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Annual Compliance Report

City of Anaheim
Canyon Power Plant

Anaheim, California

SCAQMD
Facility ID: 153992

CEC Permit Number:
800-2010-001-CMF

Docket Number:
07-AFC-9C

2024
Period Range
January 1, 2024, through December 31, 2024

Review and Certification

I have reviewed both technically and editorially all details, calculations, results conclusions and other appropriate written material contained herein and hereby certify that to the best of my knowledge the material presented is true, accurate and complete.

I certify that the information contained in this report is true, accurate, and complete.

Ronald Hoffard	Generation Plant Manager
Name	Title
	1/30/2025
Signature	Date

Canyon Power Plant

Annual Compliance Report

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List of Attachments

Acronyms and Abbreviations

BHP	Break horse power
Btu	British thermal unit
BACT	Best available control technology
CARB	California Air Resources Board
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COA	City of Anaheim
CFR	Code of Federal Regulations
CPP	Canyon Power Plant
CT	Combustion turbine
DAHS	Data acquisition and handling
TDS	Total dissolved solids
DPF	Diesel particulate filter
EPA	Environmental Protection Agency
F.	Fahrenheit
ICE	Internal combustion engine
lbs/hr	pounds per hour
lb/lb-mol	pound per pound mol
MW	mega watts
MMBtu	million British thermal units
mmcf	million cubic feet
NH_3	ammonia
NO	Nitrogen Oxide
NO_x	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
O_2	Oxygen
ppm	parts per million
ppmc	parts per million corrected to 15% O_2
RATA	relative accuracy test audit
ROG	Reactive Organic Compounds
RTU	remote terminal unit
scf	standard cubic feet (standard temperature = 68 degrees F)
SCR	selective catalytic reactor
SCAQMD	South Coast Air Quality Management District
unit	The term unit refers to the boiler/steam turbine
VOC	Volatile Organic Compounds

1.0 Facility Description:

The City of Anaheim's (COA) Canyon Power Plant (CPP) facility is located at 3071 Miraloma Avenue in Anaheim California.

The facility consists of four natural gas fired General Electric, Model LM6000PC Sprint, simple cycle combustion turbine with water injection. The gas turbine was designed with a maximum heat input of 479 MMBtu per hour with a 46 degree Fahrenheit (F.) inlet air temperature. The units are equipped with an inlet air chiller designed to maintain the gas turbine inlet temperature at 46 degrees F. at full load.

Each unit is capable of generating 50.95 megawatts.

Carbon Monoxide (CO) emission from the gas turbine are controlled by utilizing a CO oxidation catalyst located between the gas turbine and the selective catalytic reactor (SCR). The CO oxidation catalyst controls the unit's CO and volatile organic compounds (VOC) emissions. The catalyst is guaranteed to reduce the unit's CO emission rate to a maximum of 4 ppm corrected to 15% O_2 (ppmc) and the VOC to 2 ppmc, both emission rates are based on a one (1) hour averages, dry basis at 15% O_2. The CO catalyst system was designed and supplied by Englehard/BASF.

The NO_x emissions from the gas turbine are controlled by the utilizing two (2) independent systems or techniques in series. The first system utilized on this unit is the water injection system.

Water is injected into the combustor suppressing the flame temperature and reducing the 1-hour average NO_x concentration to approximately 25 ppmc at 15% oxygen prior to entry into the SCR.

The second NO_x control system utilized by the unit is the NH_3/SCR system. After passing through the CO catalyst, the exhaust gases pass through an ammonia injection grid on its way to the SCR. The ammonia (NH_3) used at this facility is in the form a 19% by weight solution of ammonium hydroxide.

The SCR catalyst utilized by the unit for NO_x control was provided by Cormetech. The reaction between the NH_3 and the SCR catalyst reduces the existing NO_x to elemental nitrogen and water, resulting in NO_x concentrations in the exhaust gas at no greater than 2.5 ppmv at 15% O2 on a 1-hour average. The ammonia slip must be maintained below 5 ppm at 15% O2. Each SCR is vented through a dedicated stack, which is 11.8 ft. diameter and 86 ft. high.

The facility is also equipped with an 1141 BHP diesel emergency internal combustion engine (ICE) (black start engine) will be used to start up the plant in the event of a loss of grid power.

The ICE, is a Caterpillar, Model C-27, rated at 1141 BHP and fired on ultra low sulfur diesel fuel. The ICE, will serve to provide power to the plant during blackout conditions. The engine is certified by the SCAQMD as an EPA Tier 2 engine on 12/31/2010. The engine is required to be permitted, rather than registered, because CPP is a RECLAIM/Title V facility.

The black start engine will be used only in emergency situations where grid power from the COA's 69 kV system is unavailable to start the CTs. The black start engine will provide power to the turbine starter motors and various other necessary pieces of support equipment to get one of the gas turbines started. Once one of the turbines has been started and providing power to the

grid, the black start engine will be shut down.

The SCAQMD's rules limit operation of an emergency ICE to 50 hours per year.

The black start engine incorporates a diesel particulate filter (DPF), which is required by LAER. The Caterpillar DPF is designed to control the particulate emissions from diesel engines. The DPF consists of 2 filters, each 15-inches diameter by 15-inches long. The DPF system has been verified by CARB under Executive Order DE-14-006-01 to reduce emissions of diesel particulate matter consistent with a Level 3 device (greater than or equal to 85 percent reduction), when used with ultra low sulfur diesel with 15 ppm or lower sulfur content. As the DPF is CARB verified, a source test is not required. With the DPF, the particulate matter emissions from the engine is reduced from 0.15 g/bhp-hr to 0.0225 g/bhp-hr.

The DPF consists of a catalyzed cordierite ceramic honeycomb with hundreds of parallel channels, is designed to reduce emissions of particulate, carbon monoxide and hydrocarbons. The catalyst on the ceramic walls oxidizes carbon monoxide into carbon dioxide, and hydrocarbons into water and carbon dioxide. The arrangement of the channels is such that the exhaust gases carrying the carbon particles are forced through the fine pores of the walls, which filter out the particles. As the carbon particles are collected on the ceramic walls, the backpressure on the engine will increase. When the temperature of the exhaust is equal to or greater than 300 ºC (572 ºF) for at least 30% of the duty cycle, the catalyst interacts with the collected particulates to burn the particulates into carbon dioxide and water vapor, which will pass through the DPF.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 1

COMPLIANCE MATRIX

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 SCAQMD COMPLIANCE

AQMD Requirement	Limit	Limit	Period	Unit 1 Done	Unit 1 Due	Unit 2 Done	Unit 2 Due	Unit 3 Done	Unit 3 Due	Unit 4 Done	Unit 4 Due	Canyon Site Done	Canyon Site Due
CEMS Calibration Stack and Turbine	each 24 hours	Daily prior to fires lit	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily		
NOx pounds		RECLAIM RTC Holdings per AQMD records 60 days after the end of each quarter	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily		
NOx pounds monthly Electronic			15 days at the end of the month									1/7/25	2/15/25
NOx pounds quarterly Electronic			30 days at the end of the Quarter									1/7/25	4/30/25
QCER			30 days at the end of the first 3 calendar Quarters									10/22/24	3/1/25
NOx pounds Annual Permit Emissions Program report (APEP)			60 days after the end of the calendar year									3/1/24	5/1/25
RATA - RECLAIM/Acid Rain		Relative accuracy test of CEMS equipment	Every Six months or annually if incentive is met	5/23/24	6/30/25	7/17/24	9/30/25	10/15/24	12/31/25	10/16/24	12/31/25		
RATA - CO Spiking 218			Annually	5/23/24	6/30/25	7/17/24	9/30/25	10/15/24	12/31/25	10/16/24	12/31/25		
Ammonia slip		5 PPM	Every quarter 1st year then annually	5/23/24	6/30/25	7/17/24	9/30/25	10/15/24	12/31/25	10/16/24	12/31/25		
Triennial Source Test (SOx, VOC, PM)		1.67 lb/hr; 2.0 ppm; .06 lb/MMbtu per unit	Every 3 years	7/21-22/20	9/30/23	7/26-27/23	9/30/26	10/24-25/23	12/31/26	10/26-27/2023	12/31/26		
Particulate PM (per Permit met the 3-year cycle on 2017)		1.67 lb/hr	Every 18 months in a 3 year period	2/8/16	not required	2/9/16	not required	11/4/15	not required	5/31/22	12/31/23		
Fuel Flow Meter	pass or fail	2% accuracy	Annually	4/9/24	4/9/25	4/8/24	4/8/25	4/8/24	4/8/25	4/9/24	4/9/25		
Fuel Temp & Press (PT-6227)	pass or fail	2% accuracy	Annually	12/14/24	12/17/25	12/6/24	12/6/25	12/12/24	12/12/25	12/9/24	12/9/25		
Fuel Temp & Press (TE-6332A/B)	pass or fail	2% accuracy	Annually	12/20/24	12/20/25	12/20/24	12/20/25	12/20/24	12/20/25	12/20/24	12/20/25		
SCR Inlet temperature probe calibration (TE-403A-D)			Annually	1/17/24	1/17/25	1/17/24	1/17/25	1/17/24	1/17/25	1/17/24	1/17/25		
SCR differential pressure calibration (DPIT 403)	pass or fail	2% accuracy	Annually	2/23/24	2/23/25	1/16/24	1/16/25	1/16/24	1/16/25	1/16/24	1/16/25		
Ammonia flow meter (X-Mitter)	pass or fail	2% accuracy	Annually	3/14/24	3/14/25	3/25/24	3/25/25	4/12/24	4/12/25	4/9/24	4/9/25		
CEMS enclosure Temperature element calibration	pass or fail	2% accuracy	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily		
Regenerate Diesel Particulate Filter			Every 24 Cold starts or Back Pressure (Yellow light) greater then 36 INCH/H2O									11/7/23	24 starts
Diesel NOx pounds quarterly electronic		RECLAIM RTC Holdings	15 days after the end of the quarter									1/7/25	4/30/25
Power Washer NOx Pounds Qtrly Electronic												1/7/25	4/30/25
Metal Coating Log - Rule 1107 (VOC)		Log coatings used on site	Annually									12/31/24	12/31/25
Natural Gas Sample analysis	Manufactures specifications	0.25 grains H2S/100 scf	Monthly									12/5/24	1/30/25
218 report (non-RECLAIM elements)		PPM & Emission Rates	Semi-annual									7/31/24	1/30/25
Title V Permit Renewal		Compliance Report	Every 5 years; Apply 180 days prior to expiration;									8/20/21	8/18/26
Title V 500 SAM Report		Compliance Report	Semi-annual									7/31/24	2/28/25
Title V 500 ACC Report		Compliance Report	Annually									2/8/24	3/1/25
Annual Emissions Report (AER)		Compliance Report	75 days at the end of calendar year									3/11/24	5/1/25
RECLAIM equipment breakdown	Upon Discovery	Upon Discovery	Verbal report to AQMD within 1 hour of discovery										
Non-RECLAIM equipment breakdown	Upon Discovery	Upon Discovery	Verbal report to AQMD within 24 hours of discovery										
Stack NOx Limit	2.5 parts per million	2.5 PPM	60 minute average										
Ammonia Slip Limit	5 parts per million	5 PPM	60 minute average										
Start-up NOx Limit	14.27 pounds	14.27 lbs per 60 min	60 minute average										
Shut-down NOx Limit	4.07 pounds	4.07 lbs per 60 min	10 minutes average										
**Maintenance Operations NOx Limit	44.0 pounds	44.0 lbs in any hour	60 minute average										
CO Limit	4.0 parts per million	4 PPM	60 minute average										
Start-up CO Limit	11.6 pounds	11.6 lbs per 60 min	60 minute average										
Shut-down CO Limit	4.15 pounds	4.15 lbs per 60 min	10 minute average										
**Maintenance Operations CO Limit	19.5 pounds	19.4 lbs in any hour	60 minute average										
ROG Limit	2.0 parts per million	2 PPM	60 minute average										
Start-up ROG Limit	1.29 pounds	1.29 lbs per 60 min	60 minute average										
Shut-down ROG Limit	1.27 pounds	1.27 lbs per 60 min	10 minutes average										
VOC Limit	412 pounds	412 lb/mo per unit	Monthly										
PM-10 Limit	540 pounds	540 lb/mo per unit	Monthly										
SOX Limit	108 pounds	108 lb/mo per unit	Monthly										
VOC Limit	3608 pounds	3608 lbs/yr per unit	Annual										
PM-10 Limit	4822 pounds	4822 lbs/yer per unit	Annual										
SOX Limit	971 pounds	971 lbs/year per unit	Annual										
Start-ups Limit	240 pounds	540 starts per unit	Year										

*** Met Incentive**

****Maintenance**- optimizing and re-balancing fo the NH3 grid or catalyst modules, and the retuning and testing of the turbine control system.

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 SCAQMD 500-N REPORTS

No.	Unit No.	Description	AQMD Permit Limit	Actual Emissions	Duration	Date of Episode	Reported to AQMD	500N sent to AQMD	Inspector Site Visit	Notice of Violation	Responsible	Resolution/Comments

No Form 500-N Reports were required to be submtted to SCAQMD

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 ENFORCEMENT ACTION NOTICES

NOV	P79467	Failure to conduct Triennial and NH3 source test in 2023	9/26/24	Unit is in outage. Variance granted.		Hernandez	Canyon seeked variance and was granted

*Wating for porsecutor letter

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 CEC REPORTING

CEC Requirement	Period	Last Done	Next Due	Responsibility	Comments
CEC 1304	varies one to two months after the quarter	1/16/25	4/30/25	Hoffard/Hernandez	
CEC 1304b	Semi-Annual	1/27/25	7/30/25	Sun/Hoffard	
CEC Annual Report	30 days at end of calender year	1/30/25	1/31/26	Hoffard/Hernandez	
CEC Quarterly Operations Report	30 days at end of each quarter	1/28/25	4/30/25	Hoffard/Hernandez	
Building and structure inspection	Semi-annually	12/30/24	6/30/25	Hernandez	
Legionella/TDS - PM10 calculation	Quarterly	12/9/24	3/15/25	Hernandez/ALS	

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 CAISO REPORTING

CAISO Requirement	Period	Canyon Site Done	Canyon Site Due	Canyon Site Done	Canyon Site Due	Responsibility	Comments
		Spring		Fall			
Planned Outage Schedule	Annual Spring & Fall Outages	5/5/25	5/9/25	12/1/25	12/21/25	Vo	
CAISO MOD 027 / 026 / 027	5 Years			12/31/20	12/31/25	Hoffard	Replaces WECC testing

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 CAL ARP

California Accidental Release Prevention Program	Period	Last Done	Next Due	Responsibility
Hazard Review - 19% Aqua Ammonia System	Every 5 years	03/15/20	3/14/25	Hoffard/AFD
Compliance Audit	Every three years	4/18/23	4/30/26	Mario Salguero
Ammonia Sensor Testing	Semi Annual	1/22/25	7/1/25	Hoffard/Salguero
Ammonia Emergency Stop (E-Stop) Test	Annual	12/4/24	12/31/25	Hoffard

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 CAL RMP REPORTING

Cal. Refrigerant Management Program (RMP) Requirements (> 2000 lbs.)	Limit	Period	Last Done	Next Due	Responsible
Annual Report and Fee Payment	Not Applicable	Due Annually (March 1 Each Year)	2/7/24	3/1/25	Hernandez/Hoffard
Leak Detection System Audit and Cals.	Not Applicable	Due Annually	6/25/24	8/30/25	Hernandez/Hoffard

California Air Resources Board
Stationary Equipment Refrigerant Management Program (RMP)
Canyon Power Plant (CPP) Compliance Guidance

Compliance Year: **2024**

Facility Size Classification: Large (at least 1 unit w/≥ 2000 lbs high GWP-refrigerant capacity)

Annual Fee: **$370.00** (Fees must be paid annually by the reporting deadline)

No. of Refrigeration Systems: 2 (CH-100, CH-200)

Location(s): Both chillers are located in the Northeast portion of facility footprint, just South of two water storage tanks.

Refrigeration System Specifications

CH-100: Centrifugal Chiller w/5200 lbs R-123 (full charge), Trane, Model No. CDHF3000, Serial No. L10B00350;
> ALDS ID: **301-IRF A**: Vulcain/Honeywell, Model No. 301-EM, Concentration Monitor (Direct System), 2 Infared Sensors

			Done		
Last System Audit:	**Next audit target:**	6/30/2025	10/1/24	**Deadline:**	12/31/2024
Last Calibration:	**Next calibration target:**	6/30/2025	10/1/24	**Deadline:**	12/31/2024

CH-200: Centrifugal Chiller w/5200 lbs R-123 (full charge), Trane, Model No. CDHF3000, Serial No. L10A00882;
>ALDS ID: **301-IRF B**: Vulcain/Honeywell, Model No. 301-EM, Concentration Monitor (Direct System), 2 Infared Sensors

Last System Audit:	**Next audit target:**	6/30/2025	10/1/24	**Deadline:**	12/31/2024
Last Calibration:	**Next calibration target:**	6/30/2025	10/1/24	**Deadline:**	12/31/2024

CARB Reporting (due by 3/1 each year)

Last CARB Report: 2/7/2024 for 2023 **Next reporting deadline:** 3/1/2025 for 2024 (Fee payment due on or before this date)

Automatic Leak Detection System Requirements

●Each system must be audited and calibrated using manufacturer's recommended procedures to ensure that the system:

1.) accurately detects a concentration level of 10 parts per million of vapor of the specific refrigerant used in the system; and
2.) alerts the operator when a refrigerant concentration of 100 parts per million of vapor of the specific refrigerant is reached.

●The audit and calibration must be completed on each leak detection system at least once per calendar year.

●If an automatic leak detection system alerts plant operators, a leak inspection must be conducted within 24 hours after the system alert.
●This leak inspection must be completed using a calibrated refrigerant leak detection device or a bubble test to aonfirm a refrigerant leak and to determine the leak location(s).
●If during a required leak inspection or at any time oil residue is observed indicating a refrigerant leak, a leak inspection must be conducted using a calibrated refrigerant leak detection device or a bubble test to confrim the leak.
●A leak inspection must be conducted using a calibrated refrigerant leak detection device, a bubble test, or observation of oil residue, each time an additional refrigerant charge equal to or greater than 5 pounds, or one percent of the refrigeration system full charge (whichever is greater), is added to the system.

Leak Repairs and Subsequent Leak Inspection Requirements

●A refrigerant leak must be repaired by an EPA-certified technician holding a current and active C38 - Refrigerantion Contractor's license, or by an employee of a contractor with these qualifications.
> A contractor's license is not required if:
1.) a City employee services or repairs the system and wages are sole compensation; or
2.) the City performs the service or repair through one undertaking, or by one or more contracts, and the aggregate contract price for labor, materials, and all other items is less than $500; or
3.) the service or repair is performed pursuant to a contract entered into before 1/1/2011, by the City.

●Leaks must be repaired within 14 days of detection, unless a longer time period is allowed (*)

*45-day allowance if ANY of the following criteria is met:
1.) A certified technician is not available to complete the repair or replace the component(s). This must be documented in writing per recordkeeping requirements;
2.) The parts necessary to repair a refrigerant leak are unavailable, and the operator obtains a written statement from the refrigeration system or component manufacturer or distributor stating that the parts are unavailable. This must be documented in writing per recordkeeping requirements; or
3.) The re refrigerant leak repair requires an industrial process shutdown that results in a process temporarily ceasing to manufacture the intermediate or final product that is produced when the industrial process refrigeration appliance is in operation.

*120-day allowance if ALL of the following criteria is met:

1.) The facility is an entity subject to Mandetory Greenhouse Gas Emissions Reporting requirements;
2.) The refrigeration system is an industrial process refrigeration applicance;
3.) The refrigerant leak repair requires an industrial process shutdown that results in a process temporarily ceasing to manufacture the intermediate or final product that is produced when the industrial process refrigeration appliance is in operation; and
4.) Written records are maintained to document that all of the conditions are met.

●An initial verification test must be performed upon completion of refrigerant leak repairs.

●A follow-up verification test must be conducted on the complete refrigeration system after the initial verification test.

> If the system was evacuated during the refrigerant leak repair, then this test should be conducted when the system is operating at normal operating characteristics and conditions.
> If the system was not evacuated during the refrigerant leak repair, then the follow-up verification test requirement is satisfied once the required changes are made to return the refrigeration system to normal operating characteristics and conditions.

●If either the initial or follow-up verification tests indicate that a refrigerant leak is still occuring, the leak must be repaired within 14 days (unless a longer time period is allowed*).

> A retrofit or retirement plan may also be prepared in lieu of this repair.

●If a follow-up verification test indicates that a refrigerant leak has not been successfully repaired within the 14 days allowed, and no exemption has been received, then:

> successfully repair the leak within 45 days of the initial leak detection; or
> prepare a retrofit or retirement plan within 60 days of the initial leak detection.

●If a follow-up verification test indicates that a refrigerant leak has not been successfully repaired within the 45 days allowed (*), and no exemption has been received, then:

> prepare a retrofit or retirement plan within 60 days of the initial leak detection.

●If a follow-up verification test indicates that a refrigerant leak has not been successfully repaired within the 120 days allowed (*), and no exemption has been received, then:

> prepare a retrofit or retirement plan within 135 days of the initial leak detection.

Retrofit or Retirement Plan Requirements

●If required to prepare a retirement or retrofit plan, the plan must establish a schedule to retrofit or retire the leaking system no later than six months after the intial leak detection, and all work must be completed during the 6-month period.
●The plan must be kept on-site where the leaking system is located.
●If a refrigeration system is to be retired and replaced, the plan must include information specific to the new refrigeration system to be constructed or installed. (**)
●If a refrigeration system is to be retrofitted, the plan must include information specific to the refrigeration system after the retrofit has been completed. (**)

** A retrofit or retirement plan must include the following information:

1.) The system identification number of the refrigeration system being retired or retrofitted;
2.) equipment type;
3.) equipment manufacturer;
4.) equipment model or description;
5.) intended physical location of the refrigeration system through schematic or floor plan with locations clearly noted;
6.) temperature classification (i.e., low, medium, other);
7.) full charge of refrigeration system;
8.) type of refrigerant used;
9.) if the refrigeration system is to be retired and replaced, a plan to dispose of the retired system;
10.) a timetable which includes, at a minimum:
    > the date installation, construction, or retrofit of the refrigeration system is expected to begin, and
    > the expected completion date of the installation, construction, or retrofit of the refrigeration system; and
11.) A signature by a representative of the facility, including the date.

●If the system is being mothballed, these requirements do not apply until the day that the refrigeration system resumes operation at a facility.
●If an exemption has been received, then the preparation and implementation of a retrofit or retirement plan is not required during the exemption time period. If an exemption request has been submitted, then the plan preparation or implementation is not required until a final exemption determination is made.

Recordkeeping Requirements

●Maintain the following records for a minimum of 5 years:

1.) All registration information required by the rule;
2.) documentation of all leak detection systems, leak inspections, and automatic leak detection system annual audit and calibrations;
3.) records of refrigeration system service and refrigerant leak repairs, and any documentation of conditions allowing repair to be

conducted more than 14 days after leak detection;

4.) retrofit or retirement plans;
5.) all CARB reports;
6.) any application for exemption, and any notification of an exemption approved, denied, revoked, or modified;
7.) invoices for all refrigerant purchases;
8.) records of all shipments of refrigerants for reclamation or destruction, to include:
    - > Name and address of the person the refrigerant was shipped to;
    - > Weight in pounds of refrigerant shipped;
    - > type of refrigerant shipped;
    - > date of shipment;
    - > purpose of shipment (i.e., reclamation, destruction, etc.);
9.) records of all refrigeration systems component data, measurements, calculations and assumptions used to determine the full charge.

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 CITY REPORTING

Anaheim Requirement	Period	Last Done	Next Due	Responsibility
Certified (Facility) Fire Protection Systems Inspection	Semi-Annual	12/12/24	5/10/25	Hoffard
Electric protection relays	10-years	12/1/21	12/1/31	Hoffard
8-Hour refresher HAZWOPER	Annual	5/15/24	5/30/25	Hoffard/Salguero
Oil Spill Prevention, Control and Countermeasure Plan	5-years	10/12/23	12/21/28	McCaffrey/Hoffard
Hazardous Materials Business Plans (CERS)	Annual	1/30/23	1/30/25	Salguero/Hernandez

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 EIA REPORTING

EIA Requirement	Period	Last Done	Next Due	Responsibility	Comments
EIA 860-A	Annual	3/7/24	3/1/25	Hernandez/Hoffard	
EIA-923-M	Monthly	12/12/24	1/30/25	Hernandez/Hoffard	

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 OSHA REPORTING

OSHA Requirement	Period	Unit 1 Done	Unit 1 Due	Unit 2 Done	Unit 2 Due	Unit 3 Done	Unit 3 Due	Unit 4 Done	Unit 4 Due	Canyon Site Done	Canyon Site Due	Responsible
LM6000 Overhead Crane inspection	Annually	11/15/24	11/30/25	10/14/24	10/31/25	10/14/24	10/31/25	11/15/24	11/31/2025			Vo/Hoffard
Warehouse Crane inspection	Annually									12/4/24	12/31/25	Vo/Hoffard
LM6000 Overhead Crane load test	Every 4 years	12/4/24	12/31/28	5/4/23	5/30/27	5/10/21	5/9/25	10/12/20	12/30/24			Vo/Hoffard
Warehouse Crane load test	Every 4 years									12/4/24	12/31/28	Vo/Hoffard
Fuel Gas system safeties - CTG	Tri-Annual									5/16/22	5/16/25	Vo/Hoffard
Fuel Gas system safeties - Gas Yard	Tri-Annual									5/16/22	5/16/25	Vo/Hoffard
Instrument Air system safeties	Every 5 years									10/30/21	10/30/26	Vo/Hoffard
Ammonia tank system safeties	Updated Every 4 years									6/21/21	6/20/25	Vo/Hoffard
Air Pressure tank inspection / permit renewal	Every 5 years									11/1/21	11/1/26	Hoffard/HSB insurance

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 EPA REPORTING

EPA Requirement	Period	Unit 1 Done	Unit 1 Due	Unit 2 Done	Unit 2 Due	Unit 3 Done	Unit 3 Due	Unit 4 Done	Unit 4 Due	Responsible
Linearity Test	anytime within the quarter	10/29/24	3/30/25	10/29/24	3/30/25	10/30/24	3/30/25	10/31/24	3/30/25	Hernandez/Hoffard
Electronic Data Report (EDR) EPA	30 days at the end of the Quarter	1/16/25	4/30/25	1/16/25	4/30/25	1/16/25	4/30/25	1/16/25	4/30/25	Hernandez/Hoffard
Greenhouse gas monitoring report	Annually	3/19/24	3/31/25	3/19/24	3/31/25	3/19/24	3/31/25	3/19/24	3/31/25	Hernandez/Hoffard
EPA Form 500 ACC	Annually	2/8/24	3/1/25	2/8/24	3/1/25	2/8/24	3/1/25	2/8/24	3/1/25	Hernandez/Hoffard

Spill Prevention, Control and Countermeasures Plan	Period	Last Done	Next Due	Responsibility	Comments
SPCC Facility Inspection	Monthly	12/3/24	1/30/25	Hernandez	

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 FIRE CODE REPORTING

Fire Code Requirement	Period	Last Done	Next Due	Responsibility
Fire detection system certification	Annual	5/13/24	5/30/25	Vo/Hoffard/Fire Protection Systems
Fire detection system inspection	Semi-annual	12/12/24	5/30/25	Vo/Hoffard/Fire Protection Systems
CO 2 cylinder (weight)	Annual	5/13/24	5/30/25	Vo/Hoffard/Fire Protection Systems

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 OCSD REPORTING

OCSD Requirement	Period	Last Done	Next Due	Responsibility
Permit # 1-600296				
Effluent Meter reading Report	Monthly	1/6/25	2/20/25	Operator/Hoffard/Hernandez
Effluent Sample collection (BOD/TSS)	semi-annual	10/11/23	4/30/25	Sanks/Hernandez/Hoffard
Effluent Meter Certification/Cal	Annual	1/17/24	1/17/25	Sanks/Hernandez/Hoffard
Class I Permit Renewal	every 2 years	3/31/23	3/31/25	Sanks/Hernandez/Hoffard
Backflow Inspection	Annual	2/29/24	2/29/25	Hernandez/Hoffard
Reclaim Water Testing (City of Anaheim)	Every 4 years	12/16/20	12/30/24	Hoffard/Hernandez

CANYON POWER PLANT COMPLIANCE MATRIX

CY 2024 WQMP REPORTING

Storm Drain Systems	Period	Last Done	Next Due	Responsibility
Catch Basins (25) inspection	Semi-Annual (in-house)	7/22/24	6/30/25	Hernandez/Hoffard
Infiltration Vault	Annual Inspection	7/22/24	6/30/25	Hernandez/Hoffard
Contech Storm Filters	Annual Inspection	7/22/24	6/30/25	Hernandez/Hoffard

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 2

FACILITY OPERATIONAL STATUS REPORT

Overall Project Status

Canyon Power Plant construction was completed in August 2011. Units 3 and 4 were ready for commercial operation on July 27, 2011. Units 1 and 2 were ready for commercial operation on September 15, 2011.

All four gas turbines were in commercial operation for the entire compliance year 2024.

No changes to the operational status of the facility implemented or planned in CY 2024.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 3

CEC APPROVED POST CERTIFICATION CHANGES

No California Energy Commission (CEC) approved post certification changes

On August 19, 2021 South Coast AQMD issued the final Title V Facility Permit Renewal and no revisions or changes in CY 2024.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 4

MISSED SUBMITTAL DEADLINES

Canyon Power Plant submitted all required compliance reports on the due dates and no missed submittal deadlines for CY 2024.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 5

PERMIT FILINGS AND PERMITS ISSUED

DURING THE PERIOD

Canyon Power Plant submitted a Title V Renewal application and SCAQMD issue the final Title V Facility Permit to Canyon Power Plant on August 19, 2021 and expires August 18, 2026.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 6

PROJECTED COMPLIANCE TESTING

FOR CY 2024

Projected Environmental Compliance Testing schedule in CY 2025:

Compliance Test	Frequency	Scheduled Quarter
NH3 Slip Test	Annual	3Q; 4Q
RATA Test	Annual or Semi-Annual	3Q; 4Q
Cooling Tower TDS/PM10	Quarterly	All four Quarters
Cooling Tower Legionella	Quarterly	All four Quarters
Fuel H_2S Test	Monthly	January through December
Fuel Flow Accuracy	Annual	2Q
SCR Differential Pressure	Annual	2Q
SCR Inlet Temperature	Annual	2Q
NH3 Flow Meter Calibration	Annual	2Q
Linearity/CGA Test	Quarterly	All four Quarters
PM10/SO_2/VOC	Triennial	3Q; 4Q
PM10	Every 18 months for 3 years	4Q

CANYON POWER PLANT

VARIOUS COMPLIANCE REPORTS

ATTACHMENT 7

ADDITIONS TO ON-SITE COMPLIANCE FILE

PLANT COMPLIANCE REPORTS

California Energy Commission (CEC)

- Quarterly reports
- Quarterly 1304 Report
- Annual report
- Potable water used records
- Cooling Tower Legionella test report
- Cooling Tower TDS test reports
- Monthly Natural gas burn records
- Monthly Reclaim water used reports
- Monthly Potable water used reports

California Independent System Operator (CAISO)

- Certificate of Compliance

California Air Resource Board (CARB)

- Greenhouse gas records
- Annual refrigerant report
- Annual SF6 use report
- Refrigerant monitor calibration report

Diesel Engine

- Maintenance Reports
- Fuel purchase records
- Engine run-time records
- Hi-Back calibration report
- Engine tune up report

U.S. Energy Information Administration (EIA)

- Annual/Monthly EIA 923 report
- Annual EIA 860 report

Environmental Protection Agency (EPA)

- Part 98 Greenhouse Gas reports
- Certificate of Representation forms
- Quarterly Acid Rain report
- Quarterly Acid Rain report & feedback report
- Annual Form 500-ACC

Regional Clean Air Market (RECLAIM)

- Daily submittals
- Monthly submittals
- Quarterly submittals
- SCAQMD QCER Forms
- SCAQMD 500-N Forms
- SCAQMD 500-SAM Forms
- SCAQMD 500-ACC Form
- SCAQMD APEP Form
- SCAQMD AER Report
- SCAQMD Rule 218 Semi-annual reports
- RECLAIM RTC holdings records

South Coast Air Quality Management District (SCAQMD)

- NOV & NTCs issued by the SCAQMD
- SCAQMD responses to 500-N forms
- Monthly Natural H_2S gas test reports

Orange County Sanitation District (OCSAN)

- Monthly Effluent Water reports
- Semi-annual

Calibration Records

- Fuel flow meter calibration report
- Water flow meter calibration report
- NH3 flow meter calibration report
- SCR DP transducer calibration report
- SCR inlet temperature transducer Cal report
- SCR outlet temperature transducer Cal report

Calibration gas logs

- Linearity test reports
- Part 75 RATA test reports
- RECLAIM RATA test reports
- Rule 218 (CO) RATA test reports
- NH3 slip test reports

Triennial compliance testing

- VOC, PM10 and ROG emissions

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 8

UN-PLANNED FACILITY CLOSURE PLAN REVIEW

An "Un-Planned Facility Closure Plan" was drafted and submitted to the California Energy Commission (CEC) in the First Quarter of 2014. Currently, no revisions or changes are required.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 9

Notice of Violation or Notice to Comply Issued in CY 2024

One (1) Notice of Violation
Issued by a Regulatory Agency in the CY 2024

No Notices to Comply
Issued by a Regulatory Agency in the CY 2024

South Coast Air Quality Management District
21865 COPLEY DRIVE, DIAMOND BAR, CA 91765-4178

P 79467

NOTICE OF VIOLATION

DATE OF VIOLATION		
Month	Day	Year
07	23	2023

Facility Name	Facility ID#	Sector
CANYON POWER PLANT	153992	OE

Location Address	City	Zip
3071 E MIRALOMA AVE.	ANAHEIM	92806

Mailing Address	City	Zip
201 S. ANAHEIM BLVD.	ANAHEIM	92805

YOU ARE HEREBY NOTIFIED THAT YOU HAVE BEEN CITED FOR ONE OR MORE VIOLATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULES, STATE LAW OR FEDERAL LAW. IF PROVEN, SUCH VIOLATION(S) MAY RESULT IN THE IMPOSITION OF CIVIL OR CRIMINAL PENALTIES.

EACH DAY A VIOLATION OCCURS MAY BE HANDLED AS A SEPARATE OFFENSE REGARDLESS OF WHETHER OR NOT ADDITIONAL NOTICES OF VIOLATION ARE ISSUED.

