalency demonstrations
- adj Surplus PM10 – adjustment necessary to surplus carry-over balance to reflect DOQ adjustments

Adjustments to PM2.5 Surplus Carry-over:

None

Adjustments to SOx Surplus Carry-over:

Region	Facility Id	Project	DOQ SOx	adj DOQ SOx	adj Percent	SOx Balance	SOx Used	adj Surplus SOx
S	1114	1171563	0.2	-0.2	-100.0%	0.0	0.0	0.0
S	3088	1193387	0.2	-0.2	-100.0%	0.2	0.0	-0.2
Total			0.4	-0.4		0.2	0.0	-0.2

Field Key:

- DOQ SOx – initial District Offset Quantity used in equivalency system
- adj DOQ SOx – adjustment necessary to initial District Offset Quantity; reflected in adjustment to the carry-over balance
- SOx Balance – value in surplus carry-over balance
- SOx Used – value previously used a surplus value mitigation in past equivalency demonstrations
- adj Surplus SOx – adjustment necessary to surplus carry-over balance to reflect DOQ adjustments

Appendix D

Offset Equivalency Report Summary Tables Glossary

Offset Quantity Equivalency (Test 1) Summary Table Glossary

- **Number of New Major Sources**
  This is the number of NMS projects that were finalized by the District during the current tracking period. Note that if a project was a NMS for multiple pollutants (i.e. PM10 and SOx), the project will be counted in all pollutant rows for which the source was a NMS and federal offsets were required.

- **Number of Federal Major Modifications**
  This is the number of FMM projects that were finalized by the District during the current tracking period. Note that if a project triggered a FMM for multiple pollutants (i.e. PM10 and SOx), the project will be counted in all pollutant rows that triggered a FMM and federal offsets were required.

- **Offsets Required Under Federal NSR**
  This is the amount of offsets required under the federal NSR offsetting program for the FMM and NMS projects finalized by the District during the tracking period.

- **Offsets Required Under District NSR**
  This is the amount of offsets the District's NSR offsetting program required for the FMM and NMS projects finalized by the District during the tracking period.

- **Current Year Excess or Shortfall**
  This value is the difference between the amount of offsets required under District NSR and the amount of offsets required under federal NSR. This value is only a comparison of the offsetting requirements for the FMM and NMS finalized by the District during the tracking period. If this value is positive, the District's NSR offsetting program required more offsets than what would have been required under Federal NSR for FMM and NMS projects finalized during the tracking period.

- **Previous Year-End Total Carry-over Excess or Shortfall**
  This value represents the Year-End Total Carry-over Excess or Shortfall from the previous year's offset equivalency report.

- **Year-to-Year Adjustment to Carry-Over Balance**
  This value is the total amount of adjustments made by the District following the previous year's offset equivalency report.

- **Year-End Total Carry-Over Excess or Shortfall**
  This value is the difference between the total offsets required by the District's NSR offsetting program and the federal NSR offsetting program since the start of the offset equivalency demonstration. This value includes the current tracking year's excess or shortfall and any adjustments that were made in the current equivalency report. If this value is positive, the District's NSR offsetting

program has required more offsets than what would have been required under Federal NSR since the start of the offset equivalency demonstration, and the District has successfully demonstrated equivalency with Test 1.

Surplus Value Equivalency (Test 2) Summary Table Glossary

- **Number of New Major Sources**
  This is the number of NMS projects that were finalized by the District during the current tracking period. Note that if a project was a NMS for multiple pollutants (i.e. PM10 and SOx), the project will be counted in all pollutant rows for which the source was a NMS and federal offsets were required.

- **Number of Federal Major Modifications**
  This is the number of FMM projects that were finalized by the District during the current tracking period. Note that if a project triggered a FMM for multiple pollutants (i.e. PM10 and SOx), the project will be counted in all pollutant rows that triggered a FMM and federal offsets were required.

- **Offsets Required Under Federal NSR**
  This is the amount of offsets required under the federal NSR offsetting program for the FMM and NMS projects finalized by the District during the tracking period.

- **Surplus Reductions Used for Equivalency This Year**
  This is the amount of surplus reductions that were used in this year's equivalency demonstration to mitigate the surplus offsets quantity required under federal NSR for FMM and NMS projects finalized by the District during the current tracking period. Surplus reductions consist of reductions in the creditable reductions carry-over bank.

- **Current Year Excess or Shortfall**
  This value is the difference between the amount of offsets required under federal NSR and the surplus reductions used for equivalency this year. A zero (0.0) value means the District's creditable reduction carry-over bank had more surplus reductions than the amount of offsets required under federal NSR for FMM and NMS projects finalized by the District during the current tracking period.

- **Previous Year-End Total Carry-over Creditable Reductions**
  This value represents the Year-End Total Carry-over Creditable Reductions from the previous year's offset equivalency report.

- **Year-to-Year Adjustment to Carry-Over Balance**
  This value is the total amount of adjustments made by the District following the previous year's offset equivalency report.

- **Current Year New Creditable Reductions**
  This value is the total amount of surplus reductions collected by the District for the current equivalency tracking period.

- **Year-End Total Carry-Over Creditable Reductions**
  This value is the difference between the total surplus reductions generated by the District and the amount of surplus offsets required by FMM and NMS since the start of the offset equivalency demonstration. This value includes the current tracking year's excess or shortfall and any adjustments that were made in the current equivalency report. If this value is positive, the District's has generated more surplus reductions than what would have been required under Federal NSR since the start of the offset equivalency demonstration, and the District has successfully demonstrated equivalency with Test 2.