DESCRIPTION OF VIOLATIONS

#	Authority*	Code Section or Rule No.	SCAQMD Permit to Operate or CARB Registration No.	Condition No. (If Applicable)	Description of Violation
1	☑ SCAQMD ☐ CH&SC ☐ CCR ☐ CFR	2004 (f)(1)		D29.3	FAILURE TO CONDUCT TRIENNIAL SOURCE TESTING FOR POLLUTANTS SOX, PM, AND VOC EMISSIONS
2	☑ SCAQMD ☐ CH&SC ☐ CCR ☐ CFR	3002 (c)(1)			FAILURE TO OPERATE ALL EQUIPMENT IN COMPLIANCE WITH ALL TERMS, REQUIREMENTS AND CONDITIONS SPECIFIED IN THE TITLE V PERMIT AT ALL TIMES.
3	☐ SCAQMD ☐ CH&SC ☐ CCR ☐ CFR				
4	☑ SCAQMD ☐ CH&SC ☐ CCR ☐ CFR	2004 (f)(1)		D29.2	FAILURE TO CONDUCT ANNUAL AMMONIA SLIP TEST FOR DEVICE ID D1 IN THE 2023 COMPLIANCE YEAR
5	☐ SCAQMD ☐ CH&SC ☐ CCR ☐ CFR				

Served To	Phone	Served By	Date Notice Served
BERTHA HERNANDEZ	(714) 765-7481	AVELINO REVILLA	09/26/2024

Title	Email	Phone No.	Email
ENV SERVICES SPECIALIST	BHERNANDEZ@ANAHEIM.NET	☑ 909-396-2577 ☐ 310-233-	arevilla@aqmd.gov

*Key to Authority Abbreviations:
SCAQMD – South Coast Air Quality Management District
CCR – California Code of Regulations
CH&SC – California Health and Safety Code
CFR – Code of Federal Regulations

Method of Service: ☐ In Person ☑ Certified Mail

ORIGINAL

SCAQMD FORM 500-N
Title V – Deviations, Emergencies & Breakdowns
Submitted by Canyon Power Plant

Canyon Power Plant did not experience any Deviations, Emergencies & Breakdowns in CY 2024

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 10

CONDITION HAZ-1

List of Hazardous Materials contained at the facility:

- **Aqua Ammonia 19%**
- **Acetylene**
- **Argon**
- **Oxygen**
- **Batteries**
- **Bromine**
- **Calibration gases for the CEMS**
- **CO_2**
- **Diesel Fuel**
- **Fire suppression chemicals**
- **Florescent light bulbs**
- **Freon for the chiller systems R-123**
- **Gas Turbine oil**
- **Gas compressor oil**
- **Reagents for the water treatment system**
- **SF6 in switch gear**
- **Anti-scalent RL 9007**
- **ChemTreat BL124**
- **Microbiocide ChemTreat CL2156**
- **ChemTreat CL6855**
- **12.5% Sodium Hypochlorite Solution**
- **Simple Green**
- **ChemTreat CL41**
- **ChemTreat CL6855**
- **Powerback Concentrate with Anti-Foam Agent**
- **Unleaded gasoline**
- **Propane**

1a*	201	205	207*	209	210a
CERSID	ChemicalLocation	ChemicalName	CommonName	CASNumber	PFCodeHazardClass
10445230	12 kV Substation, Electrical Building (BPO EEE Room)		Lead Acid Batteries		5
10445230	GAS COMPRESSOR YARD	Natural Gas	Natural Gas	8006-14-2	8
10445230	SHOP-WAREHOUSE	Oxygen	Oxygen Gas	7782-44-7	18
10445230	SHOP-WAREHOUSE	Acetylene	Acetylene	74-86-2	33
10445230	DRUM STORAGE AREA	Oil	WASTE OIL	8012-95-1	4
10445230	DRUM STORAGE AREA		POWERBACK CONCENTRATE WITH ANTIFOAM AGENT		
10445230	DRUM STORAGE AREA		Simple Green		
10445230	WATER TREATMENT		ChemTreat CL6855		5
10445230	WATER TREATMENT		ChemTreat CL 2156		5
10445230	WATER TREATMENT		ChemTreat BL 124		5
10445230	WATER TREATMENT		MICROBIOCIDE CL206 CHEMTREAT		
10445230	Chiller Enclosure	Freon R-123	Freon	306-83-2	
10445230	IN FIRE FIGHTING EQUIPMENT - VARIOUS AREAS	CARBON DIOXIDE	CO2	124-38-9	
10445230	SUBSTATION BUILDING	SULFUR HEXAFLUORIDE	SF6	2551-62-4	
10445230	SHOP-WAREHOUSE	PROPANE	PROPANE	74-98-6	8
10445230	WAREHOUSE, NEAR EXHAUST TOWERS, & MEE BLDG		CALIBRATION GAS		
10445230	NEAR COOLING TOWER AND IN DRUM STORAGE AREA		SODIUM HYPOCHLORITE SOLUTION		5
10445230	NEAR COOLING TOWER AND IN DRUM STORAGE AREA		BIOCIDE (CHEMTREAT CL41)		
10445230	IN TRANSFORMERS		MINERAL OIL		4
10445230	NATURAL GAS COMPRESSORS AND DRUM STORAGE AREA		MOBIL PEGASUS 805 OIL		4
10445230	HYDRAULIC STARTERS AND DRUM STORAGE AREA		MOBIL DTE 25 OIL		4
10445230	ELECTRIC GENERATORS AND DRUM STORAGE AREA		MOBIL DTE LIGHT OIL		4
10445230	IN TURBINE ENGINES and DRUM STORAGE AREA		MOBIL JET OIL II		3
10445230	BENEATH BACK-UP GENERATOR		DIESEL FUEL		2
10445230	AMMONIA STORAGE TANK		AQUA AMMONIA (19%)		5
10445230	RO WATER TREATMENT & DRUM STORAGE AREA		ANTISCALENT RL 9007		

CALIFORNIA AIR RESOURCES BOARD

File Report for "City of Anaheim"

Year of Filing: 2023 **Submitted Date: 2/7/2024**

Submitted By: Data Import

Company Profile

Company Name: **City of Anaheim**

Contact Person Details

Person Name: **Ronald Hoffard**

Phone: **Contact: 7147654536**

Email: **rhoffard@anaheim.net**

Location Address Information

3071 East Miraloma Ave.
Anaheim, CA 92806

Facility Profile

Facility Name: **Canyon Power Plant** Federal tax Id:

Contact Person Details

Person Name: **RonaldHoffard**

Phone: **Contact: 7147654536**

Email: **rhoffard@anaheim.net**

Location Address Information

3071 East Miraloma Ave.
Anaheim, CA 92806

Business Codes

NAICS Code: 221122 SIC Code: 491100

Annual Report Information and Documentation

Service Record data is not available in violation of C.C.R. §95388(b)(2) ☐
ALD Servicing data is not available in violation of C.C.R. §95388(b)(2) ☐
Reason :

Appliance Listing

	Appliance Name	Appliance ID	Operational Status	Equipment Type	Full Charge Amount	Installation Date	Refrigeration Type
1	CH-100	APP-0000197	Normal Operation	Chiller (Refrigera...	5200	Wednesday, May ...	R-123 - HCFC-123
2	CH-200	APP-0000198	Normal Operation	Chiller (Refrigera...	5200	Wednesday, May ...	R-123 - HCFC-123

Automatic Leak Detection (ALD) Systems

	ALD System Name	ALD System Id	Installation Date	Leak Detection System Type
1	301-IRF A	APP-0046128	2011-05-12	Concentration Monitor (Direct

Leak Inspection and Service Listing

	Service Date	Appliance Name	Appliance Id	Refrigerent Type	Service Type
1	2023-05-03	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
2	2023-05-02	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
3	2023-04-25	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
4	2023-04-26	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
5	2023-04-27	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
6	2023-04-27	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
7	2023-04-28	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
8	2023-04-28	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
9	2023-05-01	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-05-01	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-05-03	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-05-04	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-05-04	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-05-05	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-07-19	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-07-19	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-07-20	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-09-01	CH-100	APP-0000197	R-123 - HCFC-123	Seasonal Adjustr
1..	2023-09-01	CH-200	APP-0000198	R-123 - HCFC-123	Seasonal Adjustr

Automatic Leak Detection (ALD) Servicing

	Service Date	ALD System Name	ALD System Id
1	2023-09-01		APP-0046128

Refrigerant Purchase and Use Information

	Type	Total Purchased (lbs.)	Total Charged (lbs.)	Total Stored (lbs.)	Total Shipped (lbs.)	Total R
1	R-123 - HCFC-123	0	0	0	0	0

Do you claim any of this information is confidential under California law?

No

Enter claim of Confidentiality :

Comment :

CONTACT US

rmp@arb.ca.gov (mailto:rmp@arb.ca.gov) | 916-324-2517 (tel: 916-324-2517)
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812

CALIFORNIA
AIR RESOURCES BOARD
Phone: (916) 324-2517
Email: rmp@arb.ca.gov
URL: https://ww2.arb.ca.gov/our-work/programs/refrigerant-management-program

Invoice Detail

Invoice No: 127034 **Invoice For Year:** 2023 **ARB REFERENCE CODE:** RMP **Dated:** 02/07/2024

City of Anaheim				
#	Facility Name	Amount Due($)	Exemption	Total ($)
1	Canyon Power Plant (CIT003-001)	370.00	0	370.00
TOTAL CHARGES				370.00

Please return a copy on the invoice with your payment to the address below.
"Checks should be made payable to the California Air Resources Board.
If required for your company records, the CARB Federal Tax ID is 68-0288069. A $10 service fee may apply for returned checks."

Air Resources Board

Attn: Accounting

P.O. Box 1436

1001 I St., Floor 20

Sacramento, CA 95812-1436

CALIFORNIA
AIR RESOURCES BOARD
Phone: (916) 324-2517
Email: reftrackinfo@arb.ca.gov

Online Payment Receipt

Invoice No:	**127034**	**Dated:**	**2024-02-07**
Invoice For Year:	**2023**		
Payment Amount:	**$370.00**		
ARB Reference Code:	**RMP**		
Transaction Time:	**02/07/2024 08:37:29 AM**		
Payment Transaction Id:	**070224C2A-BCC75CFC-FCE3-426A-9F61-E7BB3AB1F24D**		
Payment Result:	**APPROVAL**		
Payment Approval Code:	**007202**		

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 11

CONDITION HAZ-8

In the annual compliance report, the project owner shall include the following statements:

"All current project employee and appropriate contractor background investigations have been performed and that updated certification statements have been appended to the operations security plan".

All current project employee and appropriate contractor background investigations have been performed and that updated certification statements have been appended to the operations security plan.

"The operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations".

The operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 12

SOIL & WATER USE REPORT-7

Monthly Water Reading Reports
Recycle and Potable water usage
&
Wastewater Flow Meter Calibration Report

Company: City of Anaheim/Canyon Power Plant
Plant Location: 3071 E. Miraloma Ave.
City/State/Zip: Anaheim, CA 92806

Period Start: 1/1/2024
Period End: 12/31/2024

Recycle Water Usage

Annual Total Gallons	Annual Total Acre Feet	Monthly Average Gallons	Monthly Average Acre Feet	Monthly Minimum Gallons	Monthly Minimum Acre Feet	Monthly Maximum Gallons	Monthly Maximum Acre Feet	Average Gallons Per Day
11,343,430	34.81	945,286	2.90	269,298	0.83	2,524,669	7.75	30,884

Company: City of Anaheim/Canyon Power Plant
Plant Location: 3071 E. Miraloma Ave.
City/State/Zip: Anaheim, CA 92806

Period Start: 1/1/2024
Period End: 12/31/2024

Potable Water Usage

Annual Total Gallons	Annual Total Acre Feet	Monthly Average Gallons	Monthly Average Acre Feet	Monthly Minimum Gallons	Monthly Minimum Acre Feet	Monthly Maximum Gallons	Monthly Maximum Acre Feet	Average Gallons Per Day
253,140	0.78	10,548	0.03	0.00	0.00	158,587	0.49	343

Annual Data

	Recycle Water		Potable Water	
	Annual Total Acre Feet	Annual Total Gallons	Annual Total Acre Feet	Annual Total Gallons
2022	60.40	19,681,196	2.34	763,654
2023	605.98	197,459,018	0.87	284,319
2024	34.81	11,343,430	0.78	253,140
Average	233.73	76,161,215	1.33	433,704
Min	34.81	11,343,430	0.78	253,140
Max	605.98	197,459,018	2.34	763,654

Company: City of Anaheim
Plant Location: 3071 E. Miraloma Ave.
City/State/Zip: Anaheim, CA 92806

Period Start: 1/1/2024
Period End: 12/31/2024

Recycled Water Usage

Date	Start Cubic-ft	End Cubic-ft	Total Cubic-ft	Month gal	Daily gal	Month Acre-ft
1/1/2024	29,200,100	29,374,100	174,000	1,301,607.00	41,987.32	3.99
2/1/2024	29,374,100	29,414,000	39,900	298,471.95	10,659.71	0.92
3/1/2024	29,414,000	29,459,100	45,100	337,370.55	10,882.92	1.04
4/1/2024	29,459,100	29,513,000	53,900	403,198.95	13,439.97	1.24
5/1/2024	29,513,000	29,573,900	60,900	455,562.45	14,695.56	1.40
6/1/2024	29,573,900	29,697,100	123,200	921,597.60	30,719.92	2.83
7/1/2024	29,697,100	30,034,600	337,500	2,524,668.75	81,440.93	7.75
8/1/2024	30,034,600	30,247,700	213,100	1,594,094.55	51,422.40	4.89
9/1/2024	30,247,700	30,431,600	183,900	1,375,663.95	45,855.47	4.22
10/1/2024	30,431,600	30,587,200	155,600	1,163,965.80	37,547.28	3.57
11/1/2024	30,587,200	30,680,500	93,300	697,930.65	23,264.36	2.14
12/1/2024	30,680,500	30,716,500	36,000	269,298.00	8,687.03	0.83
		Annual Total:	1,516,400	11,343,430.20		34.81
		Average:	126,367	945,285.85	30,883.57	2.90
		Monthly Minimum:	36,000	269,298.00		0.83
		Monthly Maximum:	337,500	2,524,668.75		7.75

Company: City of Anaheim
Plant Location: 3071 E. Miraloma Ave.
City/State/Zip: Anaheim, CA 92806

Period Start: 1/1/2024
Period End: 12/31/2024

Potable Water Usage

HCF-1

Date	Start Cubic-ft	End Cubic-ft	Total Cubic-ft	Month gal	Daily gal	Month Acre-ft
1/1/2024	1,150,500	1,150,500	0.00	0.00	0.00	0.00
2/1/2024	1,150,500	1,150,500	0.00	0.00	0.00	0.00
3/1/2024	1,150,500	1,150,500	0.00	0.00	0.00	0.00
4/1/2024	1,150,500	1,150,600	100.00	748.05	24.94	0.00
5/1/2024	1,150,600	1,150,600	0.00	0.00	0.00	0.00
6/1/2024	1,150,600	1,150,600	0.00	0.00	0.00	0.00
7/1/2024	1,150,600	1,171,800	21,200.00	158,586.60	5,115.70	0.49
8/1/2024	1,171,800	1,171,800	0.00	0.00	0.00	0.00
9/1/2024	1,171,800	1,171,800	0.00	0.00	0.00	0.00
10/1/2024	1,171,800	1,171,800	0.00	0.00	0.00	0.00
11/1/2024	1,171,800	1,171,800	0.00	0.00	0.00	0.00
12/1/2024	1,171,800	1,171,800	0.00	0.00	0.00	0.00
		Annual Total:	21,300.00	159,334.65		0.49
		Average:	1,775.00	13,277.89	428.39	0.04
		Monthly Minimum:	0.00	0.00		0.00
		Monthly Maximum:	21,200.00	158,586.60		0.49

HCF-2

Date	Start Cubic-ft	End Cubic-ft	Total Cubic-ft	Month gal	Daily gal	Month Acre-ft
1/1/2023	297,821	298,623	802	5,999.36	193.53	0.02
2/1/2023	298,623	299,399	776	5,804.87	207.32	0.02
3/1/2023	299,399	299,771	372	2,782.75	89.77	0.01
4/1/2023	299,771	300,349	578	4,323.73	144.12	0.01
5/1/2023	300,349	301,038	689	5,154.06	166.26	0.02
6/1/2023	301,038	301,989	951	7,113.96	237.13	0.02
7/1/2023	301,989	304,297	2,308	17,264.99	556.94	0.05
8/1/2023	304,297	305,347	1,050	7,854.53	253.37	0.02
9/1/2023	305,347	307,133	1,786	13,360.17	445.34	0.04
10/1/2023	307,133	308,218	1,085	8,116.34	261.82	0.02
11/1/2023	308,218	309,158	940	7,031.67	234.39	0.02
12/1/2023	309,158	310,361	1,203	8,999.04	290.29	0.03
		Annual Total:	12,540.00	93,805.47		0.29
		Average:	1,045.00	7,817.12	256.69	0.02
		Monthly Minimum:	372.00	2,782.75		0.01
		Monthly Maximum:	2,308.00	17,264.99		0.05

Summary for both meters

Annual Total:	33,840.00	253,140.12		0.78
Average:	1,410.00	10,547.51	342.54	0.03
Monthly Minimum:	0.00	0.00		0.00
Monthly Maximum:	21,200.00	158,586.60		0.49

WASTEWATER FLOW METER
HYDRAULIC CALIBRATION

PREPARED BY

Flowtrace
A Division of The Conservtech Group

FOR

City of Anaheim
Canyon Power Plant
3071 E. Miraloma Ave.
Anaheim, CA 92806

I.W. Permit No. 1-600296

January 16, 2025

The Conservtech Group / Flowtrace Division | 5875 Rickenbacker Road | Commerce | California | 90040
phone: 323-867-9044 | fax: 323-867-9045

EFFLUENT FLOW METER CALIBRATION REPORT

Company Name: City of Anaheim Permit No.: 1-600296

Discharge Address: 3071 E. Miraloma Ave. Anaheim, CA 92806

Mailing Address: 201 S. Anaheim Blvd. Suite 1101 Anaheim, CA 92805

Meter Location *[Use Meter Location Form (page 3) to identify location]*

☐ a ☐ b ☐ c ☐ d ☒ Other: (Attach sketch)

Effluent Meter Description

Open Channel

A. Flume:
- ☐ Parshall Flume
- ☐ Palmer-Bowlus Flume
- ☐ Trapezoidal
- ☐ Other, Specify:

B. Weir.
- ☐ V-notch
- ☐ Rectangular
- ☐ Trapezoidal
- ☐ Other, Specify:

C. Other
Description:

In-line
- ☒ Magnetic
- ☐ Propeller
- ☐ Ultrasonic
- ☐ Other, Specify:

Effluent Meter Description

Primary Element

Size: 4"

Manufacturer: Badger

Meter Series 2000

Secondary Element

Manufacturer: N/A

Recorder's 100% span = N/A GPM

Totalizer Units: = 1 Gallons per Count

Sampling Signal Contact Closure Frequency: 1 closure per N/A gallons discharged.

Current Facility Wastewater Discharge Rate to Sewer Determined by Calibration Engineer

Average -- GPM

Peak -- GPM

EFFLUENT FLOW METER CALIBRATION REPORT

5. Calibration Results

Type of Calibration: [X] Hydraulic [ ] Instrument

Calibration System		Existing Meter				Error (%)	
			Flow Rate, GPM				
Flow Rate GPM	Total Discharge Gallons	Primary Element's Head	Indicator	Recorder	Total Discharge Gallons	Recorder	Totalizer
285.6	1010	--	288.8	--	1017	--	0.7%
201.3	771	--	200.4	--	773	--	0.3%
148.3	546	--	149.8	--	550	--	0.7%
102.6	412	--	102.3	--	411	--	-0.2%

A copy of all data collected and of any calculations performed must be attached to this form.

6. Method of Calibration Results *(attach additional sheets if necessary)*

Hydraulic: (For in line flow meters describe calibration/simulator system)

Various flow rates were achieved using 125' of 2.5" fire hose connected from a local hydrant to our 2" Halliburton turbine flow meter, then to the subject 4" M2000 Badger magnetic flow meter. At each rate tested, the subject flow meter's totalizer was timed using an electronic stopwatch for a number of counts. The accumulated volume was then compared to the actual volume to determine the totalizer's accuracy.

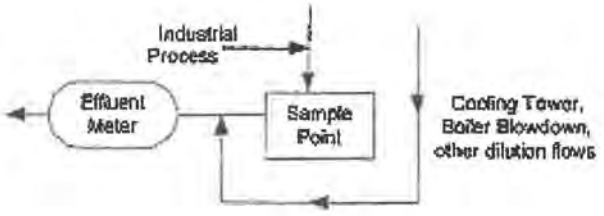
Instrument:

7. Corrective Measures *(describe condition of flow meter prior to calibration and state if any adjustments were made):*

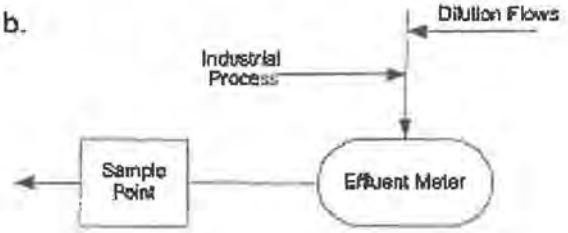
No corrective measures were required.

EFFLUENT FLOW METER LOCATION FORM

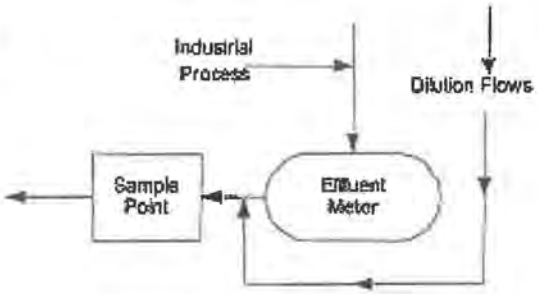
☐ a.



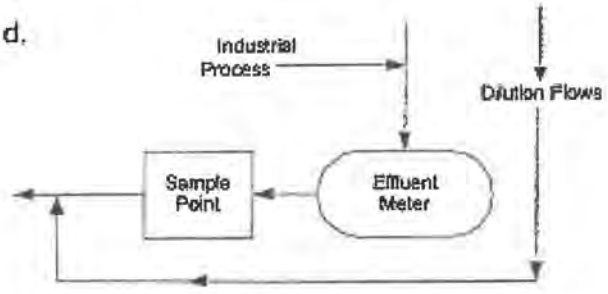
☐ b.



☐ c.



☐ d.

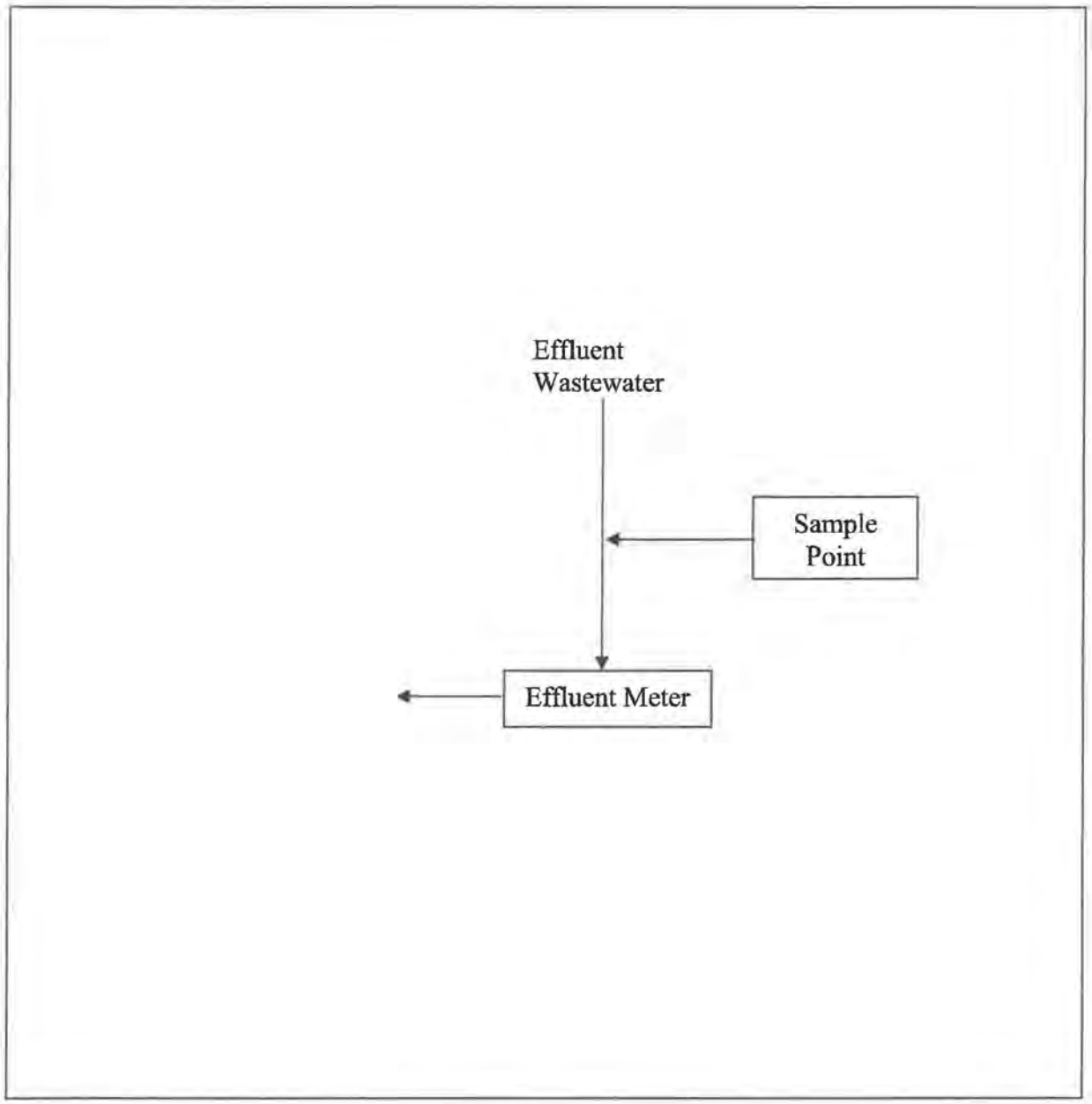


☒ Other

Please provide a schematic of the location of the effluent flow meter

Attachment:

Effluent Flow Meter Location



EFFLUENT FLOW METER MAINTENANCE RECORDS

Company Name: City of Anaheim Permit No.: 1-600296

Discharge Address: 3071 E. Miraloma Ave., Anaheim, CA 92806

Mailing Address: 201 S. Anaheim Blvd., Suite 1101, Anaheim, CA 92805

Name of Responsible Person : Bertha A. Hernandez Telephone No. 714-765-4243

Recorder's 100% span = N/A GPM Totalizer: 1 Gallons per Count

Type of Flow Meter: 4" Badger Meter Series 2000

Recorder Chart Change Frequency: ☐ Daily ☐ Weekly ☐ Monthly *(not applicable)*

REGULAR CLEANING MAINTENANCE				
Primary Element Cleaned	Level Measuring Equipment Cleaned	Other (describe)	Date	By
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	02/11/15	Yip / Paz
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	02/11/16	Yip / Paz
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	02/09/17	Yip / Paz
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/10/18	Yip / Vitug
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/10/19	Paz / Gomez
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/10/20	Yip / Gomez
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/20/21	Yip / Gomez
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/20/22	Yip / Gomez
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/09/23	Yip / Paz
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/17/24	Yip / Gomez
N/A	N/A	Hydraulic Calibration by Flowtrace Division of The Conservtech Group	01/16/25	Yip / Paz

CERTIFICATION OF CALIBRATION CHECK

(Certification of Test Results by a California Registered Professional Engineer)

I hereby certify that I am knowledgeable in the field of wastewater flow measurement and that I have supervised the calibration of the flow monitoring system as described on the previous page, and also have reviewed and approved all details of the method of calibration. I consider the calibration method and procedures used to be technically sound, and assume professional responsibility for the validity and accuracy of the results reported.

(Signature)

Marco A. Gomez, P.E.
(Full Name – Please Print or Type)

REGISTERED PROFESSIONAL ENGINEER
MARCO A GOMEZ
M 40596
Exp 12/31/25
MECHANICAL
STATE OF CALIFORNIA

M40596 Expires 12/31/25	**Mechanical**	1/20/25
(California Professional Engineering Certification No.)	(Engineering Discipline)	(Date)

CERTIFICATION OF TEST RESULTS BY
AN ADMINISTRATIVE OFFICIAL OF THE COMPANY

City of Anaheim	**1-600296**
(Company Name)	(Permit No.)

I hereby certify that the flow monitoring system certified as properly calibrated above is so arranged and operated, so as to accurately measure and record the industrial wastewater flow to the sewer system.

(Signature)

RON HOFFARD
(Full Name – Please Print or Type)

GENERATION PLANT MGR.	1/23/25
(Administrative Position in Company)	(Date)

Appendix:

Field Calibration Data
Calibration Certificate

Recorder:

MAX = -- GPM

AVG = --

PK = --

Sampler:

Contact Closure = N/A gallons/pulse

Totalizer:

Finish: 120955338

Start: 120949859

Diff: 5479

MULT: 1

Total: 5479 gallons

Client: City of Anaheim - Canyon Power Plant

Date: 1/16/25 IW#: 1-600296

Element: 4" Pipe

Instrument: 4" Badger Meter M2000

Recorder : --

Calibrated Flows and Data

Turbine		Manometer - inches					Duration	Total	Meter		Recorder			Totalizer	
									W.C.	Flow	Reading		Error	Total	Error
cycles	gpm	+	-	Δ	w.c.	gpm	min	gal	in.	gpm	%	gpm	%	gal	%
	285.6						3.52	1,010		288.8				1017	0.7
	201.3						3.83	771		200.4				773	0.3
	148.3						3.68	546		149.8				550	0.7
	102.6						4.02	412		102.3				411	-0.2

Calibration Type

____ Instrumentation

X Hydraulic

Hydraulic Meter Used:

____ Turbine Meter, 1", Haliburton, Threaded

____ Turbine Meter, 1.5", XO Technologies, 150# Flange

X Turbine Meter, 2", Haliburton, flanged

____ Turbine Meter, 4", XO Technologies, 150# Flange

____ Turbine Meter, 4", Haliburton, flanged

____ Other: _____

K: 4.86

Notes:

① 952354 − 951337 = 1017 @ 3:31

② 953580 − 952807 = 773 @ 3:50

③ 954447 − 953897 = 550 @ 3:41

④ 955182 − 954771 = 411 @ 4:01

DICK MUNNS COMPANY
FLOW & GAS FLOW CALIBRATION

ISO 17025:2017 ACCREDITED LABORATORY
Cert# CL-122

IAS ACCREDITED Calibration Laboratory

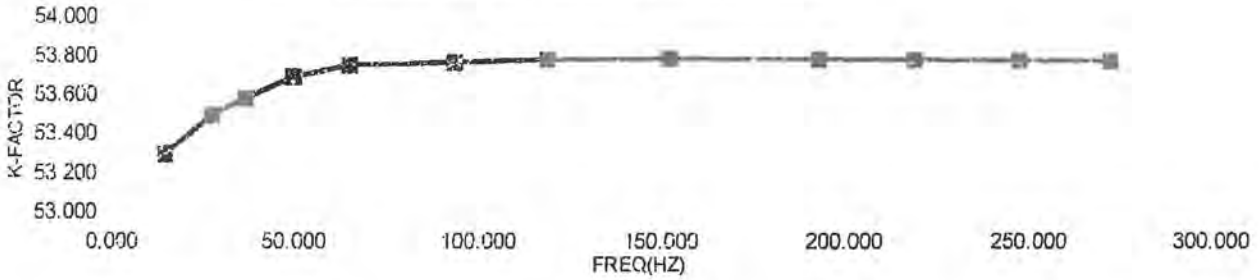
CERTIFICATE OF CALIBRATION

CUSTOMER:	**CONSERVTECH** COMMERCE, CA	**CALIBRATION DATE:**	08/07/24
VSR NUMBER:	9708	**CALIBRATION DUE:**	08/07/25
INST. MANUFACTURER:	HALLIBURTON	**PROCEDURE:**	NAVAIR17-20MG-01
INST. DESCRIPTION:	TURBINE METER	**CALIBRATION FLUID:**	H2O @ 70°F
MODEL NUMBER:	458.99101 (2")	**ARRIVAL CONDITIONS:**	WITHIN MFG. SPEC.
SERIAL NUMBER:	2SBF3677	**RETURNED CONDITIONS:**	WITHIN MFG. SPEC.
RATED ACCURACY:	+/- .5% R.D.	**AMBIENT CONDITIONS:**	762mmHGA 46%RH 73°F
UNCERTAINTY GIVEN:	TOTAL measurement uncertainty +/-.151% RD K=2	**CERTIFICATE FILE #:**	503393.2024

NOTES: ** CALIBRATED WITH DMC. MAG COIL **

DECISION RULE: SIMPLE ACCEPTANCE. MEASUREMENT UNCERTAINTIES NOT TAKEN INTO CONSIDERATION WHEN DETERMINING PASS/FAIL

TEST POINT NUMBER	INDICATED UUT FREQ(HZ)	DM.STD. ACTUAL GPM	ACTUAL K-FACTOR PUL|GAL.
1	14.654	16.524	53.209
2	27.495	30.889	53.407
3	36.783	41.256	53.494
4	49.605	55.524	53.604
5	64.689	72.325	53.665
6	93.159	104.128	53.679
7	118.700	132.640	53.694
8	152.253	170.112	53.701
9	192.886	215.526	53.697
10	218.823	244.521	53.694
11	247.266	276.325	53.690
12	272.387	304.415	53.687



STANDARDS USED:

A716 ENDRESS & HAUSER .2 – 300 GPM .1% RD TRACE# 1615794932,1615795146	DUE	09/15/24
A610 ENDRESS & HAUSER 0 – 11 GPM .1%RD TRACE# 1615794932,1615795146	DUE	04/17/25

All instruments used in the performance of the shown calibration have traceability to the National Institute of Standards and Technology (NIST). The uncertainty ratio between the calibration standards (DM.STD.) and the Unit Under Test (UUT) is a minimum of 4:1, unless otherwise noted. Calibration has been performed according to the shown procedure. The use of IAS/ILAC logo indicates calibrations are in accordance to ISO/IEC 17025:2017.

Dick Munns Company · 11133 Winners Circle, Los Alamitos, CA 90720
Phone: 714-827-1215 · www.dickmunns.com

Issuing Date: 8-7-2024

Approved By:

Cal. Technician: EA

Calibrated at: ✓ Lab
___ On-Site (Customer's)

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 13

SOIL & WATER REPORTS-8

OCSD Wastewater Quality Semi-Annual Monitoring Reports

TX Result Report

P 1
04/30/2024 10:36
Serial No. A79J012000004
TC: 721332

Addressee	Start Time	Time	Prints	Result	Note
917143781277	04-30 10:35	00:01:21	008/008	OK	

Note TMR:Timer TX, POL:Polling, ORG:Original Size Setting, FME:Frame Erase TX, DPG:Page Separation TX, MIX:Mixed Original TX, CALL:Manual TX, CSRC:CSRC, FWD:Forward, PC:PC-FAX, BND:Double-Sided Binding Direction, SP:Special Original, FCODE:F-code, RTX:Re-TX, RLY:Relay, MBX:Confidential, BUL:Bulletin, SIP:SIP Fax, IPADR:IP Address Fax, I-FAX:Internet Fax

Result OK: Communication OK, S-OK: Stop Communication, PW-OFF: Power Switch OFF, TEL: RX from TEL, NG: Other Error, Cont: Continue, No Ans: No Answer, Refuse: Receipt Refused, Busy: Busy, M-Full:Memory Full, LOVR:Receiving length Over, PDVR:Receiving page Over, FIL:File Error, DC:Decode Error, MDN:MDN Response Error, DSN:DSN Response Error, PRINT:Compulsory Memory Document Print, DEL:Compulsory Memory Document Delete, SEND:Compulsory Memory Document Send.

CITY OF ANAHEIM

PULIC UTILITIES DEPARTMENT
Environmental Services
Letter of Transmittal

To:	Ms. Kiranpreet Kaur Orange County Sanitation District Resource Protection Division 10844 Ellis Avenue Fountain Valley, CA 92708-7018	Date:	04/30/2024
		Project	Canyon Power Plant 3071 E. Miraloma Ave. Anaheim, CA 92806
		Subject:	Semi-Annual Self-Monitoring SMR # S-190688

We are sending you:

Copy of Original	Description
1	Completed Semi-Annual Form OCSD Self-Monitoring Form for City of Anaheim Canyon Power Plant (Permit No. 1-600296).

These are transmitted:

[1] As requested [ ] For your action [ ] For your files
[ ] For approval [ ] For your review [ ] For your information

Via: [ ] US Mail [X] FAX # 8 of pgs. [ ] Hand Delivery
(714) ~~525-7789~~ 378-1277

Remarks: Please contact me at (714) 765-7481 or bhernandez@anaheim.net if you have any questions regarding this submittal.

By: Bertha A Hernandez, Environmental Services Specialist

CITY OF ANAHEIM
PULIC UTILITIES DEPARTMENT
Environmental Services
Letter of Transmittal

To:	Ms. Kiranpreet Kaur Orange County Sanitation District Resource Protection Division 10844 Ellis Avenue Fountain Valley, CA 92708-7018	Date:	04/30/2024
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[ ]	For approval	[ ]	For your review	[ ]	For your information

Via: [ ] US Mail [X] FAX # 8 of pgs. (714) ~~593-7799~~ 378-1277 [ ] Hand Delivery

Remarks: Please contact me at (714) 765-7481 or bhernandez@anaheim.net if you have any questions regarding this submittal.

BAH

By: Bertha A Hernandez, Environmental Services Specialist

NR KN

OC SAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

SMR No.: S-190688
SMR Type: Standard
City of Anaheim, Public Utilities Department
General Pretreatment Regulations For Existing And New Sources Of Pollution

Permit No. 1-600296

Sampling Dates: **04/01/2024 to 04/16/2024**
Submit By Date: **04/30/2024**
Sample Start Date: 04/09/2024
Sample End Date: 04/10/2024
Sample Start Time: 11:45 AM
Sample End Time: 11:45 AM
Sampling Point Location: Sampling Structure located in the center of the site

Contact Person: RONALD HOFFARD
Contact Phone: 714 765-4536
Contact Email: RHOFFARD@ANAHEIM.NET

☐ **No Discharge**

Water Meter Readings: *(If this is a batch discharge, enter volume only)*

Location	Meter Type	Meter ID	Stop Reading	Start Reading	Volume	Units	Digits	Int
Center of site adjacent to the final clarifier/vault	Effluent Flow Meter	EM_1_600296	117,332,539	117,326,095	6444	G	9	

Composite

Sample Results: *(If constituent is not detected or is less than detection limit, enter as reported in the lab results.)*

Constituent	Result	Units	EPA Method
BOD T	2.03	mg/L	SM 5210B
TSS	ND	mg/L	SM 2540D

Sample Comments:

Please note that OC San's fax number has changed. Please use the new fax number (714) 378-1277 effective immediately if submitting completed form by fax.

To Submit Data - Fax: (714) 378-1277 or
Mail: Orange County Sanitation District, Resource Protection Division, 10844 Ellis Avenue, Fountain Valley, CA, 92708-7018

Questions: Contact Noemi Ramos at 714-593-7035

RH Ronald Hoffard, please initial each page and submit all pages

NR KN

OCSAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

SMR No.: S-190688
SMR Type: Standard
City of Anaheim, Public Utilities Department
General Pretreatment Regulations For Existing And New Sources Of Pollution

Permit No. 1-600296

This form must be completely filled out and Laboratory Analysis Report and Chain of Custody must be attached.

Please check if composite sample was obtained using an automatic sampling device: (✓) Yes ( ) No

In accordance with 40 CFR 403.12, the results presented herein must be verified and signed under penalty of perjury by: (i) a responsible corporate officer; (ii) general partner or proprietor; or (iii) a representative who has responsibility for the overall operation of the permitted facility, who has been authorized by the corporate officer, general partner or proprietor to sign such reports, and such authorization has been made in writing and submitted to the District.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.[40 C.F.R. § 403.6(a)(2)(ii) (2005)]

R Hoffard — 4.30.2024

Signature (Ronald Hoffard) **Title (Generation Plant Manager)** **Date**

RONALD HOFFARD

Print Name

To Submit Data - Fax: (714) 378-1277 or
Mail: Orange County Sanitation District, Resource Protection Division, 10844 Ellis Avenue, Fountain Valley, CA, 92708-7018

Questions: Contact Noemi Ramos at 714-593-7035

RH Ronald Hoffard, please initial each page and submit all pages

NR KN

OCSAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

SMR No.: S-190688
SMR Type: Standard
City of Anaheim, Public Utilities Department
General Pretreatment Regulations For Existing And New Sources Of Pollution

Permit No. 1-600296

Sample Location: Compliance

Meter Type	Equipment Name	Event ID	Start - End Date	Reading End	Reading Start	Vol	
EFFLUENT	EM_1_600296	190687	10/11/2023 - 10/12/2023	115602738 Gallon	115585420 Gallon	17318	GPD
EFFLUENT	EM_1_600296	190686	4/10/2023 - 4/11/2023	112345479 Gallon	112324360 Gallon	21119	GPD

To Submit Data - Fax: (714) 378-1277 or
Mail: Orange County Sanitation District, Resource Protection Division, 10844 Ellis Avenue, Fountain Valley, CA, 92708-7018

Questions: Contact Noemi Ramos at 714-593-7035

RH Ronald Hoffard, please initial each page and submit all pages

ALS Group USA, Corp.
3337 Michelson Drive, Suite CN750
Irvine, CA 92612
T +1 714 730 6239

Report

Client: **Canyon Power Plant**
3071 E Miraloma Ave
Anaheim, CA 92806

Attention: Bertha Hernandez
Project Name: Canyon Power Plant Semi-Annually Wastewater
Project Number: Canyon Power Plant
P.O. Number: MA-106-491110 (exp 8/31/18)

Work Order No.: 24D0066
Printed: 04/30/2024

CASE NARRATIVE

Date & Time Installed: 04/09/24 @ 11:45 AM
Date & Time Removed: 04/10/24 @ 11:45 AM
Flow Start Number: 117326095 GAL
Flow Stop Number: 117332539 GAL
Total Flow, GPD: 6444

SAMPLE RECEIPT SUMMARY

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
1-600296 Composite	24D0066-01	Wastewater	Composite	04/10/2024 12:05	04/10/2024 17:06

DEFINITIONS

Symbol	Definition
SC	Seed Control oxygen depletions were outside the method acceptance limit.
DF	Dilution Factor
MDL	Method Detection Limit
ND	Not Detected
RL	Reporting Limit

Respectfully yours,

Shelly Brady

Shelly Brady
Program Manager - Env. and Nutraceutical

Client: Canyon Power Plant

Project Name: Canyon Power Plant Semi-Annually Wastewater
Project Number: Canyon Power Plant
Printed: 04/30/2024

1-600296 Composite

24D0066-01 (Wastewater)

Analyte	Result	RL	Units	DF	Batch	Analyzed	Analyst	Method	Notes
ALS Group USA, Corp.									
Wet Chemistry									
Total Suspended Solids	ND	2.50	mg/L	1	2404388	04/16/2024 10:00	AxE	SM 2540 D	
General Chemistry									
Biochemical Oxygen Demand	**2.03**	2.00	mg/L	1	2404302	04/16/2024 15:44	AEG	SM 5210B - 5 Day	SC

1-600296 Composite

24D0066-01RE1 (Wastewater)

Analyte	Result	RL	Units	DF	Batch	Analyzed	Analyst	Method	Notes
ALS Group USA, Corp.									
Wet Chemistry									
Total Dissolved Solids	**63.0**	25.0	mg/L	1	2404432	04/25/2024 11:16	AxE	SM 2540 C	

24D0066

CHAIN OF CUSTODY

3337 Michelson Drive, Suite CN750, Irvine CA 92618
T: (714) 730-6239
F: (714) 730-6462

DATE: 4/8 - 4/9/24
REQUESTED TURNAROUND TIME: _____
PAGE: _____ of

Key:

Preservatives:			Sample Container Type:			EDD Req's:		
	H= HCl	S= H_2SO_4		A= Amber Glass	T= Tube		Excel EDD	Other (Specify):
	N= HNO_3	T= $Na_2S_2O_3$		M= Metal	V= VOA		CSV EDD	
	O= NaOH	Z= $Zn(AC_2)$		P= Poly	O= Other		EDT	If selecting EDT, Client provide PS Code:

Client Information

COMPANY: CITY OF ANAHEIM, CANYON POWER PLANT
CONTACT: VICTOR CARNAGGIO/Ronald Hoffard
PHONE: (714) 765-4260/(714) 765-4 EMAIL: _____
ADDRESS: 3071 E. MIRALOMA AVE., ANAHEIM, CA 92806

Project Name: Permit 52-2-758 Semi-Annual
Sampled By: _____ (SIGNATURE)

REQUESTED TEST(S): Refer to Analyses Sheet for Codes

SAMPLE I.D.	DATE	TIME	MATRIX	TDS	TSS	BOD	NUMBER OF CONTAINERS
Container Type:							
Preservative:							
52-2-758	4-10-24	12:05	WW Comp	X	X	X	3

For Internal Use Only

Work Order:

Field Data Testing Results (if applicable)

1. Sampler Start Date & Time: _____ AM/PM
Sampler End Date & Time: _____ AM/PM
2. Day 1: Meter Read Date & Time: _____ AM/PM
Day 2: Meter Read Date & Time: _____ AM/PM

Start (C.F. or Gal)	Stop (C.F. or Gal)
1.	1.
2.	2.
3.	3.
4.	4.

Total Flow: _____

Free Cl_2	Total Cl_2	Field pH (Grab)	Temp.°C (Grab)
		7.99	25.7 C

Chain of Custody Signature Record

	Relinquished by Signature	Company/ Agency	Date/ Time
1.	[signature]	ALS	4-10-24/1700
2.	[signature]	ALS	17:06
3.			
4.			
5.			
6.			

Received by Signature / Company/ Agency / Date/ Time

Instructions/Comments

Bill/Ship To: Southern California Public Power Authority

3 TOTAL NUMBER OF CONTAINERS

Sample Conditions Upon Receipt (For Internal Use Only):

Temp. (°C): 3.1 C

	Yes	No	NA
COC received and signed?	☐	☐	☐
Letter (if sent) matches COC?	☐	☐	☐
Requested Analyses acceptable?	☐	☐	☐
Samples received in a chilled condition?	☐	☐	☐
Samples intact?	☐	☐	☐
Custody seals (if any) intact?	☐	☐	☐
Analyses within hold time?	☐	☐	☐

NR KN

OCSAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

March 15, 2024

Ronald Hoffard, Generation Plant Manager
City of Anaheim, Public Utilities Department
201 S. Anaheim Blvd., #802
Anaheim, CA 92805

Subject: **REMINDER TO CONDUCT SELF-MONITORING**
Permit No. 1-600296

Please be reminded that Self-Monitoring must be conducted between **April 01, 2024 -- April 16, 2024** in accordance with your company's permit requirements. Self-Monitoring must be conducted during a production day in accordance with the guidelines detailed in your company's permit.

It is your responsibility to comply with the requirements set forth in your company's permit. Failure to comply with all the directives, conditions, and requirements of the permit may result in enforcement action against your company.

If your company's permit shows a self-monitoring requirement for total toxic organics (TTOs) and your company has received a waiver from this self-monitoring, you are now required to submit a signed TTOs SMR form to us to comply with the TTO waiver requirements of the U.S. Environmental Protection Agency. Please indicate in the "Sample Comments" that you have received a TTOs self-monitoring waiver from us.

For permittees that have monthly as well as quarterly and/or semi-annual self-monitoring requirements, the forms may list more than the SMR constituents required for the monthly self-monitoring. We ask that you adhere to your permit's self-monitoring requirements and sample only for the constituent(s) required on a monthly basis, except when the quarterly and semi-annual self-monitoring are also required in the same month, in which case all constituents listed on the form must be analyzed for as specified in your permit.

Finally, for those who are required to submit meter readings, a list of the meter readings submitted within the last year is attached to the SMR form for your reference and comparison to current readings.

Thank you for your patience and cooperation. If you have any questions, please contact Jason Daniel at 714-593-7013.

Jason Daniel
Engineering Supervisor

TX Result Report

P 1
10/30/2024 09:30
Serial No. A7PY011022705
TC: 99546

Addressee	Start Time	Time	Prints	Result	Note
OCSD	10-30 09:29	00:01:20	008/008	OK	

Note TMR:Timer TX, POL:Polling, ORG:Original Size Setting, FME:Frame Erase TX, DPG:Page Separation TX, MIX:Mixed Original TX, CALL:Manual TX, CSRC:CSRC, FWD:Forward, PC:PC-FAX, BND:Double-Sided Binding Direction, SP:Special Original, FCODE:F-code, RTX:Re-TX, RLY:Relay, MBX:Confidential, BUL:Bulletin, SIP:SIP Fax, IPADR:IP Address Fax, I-FAX:Internet Fax

Result OK: Communication OK, S-OK: Stop Communication, PW-OFF: Power Switch OFF, TEL: RX from TEL, NG: Other Error, Cont: Continue, No Ans: No Answer, Refuse: Receipt Refused, Busy: Busy, M-Full:Memory Full, LOVR:Receiving length Over, POVR:Receiving page Over, FIL:File Error, DC:Decode Error, MDN:MDN Response Error, DSN:DSN Response Error, PRINT:Compulsory Memory Document Print, DEL:Compulsory Memory Document Delete, SEND:Compulsory Memory Document Send.

CITY OF ANAHEIM

PULIC UTILITIES DEPARTMENT
Environmental Services
Letter of Transmittal

To:	Mr. Brian Finkelstein Orange County Sanitation District Resource Protection Division 10844 Ellis Avenue Fountain Valley, CA 92708-7018	Date: Project Subject:	10/30/2024 Canyon Power Plant 3071 E. Miraloma Ave. Anaheim, CA 92806 Semi-Annual Self-Monitoring SMR # S-190689

We are sending you:

Copy of Original	Description
1	Completed Semi-Annual Form OCSD Self-Monitoring Form for City of Anaheim Canyon Power Plant (Permit No. 1-600296).

These are transmitted:

[1] As requested [ ] For your action [ ] For your files
[ ] For approval [ ] For your review [ ] For your information

Via: [ ] US Mail [X] FAX # 8 of pgs. (714) 378-1277 [ ] Hand Delivery

Remarks: Please contact me at (714) 765-7481 or bhernandez@anaheim.net if you have any questions regarding this submittal.

By: Bertha A Hernandez, Environmental Services Specialist

CITY OF ANAHEIM
PULIC UTILITIES DEPARTMENT
Environmental Services
Letter of Transmittal

To:	Mr. Brian Finkelstein Orange County Sanitation District Resource Protection Division 10844 Ellis Avenue Fountain Valley, CA 92708-7018	Date:	10/30/2024
		Project	Canyon Power Plant 3071 E. Miraloma Ave. Anaheim, CA 92806
		Subject:	Semi-Annual Self-Monitoring SMR # S-190689

We are sending you:

Copy of Original	Description
1	Completed Semi-Annual Form OCSD Self-Monitoring Form for City of Anaheim Canyon Power Plant (Permit No. 1-600296).

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Via: [ ] US Mail [X] FAX # 8 of pgs. (714) 378-1277 [ ] Hand Delivery

Remarks: Please contact me at (714) 765-7481 or bhernandez@anaheim.net if you have any questions regarding this submittal.

By: Bertha A Hernandez, Environmental Services Specialist

City of Anaheim Public Utilities Department
Environmental Services Division
200 S. Anaheim Boulevard, Suite 1101
Anaheim, CA 92807

NR KN

OCSAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

September 15, 2024

Ronald Hoffard, Generation Plant Manager
City of Anaheim, Public Utilities Department
201 S. Anaheim Blvd., #802
Anaheim, CA 92805

Subject: **REMINDER TO CONDUCT SELF-MONITORING**
Permit No. 1-600296

Please be reminded that Self-Monitoring must be conducted between **October 01, 2024 -- October 16, 2024** in accordance with your company's permit requirements. Self-Monitoring must be conducted during a production day in accordance with the guidelines detailed in your company's permit.

It is your responsibility to comply with the requirements set forth in your company's permit. Failure to comply with all the directives, conditions, and requirements of the permit may result in enforcement action against your company.

If your company's permit shows a self-monitoring requirement for total toxic organics (TTOs) and your company has received a waiver from this self-monitoring, you are now required to submit a signed TTOs SMR form to us to comply with the TTO waiver requirements of the U.S. Environmental Protection Agency. Please indicate in the "Sample Comments" that you have received a TTOs self-monitoring waiver from us.

For permittees that have monthly as well as quarterly and/or semi-annual self-monitoring requirements, the forms may list more than the SMR constituents required for the monthly self-monitoring. We ask that you adhere to your permit's self-monitoring requirements and sample only for the constituent(s) required on a monthly basis except when the quarterly and semi-annual self-monitoring are also required in the same month, in which case all constituents listed on the form must be analyzed for as specified in your permit.

Finally, for those who are required to submit meter readings, a list of the meter readings submitted within the last year is attached to the SMR form for your reference and comparison to current readings.

Thank you for your patience and cooperation. If you have any questions, please contact Brian Finkelstein at 714-593-7452.

Brian Finkelstein
Senior Engineer

NR KN

OC SAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

SMR No.: S-190689
SMR Type: Standard

City of Anaheim, Public Utilities Department
General Pretreatment Regulations For Existing And New Sources Of Pollution

Permit No. 1-600296

Sampling Dates: **10/01/2024 to 10/16/2024**
Submit By Date: **10/31/2024**
Sample Start Date: 10/07/2024
Sample End Date: 10/08/2024
Sample Start Time: 1620
Sample End Time: 1620
Sampling Point Location: Sampling Structure located in the center of the site

Contact Person: RONALD HOFFARD
Contact Phone: 714 765-4536
Contact Email: RHOFFARD@ANAHEIM.NET

☐ **No Discharge**

Water Meter Readings: *(If this is a batch discharge, enter volume only)*

Location	Meter Type	Meter ID	Stop Reading	Start Reading	Volume	Units	Digits	Int
Center of site adjacent to the final clarifier/vault	Effluent Flow Meter	EM_1_600296	120121870	120083106	38764	G	9	

Composite

Sample Results: *(If constituent is not detected or is less than detection limit, enter as reported in the lab results.)*

Constituent	Result	Units	EPA Method
BOD T	4.58	mg/L	SM 5210B
TSS	ND	mg/L	SM 2540D

Sample Comments:

Please note that OC San's fax number has changed. Please use the new fax number (714) 378-1277 effective immediately if submitting completed form by fax.

To Submit Data - Fax: (714) 378-1277 or
Mail: Orange County Sanitation District, Resource Protection Division, 18480 Bandilier Circle, Fountain Valley, CA, 92708

Questions: Contact Noemi Ramos at 714-593-7035

RH Ronald Hoffard, please initial each page and submit all pages

NR KN

OCSAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

SMR No.: S-190689
SMR Type: Standard
City of Anaheim, Public Utilities Department
General Pretreatment Regulations For Existing And New Sources Of Pollution

Permit No. 1-600296

This form must be completely filled out and Laboratory Analysis Report and Chain of Custody must be attached.

Please check if composite sample was obtained using an automatic sampling device: ( ) Yes ( ) No

This form must be signed by the Responsible Officer or Designated Signatory :

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.[40 C.F.R. § 403.6(a)(2)(ii) (2005)]

R Hoffard 10/30/14

Signature (Ronald Hoffard) **Title (Generation Plant Manager)** **Date**

RONALD HOFFARD

Print Name

To Submit Data - Fax: (714) 378-1277 or
Mail: Orange County Sanitation District, Resource Protection Division, 18480 Bandilier Circle, Fountain Valley, CA, 92708

Questions: Contact Noemi Ramos at 714-593-7035

RH Ronald Hoffard, please initial each page and submit all pages

NR KN

OCSAN
ORANGE COUNTY SANITATION DISTRICT

ORANGE COUNTY SANITATION DISTRICT
SELF-MONITORING FORM

SMR No.: S-190689
SMR Type: Standard
City of Anaheim, Public Utilities Department
General Pretreatment Regulations For Existing And New Sources Of Pollution

Permit No. 1-600296

Sample Location: Compliance

Meter Type	Equipment Name	Event ID	Start - End Date	Reading End	Reading Start	Vol	
EFFLUENT	EM_1_600296	190688	4/9/2024 - 4/10/2024	117332539 Gallon	117326095 Gallon	6444	GPD
EFFLUENT	EM_1_600296	190687	10/11/2023 - 10/12/2023	115602738 Gallon	115585420 Gallon	17318	GPD

To Submit Data - Fax: (714) 378-1277 or
Mail: Orange County Sanitation District, Resource Protection Division, 18480 Bandilier Circle, Fountain Valley, CA, 92708

Questions: Contact Noemi Ramos at 714-593-7035

Ronald Hoffard, please initial each page and submit all pages

ALS Group USA, Corp.
3337 Michelson Drive, Suite CN750
Irvine, CA 92612
T +1 714 730 6239

Report

Client: **Canyon Power Plant**
3071 E Miraloma Ave
Anaheim, CA 92806

Attention: Bertha Hernandez
Project Name: Canyon Power Plant Semi-Annually Wastewater
Project Number: Canyon Power Plant
P.O. Number: MA-106-491110 (exp 8/31/18)

Work Order No.: 24J0044
Printed: 10/25/2024

CASE NARRATIVE

Date & Time Installed: 10/7/2024 16:20 PM
Date & Time Removed: 10/8/2024 16:20 PM

Flow Start Number: 120083106 GAL
Flow Stop Number: 120121870 GAL
Total Flow, GPD: 38764

SAMPLE RECEIPT SUMMARY

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
1-600296 Composite	24J0044-01	Wastewater	Composite	10/08/2024 16:25	10/08/2024 18:20
1-600296 Grab	24J0044-02	Wastewater	Composite	10/08/2024 16:24	10/08/2024 18:20

DEFINITIONS

Symbol	Definition
SC	Seed Control oxygen depletions were outside the method acceptance limit.
C	Blank seeded oxygen depletions were above the method acceptable limit.
BD	Blank unseeded oxygen depletion was greater than the method acceptance limit.
DF	Dilution Factor
MDL	Method Detection Limit
ND	Not Detected
RL	Reporting Limit

Respectfully yours,

Zondria L. Tuggles For Shelly Brady
Program Manager - Env. and Nutraceutical

Client: Canyon Power Plant

Project Name: Canyon Power Plant Semi-Annually Wastewater
Project Number: Canyon Power Plant
Printed: 10/25/2024

1-600296 Composite

24J0044-01 (Wastewater)

Analyte	Result	RL	Units	DF	Batch	Analyzed	Analyst	Method	Notes
ALS Group USA, Corp.									
Wet Chemistry									
Total Dissolved Solids	174	50.0	mg/L	1	2410393	10/18/2024 13:26	SMC	SM 2540 C	
Total Suspended Solids	ND	2.50	mg/L	1	2410435	10/16/2024 07:45	LxH	SM 2540 D	
General Chemistry									
Biochemical Oxygen Demand	4.58	2.00	mg/L	1	2410294	10/14/2024 16:45	AEG	SM 5210B - 5 Day	BD, C, SC

1-600296 Grab

24J0044-02 (Wastewater)

Analyte	Result	RL	Units	DF	Batch	Analyzed	Analyst	Method	Notes
ALS Group USA, Corp.									
Field Measurements									
pH	7.00	0.01	N/A	1	2410275	10/08/2024 16:25	ZLT	EPA 150.2	

3337 Michelson Drive, Suite CN750, Irvine CA 92618
T: (714) 730-6239
F: (714) 730-6462

2450044

CHAIN OF CUSTODY

10/07 - 10/08/24 Key: Preservatives: H= HCl S= H_2SO_4 N= HNO_3 T= $Na_2S_2O_3$ O= NaOH Z= $Zn(AC_2)$ | Sample Container Type: A= Amber Glass T= Tube M= Metal V= VOA P= Poly O= Other | EDD Req's: Excel EDD CSV EDD EDT Other (Specify): If selecting EDT, Client provide PS Code:

____ of

REQUESTED TEST(S): Refer to Analyses Sheet for Codes

For Internal Use Only

Work Order:

Container Type:

Preservative:

8 Semi-Annual

TURE)

ME	MATRIX	TDS	TSS	BOD	Field pH	NUMBER OF CONTAINERS
t pm	WW Grab				X	
pm	WW Comp	X	X	X		

Field Data Testing Results (if applicable)

1. Sampler Start Date & Time: ____ AM/PM
   Sampler End Date & Time: ____ AM/PM
2. Day 1: Meter Read Date & Time: ____ AM/PM
   Day 2: Meter Read Date & Time: ____ AM/PM

Start (C.F. or Gal)	Stop (C.F. or Gal)
1.	1.
2.	2.
3.	3.
4.	4.

Total Flow:

Free Cl_2	Total Cl_2	Field pH (Grab)	Temp. °C (Grab)
		7	

nature Record

ALS 10-8-24 4:35 pm
Company/ Agency Date/ Time

ALS 10-8-24 6:19 pm
Company/ Agency Date/ Time

ALS 10-8-24 18:20
Company/ Agency Date/ Time

Company/ Agency Date/ Time

Company/ Agency Date/ Time

Company/ Agency Date/ Time

Instructions/Comments

Bill/Ship To: Southern California Public Power Authority

TOTAL NUMBER OF CONTAINERS

Sample Conditions Upon Receipt (For Internal Use Only):

Temp. (°C): 3.8

	Yes	No	NA
COC received and signed?	☐	☐	☐
Letter (if sent) matches COC?	☐	☐	☐
Requested Analyses acceptable?	☐	☐	☐
Samples received in a chilled condition?	☐	☐	☐
Samples intact?	☐	☐	☐
Custody seals (if any) intact?	☐	☐	☐
Analyses within hold time?	☐	☐	☐

OC Sanitation District

No Violations or Corrective Actions
To report for CY 2024

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 14

VIS-4

SURFACE TREATMENT OF PROJECT STRUCTURES AND BUILDINGS

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 14

VIS-4

SURFACE TREATMENT OF PROJECT STRUCTURES AND BUILDINGS

VIS-4: Surface Treatment of Project Structures and Buildings

Condition of Certification VIS-4 requires a status report of the surface treatment maintenance for the structures and buildings in the Annual Compliance Report. The report shall specify the following:

1. **The condition of surfaces of all structures and buildings at the end of the reporting year 2024:**
    a. Butler Building (Administrative and Warehouse)
    b. Main Electrical Enclosure (MEE)
    c. Balance of Plan (BOPEE)
    d. Substation Building
    e. Chiller
    f. RO Skid (open wall with roof sheet metal covering)
        i. The exterior building material is fabricated sheet metal. The colors and finishes do not create excessive glare and consistent with local policies and ordinances. All structure and buildings visual inspection showed no trouble items and all are in good working order.
    g. Gas Turbines (4 identical units)
2. **Maintenance activities that occurred in CY 2024:**
    a. May Planned Outage
        i. Semi-annual maintenance performed
    b. December Planned Outage moved to January 2024
        i. Semi-annual maintenance performed
3. **Schedule maintenance activities for CY 2024:**
    a. May 2024 Planned Outage
        i. Semi-annual maintenance
    b. January 2025 Planned Outage
        i. Semi-annual maintenance

Status report regarding condition of Structures and Buildings

The photographs (1/22/25) show the surface treatment of project structures and buildings. All buildings comply with condition VIS-4.

Warehouse Building

Administrative Building

Main Electrical Enclosure Building

Substation Building

Chiller Building

RO Skid Structure

Balance of Plant Building

LM 6000 Turbines

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 15

LANDSCAPE SCREENING

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 15

LANDSCAPE SCREENING

VIS-5: Landscape Screening

Condition of Certification VIS-5 requires a status report in the Annual Compliance Report regarding landscape maintenance activities. At the Canyon Power Plant the landscape maintenance activities were performed according to the contract and consistent with policies and requirements of the City of Anaheim plan and zoning ordinance.

The contracted company performed the following landscape maintenance activities:

Contracted Landscape Services – Landscape West Mgmt. Service, Inc. (Period: Jan 1, through December 31, 2024).

Activity Type	Frequency
Weed Control Landscape areas Hardscape areas Gravel areas	2x/wk. 1x/Mo
Fertilization Shrubs Ground cover Trees	2x/year
Pest Control Rodents	As needed
Irrigation Maintenance Inspect all Sprinklers/Systems	As needed
Trees Canopy Trees	As needed
Maintenance/Clean-Up Ground Cover and Shrubs Trash & Litter at Landscape area Trash & Litter at enclosed gravel areas Monthly Inspection	2x/wk.

The photographs below taken by staff on 1/22/2025 of the landscape maintenance demonstrating compliance pursuant VIS-5 condition:

Landscaping - Exterior Plants


Miraloma Avenue, south wall

East wall ivy

Landscaping - Interior Plants

Administration Building Planter

Admin and Warehouse Building Planter

Warehouse Planter

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 16

AQ-9
NH3 SLIP TESTING

TEST REPORT FOR
SECOND QUARTER 2024 AMMONIA SLIP TEST AT
CANYON POWER PLANT – UNIT 1
FACILITY ID: 153992, DEVICE ID: D1

Prepared For:

Canyon Power Plant
3071 E. Mira Loma Avenue
Anaheim, California 92806

For Submittal To:

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Prepared By:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705
(714) 279-6777

Rik Dupont

Test Date: **May 23, 2024**
Production Date: **June 26, 2024**
Report Number: **W002AS-042061-RT-6209**

MONTROSE AIR QUALITY SERVICES

STAC ACCREDITED TO ASTM D7036 ONLY CERT #3925.01

CONFIDENTIALITY STATEMENT

Except as otherwise required by law or regulation, this information contained in this communication is intended exclusively for the individual or entity to which it is addressed. This communication may contain information that is proprietary, privileged or confidential or otherwise legally exempt from disclosure. If you are not the named addressee, you are not authorized to read, print, retain, copy, or disseminate this message or any part of it.

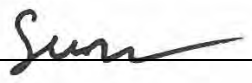
REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:  Date: 6/26/2024

Name: Rik Dupont Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  Date: 6/26/2024

Name: Surya Adhikari Title: Senior Reporting QC Specialist

TABLE OF CONTENTS

1.0 INTRODUCTION AND SUMMARY

Montrose Air Quality Services, LLC (MAQS) was contracted by the Canyon Power Plant to perform an ammonia slip test at Unit 1 as required by the facility Permit (Facility ID 153992) Condition Number D29.2. This report documents the results of the ammonia slip tests performed on May 23, 2024. The test was performed by John Peterson, Ray Madrigal, Jorge Contreras, and Victor Macedonio of MAQS. John Peterson and Victor Macedonio were the on-site Qualified Individual for MAQS. MAQS qualifies as an independent testing laboratory under SCAQMD Rule 304 (no conflict of interest) and is certified by the SCAQMD to conduct testing for criteria pollutants according to District Methods. Bertha Hernandez coordinated the test for Canyon Power Plant.

The test consisted of duplicate ammonia tests performed at 49 MW. The test program followed the procedures described in the initial compliance test protocol (MAQS document R038842). The results of the test are summarized in Table 1-1. The table shows that the ammonia slip from this unit was less than the permitted limit of 5 ppm corrected to 15% O_2.

TABLE 1-1
AMMONIA SLIP TEST RESULTS SUMMARY
CANYON POWER PLANT
UNIT 1
MAY 23, 2024

Parameter/Units	Result(1)	Limit
NH_3		
ppm	1.7	--
ppm at 15%O_2	1.6	5

(1) Maximum of duplicate runs, as required by SCAQMD Method 207.1.

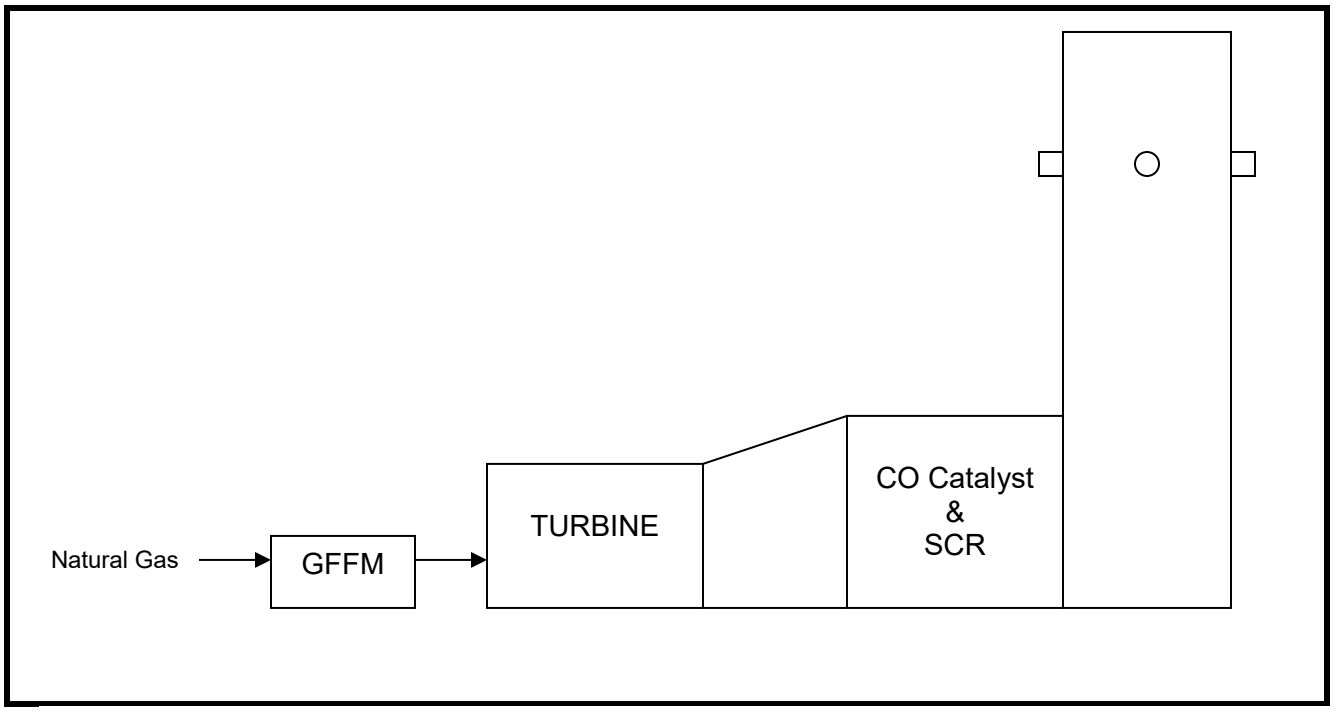
Section 2 of this document provides a brief description of the unit, test conditions, sample location, and CEMS. Details of the test procedures are provided in Section 3. Section 4 provides the results of each individual test. All raw data, calculations, quality assurance data, unit operating conditions, and CEMS data are provided in the appendices.

2.0 UNIT AND CEMS DESCRIPTION

2.1 UNIT DESCRIPTION

The City of Anaheim Canyon Power Plant is located at 3071 E. Mira Loma Avenue, Anaheim, California 92806. The facility consists of four identical generating units. Each unit consists of a natural gas fired, GE Model LM6000PC Sprint simple cycle, gas turbine. The units are natural gas fired with a rated heat input of 479 MMBtu per hour at 46°F, with water injection. The units are equipped with a CO catalyst and Selective Catalytic Reduction (SCR) system for CO and NO_x control respectively. A simplified process block diagram of the unit is presented as Figure 2-1.

FIGURE 2-1
SIMPLIFIED PROCESS BLOCK DIAGRAM
CANYON POWER PLANT
UNIT 1



Stack Inside Diameter:	11 feet, 8 inches
Distance from Upstream Disturbance:	23 feet, 4 inches (2.0 Diameters)
Distance from Stack Exit:	16 feet, 6 inches (1.4 Diameters)

2.2 CEMS DESCRIPTION

NO_x and CO emissions from the unit are monitored by a dry, extractive Continuous Emission Monitoring System (CEMS). Stack flow rate is determined from fuel flow rate, O_2 concentration, standard F-Factor, and fuel higher heating value using EPA Method 19.

2.3 TEST CONDITIONS

The tests were performed with the unit operating at an average load of 49 MW. Tests were performed while the unit was firing natural gas and operating under normal conditions. Unit operation was established by the Canyon Power Plant operators.

2.4 SAMPLE LOCATION

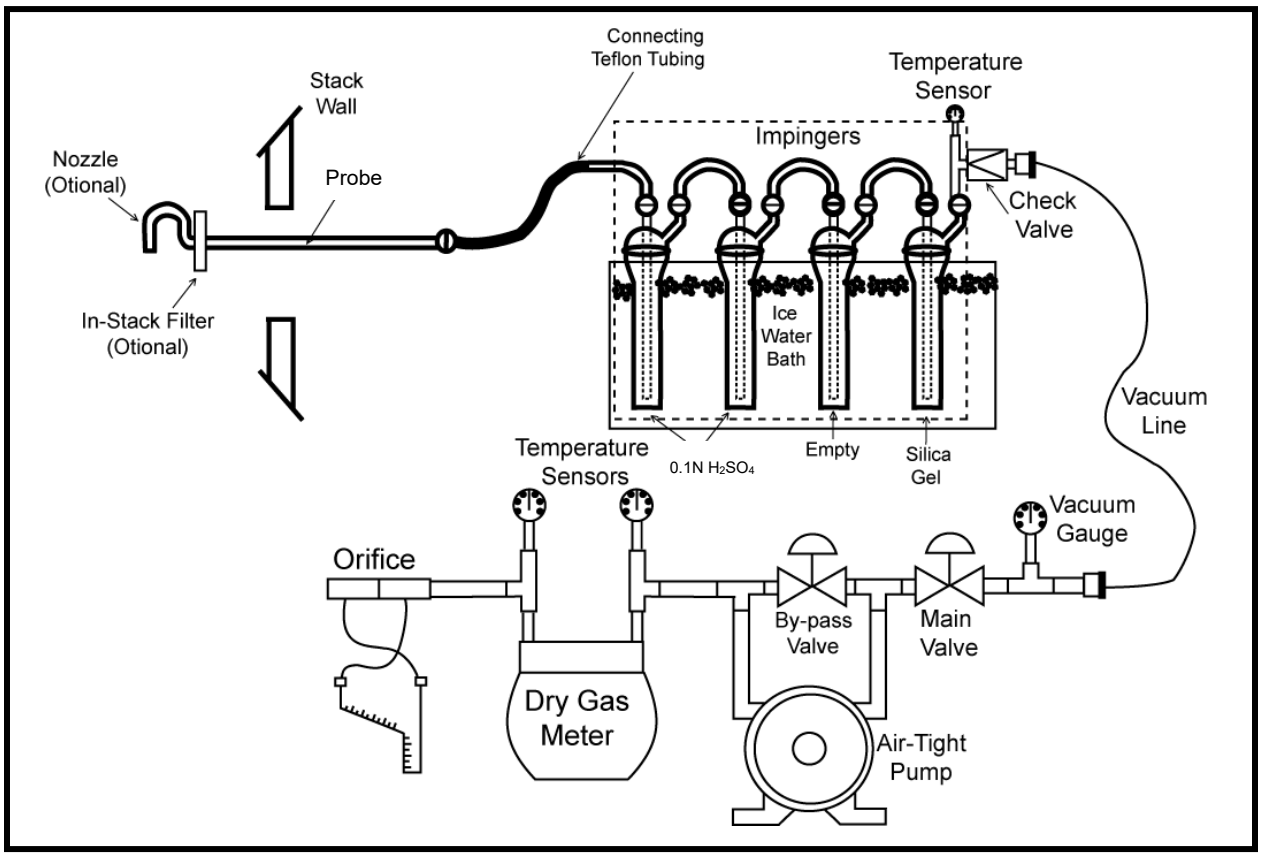
The measurements were made from sample ports located on the exhaust stack. There are four sample ports equally spaced at this location. The stack inside diameter at the sample plane is 11 feet, 8 inches. The sample ports are located 23 feet, 4 inches (2.0 diameters) downstream of the nearest flow disturbance and 16 feet, 6 inches (1.4 diameters) from the stack exit. A diagram of the sample location and individual sample points is located in Appendix A.1.

3.0 TEST DESCRIPTION

Flue gas samples were collected non-isokinetically using a SCAQMD Method 207.1 sample train. The samples were collected using a 12-point traverse at the exhaust stack location. Each test was performed over a 60 minute interval. The sample gas was drawn through a titanium probe, Teflon sample line, two impingers each containing 100 ml of 0.1N H_2SO_4, an empty impinger, an impinger containing silica gel, and a dry gas meter. The optional nozzle and filter were not used since the source is natural gas fired. The contents of the sample line and the first three impingers were recovered and analyzed by SCAQMD Method 207.1 for ammonia concentration by Ion Specific Electrode analysis. A diagram of the sampling equipment is presented as Figure 3-1.

Stack O_2 and NO_x concentrations, and stack volumetric flow rate data were recorded from the Continuous Emission Monitoring System (CEMS) which is installed on the unit. These data were used to correct the ammonia concentration to 15% O_2 and to report the mass emission rates.

FIGURE 3-1
SCAQMD METHOD 207.1 SAMPLING EQUIPMENT



4.0 TEST RESULTS AND OVERVIEW

4.1 TEST RESULTS

The results of the test are summarized in Table 4-1. The results show that the ammonia slip was 1.6 ppm @ 15% O_2 which is less than the permitted limit of 5 ppm @ 15% O_2.

TABLE 4-1
AMMONIA SLIP TEST RESULTS
CANYON POWER PLANT
UNIT 1
MAY 23, 2024

Parameter/Units	1-NH_3-U1	2-NH_3-U1	Average	Maximum(1)	Limit
Start/Stop Time	1100-1203	1240-1337	--	--	--
O_2, %(2)	14.52	14.51	14.52	--	--
Stack Flow, dscfm @ T_{ref}(2)	234,788	234,394	234,591	--	--
NO_x, ppmc(2)	2.4	2.4	2.4	--	2.5
NH_3					
ppm	1.7	1.0	1.3	1.7	--
ppmc	1.6	0.9	1.2	1.6	5
lb/hr	1.1	0.6	0.8	1.1	--
lb/MMBtu	0.002	0.001	0.002	0.002	--
lb/MMSCF	2.3	1.3	1.8	2.3	--

(1) Maximum of duplicate test runs, as required by SCAQMD Method 207.1.
(2) From facility CEMS.

4.2 TEST OVERVIEW

The test program was successful in meeting the program objectives. The sample train was leak checked before and after the test and all QA/QC requirements of SCAQMD Method 207.1 were satisfied.

APPENDIX A
RAW DATA

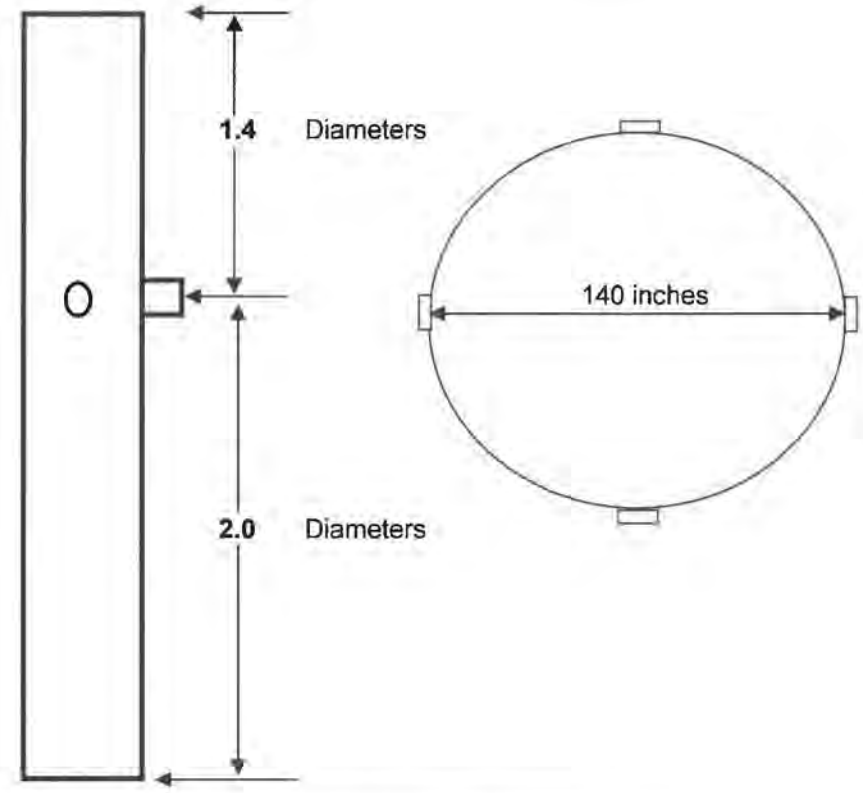
Appendix A.1
SCAQMD Method 1.1 Data

MONTROSE

METHOD 1 DATA SHEET
SAMPLE LOCATION

Client: SCPPA Date: 5/23/24

Sample Location: U1 Performed By: JP



Diameter (in.)	**140.00**
Upstream (ft.)	**23.33**
Downstream (ft.)	**16.50**
Coupling (in.)	**11.25**
Stack Area (ft^2)	**106.90**

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	6.1	17.3
2	14.6	20.5	31.8
3	29.6	41.4	52.7
4	70.4	98.6	109.8
5	85.4	119.5	130.7
6	95.6	133.9	145.2

Appendix A.2
Sample Data Sheets

MONTROSE
AIR QUALITY SERVICES

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canon Canyon
LOCATION: Unit 1
DATE: 5-23-24
RUN NO: 1-NH3-1
OPERATOR: RM
METER BOX NO: 27-WO
METER ΔH@: 1.690
METER Yd: 0.995
STACK AREA, FT²:
TRAVERSE POINTS, MIN/POINT: 5/12
ΔH= NA X ΔP:
Probe Condition, pre/post test: Good/Good
Silica Gel Expanded, Y/N: No
Filter Condition after Test: NA
Check Weight: 500.1, 1500.0

AMBIENT TEMPERATURE: 67°
BAROMETRIC PRESSURE: 29.64
ASSUMED MOISTURE: 10%
PITOT TUBE COEFF, Cp:
PROBE ID NO/MATERIAL: S-T
PROBE LENGTH:
NOZZLE ID NO/ MATERIAL:
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: <0.005 CFM@ 14" in. Hg.
POST-TEST LEAK RATE: <0.005 CFM@ 10" in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN VM
SAMPLER RM
SAMPLE CUSTODIAN VM

Imp. #	Contents	Post-Test	- Pre-Test	= Difference
1	0.1 H_2SO_4	950.5	- 764.8	
2	0.1 H_2SO_4	727.3	- 723.0	
3	Empty	608.8	- 609.2	
4	Silica Gel	937.4	- 930.2	
	LR	-100		
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P, static in. H_2O
3	1100	800.055	NA	1.0	NA	NA	NA	60	84	84	3"		
2	1105	803.050						53	82	83			
1	1110	806.140						51	86	83			
0	1113	809.110	—					—	—	—			
3	1116	809.110						54	86	82			
2	1121	811.900						53	89	83			
1	1126	914.650						54	90	85			
0	1131	917.640	—					—	—	—			
3	1132	917.640						54	90	83			
2	1137	820.320						55	91	84			
1	1142	823.270						53	92	84			
0	1147	826.185	—					—	—	—			
3	1148	826.183						53	92	84			
2	1153	829.050						54	93	85			
1	1158	832.001						54	93	84			
0	1203	834.070											
Average:													

Comments:

MONTROSE
AIR QUALITY SERVICES

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canyon
LOCATION: Unit 1
DATE: 5-23-24
RUN NO: 2-NA3-1
OPERATOR: RM
METER BOX NO: 27-WCS
METER ΔH@: 1.690
METER Yd: 0.994
STACK AREA, FT²:
TRAVERSE POINTS, MIN/POINT: 5/12
ΔH= NA X ΔP:
Probe Condition, pre/post test: Good/Good
Silica Gel Expanded, Y/N: No
Filter Condition after Test: NA
Check Weight: 500.0g/500.0g

AMBIENT TEMPERATURE: 69°
BAROMETRIC PRESSURE: 29.64
ASSUMED MOISTURE: 10%
PITOT TUBE COEFF, Cp:
PROBE ID NO/MATERIAL: SIT
PROBE LENGTH: N/A
NOZZLE ID NO/ MATERIAL:
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : 0.00 CFM@ 14 in. Hg.
POST-TEST LEAK RATE: : 0.00 CFM@ 10" in. Hg.
PITOT LEAK CHECK - PRE: NA POST: N/A
CHAIN OF CUSTODY: SAMPLE CUSTODIAN VM
SAMPLER RM
SAMPLE CUSTODIAN VM

Imp. #	Contents	Post-Test	Pre-Test = Difference
1	0.1 H_2SO_4	925.9	-744.4
2	0.1 H_2SO_4	758.3	-756.9
3	Empty	624.4	-624.4
4	Silica Gel	975.4	-970.6
—	LR	-100	
—			
Total:			

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
3	1240	836.050	NA	1.0	NA	NA	NA	51	84	84	3"		
2	1245	839.850						50	84	83			
1	1250	843.125						49	84	83			
0	1255	845.760											
3	1256	845.760						50	84	83			
2	1301	849.345						49	83	82			
1	1306	851.030						49	83	81			
0	1311	854.640											
3	1312	854.640	RM					50	83	82			
2	1317	857.280	257.280					49	84	83			
1	1322	859.895						51	84	83			
0	1327	862.473											
3	1328	862.473						52	84	82			
2	1327	865.080						50	84	82			
1	1332	867.640						51	84	82			
0	1337	870.930											
Average:													

Comments:

MONTROSE AIR QUALITY SERVICES

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: SCPPA Canyon
LOCATION: Unit 1
DATE: 5-23-24
RUN NO: FB-NH3-01
OPERATOR: RAY
METER BOX NO: 27 WXS
METER ΔH@: 1.698
METER Yd: 0.999
STACK AREA, FT²:
TRAVERSE POINTS, MIN/POINT: N/A
ΔH= NA X ΔP:
Probe Condition, pre/post-test: Good/Good
Silica Gel Expanded, Y/N: NO
Filter Condition after Test: NA
Check Weight: 500.0/500.0

AMBIENT TEMPERATURE: 67
BAROMETRIC PRESSURE: 29.64
ASSUMED MOISTURE: 10%
PITOT TUBE COEFF, Cp: NA
PROBE ID NO/MATERIAL: TIT
PROBE LENGTH:
NOZZLE ID NO/ MATERIAL: N
NOZZLE DIAMETER: A
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : 0.005 CFM@ 13 in. Hg.
POST-TEST LEAK RATE: : CFM@ in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN VM
SAMPLER RM
SAMPLE CUSTODIAN VM

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	H_2SO_4	865.0	765.0	
2	H_2SO_4	723.0	723.0	
3	MT	609.3	609.3	
4	Silica	930.2	930.2	
LR	$DI H_2O$		100.0	
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
Average:													

Field Blank

Comments:

Appendix A.3
Laboratory Data

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS CALCULATION DATA

District Method: SCAQMD 207.1

MONTROSE

Project Number: PROJ-042061
Client/Location: Canyon
Sample Location: Unit 1
Sample Date: 5/23/2024
Analysis Date: 5/23/2024
Analyst's Initials: VM

Calibration Curve Slope: -56.3144
Y-intercept: 91.8644
R^2: 0.9998
Thermometer #: 3
ISE Electrode #: 10

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Conc. µg NH3 /ml as N	C_{avg} as N	C_{avg} as NH_3	µg NH_3/ sample
Standard Check: 28 µg NH_3 / ml as N	NA	21.1	12.3	25.874	26.034	31.645	NA
		21.1	12.0	26.193			
1-NH3	537.0	21.0	78.2	1.748	1.720	2.091	1122.923
		21.0	79.0	1.692			
2-NH3	546.0	22.1	91.6	1.011	0.989	1.202	656.155
		22.1	92.7	0.966			
Spike 1-NH3	NA	20.8	17.3	21.090	21.004	25.532	NA
		21.0	17.5	20.918			
Standard Check: 28 µg NH_3 / ml as N	NA	20.9	10.5	27.850	28.022	34.062	NA
		20.9	10.2	28.194			
Reagent Blank 0.1N H_2SO_4	NA	21.2	172.5	0.037	0.037	0.044	NA
		21.2	173.1	0.036			
DI H_2O Blank	NA	20.6	184.0	0.023	0.023	0.028	NA
		20.6	184.7	0.022			
Field Blank	573.0	20.1	175.0	0.033	0.034	0.041	23.358
		20.1	174.8	0.034			
Standard Check: 28 µg NH_3 / ml as N	NA	20.7	10.4	27.964	27.794	33.785	NA
		20.8	10.7	27.623			

Notes:

- Measured Concentration of Ammonia (C) in ug NH_3 / ml as N.
- $C=10^{(P-B)/M}$, P = electrode potential (mV), M=slope and B=intercept.
- Average Measured Ammonia Concentration (C_{avg}) = (C_1 + C_2)/2 where C_1, C_2 are results from duplicate analyses (ug NH_3 /ml as N).
- C_{avg} (ug NH_3/ml as NH_3) = C_{avg} (ug NH_3/ ml as N) * 17.03/14.01.
- ug NH_3 / sample = C_{avg} (ug NH_3/ml as NH_3) * TV.
- Used 100 ml of samples and standards with 2 ml ISA and constant stirring rate, analyzed in duplicate.
- Sample pH and temperatures can be found on the laboratory datasheet.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Sample solutions, blanks and C.V. Standard temperature must be within ± 2°C.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS QUALITY CONTROL

District Method: SCAQMD 207.1

MONTROSE

Project Number: PROJ-042061
Client/ Location: Canyon
Sample Location: Unit 1
Sample Date: May 23, 2024
Analysis Date: May 23, 2024
Analyst's Initials: VM

Sample	Recovery (%)	RPD (%)	RPA (%)
Standard Check: 28 µg NH_3 / ml as N	NA	-1.23	-7.023
1-NH3	NA	3.27	NA
2-NH3	NA	4.50	NA
Spike 1-NH3	100.45	0.82	NA
Standard Check: 28 µg NH_3 / ml as N	NA	-1.23	0.078
Reagent Blank 0.1N H_2SO_4	NA	2.45	NA
DI H_2O Blank	NA	2.86	NA
Field Blank	NA	-0.82	NA
Standard Check: 28 µg NH_3 / ml as N	NA	1.23	-0.737

Notes:

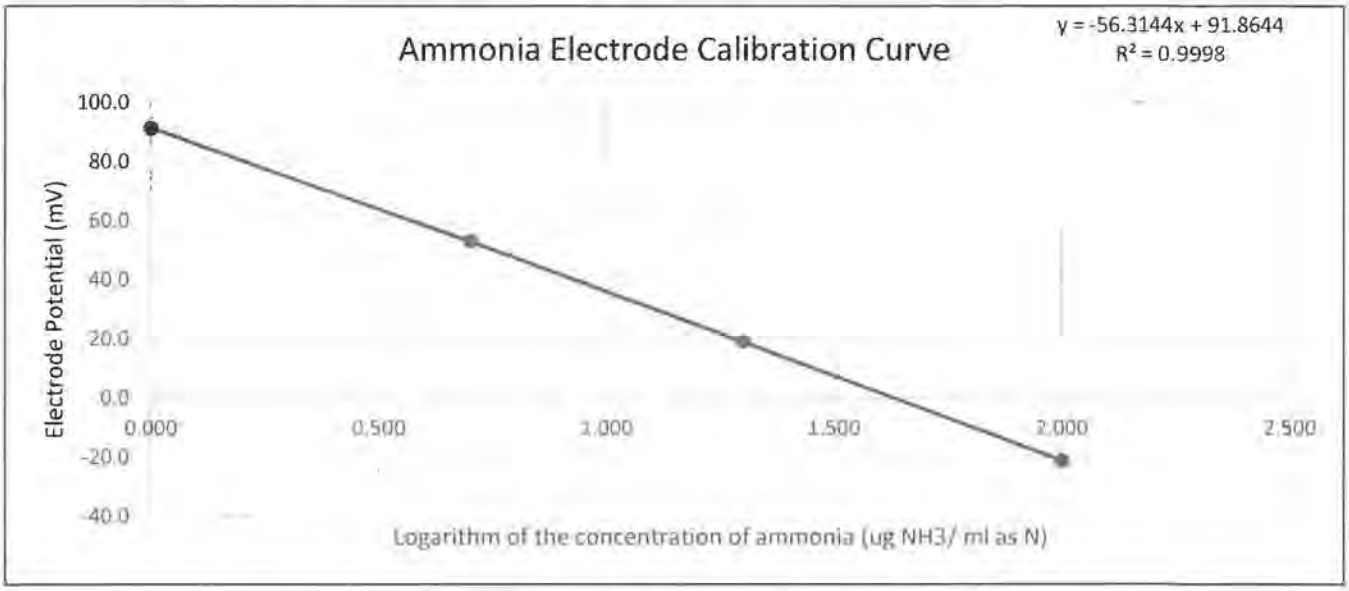
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- Matrix Spike Percent Recovery (%R).
- $\%R = (C_{spike}*0.104 - C_{sample}*0.102)/2 *100$.
- Cspike = average result of matrix spike (ug NH_3/ ml as N).
- Relative Percent Difference (RPD) = $(C_1-C_2)/ C_{avg} *100$ **(must be 5% or less).**
- Relative Percent Accuracy (RPA) **(must be 10% or less).**
- RPA = (C_{avg}-theoretical value of standard)/ theoretical value of standard * 100.

AMMONIA ELECTRODE CALIBRATION CURVE DATA

MONTROSE AIR QUALITY SERVICES

District Method: SCAQMD 207.1
Date: May 23, 2024
Project Number: PROJ-042061
Client/Location: Canyon

NH_3 concentration (µg NH3 / ml as N)	Log NH_3 concentration	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	0.000	91.3	21.6	21.0
5	0.699	53.1	21.5	21.0
20	1.301	19.1	21.4	21.0
100	2.000	-21.3	21.4	21.0



Slope	Y-Intercept	R^2
-56.3144	91.8644	0.9998

NH_3 concentration (µg NH3 / ml as N)	Value LR line	Difference	% Difference
1	1.0233	0.0233	2.3344
5	4.8793	-0.1207	-2.4142
20	19.5934	-0.4066	-2.0329
100	102.2143	2.2143	2.2143

Notes:

- Regression Line: P=M*log(ug of NH_3/ ml as N)+B.
- Measured Concentration of Ammonia (C) in ug / ml NH_3 as N: $C=10^{(P-B)/M}$ where P = electrode potential, M= slope and B= intercept.
- All standards are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.
- Calibration solution temperature must be within ± 2°C.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS DATA

District Method: SCAQMD 207.1

MONTROSE

Project Number: PROJ-042061
Client/Location: Canyon
Sample Location: Unit 2
Sample Date: 5/23/24
Analysis Date: 5/23/24

Calibration Curve: y = -56.3144x + 91.8874
R^2: 0.9998
Thermometer #: 3
ISE Electrode #: 10
Analyst's Initials: VM

NH3 concentration (µg NH3 / ml as N)	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	91.3	21.6	21.0
5	53.1	21.5	21.0
20	19.1	21.4	21.0
100	-21.3	21.4	21.0

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Blue after ISA (Y/N)	pH
Standard Check: 28 µg NH_3 / ml as N	NA	21.1	12.3	Y	NA
		21.1	12.0	Y	
1-NH_3	537.0	21.0	78.2	Y	<2
		21.0	79.0	Y	
2-NH_3	546.0	22.1	91.6	Y	<2
		22.1	92.7	Y	
Spike: 1-NH_3	NA	20.8	17.3	Y	NA
		21.0	17.5	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	20.9	10.5 ~~10.5~~ X	Y	NA
		20.9	10.2 ~~12.0~~ X	Y	
Reagent Blank 0.1N H_2SO_4	NA	21.2	172.5	Y	NA
		21.2	173.1	Y	
DI H_2O Blank	NA	20.6	184.0	Y	NA
		20.6	184.7	Y	
Field Blank	573.0	20.1	175.0	Y	<2
		20.1	174.8	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	20.7	10.4	Y	NA
		20.8	10.7	Y	

Notes:

- Used 100 ml of samples or standards with 2 ml ISA and constant stirring rate.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- All calibration solution and calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All solutions turned blue and remained blue with ISA unless otherwise indicated.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples must have a pH of less than 2.
- Sample solutions, calibration solution and C.V. standard temperature must be within ± 2°C of one another.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.

X VM 5/23/24

Appendix A.4
QA/QC Data

Barometric Pressure Determination	
Date: 05/23/24	
Data By: JP	
Reference:	https://forecast.weather.gov/MapClick.php?lon=-117.85962867946365&lat=33.863355545614255
Reference Barometer ID	FW0063 Fullerton CSU (F0063)
Reference Barometer Location	Lat: 33.8805°NLon: 117.88417°WElev: 247ft.
Reference Barometer Other Info.	23 May 08:15 AM PDT
Reference Barometer Indication, corrected to sea level	29.98
Reference Barometer Reference Elevation	247
Reference Barometer Actual Pressure	29.73
Test Barometer Location/Site	Canyon Power Plant
Location/Site Elevation	279
Location/Site Barometric Pressure	29.70
Sampling Location Height (above/below site elevation)	60
Sampling Location Barometric Pressure	**29.64**

SEMI-ANNUAL DRY GAS METER/ORIFICE CALIBRATION

Model #: Nutech 2010 Stack Sampler
ID #: 27-WCS
Date: 4/15/2024
Bar. Pressure: 30.04 (In. Hg)
Performed By: L. Olivares
Reviewed By: Surya Adhikari

DRY GAS METER READINGS									CRITICAL ORIFICE READINGS					
					Initial Temps.		Final Temps.					Ambient Temperature		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
0.12	26.00	129.200	134.565	5.365	77.0	74.0	76.0	76.0	AA-33	0.1555	18.0	65.0	65.0	65.0
0.12	26.00	134.565	139.935	5.370	76.0	76.0	76.0	76.0	AA-33	0.1555	18.0	65.0	66.0	65.5
0.12	26.00	139.935	145.310	5.375	76.0	76.0	77.0	77.0	AA-33	0.1555	18.0	66.0	66.0	66.0
0.60	12.00	112.500	117.980	5.480	79.0	75.0	78.0	75.0	QI-48	0.3440	17.0	65.0	65.0	65.0
0.60	12.00	117.980	123.455	5.475	78.0	75.0	78.0	76.0	QI-48	0.3440	17.0	65.0	65.0	65.0
0.60	12.00	123.455	128.930	5.475	78.0	76.0	78.0	76.0	QI-48	0.3440	17.0	65.0	65.0	65.0
2.00	7.00	94.900	100.465	5.565	79.0	73.0	79.0	73.0	QI-83	0.5998	16.0	65.0	65.0	65.0
2.00	7.00	100.465	106.010	5.545	79.0	73.0	80.0	74.0	QI-83	0.5998	16.0	65.0	66.0	65.5
2.00	7.00	106.010	111.570	5.560	80.0	74.0	81.0	75.0	QI-83	0.5998	16.0	66.0	66.0	66.0
3.50	5.00	75.700	81.025	5.325	76.0	69.0	78.0	70.0	AA-73	0.8123	15.0	63.0	64.0	63.5
3.50	5.00	81.025	86.340	5.315	78.0	70.0	80.0	71.0	AA-73	0.8123	15.0	64.0	64.0	64.0
3.50	5.00	86.340	91.655	5.315	80.0	71.0	81.0	72.0	AA-73	0.8123	15.0	64.0	65.0	64.5

DRY GAS METER		ORIFICE			DRY GAS METER CALIBRATION FACTOR	ORIFICE CALIBRATION FACTOR	Individual Run	Individual Orifice	Orifice Average	Orifice Average
VOLUME CORRECTED Vm(std) (cu ft)	VOLUME CORRECTED Vm(std) (liters)	VOLUME CORRECTED Vcr(std) (cu ft)	VOLUME CORRECTED Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)	Y Value (number)	dH@ Value (in H2O)	0.95 < Y < 1.05?	Ymax - Ymin < 0.010?	0.98 < Y/Yd < 1.02?	dH@ - dH@ av < 0.156?
5.308	150.3	5.301	150.1	5.252	0.999	1.609	Pass			
5.311	150.4	5.298	150.0	5.254	0.998	1.608	Pass			
5.310	150.4	5.296	150.0	5.257	0.997	1.608	Pass			
				Average	0.998	1.608		Pass	Pass	Pass
5.418	153.4	5.412	153.3	5.362	0.999	1.644	Pass			
5.413	153.3	5.412	153.3	5.362	1.000	1.643	Pass			
5.411	153.2	5.412	153.3	5.362	1.000	1.641	Pass			
				Average	1.000	1.643		Pass	Pass	Pass
5.529	156.6	5.505	155.9	5.454	0.996	1.809	Pass			
5.504	155.9	5.502	155.8	5.456	1.000	1.809	Pass			
5.508	156.0	5.499	155.7	5.459	0.998	1.808	Pass			
				Average	0.998	1.809		Pass	Pass	Pass
5.337	151.1	5.332	151.0	5.268	0.999	1.733	Pass			
5.312	150.4	5.330	150.9	5.271	1.003	1.731	Pass			
5.300	150.1	5.327	150.9	5.273	1.005	1.730	Pass			
				Average	1.003	1.731		Pass	Pass	Pass

Average Yd: 0.999 dH@: 1.698

Q @ dH = 1: 0.676

Performed by signature: [signature] Date: 4/15/2024

Reviewed by signature: [signature] Date: 4/16/2024

MONTROSE
AIR QUALITY SERVICES

DIGITAL TEMPERATURE READOUT CALIBRATION

Digital Temperature Readout ID: 27 WCS
Readout Description: Control Box
Date: 1/2/2024
Performed By: JS

Calibrated Thermocouple ID: TC-295
T1 Reference Thermometer ID: 313010
T2 Reference Thermometer ID: 2736
T3 Reference Thermometer ID: 2786

T/C I.D. TC-295	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	27 WCS	373	373	373	373	370	370	370	370	3.0	0.4%	Pass
T2 (~212 F)	27 WCS	217	217	217	217	212	212	212	212	5.0	0.7%	Pass
T1 (~ 32 F)	27 WCS	38	38	37	38	32	32	32	32	5.7	1.2%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

Thermocouple Source Readings

	T/C Source S/N	T/C - Readout °F				T/C Source °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T4 (~650 F)	125097	654	654	654	654	650	650	650	650	4.0	0.4%	Pass
T3 (~370 F)	125097	375	375	375	375	370	370	370	370	5.0	0.6%	Pass
T2 (~212 F)	125097	211	211	211	211	212	212	212	212	1.0	0.1%	Pass
T1 (~32 F)	125097	34	34	34	34	32	32	32	32	2.0	0.4%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

APPENDIX B
FACILITY CEMS DATA

CEMTEK KVB-Enertec NetDAHS©

Version 48.0

Average Values Report
Generated: 6/14/2024 10:10

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 1

Period Start: 5/23/2024 11:01
Period End: 5/23/2024 12:03
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 1_O2 %	Average 1_NOXPPM ppm	Average 1_NOX_CORR ppm	Average 1_NOX_LBHR #/hr	Average 1_NOX_LBMM #/MBTU	Average 1_GasFlow kscfh	Average 1_LOAD MW	Average 1_STACKFLW kscfm	Average 1_COPPM ppm	Average 1_CO_CORR ppm	Average 1_CO_LBHR #/hr
05/23/2024 11:01	14.51	2.61	2.41	4.52	0.009	478.8	49.12	238.7	3.24	2.99	3.37
05/23/2024 11:02	14.51	2.62	2.42	4.53	0.009	479.2	49.12	238.9	3.25	3.00	3.37
05/23/2024 11:03	14.51	2.62	2.42	4.53	0.009	479.3	49.14	239.0	3.26	3.01	3.42
05/23/2024 11:04	14.51	2.62	2.42	4.52	0.009	478.8	49.10	238.7	3.29	3.04	3.42
05/23/2024 11:05	14.52	2.61	2.41	4.52	0.009	478.6	49.13	239.0	3.29	3.04	3.42
05/23/2024 11:06	14.52	2.62	2.42	4.53	0.009	479.0	49.10	239.2	3.29	3.04	3.42
05/23/2024 11:07	14.51	2.63	2.43	4.52	0.009	478.8	49.11	238.7	3.28	3.03	3.42
05/23/2024 11:08	14.52	2.63	2.43	4.52	0.009	478.7	49.10	239.0	3.28	3.03	3.42
05/23/2024 11:09	14.52	2.63	2.43	4.52	0.009	478.4	49.10	238.9	3.29	3.04	3.42
05/23/2024 11:10	14.51	2.63	2.43	4.52	0.009	478.3	49.07	238.4	3.28	3.03	3.42
05/23/2024 11:11	14.51	2.62	2.42	4.52	0.009	477.9	49.08	238.3	3.27	3.02	3.41
05/23/2024 11:12	14.51	2.62	2.42	4.52	0.009	478.5	49.10	238.5	3.25	3.00	3.37
05/23/2024 11:13	14.52	2.63	2.43	4.52	0.009	478.6	49.08	239.0	3.25	3.01	3.37
05/23/2024 11:14	14.52	2.63	2.43	4.52	0.009	478.2	49.10	238.8	3.27	3.02	3.41
05/23/2024 11:15	14.52	2.62	2.42	4.52	0.009	478.3	49.09	238.8	3.27	3.02	3.41
05/23/2024 11:16	14.52	2.62	2.42	4.51	0.009	477.7	49.08	238.5	3.26	3.01	3.41
05/23/2024 11:17	14.52	2.61	2.41	4.52	0.009	478.4	49.10	238.9	3.25	3.01	3.37
05/23/2024 11:18	14.52	2.62	2.42	4.52	0.009	478.1	49.09	238.7	3.24	3.00	3.36
05/23/2024 11:19	14.52	2.63	2.43	4.52	0.009	478.4	49.08	238.9	3.24	3.00	3.37
05/23/2024 11:20	14.52	2.63	2.43	4.52	0.009	477.9	49.07	238.6	3.27	3.02	3.41
05/23/2024 11:21	14.52	2.64	2.44	4.52	0.009	478.0	49.07	238.7	3.26	3.01	3.41
05/23/2024 11:22	14.52	2.63	2.43	4.51	0.009	477.7	49.05	238.5	3.26	3.01	3.41
05/23/2024 11:23	14.51	2.61	2.41	4.52	0.009	478.0	49.08	238.3	3.25	3.00	3.36
05/23/2024 11:24	14.51	2.59	2.39	4.52	0.009	478.0	49.09	238.3	3.25	3.00	3.36
05/23/2024 11:25	14.51	2.60	2.40	4.52	0.009	477.8	49.05	238.2	3.25	3.00	3.36
05/23/2024 11:26	14.52	2.60	2.40	4.52	0.009	477.8	49.05	238.6	3.23	2.99	3.36
05/23/2024 11:27	14.52	2.60	2.40	4.52	0.009	477.9	49.01	238.6	3.23	2.99	3.36
05/23/2024 11:28	14.52	2.60	2.40	4.52	0.009	477.8	49.05	238.6	3.22	2.98	3.36
05/23/2024 11:29	14.52	2.61	2.41	4.52	0.009	478.1	49.09	238.7	3.24	3.00	3.36
05/23/2024 11:30	14.52	2.62	2.42	4.52	0.009	477.8	49.06	238.6	3.24	3.00	3.36
05/23/2024 11:31	14.52	2.63	2.43	4.52	0.009	478.1	49.09	238.7	3.24	3.00	3.36
05/23/2024 11:32	14.52	2.62	2.42	4.52	0.009	478.0	49.08	238.7	3.24	3.00	3.36
05/23/2024 11:33	14.52	2.62	2.42	4.52	0.009	478.2	49.09	238.8	3.25	3.01	3.36
05/23/2024 11:34	14.52	2.62	2.42	4.52	0.009	477.8	49.08	238.6	3.25	3.01	3.36
05/23/2024 11:35	14.51	2.61	2.41	4.51	0.009	477.7	49.07	238.2	3.24	2.99	3.36
05/23/2024 11:36	14.51	2.63	2.43	4.51	0.009	477.6	49.08	238.1	3.23	2.98	3.36
05/23/2024 11:37	14.52	2.64	2.44	4.51	0.009	477.4	49.08	238.4	3.21	2.97	3.36
05/23/2024 11:38	14.52	2.64	2.44	4.51	0.009	477.3	49.06	238.3	3.19	2.95	3.31
05/23/2024 11:39	14.52	2.64	2.44	4.51	0.009	477.4	49.08	238.4	3.20	2.96	3.31
05/23/2024 11:40	14.52	2.65	2.45	4.51	0.009	477.1	49.04	238.2	3.20	2.96	3.31
05/23/2024 11:41	14.52	2.65	2.45	4.50	0.009	476.6	49.02	238.0	3.21	2.97	3.35
05/23/2024 11:42	14.53	2.65	2.45	4.51	0.009	476.8	49.04	238.4	3.20	2.96	3.30
05/23/2024 11:43	14.52	2.66	2.46	4.50	0.009	476.6	49.03	238.0	3.20	2.96	3.30
05/23/2024 11:44	14.52	2.67	2.47	4.50	0.009	476.6	49.05	238.0	3.19	2.95	3.30
05/23/2024 11:45	14.52	2.68	2.48	4.51	0.009	476.8	49.07	238.1	3.19	2.95	3.30
05/23/2024 11:46	14.51	2.68	2.47	4.50	0.009	476.6	49.03	237.6	3.18	2.94	3.30
05/23/2024 11:47	14.52	2.65	2.45	4.50	0.009	475.9	49.02	237.6	3.16	2.92	3.30
05/23/2024 11:48	14.52	2.63	2.43	4.50	0.009	476.1	48.99	237.7	3.13	2.89	3.25
05/23/2024 11:49	14.52	2.62	2.42	4.50	0.009	476.2	49.06	237.8	3.12	2.89	3.25

Period Start:	Average 1_O2 %	Average 1_NOXPPM ppm	Average 1_NOX_CORR ppm	Average 1_NOX_LBHR #/hr	Average 1_NOX_LBMM #/MBTU	Average 1_GasFlow kscfh	Average 1_LOAD MW	Average 1_STACKFLW kscfm	Average 1_COPPM ppm	Average 1_CO_CORR ppm	Average 1_CO_LBHR #/hr
05/23/2024 11:50	14.52	2.60	2.40	4.51	0.009	477.3	49.07	238.3	3.13	2.89	3.26
05/23/2024 11:51	14.52	2.53	2.34	4.51	0.009	477.3	49.08	238.3	3.21	2.97	3.36
05/23/2024 11:52	14.52	2.42	2.24	4.01	0.008	477.3	49.11	238.3	3.30	3.05	3.41
05/23/2024 11:53	14.51	2.41	2.23	4.01	0.008	477.6	49.11	238.1	3.35	3.09	3.46
05/23/2024 11:54	14.51	2.44	2.25	4.01	0.008	477.1	49.06	237.9	3.35	3.09	3.46
05/23/2024 11:55	14.51	2.49	2.30	4.01	0.008	477.4	49.10	238.0	3.35	3.09	3.46
05/23/2024 11:56	14.51	2.54	2.35	4.51	0.009	477.5	49.10	238.1	3.34	3.08	3.46
05/23/2024 11:57	14.50	2.55	2.35	4.51	0.009	477.6	49.11	237.7	3.35	3.09	3.46
05/23/2024 11:58	14.50	2.55	2.35	4.51	0.009	477.5	49.10	237.7	3.35	3.09	3.46
05/23/2024 11:59	14.51	2.54	2.35	4.51	0.009	477.4	49.06	238.0	3.35	3.09	3.46
05/23/2024 12:00	14.51	2.53	2.34	4.51	0.009	477.5	49.07	238.1	3.35	3.09	3.46
05/23/2024 12:01	14.51	2.54	2.35	4.51	0.009	477.4	49.07	238.0	3.36	3.10	3.51
05/23/2024 12:02	14.51	2.55	2.35	4.51	0.009	477.6	49.08	238.1	3.37	3.11	3.51
05/23/2024 12:03	14.51	2.55	2.35	4.51	0.009	477.5	49.10	238.1	3.37	3.11	3.51
Daily Average*	**14.52**	**2.60**	**2.40**	**4.48**	**0.009**	**477.7**	**49.08**	**238.4**	**3.26**	**3.01**	**3.38**
Maximum*	**14.53**	**2.68**	**2.48**	**4.53**	**0.009**	**479.3**	**49.14**	**239.2**	**3.37**	**3.11**	**3.51**
	05/23/2024 11:42	05/23/2024 11:46	05/23/2024 11:45	05/23/2024 11:06	05/23/2024 12:03	05/23/2024 11:03	05/23/2024 11:03	05/23/2024 11:06	05/23/2024 12:03	05/23/2024 12:03	05/23/2024 12:03
Minimum*	**14.50**	**2.41**	**2.23**	**4.01**	**0.008**	**475.9**	**48.99**	**237.6**	**3.12**	**2.89**	**3.25**
	05/23/2024 11:58	05/23/2024 11:53	05/23/2024 11:53	05/23/2024 11:55	05/23/2024 11:55	05/23/2024 11:47	05/23/2024 11:48	05/23/2024 11:47	05/23/2024 11:49	05/23/2024 11:50	05/23/2024 11:49

* Does not include Invalid Averaging Periods ("N/A")

CEMTEK KVB-Enertec NetDAHS©

Version 48.0

Average Values Report
Generated: 6/14/2024 10:38

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source:

Period Start: 5/23/2024 12:41
Period End: 5/23/2024 13:37
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 1_O2 %	Average 1_NOXPPM ppm	Average 1_NOX_CORR ppm	Average 1_NOX_LBHR #/hr	Average 1_NOX_LBMM #/MBTU	Average 1_GasFlow kscfh	Average 1_LOAD MW	Average 1_STACKFLW kscfm	Average 1_COPPM ppm	Average 1_CO_CORR ppm	Average 1_CO_LBHR #/hr
05/23/2024 12:41	14.50	2.62	2.42	4.51	0.009	477.5	49.13	237.7	3.38	3.12	3.51
05/23/2024 12:42	14.50	2.63	2.42	4.51	0.009	477.5	49.10	237.7	3.35	3.09	3.46
05/23/2024 12:43	14.50	2.63	2.42	4.52	0.009	477.8	49.12	237.8	3.33	3.07	3.46
05/23/2024 12:44	14.51	2.63	2.43	4.51	0.009	477.7	49.11	238.2	3.33	3.07	3.46
05/23/2024 12:45	14.50	2.63	2.42	4.51	0.009	477.7	49.13	237.8	3.35	3.09	3.46
05/23/2024 12:46	14.51	2.65	2.45	4.52	0.009	477.8	49.13	238.2	3.38	3.12	3.51
05/23/2024 12:47	14.51	2.68	2.47	4.52	0.009	477.8	49.16	238.2	3.37	3.11	3.51
05/23/2024 12:48	14.51	2.69	2.48	4.51	0.009	477.4	49.11	238.0	3.37	3.11	3.51
05/23/2024 12:49	14.51	2.71	2.50	4.51	0.009	477.3	49.11	238.0	3.36	3.10	3.51
05/23/2024 12:50	14.51	2.71	2.50	4.51	0.009	477.2	49.11	237.9	3.36	3.10	3.51
05/23/2024 12:51	14.51	2.74	2.53	4.51	0.009	477.4	49.10	238.0	3.34	3.08	3.46
05/23/2024 12:52	14.51	2.83	2.61	5.01	0.010	477.2	49.08	237.9	3.32	3.07	3.46
05/23/2024 12:53	14.50	2.86	2.64	5.02	0.010	477.8	49.10	237.8	3.32	3.06	3.46
05/23/2024 12:54	14.51	2.72	2.51	4.51	0.009	477.2	49.10	237.9	3.33	3.07	3.46
05/23/2024 12:55	14.51	2.61	2.41	4.52	0.009	477.9	49.09	238.3	3.34	3.08	3.46
05/23/2024 12:56	14.51	2.64	2.44	4.51	0.009	477.1	49.07	237.9	3.36	3.10	3.51
05/23/2024 12:57	14.51	2.74	2.53	4.52	0.009	478.0	49.10	238.3	3.36	3.10	3.51
05/23/2024 12:58	14.51	2.79	2.58	4.52	0.009	478.0	49.10	238.3	3.36	3.10	3.51
05/23/2024 12:59	14.51	2.76	2.55	4.52	0.009	477.9	49.15	238.3	3.36	3.10	3.51
05/23/2024 13:00	14.51	2.72	2.51	4.51	0.009	477.6	49.11	238.1	3.37	3.11	3.51
05/23/2024 13:01	14.50	2.69	2.48	4.52	0.009	477.8	49.12	237.8	3.39	3.13	3.51
05/23/2024 13:02	14.50	2.66	2.45	4.52	0.009	477.8	49.12	237.8	3.39	3.13	3.51
05/23/2024 13:03	14.50	2.67	2.46	4.52	0.009	478.1	49.12	238.0	3.39	3.13	3.51
05/23/2024 13:04	14.50	2.67	2.46	4.52	0.009	478.0	49.15	237.9	3.36	3.10	3.46
05/23/2024 13:05	14.50	2.65	2.44	4.52	0.009	478.2	49.19	238.0	3.34	3.08	3.46
05/23/2024 13:06	14.50	2.62	2.42	4.52	0.009	478.0	49.12	237.9	3.35	3.09	3.46
05/23/2024 13:07	14.51	2.61	2.41	4.51	0.009	477.7	49.15	238.2	3.37	3.11	3.51
05/23/2024 13:08	14.51	2.62	2.42	4.51	0.009	477.7	49.11	238.2	3.36	3.10	3.51
05/23/2024 13:09	14.51	2.63	2.43	4.51	0.009	477.7	49.12	238.2	3.35	3.09	3.46
05/23/2024 13:10	14.51	2.64	2.44	4.51	0.009	477.3	49.10	238.0	3.35	3.09	3.46
05/23/2024 13:11	14.51	2.64	2.44	4.51	0.009	477.5	49.15	238.1	3.36	3.10	3.51
05/23/2024 13:12	14.50	2.64	2.43	4.52	0.009	477.9	49.12	237.9	3.35	3.09	3.46
05/23/2024 13:13	14.51	2.63	2.43	4.52	0.009	478.1	49.10	238.4	3.36	3.10	3.51
05/23/2024 13:14	14.50	2.60	2.40	4.52	0.009	477.9	49.14	237.9	3.36	3.10	3.46
05/23/2024 13:15	14.50	2.58	2.38	4.51	0.009	477.7	49.11	237.8	3.37	3.11	3.51
05/23/2024 13:16	14.51	2.54	2.35	4.52	0.009	477.8	49.09	238.2	3.37	3.11	3.51
05/23/2024 13:17	14.51	2.51	2.32	4.51	0.009	477.7	49.10	238.2	3.37	3.11	3.51
05/23/2024 13:18	14.51	2.49	2.30	4.01	0.008	477.3	49.10	238.0	3.37	3.11	3.51
05/23/2024 13:19	14.51	2.47	2.28	4.01	0.008	477.6	49.09	238.1	3.39	3.13	3.51
05/23/2024 13:20	14.51	2.48	2.29	4.01	0.008	477.7	49.10	238.2	3.39	3.13	3.51
05/23/2024 13:21	14.51	2.49	2.30	4.01	0.008	477.2	49.13	237.9	3.39	3.13	3.51
05/23/2024 13:22	14.51	2.48	2.29	4.01	0.008	477.3	49.09	238.0	3.40	3.14	3.51
05/23/2024 13:23	14.51	2.47	2.28	4.01	0.008	477.3	49.11	238.0	3.39	3.13	3.51
05/23/2024 13:24	14.51	2.47	2.28	4.01	0.008	477.7	49.13	238.2	3.39	3.13	3.51
05/23/2024 13:25	14.50	2.48	2.29	4.01	0.008	477.5	49.09	237.7	3.39	3.13	3.51
05/23/2024 13:26	14.51	2.49	2.30	4.01	0.008	477.1	49.11	237.9	3.37	3.11	3.51
05/23/2024 13:27	14.50	2.51	2.31	4.51	0.009	477.4	49.13	237.6	3.35	3.09	3.46
05/23/2024 13:28	14.50	2.50	2.30	4.01	0.008	477.3	49.10	237.6	3.34	3.08	3.46
05/23/2024 13:29	14.51	2.49	2.30	4.01	0.008	477.6	49.15	238.1	3.33	3.07	3.46

Period Start:	Average 1_O2 %	Average 1_NOXPPM ppm	Average 1_NOX_CORR ppm	Average 1_NOX_LBHR #/hr	Average 1_NOX_LBMM #/MBTU	Average 1_GasFlow kscfh	Average 1_LOAD MW	Average 1_STACKFLW kscfm	Average 1_COPPM ppm	Average 1_CO_CORR ppm	Average 1_CO_LBHR #/hr
05/23/2024 13:30	14.51	2.49	2.30	4.01	0.008	477.6	49.10	238.1	3.35	3.09	3.46
05/23/2024 13:31	14.51	2.49	2.30	4.01	0.008	477.4	49.16	238.0	3.37	3.11	3.51
05/23/2024 13:32	14.51	2.50	2.31	4.51	0.009	477.3	49.14	238.0	3.39	3.13	3.51
05/23/2024 13:33	14.51	2.50	2.31	4.51	0.009	477.6	49.11	238.1	3.38	3.12	3.51
05/23/2024 13:34	14.51	2.50	2.31	4.51	0.009	477.4	49.11	238.0	3.39	3.13	3.51
05/23/2024 13:35	14.51	2.52	2.33	4.51	0.009	477.0	49.10	237.8	3.38	3.12	3.51
05/23/2024 13:36	14.51	2.56	2.36	4.51	0.009	477.2	49.11	237.9	3.37	3.11	3.51
05/23/2024 13:37	14.50	2.58	2.38	4.51	0.009	477.5	49.13	237.7	3.38	3.12	3.51
Daily Average*	**14.51**	**2.61**	**2.41**	**4.42**	**0.009**	**477.6**	**49.12**	**238.0**	**3.36**	**3.10**	**3.49**
Maximum*	**14.51**	**2.86**	**2.64**	**5.02**	**0.010**	**478.2**	**49.19**	**238.4**	**3.40**	**3.14**	**3.51**
	05/23/2024 13:36	05/23/2024 12:53	05/23/2024 12:53	05/23/2024 12:53	05/23/2024 12:53	05/23/2024 13:05	05/23/2024 13:05	05/23/2024 13:13	05/23/2024 13:22	05/23/2024 13:22	05/23/2024 13:37
Minimum*	**14.50**	**2.47**	**2.28**	**4.01**	**0.008**	**477.0**	**49.07**	**237.6**	**3.32**	**3.06**	**3.46**
	05/23/2024 13:37	05/23/2024 13:24	05/23/2024 13:24	05/23/2024 13:31	05/23/2024 13:31	05/23/2024 13:35	05/23/2024 12:56	05/23/2024 13:28	05/23/2024 12:53	05/23/2024 12:53	05/23/2024 13:30

* Does not include Invalid Averaging Periods ("N/A")

APPENDIX C
CALCULATIONS

Appendix C.1
General Emissions Calculations

GENERAL EMISSIONS CALCULATIONS

I. Stack Gas Velocity

A. Stack gas molecular weight, lb/lb-mole

$MW_{dry} = 0.44 * \%\ CO_2 + 0.32 * \%\ O_2 + 0.28 * \%\ N_2$

$MW_{wet} = MW_{dry} * (1 - B_{wo}) + 18 * B_{wo}$

B. Absolute stack pressure, iwg

$$P_s = P_{bar} + \frac{P_{sg}}{13.6}$$

C. Stack gas velocity, ft/sec

$$V_s = 2.9 * C_p * \sqrt{\Delta P} * \sqrt{T_s} * \sqrt{\frac{29.92 * 28.95}{P_s * MW_{wet}}}$$

II. Moisture

A. Sample gas volume, dscf

$$V_{mstd} = 0.03342 * V_m * \left(P_{bar} + \frac{\Delta H}{13.6}\right) * \frac{T_{ref}}{T_m} * Y_d$$

B. Water vapor volume, scf

$$V_{wstd} = 0.0472 * V_{ic} * \frac{T_{ref}}{528°R}$$

C. Moisture content, dimensionless

$$B_{wo} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$$

III. Stack Gas Volumetric Flow Rate

A. Actual stack gas volumetric flow rate, wacfm

$Q = V_s * A_s * 60$

B. Standard stack gas flow rate, dscfm

$$Q_{sd} = Q * (1 - B_{wo}) * \frac{T_{ref}}{T_s} * \frac{P_s}{29.92}$$

IV. Gaseous Mass Emission Rates, lb/hr

$$M = \frac{ppm * MW_i * Q_{sd} * 60}{SV * 10^6}$$

V. Emission Rates, lb/MMBtu

$$\frac{lb}{MMBtu} = \frac{ppm * MW_i * F}{SV * 10^6} * \frac{20.9}{20.9 - \%\ O_2}$$

VI. Percent Isokinetic

$$I = \frac{17.32 * T_s\ (V_{mstd})}{(1 - B_{wo})\ 0 * V_s * P_s * Dn^2} * \frac{520°R}{T_{ref}}$$

VII. Particulate Emissions

(a) Grain loading, gr/dscf
$C = 0.01543\ (M_n/V_{m\ std})$

(b) Grain loading at 12% CO_2, gr/dscf
$C_{12\%}\ CO_2 = C\ (12/\%\ CO_2)$

(c) Mass emissions, lb/hr
$M = C * Q_{sd} * (60\ min/hr) / (7000\ gr/lb)$

(d) Particulate emission factor

$$lb/10^6\ Btu = Cx\ \frac{1\ lb}{7000\ gr} * F * \frac{20.9}{20.9 - \%\ O_2}$$

Nomenclature:

A_s	=	stack area, ft^2
B_{wo}	=	flue gas moisture content, dimensionless
$C_{12\%CO2}$	=	particulate grain loading, gr/dscf corrected to 12% CO_2
C	=	particulate grain loading, gr/dscf
C_p	=	pitot calibration factor, dimensionless
Dn	=	nozzle diameter, inches
F	=	fuel F-Factor, dscf/MMBtu @ 0% O_2
H	=	orifice differential pressure, iwg
I	=	% isokinetics
M_n	=	mass of collected particulate, mg
M_i	=	mass emission rate of specie i, lb/hr
MW	=	molecular weight of flue gas, lb/lb-mole
M_{wi}	=	molecular weight of specie i:
	SO_2:	64
	NO_x:	46
	CO:	28
	HC:	16
0	=	sample time, minutes
ΔP	=	average velocity head, iwg = $(\sqrt{\Delta P})^2$
P_{bar}	=	barometric pressure, inches Hg
P_s	=	stack absolute pressure, inches Hg
P_{sg}	=	stack static pressure, iwb
Q	=	wet stack flow rate at actual conditions, wacfm
Q_{sd}	=	dry standard stack flow rate, dscfm
SV	=	specific molar volume of an ideal gas at standard conditions, ft^3/lb-mole
T_m	=	meter temperature, °R
T_{ref}	=	reference temperature, °R
T_s	=	stack temperature, °R
V_s	=	stack gas velocity, ft/sec
V_{lc}	=	volume of liquid collected in impingers, ml
V_m	=	uncorrected dry meter volume, dcf
V_{mstd}	=	dry meter volume at standard conditions, dscf
V_{wstd}	=	volume of water vapor at standard conditions, scf
Y_d	=	meter calibration coefficient

Appendix C.2
Spreadsheet Summaries

SCAQMD METHOD 207.1
DATA WORKSHEET AND SUMMARY

Facility	**Canyon**		Parameter		**NH_3**
Unit	**U1**		Fuel		**Natural gas**
Sample Location	**Stack**		Data By		**JP**
Test Number	1-NH3-U1	2-NH3-U1	Average	Maximum	Limit
Reference Temperature (°F)	60	60			
Test Date	5/23/2024	5/23/2024			
Test Method	SCAQMD 207.1	SCAQMD 207.1			
Sample Train	27-WCS	27-WCS			
Meter Calibration Factor	0.999	0.999			
Stack Area (ft^2)	106.90	106.90			
Sample Time (Minutes)	60	60			
Barometric Pressure ("Hg)	29.64	29.64			
Start/Stop Time	1100-1203	1240-1337			
Meter Volume (acf)	34.015	34.958			
Meter Temperature (°F)	86.6	83.1			
Meter Pressure (iwg)	1.0	1.0			
Liquid Volume (ml)	96.8	87.7			
Stack O_2 (%)	14.52	14.51	14.52	(from facility CEMS)	
Unit Load (MW)	49	49	49.1		
Standard Sample Volume (SCF)	32.102	33.204			
Moisture Fraction	0.123	0.109			
Stack Flow Rate (dscfm, 68 °F)	238,400	238,000	238,200	(from facility CEMS)	
Stack Flow Rate (@ Tref)	234,788	234,394	234,591		
Gas Constant (ft-lbf/lb-mole-R)	1545.33	1545.33			
Molecular Weight NH_3 (lb/lb-mole)	17.03	17.03			
Specific Molar Volume (ft^3/lb-mole)	379.5	379.5			
F-Factor (dscf/MMBtu)	8,710	8,710			
HHV(Btu/SCF)	1,050	1,050			
Mass Conversion (lb/ug)	2.2046E-09	2.2046E-09			
O_2 Correction Factor (%)	15	15			
Mass NH_3 (ug)	1,122.923	656.155			
Mass NH_3 (lb)	2.48E-06	1.45E-06			
NH_3 (ppmv, flue gas)	1.72	0.97	1.34	1.72	
NH_3 (ppmv @ O_2 Correction Factor)	1.59	0.90	1.24	1.59	5
NH_3 (lb/hr)	1.08	0.61	0.85	1.08	
NH_3 (lb/MMBtu)	0.002	0.001	0.002	0.002	
NH_3 (lb/MMSCF)	2.27	1.28	1.78	2.27	

Note: SCAQMD Method 207.1 requires the higher of the duplicate runs be reported as the test result.

1-NH3-U1

Point	Meter Volume	Delta H	Tm In	Tm Out
3	800.055	1.0	84	84
2			86	83
1			88	83
3			86	82
2			89	83
1			90	85
3			90	83
2			91	84
1			92	84
3			92	84
2			93	85
1			93	84
Stop	834.070			
Result	**34.015**	**1.0**	**86.6**	

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	950.5	764.8	185.7
2	727.3	723.0	4.3
3	608.8	609.2	-0.4
4	937.4	930.2	7.2
Line Rinse	0.0	100.0	-100.0
			96.8

2-NH3-U1

Point	Meter Volume	Delta H	Tm In	Tm Out
3	836.030	1.0	84	84
2			84	83
1			84	83
3			84	83
2			83	82
1			83	81
3			83	82
2			84	83
1			84	83
3			84	82
2			84	82
1			84	82
Stop	870.988			
Result	**34.958**	**1.0**	**83.1**	

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	925.9	744.4	181.5
2	758.3	756.9	1.4
3	624.4	624.4	0.0
4	975.4	970.6	4.8
Line Rinse	0.0	100.0	-100.0
			87.7

SCAQMD 207.1 EXAMPLE CALCULATION
TEST NUMBER: 1-NH3-U1

Identifier	Description	Units	Equation	Value
A	Reference Temperature	F	--	60
B	Reference Temperature	R	A + 460	520
C	Meter Calibration Factor (Yd)	--	--	0.999
D	Barometric Pressure	" Hg	--	29.64
E	Meter Volume	acf	--	34.015
F	Meter Temperature	F	--	86.6
G	Meter Temperature	R	F + 460	546.6
H	Delta H	" H_2O	--	1.0
I	Meter Volume (standard)	dscf	0.03342 * E * (D + H/13.6) * B/G * C	32.102
J	Liquid Collected	grams	--	96.8
K	Water vapor volume	scf	0.0472 * J * B/528	4.500
L	Moisture Content	--	K/(K + I)	0.123
M	Gas Constant	ft-lbf/lb-mole-R	--	1545.33
N	Specific Molar Volume	SCF/lb-mole	385.3 * B / 528	379.5
O	F-Factor	dscf/MMBtu	--	8,710
P	HHV	Btu/SCF	--	1,050
Q	Mass Conversion Factor	lb/ug	--	2.2046E-09
R	O_2 Correction Factor	--	--	15
S	Stack Flow Rate @ 68 F	dscfm	--	238,400
T	Stack Flow Rate @ Tref	dscfm	S * B/528	234,788
U	Mass NH_3	ug	--	1,123
V	Mass NH_3	lb	U * Q	2.48E-06
W	MW of NH_3	lb/lb-mole	--	17.03
X	NH_3	ppm	$(V * N * 10^b)/(I * W)$	1.7
Y	Flue Gas O_2	%	--	14.52
Z	NH_3	ppmc	X * (20.9 - R)/(20.9 - Y)	1.6
AA	NH_3	lb/hr	$X * T * W * 60/(N * 10^b)$	1.1
AB	NH_3	lb/MMBtu	$(X * W * O)/(385.3 * 10^b) * 20.9/(20.9 - Y)$	0.002
AC	NH_3	lb/MMSCF	AB * P	2.3

Note:

(1) Some values may be slightly different from those shown on the run sheets due to round off errors. This page is intended to show the calculation methodology only.

APPENDIX D
QUALITY ASSURANCE

Appendix D.1
Quality Assurance Program Summary

QUALITY ASSURANCE PROGRAM SUMMARY

As part of Montrose Air Quality Services, LLC (Montrose) ASTM D7036-04 certification, Montrose is committed to providing emission related data which is complete, precise, accurate, representative, and comparable. Montrose quality assurance program and procedures are designed to ensure that the data meet or exceed the requirements of each test method for each of these items. The quality assurance program consists of the following items:

- Assignment of an Internal QA Officer
- Development and use of an internal QA Manual
- Personnel training
- Equipment maintenance and calibration
- Knowledge of current test methods
- Chain-of-custody
- QA reviews of test programs

Assignment of an Internal QA Officer: Montrose has assigned an internal QA Officer who is responsible for administering all aspects of the QA program.

Internal Quality Assurance Manual: Montrose has prepared a QA Manual according to the requirements of ASTM D7036-04 and guidelines issued by EPA. The manual documents and formalizes all of Montrose's QA efforts. The manual is revised upon periodic review and as Montrose adds capabilities. The QA manual provides details on the items provided in this summary.

Personnel Testing and Training: Personnel testing and training is essential to the production of high quality test results. Montrose training programs include:

- A requirement for all technical personnel to read and understand the test methods performed
- A requirement for all technical personnel to read and understand the Montrose QA manual
- In-house testing and training
- Quality Assurance meetings
- Third party testing where available
- Maintenance of training records.

Equipment Maintenance and Calibration: All laboratory and field equipment used as a part of Montrose's emission measurement programs is maintained according to manufacturer's recommendations. A summary of the major equipment maintenance schedules is summarized in Table 1. In addition to routine maintenance, calibrations are performed on all sampling equipment according to the procedures outlined in the applicable test method. The calibration intervals and techniques for major equipment components is summarized in Table 2. The calibration technique may vary to meet regulatory agency requirements.

Knowledge of Current Test Methods: Montrose maintains current copies of EPA, ARB, and SCAQMD Source Test Manuals and Rules and Regulations.

Chain-of-Custody: Montrose maintains chain-of-custody documentation on all data sheets and samples. Samples are stored in a locked area accessible only to Montrose source test personnel. Data sheets are kept in the custody of the originator, program manager, or in locked storage until return to Montrose office. Electronic field data is duplicated for backup on secure storage media. The original data sheets are used for report preparation and any additions are initialed and dated.

QA Reviews: Periodic field, laboratory, and report reviews are performed by the in-house QA coordinator. Periodically, test plans are reviewed to ensure proper test methods are selected and reports are reviewed to ensure that the methods were followed and any deviations from the methods are justified and documented.

ASTM D7036-04 Required Information

Uncertainty Statement

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is presented in the report appendices.

Performance Data

Performance data are available for review.

Qualified Personnel

A qualified individual (QI), defined by performance on a third party or internal test on the test methods, is present on each test event.

Plant Entry and Safety Requirements

Plant Entry

All test personnel are required to check in with the guard at the entrance gate or other designated area. Specific details are provided by the facility and project manager.

Safety Requirements

All personnel shall have the following personal protective equipment (PPE) and wear them where designated:

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Hearing Protection
- Gloves
- High Temperature Gloves (if required)
- Flame Resistant Clothing (if required)

The following safety measures are followed:

- Good housekeeping
- SDS for all on-site hazardous materials
- Confine selves to necessary areas (stack platform, mobile laboratory, CEMS data acquisition system, control room, administrative areas)
- Knowledge of evacuation procedures

Each facility will provide plant specific safety training.

TABLE 1
EQUIPMENT MAINTENANCE SCHEDULE

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pumps	1. Absence of leaks 2. Ability to draw manufacturers required vacuum and flow	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Replace parts 4. Leak check
Flow Meters	1. Free mechanical movement	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Calibrate
Sampling Instruments	1. Absence of malfunction 2. Proper response to zero span gas	As recommended by manufacturer	As recommended by manufacturer
Integrated Sampling Tanks	1. Absence of leaks	Depends on nature of use	1. Steam clean 2. Leak check
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters 2. Change gas dryer 3. Leak check 4. Check for system contamination
Sampling Lines	1. Sample degradation less than 2%	After each test series	1. Blow dry, inert gas through line until dry

TABLE 2
MAJOR SAMPLING EQUIPMENT CALIBRATION REQUIREMENTS

Sampling Equipment	Calibration Frequency	Calibration Procedure	Acceptable Calibration Criteria
Continuous Analyzers	Before and After Each Test Day	3-point calibration error test	< 2% of analyzer range
Continuous Analyzers	Before and After Each Test Run	2-point sample system bias check	< 5% of analyzer range
Continuous Analyzers	After Each Test Run	2-point analyzer drift determination	< 3% of analyzer range
CEMS System	Beginning of Each Day	leak check	< 1 in. Hg decrease in 5 min. at > 20 in. Hg
Continuous Analyzers	Semi-Annually	3-point linearity	< 1% of analyzer range
NO_x Analyzer	Daily	NO_2 -> NO converter efficiency	> 90%
Differential Pressure Gauges (except for manometers)	Semi-Annually	Correction factor based on 5-point comparison to standard	± 5%
Differential Pressure Gauges (except for manometers)	Bi-Monthly	3-point comparison to standard, no correction factor	± 5%
Barometer	Semi-Annually	Adjusted to mercury-in-glass or National Weather Service Station	± 0.1 inches Hg
Dry Gas Meter	Semi-Annually	Calibration check at 4 flow rates using a NIST traceable standard	± 2%
Dry Gas Meter	Bi-Monthly	Calibration check at 2 flow rates using a NIST traceable standard	± 2% of semi-annual factor
Dry Gas Meter Orifice	Annually	4-point calibration for ΔH@	--
Temperature Sensors	Semi-Annually	3-point calibration vs. NIST traceable standard	± 1.5%

Note: Calibration requirements that meet applicable regulatory agency requirements are used.

Appendix D.2
SCAQMD and STAC Certifications

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

September 14, 2023

Mr. John Peterson
Montrose Air Quality Services, LLC
1631 E. Saint Andrew Place
Santa Ana, CA 92705

Subject: LAP Approval Notice
Reference # 96LA1220

Dear Mr. Peterson:

We have completed our review of Montrose Air Quality Services' revised renewal application, which was submitted as notification of Montrose's recent acquisition of AirKinetics, Inc. under the South Coast AQMD Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning September 30, 2023, and ending September 30, 2024, for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement and conditions listed in the attachment to this letter:

South Coast AQMD Methods 1-4
South Coast AQMD Methods 10.1 and 100.1
South Coast AQMD Methods 5.1, 5.2, 5.3, 6.1 (Sampling and Analysis)
South Coast AQMD Methods 25.1 and 25.3 (Sampling)
Rule 1121/ 1146.2 Protocol
Rule 1420/1420.1/1420.2 – (Lead) Source and Ambient Sampling
USEPA CTM-030 and ASTM D6522-00

Your LAP approval to perform nitrogen oxide emissions compliance testing for Rule 1121/ 1146.2 Protocols includes satellite facilities located at:

McKenna Boiler
1510 North Spring Street
Los Angeles, CA 90012

Noritz America Corp.
11160 Grace Avenue
Fountain Valley, CA 92708

Ajax Boiler, Inc.
2701 S. Harbor Blvd.
Santa Ana, CA 92704

VA Laundry Bldg., Greater LA Healthcare Sys.
508 Constitution Avenue
Los Angeles, CA 90049

So Cal Gas – Engr Analysis Ctr, Bldg H
8101 Rosemead Blvd
Pico Rivera, CA 90660

Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions. You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

D. Sarkar

Dipankar Sarkar
Program Supervisor
Source Test Engineering

DS:CE
Attachment

230914 LapRenewal.doc

STAC STACK TESTING ACCREDITATION COUNCIL

A2LA American Association for Laboratory Accreditation

Accredited Air Emission Testing Body

A2LA has accredited

MONTROSE AIR QUALITY SERVICES

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Council (STAC) evaluation process, this laboratory is accredited to perform testing activities in compliance with ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.

Presented this 27th day of February 2024.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3925.01
Valid to February 28, 2026

This accreditation program is not included under the A2LA ILAC Mutual Recognition Arrangement.

Appendix D.3
Individual QI Certificate

CERTIFICATE OF COMPLETION

John Peterson

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Methods 1.1, 1.2, 2.1, 2.2, 2.3, 3.1, & 4.1

Certificate Number: 002-2022-113

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 11/23/2022

DATE OF EXPIRATION: 11/22/2027

MONTROSE ENVIRONMENTAL


CERTIFICATE OF COMPLETION
Victor Macedonio
This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):
SCAQMD Method 207.1
Certificate Number: 002-2022-69
Tate Strickler, VP – Quality Systems
DATE OF ISSUE: 05/06/2022
DATE OF EXPIRATION: 05/05/2027
MONTROSE
ENVIRONMENTAL

Appendix D.4
Statement of No Conflict of Interest

STATEMENT OF NO CONFLICT OF INTEREST AS AN INDEPENDENT TESTING LABORATORY

(To be completed by authorized source testing firm representative and included in source test report)

The following facility and equipment were tested by my source testing firm and are the subjects of this statement:

Facility ID:	**153992**
Date(s) Tested:	**May 23, 2024**
Facility Name:	**Canyon Power Plant**
Equipment Address:	**3071 E. Mira Loma Avenue**
	Anaheim, California 92806
Equipment Tested:	**Unit 1**
Device ID, A/N, P/N:	**D1**

I state, as its legally authorized representative, that the source testing firm of:

Source Test Firm:	Montrose Air Quality Services, LLC
Business Address:	1631 E. St. Andrew Pl.
	Santa Ana, California 92705

is an "Independent Testing Laboratory" as defined in ***District Rule 304(k):***

For the purposes of this Rule, when an independent testing laboratory is used for the purposes of establishing compliance with District rules or to obtain a District permit to operate, it must meet all of the following criteria:

(1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company, or any subsidiary thereof -

(2) The company or facility being tested, or parent company or any subsidiary thereof, shall have no financial interest in the testing laboratory;

(3) Any company or facility responsible for the emission of significant quantities of pollutants to the atmosphere, or parent company or any subsidiary thereof shall have no financial interest in the testing laboratory; and

(4) The testing laboratory shall not be in partnership with, own or be owned by, in part or in full, the contractor who has provided or installed equipment (basic or control), or monitoring systems, or is providing maintenance for installed equipment or monitoring systems, for the company being tested.

Furthermore, I state that any contracts or agreements entered into by my source testing firm and the facility referenced above, or its designated contractor(s), either verbal or written, are not contingent upon the outcome of the source testing, or the source testing information provided to the SCAQMD.

Signature: _____ **Date:** **6/26/2024**

Rik Dupont	**Client Project Manager**	**(714) 279-6777**	**6/26/2024**
(Name)	(Title)	(Phone)	(Date)

FORM ST-110 :stevforl.doc (Revised 11/18/98

APPENDIX E
APPLICABLE PERMIT SECTIONS

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
System 1: GAS TURBINE					
GAS TURBINE, NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, 479 MMBTU/HR AT 46 DEG F, WITH INLET CHILLING, WITH WATER INJECTION WITH A/N: 555828 GENERATOR, 50.95 MW	D1	C3	NOX: MAJOR SOURCE**	**CO:** 4 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1) -BACT, 12-6-2002*]; **CO:** 2000 PPMV NATURAL GAS (5) **[RULE 407, 4-2-1982]; NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 2005, 12-4-2015]; NOX:** 25 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK, 3-20-2009]; PM10:** 0.01 GRAINS/SCF NATURAL GAS (5A) **[RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **PM10:** 0.1 GRAINS/SCF NATURAL GAS (5) **[RULE 409, 8-7-1981]; PM10:** 1.67 LBS/HR NATURAL GAS (5C) **[RULE 1303(b)(2)-Offset, 5-10-1996;** *RULE 1303(b)(2) -Offset, 12-6-2002*]; **PM10:** 11 LBS/HR NATURAL GAS (5B) **[RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **SO2:** (9) **[40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2:** 0.06 LBS/MMBTU NATURAL GAS (8) **[40CFR 60 Subpart KKKK, 3-20-2009]; VOC:** 2 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A63.1, A99.1, A99.2, A99.3, A195.1, A195.2, A195.3, A327.1, B61.1, D12.1, D29.2, D29.3, D82.1, D82.2, E193.1, H23.1, I298.1, K40.1

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
CO OXIDATION CATALYST, NO. 1, BASF, 110 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 476654	C3	D1 C4			
SELECTIVE CATALYTIC REDUCTION, NO. 1, CORMETECH CMHT-21, 1012 CU.FT.; WIDTH: 2 FT 6 IN; HEIGHT: 25 FT 9 IN; LENGTH: 18 FT WITH A/N: 476654 AMMONIA INJECTION	C4	C3 S6		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1) -BACT, 12-6-2002*]	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, TURBINE NO. 1, HEIGHT: 86 FT ; DIAMETER: 11 FT 8 IN A/N: 555828	S6	C4			

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : C4, C10, C16, C22]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1110.2, 2-1-2008; RULE 1110.2, 11-1-2019; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 9-1-2017; RULE 1470, 5-4-2012; **RULE 2012, 5-6-2005; 40CFR 60 Subpart IIII, 7-7-2016]**

[Devices subject to this condition : D25]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The test(s) shall be conducted quarterly during the first twelve months of operation of the catalytic control device and annually thereafter when four consecutive quarterly source tests demonstrate compliance with the ammonia emission limit. If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the ammonia emissions limits prior to resuming annual source tests.

The South Coast AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

If the turbine is not in operation during one calendar year, then no testing is required during that calendar year.

The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using South Coast AQMD Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted and the results submitted to the South Coast AQMD within 60 days after the test date.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

[RULE 1135, 11-2-2018; **RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1) -BACT, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19]

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Sampling Time	Test Location
SOX emissions	AQMD Labcratory Method 307-91	District-approved averaging time	Fuel sample

THIS IS THE LAST PAGE OF THIS DOCUMENT

If you have any questions, please contact one of the following individuals by email or phone.

Name: Mr. Rik Dupont
Title: Client Project Manager
Region: West
Email: RDupont@montrose-env.com
Phone: (714) 279-6777

Name: Mr. Matt McCune
Title: Regional Vice President
Region: West
Email: MMccune@montrose-env.com
Phone: (714) 279-6777

TEST REPORT FOR
THIRD QUARTER 2024 AMMONIA SLIP TEST AT
CANYON POWER PLANT – UNIT 2
FACILITY ID: 153992, DEVICE ID: D7

Prepared For:

Canyon Power Plant
3071 E. Mira Loma Avenue
Anaheim, California 92806

For Submittal To:

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Prepared By:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705
(714) 279-6777

Rik Dupont

Test Date: **July 17, 2024**
Production Date: **August 23, 2024**
Report Number: **W002AS-044155-RT-6414**

MONTROSE AIR QUALITY SERVICES

STAC ACCREDITED TO ASTM D7036 ONLY CERT #3925.01

CONFIDENTIALITY STATEMENT

Except as otherwise required by law or regulation, this information contained in this communication is intended exclusively for the individual or entity to which it is addressed. This communication may contain information that is proprietary, privileged or confidential or otherwise legally exempt from disclosure. If you are not the named addressee, you are not authorized to read, print, retain, copy, or disseminate this message or any part of it.

REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:  Date: 8/23/2024

Name: Rik Dupont Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  Date: 8/23/2024

Name: Surya Adhikari Title: Senior Reporting QC Specialist

TABLE OF CONTENTS

1.0 INTRODUCTION AND SUMMARY

Montrose Air Quality Services, LLC (MAQS) was contracted by the Canyon Power Plant to perform an ammonia slip test at Unit 2 as required by the facility Permit (Facility ID 153992) Condition Number D29.2. This report documents the results of the ammonia slip tests performed on July 17, 2024. The test was performed by Rik Dupont, Jason Sering, Jorge Contreras, and Nestor Gonzalez of MAQS. Rik Dupont was the on-site Qualified Individual for MAQS. MAQS qualifies as an independent testing laboratory under SCAQMD Rule 304 (no conflict of interest) and is certified by the SCAQMD to conduct testing for criteria pollutants according to District Methods. Bertha Hernandez coordinated the test for Canyon Power Plant.

The test consisted of duplicate ammonia tests performed at 49.7 MW. The test program followed the procedures described in the initial compliance test protocol (MAQS document R038842). The results of the test are summarized in Table 1-1. The table shows that the ammonia slip from this unit was less than the permitted limit of 5 ppm corrected to 15% O_2.

TABLE 1-1
AMMONIA SLIP TEST RESULTS SUMMARY
CANYON POWER PLANT
UNIT 2
JULY 17, 2024

Parameter/Units	Result(1)	Limit
NH_3		
ppm	1.0	--
ppm at 15%O_2	0.9	5

(1) Maximum of duplicate runs, as required by SCAQMD Method 207.1.

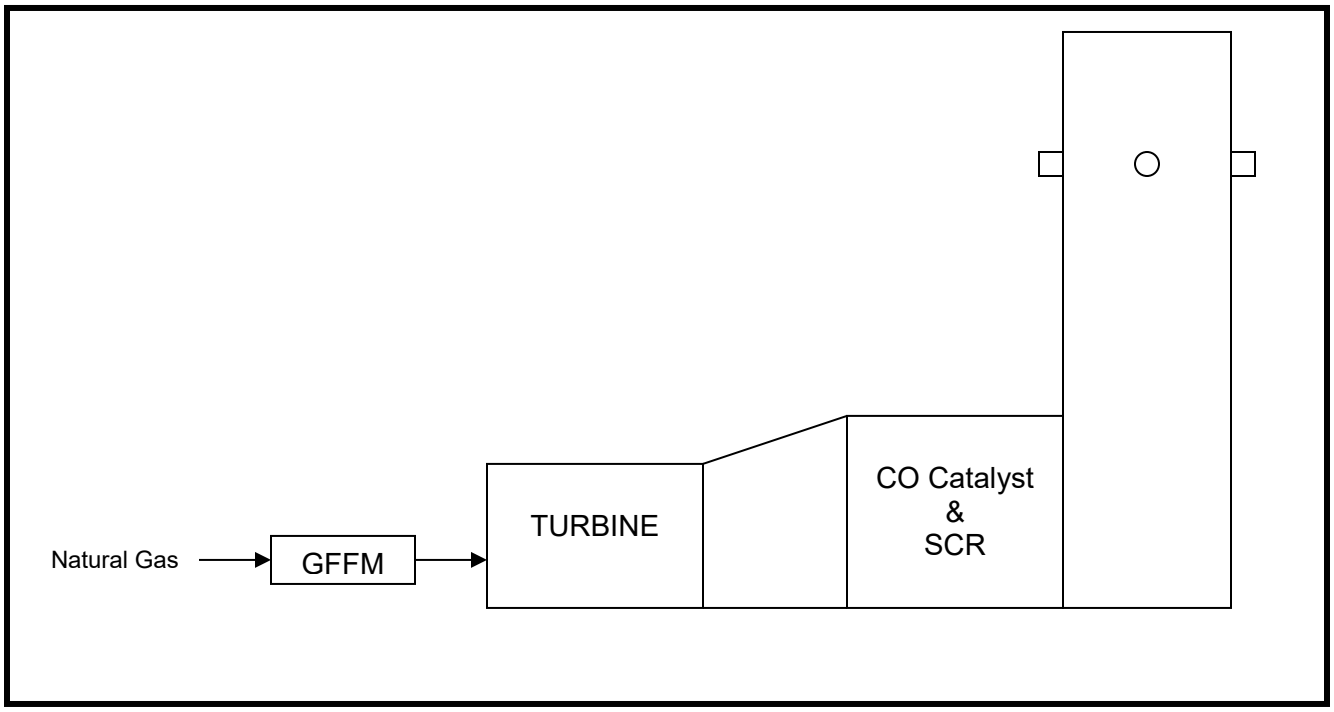
Section 2 of this document provides a brief description of the unit, test conditions, sample location, and CEMS. Details of the test procedures are provided in Section 3. Section 4 provides the results of each individual test. All raw data, calculations, quality assurance data, unit operating conditions, and CEMS data are provided in the appendices.

2.0 UNIT AND CEMS DESCRIPTION

2.1 UNIT DESCRIPTION

The City of Anaheim Canyon Power Plant is located at 3071 E. Mira Loma Avenue, Anaheim, California 92806. The facility consists of four identical generating units. Each unit consists of a natural gas fired, GE Model LM6000PC Sprint simple cycle, gas turbine. The units are natural gas fired with a rated heat input of 479 MMBtu per hour at 46°F, with water injection. The units are equipped with a CO catalyst and Selective Catalytic Reduction (SCR) system for CO and NO_x control respectively. A simplified process block diagram of the unit is presented as Figure 2-1.

FIGURE 2-1
SIMPLIFIED PROCESS BLOCK DIAGRAM
CANYON POWER PLANT
UNIT 2



Stack Inside Diameter:	11 feet, 8 inches
Distance from Upstream Disturbance:	23 feet, 4 inches (2.0 Diameters)
Distance from Stack Exit:	16 feet, 6 inches (1.4 Diameters)

2.2 CEMS DESCRIPTION

NO_x and CO emissions from the unit are monitored by a dry, extractive Continuous Emission Monitoring System (CEMS). Stack flow rate is determined from fuel flow rate, O_2 concentration, standard F-Factor, and fuel higher heating value using EPA Method 19.

2.3 TEST CONDITIONS

The tests were performed with the unit operating at an average load of 49.7 MW. Tests were performed while the unit was firing natural gas and operating under normal conditions. Unit operation was established by the Canyon Power Plant operators.

2.4 SAMPLE LOCATION

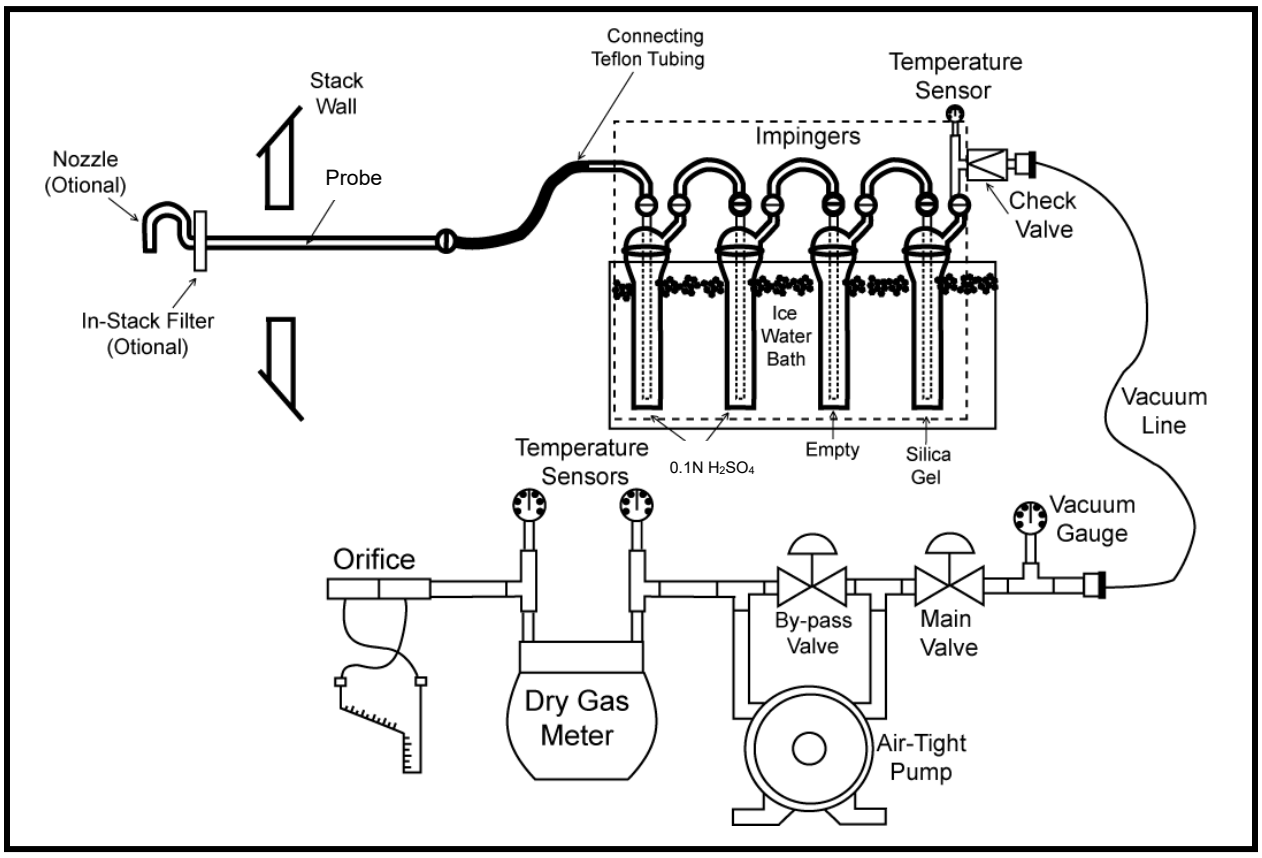
The measurements were made from sample ports located on the exhaust stack. There are four sample ports equally spaced at this location. The stack inside diameter at the sample plane is 11 feet, 8 inches. The sample ports are located 23 feet, 4 inches (2.0 diameters) downstream of the nearest flow disturbance and 16 feet, 6 inches (1.4 diameters) from the stack exit. A diagram of the stack sample location and traverse points is presented in Appendix A.1.

3.0 TEST DESCRIPTION

Flue gas samples were collected non-isokinetically using a SCAQMD Method 207.1 sample train. The samples were collected using a 12-point traverse at the exhaust stack location. Each test was performed over a 60 minute interval. The sample gas was drawn through a titanium probe, Teflon sample line, two impingers each containing 100 ml of 0.1N H_2SO_4, an empty impinger, an impinger containing silica gel, and a dry gas meter. The optional nozzle and filter were not used since the source is natural gas fired. The contents of the sample line and the first three impingers were recovered and analyzed by SCAQMD Method 207.1 for ammonia concentration by Ion Specific Electrode analysis. A diagram of the sampling equipment is presented as Figure 3-1.

Stack O_2 and NO_x concentrations, and stack volumetric flow rate data were recorded from the Continuous Emission Monitoring System (CEMS) which is installed on the unit. These data were used to correct the ammonia concentration to 15% O_2 and to report the mass emission rates.

FIGURE 3-1
SCAQMD METHOD 207.1 SAMPLING EQUIPMENT



4.0 TEST RESULTS AND OVERVIEW

4.1 TEST RESULTS

The results of the test are summarized in Table 4-1. The results show that the ammonia slip was 0.9 ppm @ 15% O_2 which is less than the permitted limit of 5 ppm @ 15% O_2.

TABLE 4-1
AMMONIA SLIP TEST RESULTS
CANYON POWER PLANT
UNIT 2
JULY 17, 2024

Parameter/Units	1-NH_3	2-NH_3	Average	Maximum(1)	Limit
Start/Stop Time	1638/1744	1822/1926	--	--	--
Stack Flow, dscfm @ T_{ref}(2)	231,833	232,818	232,326	--	--
O_2, %(2)	14.40	14.43	14.42	--	--
NO_x, ppmc(2)	2.3	2.3	2.3	--	2.5
NH_3					
ppm	0.9	1.0	1.0	1.0	--
ppmc	0.9	0.9	0.9	0.9	5
lb/hr	0.6	0.6	0.6	0.6	--
lb/MMBtu	0.001	0.001	0.001	0.001	--
lb/MMSCF	1.2	1.3	1.3	1.3	--

(1) Maximum of duplicate test runs, as required by SCAQMD Method 207.1.
(2) From facility CEMS.

4.2 TEST OVERVIEW

The test program was successful in meeting the program objectives. The sample train was leak checked before and after the test and all QA/QC requirements of SCAQMD Method 207.1 were satisfied.

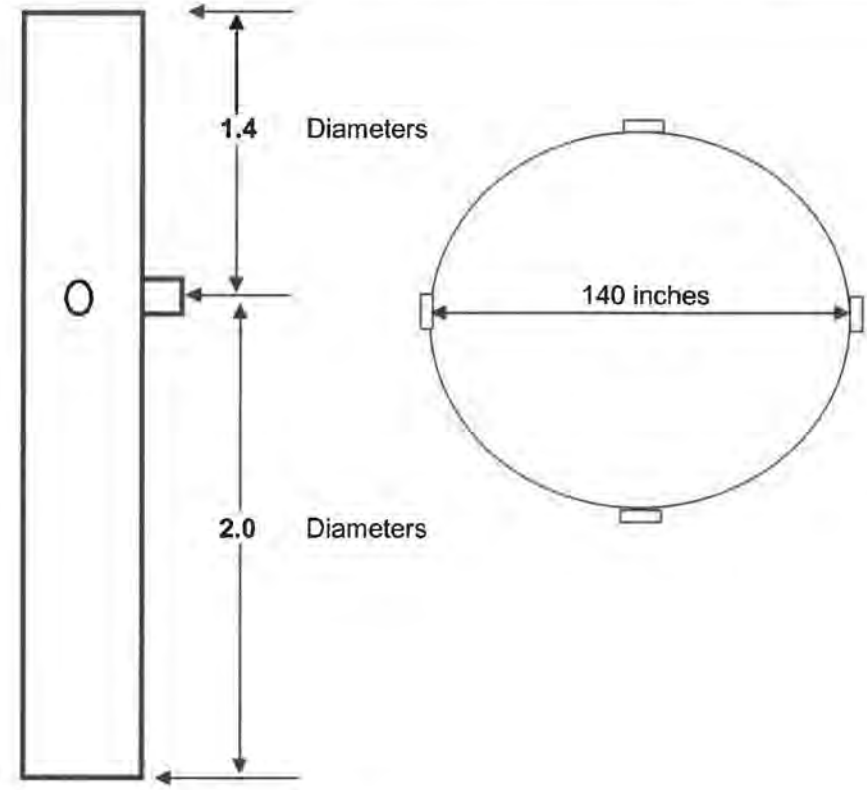
APPENDIX A
TEST DATA

Appendix A.1
SCAQMD Method 1.1 Data

METHOD 1 DATA SHEET
SAMPLE LOCATION

Client: SCPPA Date: 7/17/24

Sample Location: U2 Performed By: RD



Diameter (in.)	**140.00**
Upstream (ft.)	**23.33**
Downstream (ft.)	**16.50**
Coupling (in.)	**11.25**
Stack Area (ft^2)	**106.90**

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	6.1	17.3
2	14.6	20.5	31.8
3	29.6	41.4	52.7
4	70.4	98.6	109.8
5	85.4	119.5	130.7
6	95.6	133.9	145.2

Appendix A.2
Sample Data Sheets

MONTROSE
AIR QUALITY SERVICES

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET

CLIENT: SCPPA - Canyon
LOCATION: Anaheim, CA
DATE: 7-17-2024
RUN NO: 1-NH3-U2
OPERATOR: N.G - JAC
METER BOX NO: 47WC3
METER ΔH@: 1.852 @ 0.551
METER Yd: 1.005
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12pts-5min
ΔH= ~~*tg1.9~~ X ΔP:
Probe Condition, pre/post test: ok / ok
Silica Gel Expended, Y/N: NO
Filter Condition after Test: N/A
Check Weight: 499.9 - 500.0

AMBIENT TEMPERATURE: 86°F
BAROMETRIC PRESSURE: 29.64
ASSUMED MOISTURE: N/A
PITOT TUBE COEFF, Cp:
PROBE ID NO/MATERIAL: N/A T:
PROBE LENGTH: 8
NOZZLE ID NO/ MATERIAL: N/A
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : 0.002 CFM@ 15 in. Hg.
POST-TEST LEAK RATE: : 0.001 CFM@ 9 in. Hg.
PITOT LEAK CHECK - PRE: N/A POST: N/A
CHAIN OF CUSTODY: SAMPLE CUSTODIAN J.S.
SAMPLER N.G
SAMPLE CUSTODIAN J.S.

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	0.1N H2SO4	977.4	745.9	
2	0.1N H2SO4	748.8	747.0	
3	MT	659.6	660.0	
4	SG	913.0	904.3	
LR	DI	760.0	+100mL	
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H₂O	ΔH in. H₂O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O₂ %	Pstatic in. H₂O
3	16:38	285.437	N/A	+0.10	N/A	N/A	N/A	57	N/A	86	4		-0.77
2 *	~~16:43~~ 16:43	288.310						50		85	4		
1	16:48	291.292						49		85	4		
P	16:53	294.049											
3	16:55	294.049						49		85	4		
2 *	~~16:00~~ 17:00	296.974						48		86	4		
1	17:05	299.825						48		86	4		
P	17:10	302.546											
3	17:12	302.546						45		86	4		
2	17:17	305.411						44		86	4		
1	17:22	308.207						44		86	4		
P	17:27	311.013											
3	17:29	311.013						44		86	4		
2	17:34	313.840						45		86	4		
1	17:39	316.667						45		85	4		
P	17:44	319.502											
Average:													

Comments: * N.G 7-17-2024

MONTROSE AIR QUALITY SERVICES

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET

CLIENT: SCRPA - Canyon
LOCATION: Anaheim CA
DATE: 7-17-2024
RUN NO: 2-NH3-W2
OPERATOR: N.G
METER BOX NO: 47 WC3
METER ΔH@: 1.852 @ 0.551
METER Yd: 1.008
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12 pts - 5 min
ΔH= 1.910 X ΔP:
Probe Condition, pre/post test: ok / ok
Silica Gel Expended, Y/N: N
Filter Condition after Test: N/A
Check Weight: 499.9 - 500.0

AMBIENT TEMPERATURE: 85 °F
BAROMETRIC PRESSURE: 29.64" Hg
ASSUMED MOISTURE: N/A
PITOT TUBE COEFF, Cp:
PROBE ID NO/MATERIAL: N/A - Ti
PROBE LENGTH: 8'
NOZZLE ID NO/ MATERIAL: N/A
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : <.003 CFM@ 15 in. Hg.
POST-TEST LEAK RATE: : <.002 CFM@ 10 in. Hg.
PITOT LEAK CHECK - PRE: N/A POST: N/A
CHAIN OF CUSTODY: SAMPLE CUSTODIAN J.S.
SAMPLER N.G
SAMPLE CUSTODIAN J.S.

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	0.1 H_2SO_4	962.5	723.9	
2	0.1 H_2SO_4	794.3	749.2	
3	MT	664.0	664.8	
4	SG	914.8	908.0	
LR	D1		0100	
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	Pstatic in. H_2O
3	18:20	320.010	N/A	1.910	N/A	N/A	N/A	57	N/A	86	3		-.77
2	18:25	322.866						50		87	3		
1	18:30	325.813						45		86	3		
C	18:35	328.676											
3	18:37	328.676						44		86	3		
2	18:42	331.639						43		85	3		
1	18:47	334.550						43		85	3		
C	18:52	337.225											
3	18:54	337.225						43		86	3		
2	18:59	340.032						44		86	3		
1	19:04	342.801						44		85	3		
C	19:09	345.609											
3	19:11	345.609						44		85	3		
2	19:16	348.467						44		85	3		
1	19:21	351.240						45		85	3		
C	19:26	354.077											
Average:													

Comments:

Date of last revision 2/14/2017

MONTROSE AIR QUALITY SERVICES

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET

CLIENT: SCPPA CANYON
LOCATION: UNIT-2
DATE: 7.17.24
RUN NO: FB-NH3-U2
OPERATOR: N.G.
METER BOX NO: 47 WCS
METER ΔH@: 1.852
METER Yd: 1.000
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12,5
ΔH= NA X ΔP:
Probe Condition, pre/post test: Good/Good
Silica Gel Expended, Y/N: NO
Filter Condition after Test: NA
Check Weight: 999.4/1000.0

AMBIENT TEMPERATURE: 86° F
BAROMETRIC PRESSURE: 29.64
ASSUMED MOISTURE: NA
PITOT TUBE COEFF, Cp: NA
PROBE ID NO/MATERIAL: NA / T1
PROBE LENGTH: 2
NOZZLE ID NO/ MATERIAL: NA
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : 0.005 CFM@ 12 in. Hg.
POST-TEST LEAK RATE: 0.005 CFM@ 10 in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN JS
SAMPLER N.G.
SAMPLE CUSTODIAN JS

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	0.1N H_2SO_4	818.3	718.4	
2	0.1N H_2SO_4	731.3	731.2	
3	MT	645.4	645.4	
4	SG	902.1	902.4	
#2	100g/s DI H_2O	-100.0		
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	Pstatic in. H_2O
Average:													

F.B. - NH3 - U2

Comments:

Date of last revision 2/14/2017

Appendix A.3
Laboratory Data

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS CALCULATION DATA

MONTROSE

District Method: SCAQMD 207.1

Project Number: Proj-044155
Client/Location: SCPPA/Canyon
Sample Location: Unit-2
Sample Date: 7/17/2024
Analysis Date: 7/17/2024
Analyst's Initials: JS

Calibration Curve Slope: -59.6167
Y-intercept: 91.3917
R^2: 0.9999
Thermometer #: #5
ISE Electrode #: #8

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Conc. µg NH3 /ml as N	C_{avg} as N	C_{avg} as NH_3	µg NH_3/ sample
Standard Check: 28 µg NH_3 / ml as N	NA	21.6	4.9	28.236	28.181	34.256	NA
		21.6	5.0	28.127			
1-NH_3	650.2	21.6	97.7	0.784	0.785	0.955	620.651
		21.7	97.6	0.787			
2-NH_3	718.9	21.0	97.3	0.796	0.782	0.951	683.686
		21.1	98.2	0.769			
Spike 1-NH3	NA	21.6	15.6	18.677	18.606	22.616	NA
		21.7	15.8	18.534			
Standard Check: 28 µg NH_3 / ml as N	NA	22.0	5.7	27.376	27.429	33.342	NA
		22.0	5.6	27.482			
Reagent Blank 0.1N H_2SO_4	NA	21.7	172.4	0.044	0.043	0.052	NA
		21.7	173.1	0.043			
DI H_2O Blank	NA	21.4	181.6	0.031	0.031	0.038	NA
		21.5	181.2	0.031			
Field Blank	440.1	21.8	176.7	0.037	0.037	0.045	19.605
		21.5	177.3	0.036			
Standard Check: 28 µg NH_3 / ml as N	NA	21.8	5.8	27.271	27.218	33.086	NA
		21.7	5.9	27.166			

Notes:

- Measured Concentration of Ammonia (C) in ug NH_3 / ml as N.
- $C=10^{(P-B)/M}$, P = electrode potential (mV), M=slope and B=intercept.
- Average Measured Ammonia Concentration (C_{avg}) = (C_1 + C_2)/2 where C_1, C_2 are results from duplicate analyses (ug NH_3 /ml as N).
- C_{avg} (ug NH_3/ml as NH_3) = C_{avg} (ug NH_3/ ml as N) * 17.03/14.01.
- ug NH_3 / sample = C_{avg} (ug NH_3/ml as NH_3) * TV.
- Used 100 ml of samples and standards with 2 ml ISA and constant stirring rate, analyzed in duplicate.
- Sample pH and temperatures can be found on the laboratory datasheet.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Sample solutions, blanks and C.V. Standard temperature must be within ± 2°C.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS QUALITY CONTROL

District Method: SCAQMD 207.1

MONTROSE

Project Number: Proj-044155
Client/ Location: SCPPA/Canyon
Sample Location: Unit-2
Sample Date: 7/17/2024
Analysis Date: 7/17/2024
Analyst's Initials: JS

Sample	Recovery (%)	RPD (%)	RPA (%)
Standard Check: 28 µg NH_3 / ml as N	NA	0.39	0.647
1-NH3	NA	-0.39	NA
2-NH3	NA	3.48	NA
Spike 1-NH3	92.74	0.77	NA
Standard Check: 28 µg NH_3 / ml as N	NA	-0.39	-2.038
Reagent Blank 0.1N H_2SO_4	NA	2.70	NA
DI H_2O Blank	NA	-1.54	NA
Field Blank	NA	2.32	NA
Standard Check: 28 µg NH_3 / ml as N	NA	0.39	-2.791

Notes:

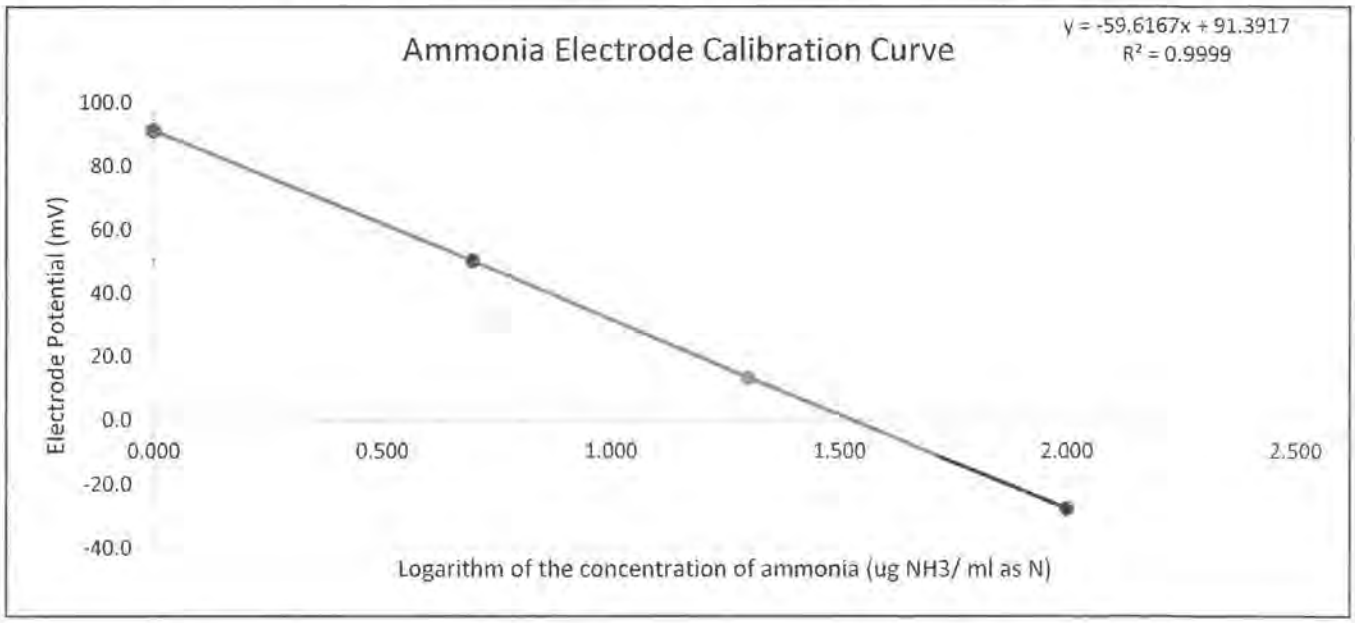
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- Matrix Spike Percent Recovery (%R).
- $\%R = (C_{spike}*0.104 - C_{sample}*0.102)/2 *100$.
- Cspike = average result of matrix spike (ug NH_3/ ml as N).
- Relative Percent Difference (RPD) = $(C_1-C_2)/ C_{avg} *100$ **(must be 5% or less).**
- Relative Percent Accuracy (RPA) **(must be 10% or less).**
- RPA = (C_{avg}-theoretical value of standard)/ theoretical value of standard * 100.

AMMONIA ELECTRODE CALIBRATION CURVE DATA

MONTROSE

District Method: SCAQMD 207.1
Date: July 17, 2024
Project Number: Proj-044155
Client/Location: SCPPA/Canyon

NH_3 concentration (µg NH3 / ml as N)	Log NH_3 concentration	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	0.000	91.3	21.0	22.0
5	0.699	50.2	21.1	22.0
20	1.301	13.2	21.1	22.0
100	2.000	-27.6	21.3	22.0



Slope	Y-Intercept	R^2
-59.6167	91.3917	0.9999

NH_3 concentration (µg NH3 / ml as N)	Value LR line	Difference	% Difference
1	1.0035	0.0035	0.3546
5	4.9084	-0.0916	-1.8315
20	20.4915	0.4915	2.4576
100	99.0710	-0.9290	-0.9290

Notes:

- Regression Line: P=M*log(ug of NH_3/ ml as N)+B.
- Measured Concentration of Ammonia (C) in ug / ml NH_3 as N: $C=10^{(P-B)/M}$ where P = electrode potential, M= slope and B= intercept.
- All standards are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.
- Calibration solution temperature must be within ± 2°C.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS DATA

District Method: SCAQMD 207.1

Project Number: Proj- 044155
Client/Location: SCPDA CANYON
Sample Location: UNIT-2
Sample Date: 07-17-24
Analysis Date: 07-17-24

Calibration Curve: Y=596167x + 91.3917
R^2: 0.9999
Thermometer #: #5
ISE Electrode #: #8
Analyst's Initials: JS

NH3 concentration (µg NH3 / ml as N)	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	91.3	21.0	22.0
5	50.2	21.1	22.0
20	13.2	21.1	22.0
100	-27.6	21.3	22.0

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Blue after ISA (Y/N)	pH
Standard Check: 28 µg NH_3 / ml as N	NA	21.6	4.9	Y	NA
		21.6	5.0	Y	
1- NH_3	650.2	21.6	97.7	Y	<2
		21.7	97.6	Y	
2- NH_3	718.9	21.0	97.3	Y	<2
		21.1	98.2	Y	
Spike: 1- NH_3	NA	21.6	15.6	Y	NA
		21.7	15.8	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	22.0	5.7	Y	NA
		22.0	5.6	Y	
Reagent Blank 0.1N H_2SO_4	NA	21.7	172.4	Y	NA
		21.7	173.1	Y	
DI H_2O Blank	NA	21.4	181.6	Y	NA
		21.5	181.2	Y	
Field Blank	440.1	21.8	176.7	Y	<2
		21.5	177.3	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	21.8	5.8	Y	NA
		21.7	5.9	Y	

Notes:

- Used 100 ml of samples or standards with 2 ml ISA and constant stirring rate.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- All calibration solution and calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All solutions turned blue and remained blue with ISA unless otherwise indicated.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples must have a pH of less than 2.
- Sample solutions, calibration solution and C.V. standard temperature must be within ± 2°C of one another.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.

Appendix A.4
QA/QC Data

SEMI-ANNUAL DRY GAS METER/ORIFICE CALIBRATION

Model #: C-5000 Source Sampler
ID #: 47-WCS
Date: 7/2/2024
Bar. Pressure: 29.74 (in. Hg)
Performed By: L. Olivares
Reviewed By: Surya Adhikari

DRY GAS METER READINGS									CRITICAL ORIFICE READINGS					
					Initial Temps.		Final Temps.					Ambient Temperature		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
0.13	26.00	209.200	214.515	5.315		78.0		78.0	AA-33	0.1555	19.0	77.0	78.0	77.5
0.13	26.00	214.515	219.835	5.320		78.0		78.0	AA-33	0.1555	19.0	78.0	78.0	78.0
0.13	26.00	219.835	225.150	5.315		78.0		79.0	AA-33	0.1555	19.0	78.0	78.0	78.0
0.65	12.00	192.800	198.210	5.410		76.0		77.0	QI-48	0.3440	18.0	76.0	76.0	76.0
0.65	12.00	198.210	203.640	5.430		77.0		78.0	QI-48	0.3440	18.0	76.0	77.0	76.5
0.65	12.00	203.640	209.055	5.415		78.0		78.0	QI-48	0.3440	18.0	77.0	76.0	76.5
2.00	7.00	175.700	181.175	5.475		73.0		74.0	QI-83	0.5998	17.0	75.0	75.0	75.0
2.00	7.00	181.175	186.650	5.475		74.0		75.0	QI-83	0.5998	17.0	75.0	75.0	75.0
2.00	7.00	186.650	192.120	5.470		75.0		76.0	QI-83	0.5998	17.0	75.0	75.0	75.0
3.80	5.00	159.500	164.755	5.255		71.0		71.0	AA-73	0.8123	16.0	73.0	73.0	73.0
3.80	5.00	164.755	169.990	5.235		71.0		72.0	AA-73	0.8123	16.0	73.0	74.0	73.5
3.80	5.00	169.990	175.230	5.240		72.0		73.0	AA-73	0.8123	16.0	74.0	75.0	74.5

DRY GAS METER		ORIFICE			DRY GAS METER CALIBRATION FACTOR		ORIFICE CALIBRATION FACTOR	Individual Run	Individual Orifice	Orifice Average	Orifice Average
VOLUME CORRECTED Vm(std) (cu ft)	VOLUME CORRECTED Vm(std) (liters)	VOLUME CORRECTED Vcr(std) (cu ft)	VOLUME CORRECTED Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)		Y Value (number)	dH@ Value (in H2O)	0.95 < Y < 1.05?	Ymax - Ymin < 0.010?	0.98 < Y/Yd < 1.02?	dH@ - dH@ av < 0.155?
5.184	146.8	5.186	146.9	5.314		1.000	1.793	Pass			
5.189	147.0	5.184	146.8	5.318		0.999	1.794	Pass			
5.180	146.7	5.184	146.8	5.319		1.001	1.793	Pass			
					Average	1.000	1.793		Pass	Pass	Pass
5.299	150.1	5.303	150.2	5.418		1.001	1.832	Pass			
5.306	150.3	5.300	150.1	5.420		0.998	1.830	Pass			
5.289	149.8	5.300	150.1	5.420		1.002	1.828	Pass			
					Average	1.000	1.830		Pass	Pass	Pass
5.410	153.2	5.398	152.9	5.505		0.998	1.861	Pass			
5.400	152.9	5.398	152.9	5.505		1.000	1.857	Pass			
5.385	152.5	5.398	152.9	5.505		1.002	1.854	Pass			
					Average	1.000	1.857		Pass	Pass	Pass
5.241	148.4	5.232	148.2	5.316		0.998	1.929	Pass			
5.216	147.7	5.230	148.1	5.318		1.003	1.929	Pass			
5.211	147.6	5.225	148.0	5.323		1.003	1.929	Pass			
					Average	1.001	1.929		Pass	Pass	Pass

Average Yd: 1.000 dH@: 1.852

Q @ dH = 1: 0.551

Performed by signature: _____ Date: 07/02/2024

Reviewed by signature: _____ Date: 07/02/2024

Note: Control box not equipped with meter inlet temperature reading.

MONTROSE
AIR QUALITY SERVICES

DIGITAL TEMPERATURE READOUT CALIBRATION

Digital Temperature Readout ID: 47-WCS
Readout Description: Control box
Date: 7/3/2024
Performed By: JS

Calibrated Thermocouple ID: TC-Cal
T1 Reference Thermometer ID: 313010
T2 Reference Thermometer ID: 2736
T3 Reference Thermometer ID: 2786

T/C I.D. TC-Cal	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	47-WCS	376	376	376	376	375	375	375	375	1.0	0.1%	Pass
T2 (~212 F)	47-WCS	215	215	215	215	212	212	212	212	3.0	0.4%	Pass
T1 (~ 32 F)	47-WCS	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

Thermocouple Source Readings

	T/C Source S/N	T/C - Readout °F				T/C Source °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T4 (~650 F)	125097	658	658	658	658	650	650	650	650	8.0	0.7%	Pass
T3 (~370 F)	125097	378	378	378	378	375	375	375	375	3.0	0.4%	Pass
T2 (~212 F)	125097	212	212	212	212	212	212	212	212	0.0	0.0%	Pass
T1 (~32 F)	125097	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

MONTROSE

Barometric Pressure Determination	
Date: 7/17/2024	
Data By: Rik Dupont	
Reference: https://forecast.weather.gov/MapClick.php?lon=-117.85962867946365&lat=33.863355545	
Reference Barometer ID	FW0063 Fullerton CSU (F0063)
Reference Barometer Location	Lat: 33.8805°NLon: 117.88417°WElev: 247ft.
Reference Barometer Other Info.	17 Jul 01:15 PM PDT
Reference Barometer Indication, corrected to sea level	29.98
Reference Barometer Reference Elevation	247
Reference Barometer Actual Pressure	29.73
Test Barometer Location/Site	Canyon Power Plant
Location/Site Elevation	279
Location/Site Barometric Pressure	29.70
Sampling Location Height (above/below site elevation)	60
Sampling Location Barometric Pressure	**29.64**

APPENDIX B
FACILITY CEMS DATA

CEMTEK KVB-Enertec NetDAHS©

1-NH3

Version 48.0

Average Values Report
Generated: 7/17/2024 18:25

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 2

Period Start: 7/17/2024 16:39
Period End: 7/17/2024 17:44
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 2_O2 %	Average 2_NOXPPM ppm	Average 2_NOX_CORR ppm	Average 2_NOX_LBHR #/hr	Average 2_NOX_LBMM #/MBTU	Average 2_GasFlow kscfh	Average 2_LOAD MW	Average 2_STACKFLW kscfm	Average 2_COPPM ppm	Average 2_CO_CORR ppm	Average 2_CO_LBHR #/hr
07/17/2024 16:39	14.38	2.59	2.34	4.55	0.009	481.4	49.88	235.2	3.72	3.37	3.84
07/17/2024 16:40	14.39	2.58	2.34	4.55	0.009	481.1	49.86	235.4	3.73	3.38	3.84
07/17/2024 16:41	14.39	2.59	2.35	4.54	0.009	480.5	49.79	235.1	3.73	3.38	3.83
07/17/2024 16:42	14.40	2.58	2.34	4.53	0.009	479.4	49.68	235.0	3.73	3.39	3.83
07/17/2024 16:43	14.41	2.56	2.33	4.55	0.009	481.3	49.90	236.3	3.74	3.40	3.84
07/17/2024 16:44	14.38	2.52	2.28	4.05	0.008	481.7	49.93	235.4	3.76	3.40	3.84
07/17/2024 16:45	14.38	2.52	2.28	4.04	0.008	480.5	49.77	234.8	3.77	3.41	3.88
07/17/2024 16:46	14.40	2.55	2.31	4.53	0.009	479.4	49.67	235.0	3.75	3.40	3.83
07/17/2024 16:47	14.41	2.55	2.32	4.55	0.009	481.2	49.91	236.2	3.72	3.38	3.84
07/17/2024 16:48	14.38	2.51	2.27	4.05	0.008	481.9	49.92	235.5	3.73	3.38	3.85
07/17/2024 16:49	14.38	2.52	2.28	4.04	0.008	481.3	49.88	235.2	3.74	3.38	3.84
07/17/2024 16:50	14.40	2.57	2.33	4.54	0.009	480.3	49.74	235.4	3.76	3.41	3.88
07/17/2024 16:51	14.41	2.58	2.35	4.54	0.009	480.1	49.78	235.7	3.77	3.43	3.88
07/17/2024 16:52	14.39	2.54	2.30	4.04	0.008	481.3	49.89	235.5	3.75	3.40	3.84
07/17/2024 16:53	14.39	2.53	2.29	4.04	0.008	480.7	49.82	235.2	3.75	3.40	3.84
07/17/2024 16:54	14.40	2.57	2.33	4.54	0.009	480.4	49.82	235.4	3.77	3.42	3.88
07/17/2024 16:55	14.39	2.57	2.33	4.55	0.009	481.3	49.86	235.5	3.78	3.43	3.89
07/17/2024 16:56	14.39	2.56	2.32	4.54	0.009	480.7	49.78	235.2	3.77	3.42	3.89
07/17/2024 16:57	14.38	2.55	2.31	4.54	0.009	480.8	49.81	234.9	3.75	3.39	3.84
07/17/2024 16:58	14.38	2.57	2.33	4.54	0.009	480.0	49.70	234.5	3.74	3.38	3.83
07/17/2024 16:59	14.38	2.59	2.34	4.53	0.009	479.2	49.58	234.2	3.70	3.35	3.77
07/17/2024 17:00	14.38	2.58	2.33	4.52	0.009	477.9	49.45	233.5	3.67	3.32	3.76
07/17/2024 17:01	14.39	2.60	2.36	4.52	0.009	478.7	49.60	234.2	3.63	3.29	3.72
07/17/2024 17:02	14.39	2.61	2.37	4.52	0.009	478.2	49.52	234.0	3.61	3.27	3.67
07/17/2024 17:03	14.39	2.60	2.36	4.52	0.009	478.7	49.51	234.2	3.60	3.26	3.67
07/17/2024 17:04	14.39	2.54	2.30	4.03	0.008	479.4	49.65	234.6	3.64	3.30	3.73
07/17/2024 17:05	14.39	2.57	2.33	4.53	0.009	479.8	49.78	234.8	3.60	3.26	3.68
07/17/2024 17:06	14.38	2.64	2.39	4.54	0.009	480.2	49.78	234.6	3.59	3.25	3.68
07/17/2024 17:07	14.38	2.60	2.35	4.54	0.009	480.7	49.82	234.9	3.66	3.31	3.73
07/17/2024 17:08	14.38	2.57	2.33	4.54	0.009	480.8	49.85	234.9	3.73	3.38	3.84
07/17/2024 17:09	14.37	2.57	2.32	4.55	0.009	481.0	49.83	234.7	3.77	3.41	3.84
07/17/2024 17:10	14.38	2.58	2.33	4.55	0.009	481.1	49.87	235.1	3.77	3.41	3.89
07/17/2024 17:11	14.38	2.58	2.33	4.55	0.009	481.0	49.86	235.0	3.77	3.41	3.89
07/17/2024 17:12	14.38	2.56	2.32	4.54	0.009	480.9	49.87	234.9	3.78	3.42	3.89
07/17/2024 17:13	14.38	2.55	2.31	4.55	0.009	481.2	49.89	235.1	3.79	3.43	3.89
07/17/2024 17:14	14.38	2.56	2.32	4.54	0.009	480.8	49.87	234.9	3.79	3.43	3.89
07/17/2024 17:15	14.38	2.56	2.32	4.54	0.009	480.9	49.88	234.9	3.80	3.44	3.89
07/17/2024 17:16	14.38	2.55	2.31	4.54	0.009	480.8	49.87	234.9	3.82	3.46	3.94
07/17/2024 17:17	14.38	2.54	2.30	4.04	0.008	481.0	49.88	235.0	3.85	3.48	3.94
07/17/2024 17:18	14.38	2.53	2.29	4.04	0.008	481.1	49.83	235.1	3.86	3.49	3.94
07/17/2024 17:19	14.38	2.51	2.27	4.04	0.008	481.0	49.83	235.0	3.87	3.50	3.99
07/17/2024 17:20	14.39	2.50	2.27	4.04	0.008	480.9	49.81	235.3	3.88	3.52	3.99
07/17/2024 17:21	14.39	2.49	2.26	4.04	0.008	480.8	49.74	235.3	3.91	3.54	3.99
07/17/2024 17:22	14.39	2.45	2.22	4.04	0.008	480.9	49.71	235.3	3.96	3.59	4.09
07/17/2024 17:23	14.40	2.39	2.17	4.04	0.008	480.6	49.67	235.5	4.04	3.67	4.14
07/17/2024 17:24	14.40	2.35	2.13	4.04	0.008	481.0	49.68	235.8	4.14	3.76	4.24
07/17/2024 17:25	14.42	2.33	2.12	4.04	0.008	481.0	49.67	236.5	4.19	3.81	4.34
07/17/2024 17:26	14.41	2.38	2.16	4.04	0.008	480.9	49.66	236.0	4.14	3.76	4.24
07/17/2024 17:27	14.41	2.43	2.21	4.04	0.008	480.9	49.66	236.0	4.06	3.69	4.19

Period Start:	Average 2_O2 %	Average 2_NOXPPM ppm	Average 2_NOX_CORR ppm	Average 2_NOX_LBHR #/hr	Average 2_NOX_LBMM #/MBTU	Average 2_GasFlow kscfh	Average 2_LOAD MW	Average 2_STACKFLW kscfm	Average 2_COPPM ppm	Average 2_CO_CORR ppm	Average 2_CO_LBHR #/hr
07/17/2024 17:28	14.41	2.45	2.23	4.04	0.008	480.9	49.65	236.0	4.01	3.65	4.14
07/17/2024 17:29	14.42	2.44	2.22	4.04	0.008	480.8	49.63	236.4	3.99	3.63	4.09
07/17/2024 17:30	14.42	2.44	2.22	4.04	0.008	480.5	49.65	236.2	4.00	3.64	4.14
07/17/2024 17:31	14.42	2.42	2.20	4.04	0.008	480.7	49.65	236.3	4.04	3.68	4.19
07/17/2024 17:32	14.42	2.42	2.20	4.04	0.008	480.7	49.67	236.3	4.06	3.70	4.19
07/17/2024 17:33	14.42	2.43	2.21	4.04	0.008	480.7	49.68	236.3	4.05	3.69	4.19
07/17/2024 17:34	14.42	2.48	2.26	4.04	0.008	480.6	49.67	236.3	3.98	3.62	4.09
07/17/2024 17:35	14.42	2.55	2.32	4.54	0.009	480.6	49.68	236.3	3.90	3.55	4.04
07/17/2024 17:36	14.42	2.61	2.38	4.54	0.009	480.5	49.68	236.2	3.85	3.51	3.99
07/17/2024 17:37	14.42	2.63	2.39	4.54	0.009	480.3	49.68	236.1	3.84	3.50	3.93
07/17/2024 17:38	14.42	2.63	2.39	4.54	0.009	480.6	49.69	236.3	3.84	3.50	3.94
07/17/2024 17:39	14.42	2.65	2.41	4.54	0.009	480.6	49.68	236.3	3.81	3.47	3.94
07/17/2024 17:40	14.42	2.64	2.40	4.54	0.009	480.6	49.67	236.3	3.79	3.45	3.89
07/17/2024 17:41	14.42	2.62	2.39	4.54	0.009	480.8	49.70	236.4	3.78	3.44	3.89
07/17/2024 17:42	14.42	2.60	2.37	4.54	0.009	480.5	49.67	236.3	3.78	3.44	3.89
07/17/2024 17:43	14.42	2.59	2.36	4.54	0.009	480.7	49.69	236.3	3.78	3.44	3.89
07/17/2024 17:44	14.42	2.61	2.38	4.54	0.009	480.7	49.68	236.3	3.79	3.45	3.89
Daily Average*	**14.40**	**2.54**	**2.30**	**4.35**	**0.009**	**480.6**	**49.75**	**235.4**	**3.82**	**3.46**	**3.92**
Maximum*	**14.42**	**2.65**	**2.41**	**4.55**	**0.009**	**481.9**	**49.93**	**236.5**	**4.19**	**3.81**	**4.34**
	07/17/2024 17:44	07/17/2024 17:39	07/17/2024 17:39	07/17/2024 17:13	07/17/2024 17:44	07/17/2024 16:48	07/17/2024 16:44	07/17/2024 17:25	07/17/2024 17:25	07/17/2024 17:25	07/17/2024 17:25
Minimum*	**14.37**	**2.33**	**2.12**	**4.03**	**0.008**	**477.9**	**49.45**	**233.5**	**3.59**	**3.25**	**3.67**
	07/17/2024 17:09	07/17/2024 17:25	07/17/2024 17:25	07/17/2024 17:04	07/17/2024 17:34	07/17/2024 17:00	07/17/2024 17:00	07/17/2024 17:00	07/17/2024 17:06	07/17/2024 17:06	07/17/2024 17:03

* Does not include Invalid Averaging Periods ("N/A")

CEMTEK KVB-Enertec NetDAHS©

Version 48.0

Average Values Report
Generated: 8/12/2024 09:44

2-NM3

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 2

Period Start: 7/17/2024 18:21
Period End: 7/17/2024 19:26
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 2_O2 %	Average 2_NOXPPM ppm	Average 2_NOX_CORR ppm	Average 2_NOX_LBHR #/hr	Average 2_NOX_LBMM #/MBTU	Average 2_GasFlow kscfh	Average 2_LOAD MW	Average 2_STACKFLW kscfm	Average 2_COPPM ppm	Average 2_CO_CORR ppm	Average 2_CO_LBHR #/hr
07/17/2024 18:21	14.42	2.56	2.33	4.54	0.009	480.3	49.71	236.1	3.78	3.44	3.88
07/17/2024 18:22	14.42	2.55	2.32	4.54	0.009	480.3	49.68	236.1	3.78	3.44	3.88
07/17/2024 18:23	14.42	2.56	2.33	4.54	0.009	480.4	49.71	236.2	3.79	3.45	3.88
07/17/2024 18:24	14.42	2.57	2.34	4.54	0.009	480.5	49.71	236.2	3.81	3.47	3.94
07/17/2024 18:25	14.42	2.56	2.33	4.54	0.009	480.3	49.69	236.1	3.81	3.47	3.93
07/17/2024 18:26	14.42	2.57	2.34	4.54	0.009	480.5	49.69	236.2	3.79	3.45	3.88
07/17/2024 18:27	14.42	2.57	2.34	4.54	0.009	480.3	49.68	236.1	3.78	3.44	3.88
07/17/2024 18:28	14.42	2.56	2.33	4.54	0.009	480.6	49.69	236.3	3.79	3.45	3.89
07/17/2024 18:29	14.42	2.56	2.33	4.54	0.009	480.4	49.71	236.2	3.77	3.43	3.88
07/17/2024 18:30	14.42	2.55	2.32	4.54	0.009	480.5	49.71	236.2	3.78	3.44	3.88
07/17/2024 18:31	14.42	2.55	2.32	4.54	0.009	480.4	49.69	236.2	3.77	3.43	3.88
07/17/2024 18:32	14.42	2.54	2.31	4.54	0.009	480.4	49.68	236.2	3.79	3.45	3.88
07/17/2024 18:33	14.42	2.54	2.31	4.54	0.009	480.4	49.69	236.2	3.81	3.47	3.93
07/17/2024 18:34	14.42	2.52	2.29	4.04	0.008	480.4	49.69	236.2	3.84	3.50	3.93
07/17/2024 18:35	14.42	2.52	2.29	4.04	0.008	480.4	49.70	236.2	3.83	3.49	3.93
07/17/2024 18:36	14.42	2.53	2.30	4.04	0.008	480.6	49.70	236.3	3.82	3.48	3.94
07/17/2024 18:37	14.42	2.53	2.30	4.04	0.008	480.5	49.70	236.2	3.81	3.47	3.94
07/17/2024 18:38	14.42	2.53	2.30	4.04	0.008	480.4	49.71	236.2	3.80	3.46	3.93
07/17/2024 18:39	14.42	2.53	2.30	4.04	0.008	480.4	49.72	236.2	3.78	3.44	3.88
07/17/2024 18:40	14.42	2.54	2.31	4.54	0.009	480.6	49.72	236.3	3.78	3.44	3.89
07/17/2024 18:41	14.42	2.55	2.32	4.54	0.009	480.6	49.69	236.3	3.79	3.45	3.89
07/17/2024 18:42	14.42	2.55	2.32	4.54	0.009	480.3	49.69	236.1	3.80	3.46	3.93
07/17/2024 18:43	14.42	2.56	2.33	4.54	0.009	480.5	49.70	236.2	3.81	3.47	3.94
07/17/2024 18:44	14.42	2.55	2.32	4.54	0.009	480.6	49.71	236.3	3.80	3.46	3.94
07/17/2024 18:45	14.42	2.54	2.31	4.54	0.009	480.4	49.73	236.2	3.78	3.44	3.88
07/17/2024 18:46	14.42	2.53	2.30	4.04	0.008	480.5	49.69	236.2	3.75	3.41	3.88
07/17/2024 18:47	14.42	2.56	2.33	4.54	0.009	480.3	49.70	236.1	3.73	3.40	3.83
07/17/2024 18:48	14.42	2.56	2.33	4.54	0.009	480.6	49.72	236.3	3.72	3.39	3.83
07/17/2024 18:49	14.42	2.55	2.32	4.54	0.009	480.4	49.70	236.2	3.75	3.41	3.88
07/17/2024 18:50	14.42	2.54	2.31	4.54	0.009	480.3	49.70	236.1	3.76	3.42	3.88
07/17/2024 18:51	14.43	2.55	2.33	4.54	0.009	480.4	49.70	236.5	3.78	3.45	3.88
07/17/2024 18:52	14.42	2.55	2.32	4.54	0.009	480.3	49.72	236.1	3.77	3.43	3.88
07/17/2024 18:53	14.42	2.55	2.32	4.54	0.009	480.5	49.70	236.2	3.78	3.44	3.88
07/17/2024 18:54	14.42	2.55	2.32	4.54	0.009	480.3	49.71	236.1	3.78	3.44	3.88
07/17/2024 18:55	14.42	2.56	2.33	4.54	0.009	480.4	49.71	236.2	3.77	3.43	3.88
07/17/2024 18:56	14.42	2.56	2.33	4.54	0.009	480.4	49.73	236.2	3.75	3.41	3.88
07/17/2024 18:57	14.42	2.57	2.34	4.54	0.009	480.4	49.73	236.2	3.75	3.41	3.88
07/17/2024 18:58	14.42	2.57	2.34	4.54	0.009	480.4	49.69	236.2	3.74	3.41	3.83
07/17/2024 18:59	14.43	2.57	2.34	4.54	0.009	480.2	49.69	236.4	3.74	3.41	3.89
07/17/2024 19:00	14.43	2.57	2.34	4.54	0.009	480.5	49.70	236.5	3.75	3.42	3.88
07/17/2024 19:01	14.43	2.54	2.32	4.54	0.009	480.5	49.70	236.6	3.76	3.43	3.88
07/17/2024 19:02	14.43	2.53	2.31	4.54	0.009	480.4	49.71	236.5	3.79	3.46	3.93
07/17/2024 19:03	14.44	2.53	2.31	4.54	0.009	480.5	49.74	236.8	3.80	3.47	3.93
07/17/2024 19:04	14.44	2.53	2.31	4.54	0.009	480.4	49.72	236.9	3.80	3.47	3.93
07/17/2024 19:05	14.43	2.51	2.29	4.04	0.008	480.4	49.71	236.5	3.79	3.46	3.93
07/17/2024 19:06	14.43	2.52	2.30	4.03	0.008	480.3	49.71	236.5	3.77	3.44	3.88
07/17/2024 19:07	14.42	2.53	2.30	4.04	0.008	480.4	49.72	236.2	3.77	3.43	3.88
07/17/2024 19:08	14.42	2.54	2.31	4.54	0.009	480.6	49.74	236.3	3.79	3.45	3.89
07/17/2024 19:09	14.42	2.55	2.32	4.54	0.009	480.4	49.71	236.2	3.80	3.46	3.93

Period Start:	Average 2_O2 %	Average 2_NOXPPM ppm	Average 2_NOX_CORR ppm	Average 2_NOX_LBHR #/hr	Average 2_NOX_LBMM #/MBTU	Average 2_GasFlow kscfh	Average 2_LOAD MW	Average 2_STACKFLW kscfm	Average 2_COPPM ppm	Average 2_CO_CORR ppm	Average 2_CO_LBHR #/hr
07/17/2024 19:10	14.43	2.55	2.33	4.54	0.009	480.4	49.73	236.5	3.81	3.47	3.93
07/17/2024 19:11	14.43	2.54	2.32	4.54	0.009	480.5	49.72	236.6	3.82	3.48	3.94
07/17/2024 19:12	14.43	2.53	2.31	4.54	0.009	480.6	49.74	236.6	3.81	3.47	3.94
07/17/2024 19:13	14.43	2.53	2.31	4.54	0.009	480.3	49.72	236.5	3.81	3.47	3.93
07/17/2024 19:14	14.44	2.52	2.30	4.04	0.008	480.5	49.75	236.9	3.81	3.48	3.94
07/17/2024 19:15	14.44	2.52	2.30	4.03	0.008	480.3	49.70	236.8	3.80	3.47	3.93
07/17/2024 19:16	14.44	2.52	2.30	4.04	0.008	480.6	49.73	237.0	3.83	3.50	3.94
07/17/2024 19:17	14.44	2.51	2.29	4.04	0.008	480.4	49.72	236.9	3.86	3.53	3.98
07/17/2024 19:18	14.44	2.50	2.28	4.03	0.008	480.3	49.75	236.8	3.88	3.54	3.98
07/17/2024 19:19	14.44	2.50	2.28	4.04	0.008	480.5	49.72	236.9	3.85	3.52	3.99
07/17/2024 19:20	14.44	2.51	2.29	4.04	0.008	480.6	49.72	237.0	3.81	3.48	3.94
07/17/2024 19:21	14.44	2.50	2.28	4.04	0.008	480.8	49.73	237.1	3.78	3.45	3.89
07/17/2024 19:22	14.44	2.49	2.27	4.04	0.008	480.4	49.74	236.9	3.79	3.46	3.93
07/17/2024 19:23	14.44	2.50	2.28	4.04	0.008	480.4	49.74	236.9	3.80	3.47	3.93
07/17/2024 19:24	14.44	2.50	2.28	4.03	0.008	480.3	49.71	236.8	3.82	3.49	3.93
07/17/2024 19:25	14.44	2.49	2.27	4.04	0.008	480.4	49.74	236.9	3.85	3.52	3.98
07/17/2024 19:26	14.44	2.49	2.27	4.03	0.008	480.3	49.72	236.8	3.86	3.53	3.98
Daily Average*	**14.43**	**2.54**	**2.31**	**4.36**	**0.009**	**480.4**	**49.71**	**236.4**	**3.79**	**3.46**	**3.91**
Maximum*	**14.44**	**2.57**	**2.34**	**4.54**	**0.009**	**480.8**	**49.75**	**237.1**	**3.88**	**3.54**	**3.99**
	07/17/2024 19:26	07/17/2024 19:00	07/17/2024 19:00	07/17/2024 19:13	07/17/2024 19:13	07/17/2024 19:21	07/17/2024 19:18	07/17/2024 19:21	07/17/2024 19:18	07/17/2024 19:18	07/17/2024 19:19
Minimum*	**14.42**	**2.49**	**2.27**	**4.03**	**0.008**	**480.2**	**49.68**	**236.1**	**3.72**	**3.39**	**3.83**
	07/17/2024 19:09	07/17/2024 19:26	07/17/2024 19:26	07/17/2024 19:26	07/17/2024 19:26	07/17/2024 18:59	07/17/2024 18:32	07/17/2024 18:54	07/17/2024 18:48	07/17/2024 18:48	07/17/2024 18:58

* Does not include Invalid Averaging Periods ("N/A")

APPENDIX C
CALCULATIONS

Appendix C.1
General Emissions Calculations

GENERAL EMISSIONS CALCULATIONS

I. Stack Gas Velocity

A. Stack gas molecular weight, lb/lb-mole

$MW_{dry} = 0.44 * \%\ CO_2 + 0.32 * \%\ O_2 + 0.28 * \%\ N_2$

$MW_{wet} = MW_{dry} * (1 - B_{wo}) + 18 * B_{wo}$

B. Absolute stack pressure, iwg

$$P_s = P_{bar} + \frac{P_{sg}}{13.6}$$

C. Stack gas velocity, ft/sec

$$V_s = 2.9 * C_p * \sqrt{\Delta P} * \sqrt{T_s} * \sqrt{\frac{29.92 * 28.95}{P_s * MW_{wet}}}$$

II. Moisture

A. Sample gas volume, dscf

$$V_{mstd} = 0.03342 * V_m * \left(P_{bar} + \frac{\Delta H}{13.6}\right) * \frac{T_{ref}}{T_m} * Y_d$$

B. Water vapor volume, scf

$$V_{wstd} = 0.0472 * V_{ic} * \frac{T_{ref}}{528°R}$$

C. Moisture content, dimensionless

$$B_{wo} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$$

III. Stack Gas Volumetric Flow Rate

A. Actual stack gas volumetric flow rate, wacfm

$Q = V_s * A_s * 60$

B. Standard stack gas flow rate, dscfm

$$Q_{sd} = Q * (1 - B_{wo}) * \frac{T_{ref}}{T_s} * \frac{P_s}{29.92}$$

IV. Gaseous Mass Emission Rates, lb/hr

$$M = \frac{ppm * MW_i * Q_{sd} * 60}{SV * 10^6}$$

V. Emission Rates, lb/MMBtu

$$\frac{lb}{MMBtu} = \frac{ppm * MW_i * F}{SV * 10^6} * \frac{20.9}{20.9 - \%\ O_2}$$

VI. Percent Isokinetic

$$I = \frac{17.32 * T_s\ (V_{mstd})}{(1 - B_{wo})\ 0 * V_s * P_s * Dn^2} * \frac{520°R}{T_{ref}}$$

VII. Particulate Emissions

(a) Grain loading, gr/dscf
$C = 0.01543\ (M_n/V_{m\ std})$

(b) Grain loading at 12% CO_2, gr/dscf
$C_{12\%}\ CO_2 = C\ (12/\%\ CO_2)$

(c) Mass emissions, lb/hr
$M = C * Q_{sd} * (60\ min/hr) / (7000\ gr/lb)$

(d) Particulate emission factor

$$lb/10^6\ Btu = Cx\ \frac{1\ lb}{7000\ gr} * F * \frac{20.9}{20.9 - \%\ O_2}$$

Nomenclature:

A_s	=	stack area, ft^2
B_{wo}	=	flue gas moisture content, dimensionless
$C_{12\%CO2}$	=	particulate grain loading, gr/dscf corrected to 12% CO_2
C	=	particulate grain loading, gr/dscf
C_p	=	pitot calibration factor, dimensionless
Dn	=	nozzle diameter, inches
F	=	fuel F-Factor, dscf/MMBtu @ 0% O_2
H	=	orifice differential pressure, iwg
I	=	% isokinetics
M_n	=	mass of collected particulate, mg
M_i	=	mass emission rate of specie i, lb/hr
MW	=	molecular weight of flue gas, lb/lb-mole
M_{wi}	=	molecular weight of specie i:
	SO_2:	64
	NO_x:	46
	CO:	28
	HC:	16
0	=	sample time, minutes
ΔP	=	average velocity head, iwg = $(\sqrt{\Delta P})^2$
P_{bar}	=	barometric pressure, inches Hg
P_s	=	stack absolute pressure, inches Hg
P_{sg}	=	stack static pressure, iwb
Q	=	wet stack flow rate at actual conditions, wacfm
Q_{sd}	=	dry standard stack flow rate, dscfm
SV	=	specific molar volume of an ideal gas at standard conditions, ft^3/lb-mole
T_m	=	meter temperature, °R
T_{ref}	=	reference temperature, °R
T_s	=	stack temperature, °R
V_s	=	stack gas velocity, ft/sec
V_{lc}	=	volume of liquid collected in impingers, ml
V_m	=	uncorrected dry meter volume, dcf
V_{mstd}	=	dry meter volume at standard conditions, dscf
V_{wstd}	=	volume of water vapor at standard conditions, scf
Y_d	=	meter calibration coefficient

Appendix C.2
Spreadsheet Summaries

SCAQMD 207.1 EXAMPLE CALCULATION
TEST NUMBER: 1-NH3-U2

Identifier	Description	Units	Equation	Value
A	Reference Temperature	F	--	60
B	Reference Temperature	R	A + 460	520
C	Meter Calibration Factor (Yd)	--	--	1.000
D	Barometric Pressure	" Hg	--	29.64
E	Meter Volume	acf	--	34.065
F	Meter Temperature	F	--	85.7
G	Meter Temperature	R	F + 460	545.7
H	Delta H	" H_2O	--	1.0
I	Meter Volume (standard)	dscf	0.03342 * E * (D + H/13.6) * B/G * C	32.234
J	Liquid Collected	grams	--	91.6
K	Water vapor volume	scf	0.0472 * J * B/528	4.258
L	Moisture Content	--	K/(K + I)	0.117
M	Gas Constant	ft-lbf/lb-mole-R	--	1545.33
N	Specific Molar Volume	SCF/lb-mole	385.3 * B / 528	379.5
O	F-Factor	dscf/MMBtu	--	8,710
P	HHV	Btu/SCF	--	1,050
Q	Mass Conversion Factor	lb/ug	--	2.2046E-09
R	O_2 Correction Factor	--	--	15
S	Stack Flow Rate @ 68 F	dscfm	--	235,400
T	Stack Flow Rate @ Tref	dscfm	S * B/528	231,833
U	Mass NH_3	ug	--	621
V	Mass NH_3	lb	U * Q	1.37E-06
W	MW of NH_3	lb/lb-mole	--	17.03
X	NH_3	ppm	$(V * N * 10^6)/(I * W)$	0.9
Y	Flue Gas O_2	%	--	14.40
Z	NH_3	ppmc	X * (20.9 - R)/(20.9 - Y)	0.9
AA	NH_3	lb/hr	$X * T * W * 60/(N * 10^6)$	0.6
AB	NH_3	lb/MMBtu	$(X * W * O)/(385.3 * 10^6) * 20.9/(20.9 - Y)$	0.001
AC	NH_3	lb/MMSCF	AB * P	1.2

Note:

(1) Some values may be slightly different from those shown on the run sheets due to round off errors. This page is intended to show the calculation methodology only.

MONTROSE

SCAQMD METHOD 207.1
DATA WORKSHEET AND SUMMARY

Facility	Canyon		Parameter		NH_3
Unit	U2		Fuel		Natural gas
Sample Location	Stack		Data By		RD
Test Number	1-NH3-U2	2-NH3-U2	Average	Maximum	Limit
Reference Temperature (°F)	60	60			
Test Date	7/17/2024	7/17/2024			
Test Method	SCAQMD 207.1	SCAQMD 207.1			
Sample Train	47-WCS	47-WCS			
Meter Calibration Factor	1.000	1.000			
Stack Area (ft^2)	106.90	106.90			
Sample Time (Minutes)	60	60			
Barometric Pressure ("Hg)	29.64	29.64			
Start/Stop Time	1638/1744	1820/1926			
Meter Volume (acf)	34.065	34.667			
Meter Temperature (°F)	85.7	85.6			
Meter Pressure (iwg)	1.0	1.0			
Liquid Volume (ml)	91.6	89.7			
Stack O_2 (%)	14.40	14.43	14.42	(from facility CEMS)	
Unit Load (MW)	49.75	49.71	49.7		
Standard Sample Volume (SCF)	32.234	32.810			
Moisture Fraction	0.117	0.113			
Stack Flow Rate (dscfm, 68 °F)	235,400	236,400	235,900	(from facility CEMS)	
Stack Flow Rate (@ Tref)	231,833	232,818	232,326		
Gas Constant (ft-lbf/lb-mole-R)	1545.33	1545.33			
Molecular Weight NH_3 (lb/lb-mole)	17.03	17.03			
Specific Molar Volume (ft^3/lb-mole)	379.5	379.5			
F-Factor (dscf/MMBtu)	8,710	8,710			
HHV(Btu/SCF)	1,050	1,050			
Mass Conversion (lb/ug)	2.2046E-09	2.2046E-09			
O_2 Correction Factor (%)	15	15			
Mass NH_3 (ug)	620.651	683.686			
Mass NH_3 (lb)	1.37E-06	1.51E-06			
NH_3 (ppmv, flue gas)	0.95	1.02	0.98	1.02	
NH_3 (ppmv @ O_2 Correction Factor)	0.86	0.93	0.90	0.93	5
NH_3 (lb/hr)	0.59	0.64	0.62	0.64	
NH_3 (lb/MMBtu)	0.001	0.001	0.001	0.001	
NH_3 (lb/MMSCF)	1.23	1.33	1.28	1.33	

Note: SCAQMD Method 207.1 requires the higher of the duplicate runs be reported as the test result.

1-NH3-U2

Point	Meter Volume	Delta H	Tm In	Tm Out
3	285.437	1.0		86
2				85
1				85
3				85
2				86
1				86
3				86
2				86
1				86
3				86
2				86
1				85
Stop	319.502			
Result	**34.065**	**1.0**		**85.7**

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	927.4	745.9	181.5
2	748.8	747.0	1.8
3	659.6	660.0	-0.4
4	913.0	904.3	8.7
Line Rinse	0.0	100.0	-100.0
			91.6

2-NH3-U2

Point	Meter Volume	Delta H	Tm In	Tm Out
3	320.010	1.0		86
2				87
1				86
3				86
2				85
1				85
3				86
2				86
1				85
3				85
2				85
1				85
Stop	354.677			
Result	**34.667**	**1.0**		**85.6**

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	902.5	723.9	178.6
2	754.3	749.2	5.1
3	664.0	664.8	-0.8
4	914.8	908.0	6.8
Line Rinse	0.0	100.0	-100.0
			89.7

APPENDIX D
QUALITY ASSURANCE

Appendix D.1
Quality Assurance Program Summary

QUALITY ASSURANCE PROGRAM SUMMARY

As part of Montrose Air Quality Services, LLC (Montrose) ASTM D7036-04 certification, Montrose is committed to providing emission related data which is complete, precise, accurate, representative, and comparable. Montrose quality assurance program and procedures are designed to ensure that the data meet or exceed the requirements of each test method for each of these items. The quality assurance program consists of the following items:

- Assignment of an Internal QA Officer
- Development and use of an internal QA Manual
- Personnel training
- Equipment maintenance and calibration
- Knowledge of current test methods
- Chain-of-custody
- QA reviews of test programs

Assignment of an Internal QA Officer: Montrose has assigned an internal QA Officer who is responsible for administering all aspects of the QA program.

Internal Quality Assurance Manual: Montrose has prepared a QA Manual according to the requirements of ASTM D7036-04 and guidelines issued by EPA. The manual documents and formalizes all of Montrose's QA efforts. The manual is revised upon periodic review and as Montrose adds capabilities. The QA manual provides details on the items provided in this summary.

Personnel Testing and Training: Personnel testing and training is essential to the production of high quality test results. Montrose training programs include:

- A requirement for all technical personnel to read and understand the test methods performed
- A requirement for all technical personnel to read and understand the Montrose QA manual
- In-house testing and training
- Quality Assurance meetings
- Third party testing where available
- Maintenance of training records.

Equipment Maintenance and Calibration: All laboratory and field equipment used as a part of Montrose's emission measurement programs is maintained according to manufacturer's recommendations. A summary of the major equipment maintenance schedules is summarized in Table 1. In addition to routine maintenance, calibrations are performed on all sampling equipment according to the procedures outlined in the applicable test method. The calibration intervals and techniques for major equipment components is summarized in Table 2. The calibration technique may vary to meet regulatory agency requirements.

Knowledge of Current Test Methods: Montrose maintains current copies of EPA, ARB, and SCAQMD Source Test Manuals and Rules and Regulations.

Chain-of-Custody: Montrose maintains chain-of-custody documentation on all data sheets and samples. Samples are stored in a locked area accessible only to Montrose source test personnel. Data sheets are kept in the custody of the originator, program manager, or in locked storage until return to Montrose office. Electronic field data is duplicated for backup on secure storage media. The original data sheets are used for report preparation and any additions are initialed and dated.

QA Reviews: Periodic field, laboratory, and report reviews are performed by the in-house QA coordinator. Periodically, test plans are reviewed to ensure proper test methods are selected and reports are reviewed to ensure that the methods were followed and any deviations from the methods are justified and documented.

ASTM D7036-04 Required Information

Uncertainty Statement

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is presented in the report appendices.

Performance Data

Performance data are available for review.

Qualified Personnel

A qualified individual (QI), defined by performance on a third party or internal test on the test methods, is present on each test event.

Plant Entry and Safety Requirements

Plant Entry

All test personnel are required to check in with the guard at the entrance gate or other designated area. Specific details are provided by the facility and project manager.

Safety Requirements

All personnel shall have the following personal protective equipment (PPE) and wear them where designated:

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Hearing Protection
- Gloves
- High Temperature Gloves (if required)
- Flame Resistant Clothing (if required)

The following safety measures are followed:

- Good housekeeping
- SDS for all on-site hazardous materials
- Confine selves to necessary areas (stack platform, mobile laboratory, CEMS data acquisition system, control room, administrative areas)
- Knowledge of evacuation procedures

Each facility will provide plant specific safety training.

TABLE 1
EQUIPMENT MAINTENANCE SCHEDULE

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pumps	1. Absence of leaks 2. Ability to draw manufacturers required vacuum and flow	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Replace parts 4. Leak check
Flow Meters	1. Free mechanical movement	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Calibrate
Sampling Instruments	1. Absence of malfunction 2. Proper response to zero span gas	As recommended by manufacturer	As recommended by manufacturer
Integrated Sampling Tanks	1. Absence of leaks	Depends on nature of use	1. Steam clean 2. Leak check
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters 2. Change gas dryer 3. Leak check 4. Check for system contamination
Sampling Lines	1. Sample degradation less than 2%	After each test series	1. Blow dry, inert gas through line until dry

TABLE 2
MAJOR SAMPLING EQUIPMENT CALIBRATION REQUIREMENTS

Sampling Equipment	Calibration Frequency	Calibration Procedure	Acceptable Calibration Criteria
Continuous Analyzers	Before and After Each Test Day	3-point calibration error test	< 2% of analyzer range
Continuous Analyzers	Before and After Each Test Run	2-point sample system bias check	< 5% of analyzer range
Continuous Analyzers	After Each Test Run	2-point analyzer drift determination	< 3% of analyzer range
CEMS System	Beginning of Each Day	leak check	< 1 in. Hg decrease in 5 min. at > 20 in. Hg
Continuous Analyzers	Semi-Annually	3-point linearity	< 1% of analyzer range
NO_x Analyzer	Daily	NO_2 -> NO converter efficiency	> 90%
Differential Pressure Gauges (except for manometers)	Semi-Annually	Correction factor based on 5-point comparison to standard	± 5%
Differential Pressure Gauges (except for manometers)	Bi-Monthly	3-point comparison to standard, no correction factor	± 5%
Barometer	Semi-Annually	Adjusted to mercury-in-glass or National Weather Service Station	± 0.1 inches Hg
Dry Gas Meter	Semi-Annually	Calibration check at 4 flow rates using a NIST traceable standard	± 2%
Dry Gas Meter	Bi-Monthly	Calibration check at 2 flow rates using a NIST traceable standard	± 2% of semi-annual factor
Dry Gas Meter Orifice	Annually	4-point calibration for ΔH@	--
Temperature Sensors	Semi-Annually	3-point calibration vs. NIST traceable standard	± 1.5%

Note: Calibration requirements that meet applicable regulatory agency requirements are used.

Appendix D.2
SCAQMD and STAC Certifications

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

September 14, 2023

Mr. John Peterson
Montrose Air Quality Services, LLC
1631 E. Saint Andrew Place
Santa Ana, CA 92705

Subject: LAP Approval Notice
Reference # 96LA1220

Dear Mr. Peterson:

We have completed our review of Montrose Air Quality Services' revised renewal application, which was submitted as notification of Montrose's recent acquisition of AirKinetics, Inc. under the South Coast AQMD Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning September 30, 2023, and ending September 30, 2024, for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement and conditions listed in the attachment to this letter:

South Coast AQMD Methods 1-4
South Coast AQMD Methods 10.1 and 100.1
South Coast AQMD Methods 5.1, 5.2, 5.3, 6.1 (Sampling and Analysis)
South Coast AQMD Methods 25.1 and 25.3 (Sampling)
Rule 1121/ 1146.2 Protocol
Rule 1420/1420.1/1420.2 – (Lead) Source and Ambient Sampling
USEPA CTM-030 and ASTM D6522-00

Your LAP approval to perform nitrogen oxide emissions compliance testing for Rule 1121/ 1146.2 Protocols includes satellite facilities located at:

McKenna Boiler
1510 North Spring Street
Los Angeles, CA 90012

Noritz America Corp.
11160 Grace Avenue
Fountain Valley, CA 92708

Ajax Boiler, Inc.
2701 S. Harbor Blvd.
Santa Ana, CA 92704

VA Laundry Bldg., Greater LA Healthcare Sys.
508 Constitution Avenue
Los Angeles, CA 90049

So Cal Gas – Engr Analysis Ctr, Bldg H
8101 Rosemead Blvd
Pico Rivera, CA 90660

Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions. You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

D. Sarkar

Dipankar Sarkar
Program Supervisor
Source Test Engineering

DS:CE
Attachment

230914 LapRenewal.doc

STAC
STACK TESTING ACCREDITATION COUNCIL

American Association for Laboratory Accreditation

Accredited Air Emission Testing Body

A2LA has accredited

MONTROSE AIR QUALITY SERVICES

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Council (STAC) evaluation process, this laboratory is accredited to perform testing activities in compliance with ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.

Presented this 27th day of February 2024.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3925.01
Valid to February 28, 2026

This accreditation program is not included under the A2LA IIAC Mutual Recognition Arrangement.

MONTROSE AIR QUALITY SERVICES

Appendix D.3
Individual QI Certificate

CERTIFICATE OF COMPLETION

Rik Dupont

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Methods 1.1 - 4.1

Certificate Number: 002-2021-41

DATE OF ISSUE: 12/02/2021

Tate Strickler, VP – Quality Systems

DATE OF EXPIRATION: 12/01/2026

MONTROSE ENVIRONMENTAL

CERTIFICATE OF COMPLETION

Rik Dupont

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Method 207.1

Certificate Number: 002-2021-26

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 8/19/21

DATE OF EXPIRATION: 8/19/26

MONTROSE ENVIRONMENTAL

Appendix D.4
Statement of No Conflict of Interest

STATEMENT OF NO CONFLICT OF INTEREST AS AN INDEPENDENT TESTING LABORATORY

(To be completed by authorized source testing firm representative and included in source test report)

The following facility and equipment were tested by my source testing firm and are the subjects of this statement:

Facility ID:	**153992**
Date(s) Tested:	**July 17, 2024**
Facility Name:	**Canyon Power Plant**
Equipment Address:	**3071 E. Mira Loma Avenue**
	Anaheim, California 92806
Equipment Tested:	**Unit 2**
Device ID, A/N, P/N:	**D7**

I state, as its legally authorized representative, that the source testing firm of:

Source Test Firm:	Montrose Air Quality Services, LLC
Business Address:	1631 E. St. Andrew Pl.
	Santa Ana, California 92705

is an "Independent Testing Laboratory" as defined in ***District Rule 304(k):***

For the purposes of this Rule, when an independent testing laboratory is used for the purposes of establishing compliance with District rules or to obtain a District permit to operate, it must meet all of the following criteria:

(1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company, or any subsidiary thereof -

(2) The company or facility being tested, or parent company or any subsidiary thereof, shall have no financial interest in the testing laboratory;

(3) Any company or facility responsible for the emission of significant quantities of pollutants to the atmosphere, or parent company or any subsidiary thereof shall have no financial interest in the testing laboratory; and

(4) The testing laboratory shall not be in partnership with, own or be owned by, in part or in full, the contractor who has provided or installed equipment (basic or control), or monitoring systems, or is providing maintenance for installed equipment or monitoring systems, for the company being tested.

Furthermore, I state that any contracts or agreements entered into by my source testing firm and the facility referenced above, or its designated contractor(s), either verbal or written, are not contingent upon the outcome of the source testing, or the source testing information provided to the SCAQMD.

Signature: _____ **Date:** **8/23/2024**

Rik Dupont	**Client Project Manager**	**(714) 279-6777**	**8/23/2024**
(Name)	(Title)	(Phone)	(Date)

FORM ST-110 :stevforl.doc (Revised 11/18/98

APPENDIX E
APPLICABLE PERMIT SECTIONS

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
GAS TURBINE, NO. 2, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, 479 MMBTU/HR AT 46 DEG F, WITH INLET CHILLING, WITH WATER INJECTION WITH A/N: 555829 GENERATOR, 50.95 MW	D7	C9	NOX: MAJOR SOURCE**	CO: 4 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1) -BACT, 12-6-2002*]; CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 2005, 12-4-2015]; NOX: 25 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; PM10: 0.01 GRAINS/SCF NATURAL GAS (5A) [RULE 475, 10-8-1976; *RULE 475, 8-7-1978*]; PM10: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]; PM10: 1.67 LBS/HR NATURAL GAS (5C) [RULE 1303(b)(2)-Offset, 5-10-1996; *RULE 1303(b)(2) -Offset, 12-6-2002*]; PM10: 11 LBS/HR NATURAL GAS (5B) [RULE 475, 10-8-1976; *RULE 475, 8-7-1978*]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1)-BACT, 12-6-2002*]	A63.1, A99.1, A99.2, A99.3, A195.1, A195.2, A195.3, A327.1, B61.1, D12.1, D29.2, D29.3, D82.1, D82.2, E193.1, H23.1, I298.2, K40.1

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
CO OXIDATION CATALYST, NO. 2, BASF, 110 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 476657	C9	D7 C10			
SELECTIVE CATALYTIC REDUCTION, NO. 2, CORMETECH CMHT-21, 1012 CU.FT.; WIDTH: 2 FT 6 IN; HEIGHT: 25 FT 9 IN; LENGTH: 18 FT WITH A/N: 476657 AMMONIA INJECTION	C10	C9 S12		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1) -BACT, 12-6-2002*]	A195.5, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, TURBINE NO. 2, HEIGHT: 86 FT ; DIAMETER: 11 FT 8 IN A/N: 555829	S12	C10			

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : C4, C10, C16, C22]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1110.2, 2-1-2008; RULE 1110.2, 11-1-2019; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 9-1-2017; RULE 1470, 5-4-2012; **RULE 2012, 5-6-2005; 40CFR 60 Subpart IIII, 7-7-2016]**

[Devices subject to this condition : D25]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The test(s) shall be conducted quarterly during the first twelve months of operation of the catalytic control device and annually thereafter when four consecutive quarterly source tests demonstrate compliance with the ammonia emission limit. If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the ammonia emissions limits prior to resuming annual source tests.

The South Coast AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

If the turbine is not in operation during one calendar year, then no testing is required during that calendar year.

The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using South Coast AQMD Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted and the results submitted to the South Coast AQMD within 60 days after the test date.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

[RULE 1135, 11-2-2018; **RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1) -BACT, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19]

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Sampling Time	Test Location
SOX emissions	AQMD Labcratory Method 307-91	District-approved averaging time	Fuel sample

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

VOC emissions	District Method 25.3 Modified	1 hour	Outlet of the SCR serving this equipment
PM emissions	District method 5.1	4 hours	Outlet of the SCR serving this equipment

THIS IS THE LAST PAGE OF THIS DOCUMENT

If you have any questions, please contact one of the following individuals by email or phone.

Name: Mr. Rik Dupont
Title: Client Project Manager
Region: West
Email: RDupont@montrose-env.com
Phone: (714) 279-6777

Name: Mr. Matt McCune
Title: Regional Vice President
Region: West
Email: MMccune@montrose-env.com
Phone: (714) 279-6777

TEST REPORT FOR
FOURTH QUARTER 2024 AMMONIA SLIP TEST
AT CANYON POWER PLANT UNIT 3
FACILITY ID: 153992, DEVICE ID: D13

Prepared For:

Canyon Power Plant
3071 E. Mira Loma Avenue
Anaheim, California 92806

For Submittal To:

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Prepared By:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705
(714) 279-6777

Rik Dupont

Test Date: **October 15, 2024**
Production Date: **November 14, 2024**
Report Number: **W002AS-046148-RT-6709**

MONTROSE AIR QUALITY SERVICES

STAC ACCREDITED TO ASTM D7036 ONLY CERT #3925.01

CONFIDENTIALITY STATEMENT

Except as otherwise required by law or regulation, this information contained in this communication is intended exclusively for the individual or entity to which it is addressed. This communication may contain information that is proprietary, privileged or confidential or otherwise legally exempt from disclosure. If you are not the named addressee, you are not authorized to read, print, retain, copy, or disseminate this message or any part of it.

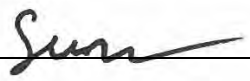
REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:  Date: 11/14/2024

Name: Rik Dupont Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  Date: 11/14/2024

Name: Surya Adhikari Title: Senior Reporting QC Specialist

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LIST OF FIGURES

1.0 INTRODUCTION AND SUMMARY

Montrose Air Quality Services, LLC (MAQS) was contracted by Southern California Public Power Authority (SCPPA) Canyon Power Plant to perform an ammonia slip test at Unit 3 as required by the facility Permit (Facility ID 153992) Condition Number D29.2. This report documents the results of the ammonia slip tests performed on October 15, 2024. The test was performed by Rik Dupont, Jason Sering, Kyle Thomas, and Jorge Contreras. Rik Dupont was the on-site Qualified Individual for MAQS. Ms. Bertha Hernandez of SCPPA City of Anaheim coordinated the test for Canyon Power Plant.

MAQS qualifies as an independent testing laboratory under SCAQMD Rule 304 (no conflict of interest) and is certified by the SCAQMD to conduct testing for criteria pollutants according to District Methods.

The test consisted of duplicate ammonia tests performed at 49.0 MW. The test program followed the procedures described in the initial compliance test protocol (MAQS document R038842). The results of the test are summarized in Table 1-1. The table shows that the ammonia slip from this unit was less than the permitted limit of 5 ppm corrected to 15% O_2.

TABLE 1-1
AMMONIA SLIP TEST RESULTS SUMMARY
SCPPA – CANYON POWER PLANT
UNIT 3
OCTOBER 15, 2024

Parameter/Units	Result(1)	Limit
NH_3		
ppm	1.5	--
ppm @ 15% O_2	1.4	5

(1) Maximum of duplicate runs, as required by SCAQMD Method 207.1.

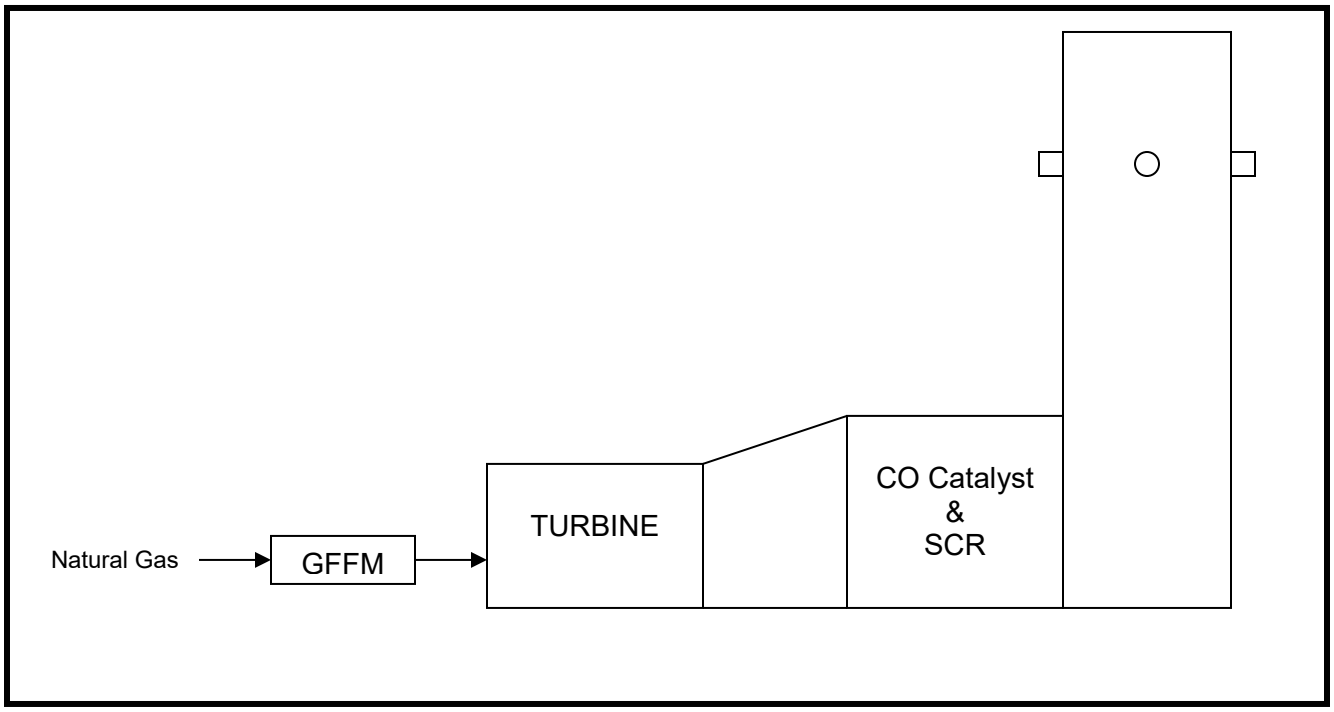
Section 2 of this document provides a brief description of the unit, test conditions, sample location, and CEMS. Details of the test procedures are provided in Section 3. Section 4 provides the results of each individual test. All raw data, calculations, quality assurance data, unit operating conditions, and CEMS data are provided in the appendices.

2.0 UNIT AND CEMS DESCRIPTION

2.1 UNIT DESCRIPTION

The City of Anaheim Canyon Power Plant is located at 3071 E. Mira Loma Avenue, Anaheim, California 92806. The facility consists of four identical generating units. Each unit consists of a natural gas fired, GE Model LM6000PC Sprint simple cycle, gas turbine. The units are natural gas fired with a rated heat input of 479 MMBtu per hour at 46°F, with water injection. The units are equipped with a CO oxidation catalyst and Selective Catalytic Reduction (SCR) system for emissions controls. A simplified process block diagram of the unit is presented as Figure 2-1.

FIGURE 2-1
SIMPLIFIED PROCESS BLOCK DIAGRAM
SCPPA – CANYON POWER PLANT
UNIT 3



Stack Inside Diameter:	11 feet, 8 inches
Distance from Upstream Disturbance:	23 feet, 4 inches (2.0 Diameters)
Distance from Stack Exit:	16 feet, 6 inches (1.4 Diameters)

2.2 CEMS DESCRIPTION

NO_x and CO emissions from the unit are monitored by a dry, extractive Continuous Emission Monitoring System (CEMS). Stack flow rate is determined from fuel flow rate, O_2 concentration, standard F-Factor, and fuel higher heating value using EPA Method 19.

2.3 TEST CONDITIONS

The tests were performed with the unit operating at an average load of 49.0 MW. Tests were performed while the unit was firing natural gas and operating under normal conditions. Unit operation was established by the Canyon Power Plant operators.

2.4 SAMPLE LOCATION

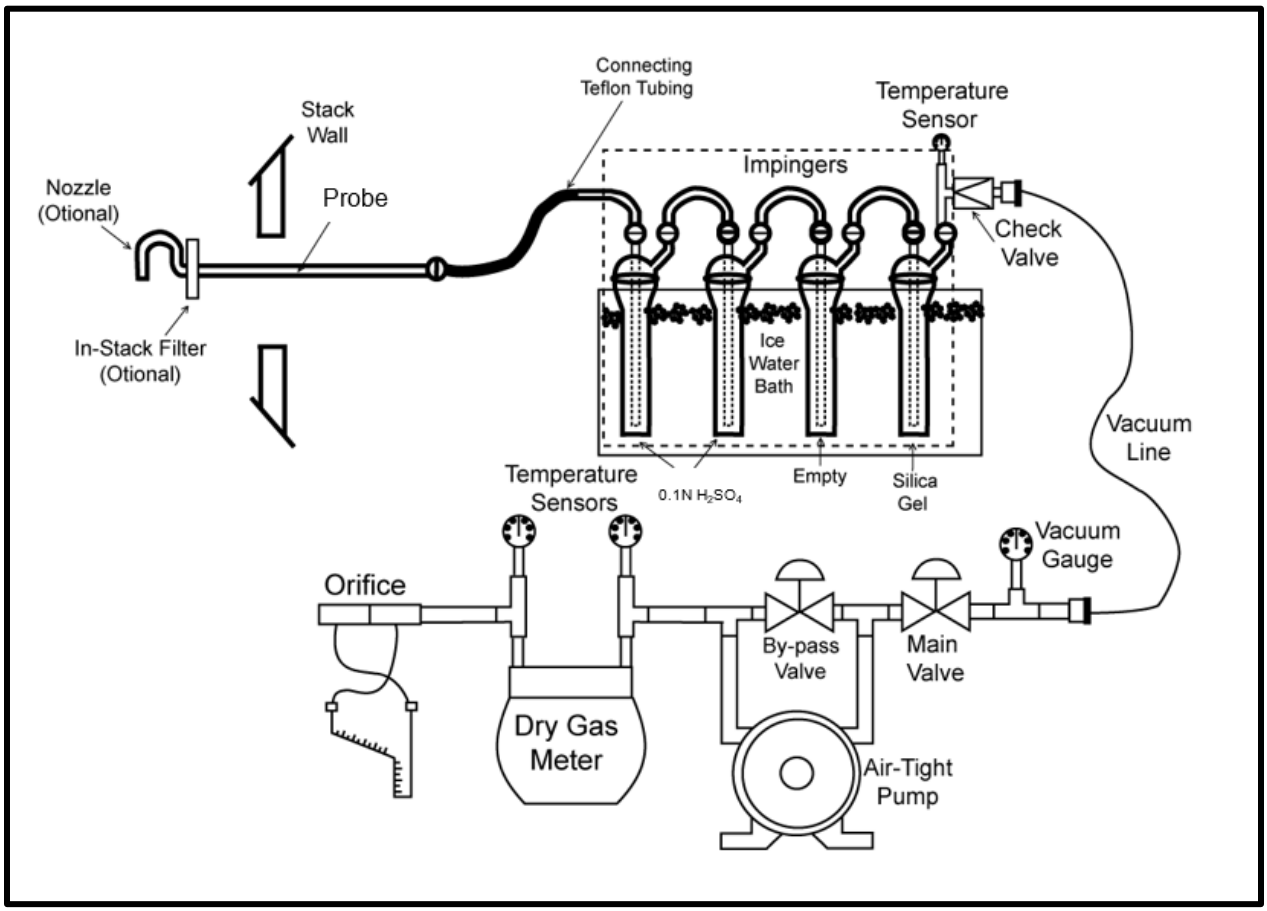
The measurements were made from sample ports located on the exhaust stack. There are four sample ports equally spaced at this location. The stack inside diameter at the sample plane is 11 feet, 8 inches. The sample ports are located 23 feet, 4 inches (2.0 diameters) downstream of the nearest flow disturbance and 16 feet, 6 inches (1.4 diameters) from the stack exit. A diagram of the sample location and individual traverse points is contained in Appendix A.1.

3.0 TEST DESCRIPTION

Flue gas samples were collected non-isokinetically using a SCAQMD Method 207.1 sample train. The samples were collected using a 12-point traverse at the exhaust stack location. Each test was performed over a 60 minute interval. The sample gas was drawn through a titanium probe, Teflon sample line, two impingers each containing 100 ml of 0.1N H_2SO_4, an empty impinger, an impinger containing silica gel, and a dry gas meter. The optional nozzle and filter were not used since the source is natural gas fired. The contents of the sample line and the first three impingers were recovered and analyzed by SCAQMD Method 207.1 for ammonia concentration by Ion Specific Electrode analysis. A diagram of the sampling equipment is presented as Figure 3-1.

Stack NO_x and O_2 concentrations and stack volumetric flow rate data were recorded from the Continuous Emission Monitoring System (CEMS) which is installed on the unit. These data were used to correct the ammonia concentration to 15% O_2.

FIGURE 3-1
SCAQMD METHOD 207.1 SAMPLING EQUIPMENT



4.0 TEST RESULTS AND OVERVIEW

4.1 TEST RESULTS

The results of the test are summarized in Table 4-1. The results show that the maximum ammonia slip was 1.4 ppm @ 15% O_2 which is less than the permitted limit of 5 ppm @ 15% O_2.

TABLE 4-1
AMMONIA SLIP TEST RESULTS
SCPPA – CANYON POWER PLANT
UNIT 3
OCTOBER 15, 2024

Parameter/Units	1-NH_3	2-NH_3	Average	Maximum(1)	Limit
Start/Stop Time	1608/1714	1755/1901	--	--	--
Stack Flow, dscfm @ T_{ref}(2)	231,242	231,833	231,538	--	--
NO_x, ppm @ 15% O_2(2)	2.2	2.2	2.2	--	2.5
O_2, %(2)	14.58	14.60	14.59	--	--
NH_3					
ppm	1.5	1.2	1.4	1.5	--
ppm @ 15% O_2	1.4	1.1	1.3	1.4	5
lb/hr	0.9	0.8	0.8	0.9	--
lb/MMBtu	0.002	0.002	0.002	0.002	--
lb/MMSCF	2.0	1.6	1.8	2.0	--

(1) Maximum of duplicate test runs, as required by SCAQMD Method 207.1.
(2) From facility CEMS.

4.2 TEST OVERVIEW

The test program was successful in meeting the program objectives. The QA/QC requirements of SCAQMD Method 207.1 were met. The results are considered representative of the source at the time of the tests.

APPENDIX A
TEST DATA

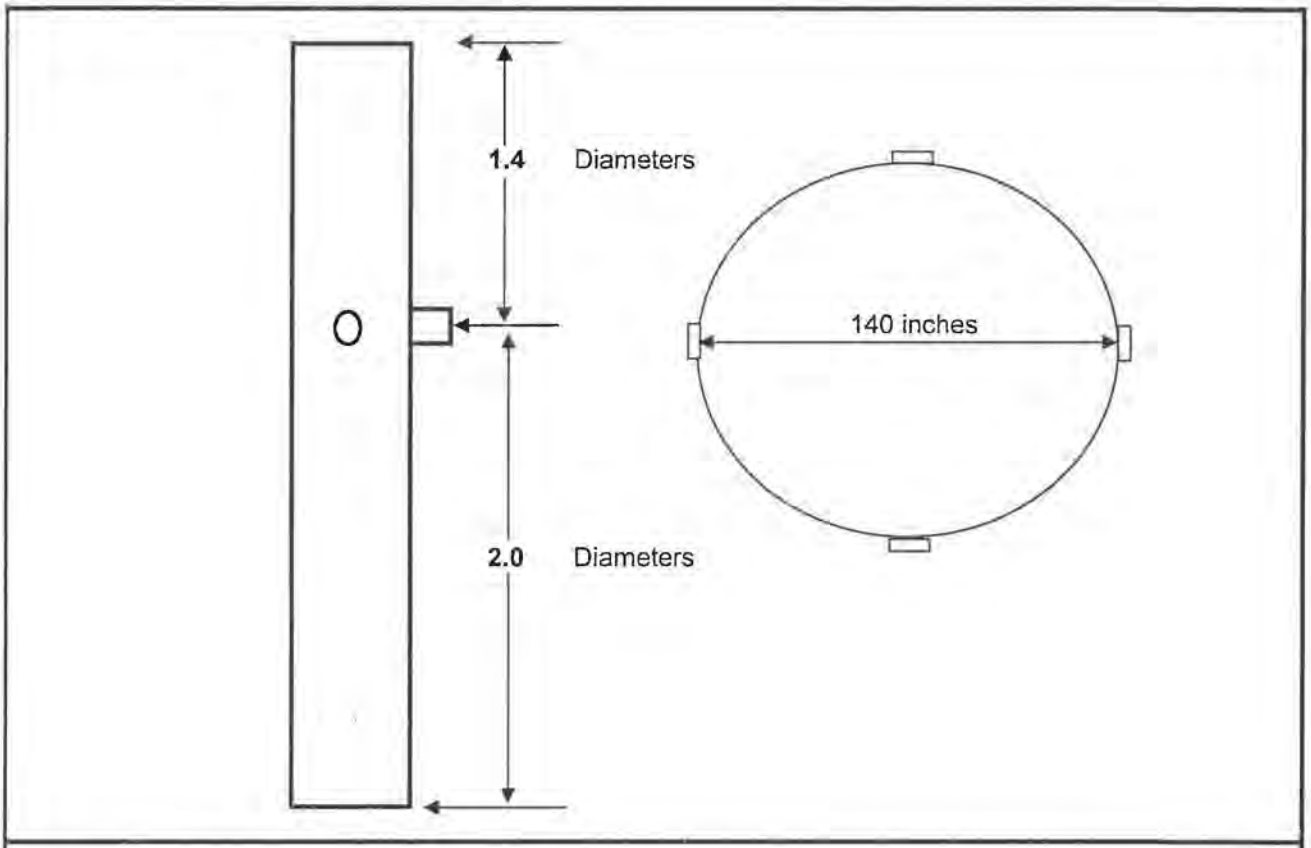
Appendix A.1
SCAQMD Method 1.1 Data

MONTROSE

METHOD 1 DATA SHEET
SAMPLE LOCATION

Client: SCPPA Date: 10/15/24

Sample Location: U3 Performed By: RD



Diameter (in.)	**140.00**
Upstream (ft.)	**23.33**
Downstream (ft.)	**16.50**
Coupling (in.)	**11.25**
Stack Area (ft^2)	**106.90**

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	6.1	17.3
2	14.6	20.5	31.8
3	29.6	41.4	52.7
4	70.4	98.6	109.8
5	85.4	119.5	130.7
6	95.6	133.9	145.2

Appendix A.2
Sample Data Sheets

AA MONTP

W002AS-046148-RT-6709

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canyon
LOCATION: UNIT - 3
DATE: 10-15-24
RUN NO: 1 - NH3 - U3
OPERATOR: KT
METER BOX NO: 17-WCS
METER ΔH@: ~~1.992~~ 1.819
METER Yd: 0.992
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12/5
ΔH= 1.5 X ΔP: N/A
Probe Condition, pre/post test: good/good
Silica Gel Expanded, Y/N: N
Filter Condition after Test: NA
Check Weight: 499.9/500.0

AMBIENT TEMPERATURE: 72°F
BAROMETRIC PRESSURE: 29.74
ASSUMED MOISTURE: 11%
PITOT TUBE COEFF, Cp: N/A
PROBE ID NO/MATERIAL: NA / T
PROBE LENGTH: 8'
NOZZLE ID NO/ MATERIAL:
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : 0.005 CFM@ 15 in. Hg.
POST-TEST LEAK RATE: : 0.005 CFM@ 15 in. Hg.
PITOT LEAK CHECK - PRE: N/A POST: N/A
CHAIN OF CUSTODY: SAMPLE CUSTODIAN JS
SAMPLER KT
SAMPLE CUSTODIAN JS

Imp. #	Contents	Post-Test	Pre-Test	Difference
1	0.1 NH_4SO_4	931.0	746.2	
2	0.1 NH_4SO_4	766.5	748.8	
3	MT	639.3	638.5	
4	SG	970.3	961.0	
VR	100 D.		-1260	
Total:				

221.700

Point	Time	Meter Volume, ft³	ΔP in. H₂O	ΔH in. H₂O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H₂O
3	1608	~~246.186~~	N/A	1.5	N/A	N/A	N/A	60	78	76	4"	N/A	N/A
2	1613	225.145	—		—	—	—	57	78	76	4"	—	—
1	1618	228.575	—		—	—	—	54	78	76	4"	—	—
PC	1623	231.975	—		—	—	—	—	—	—	—	—	—
3	1625	231.975	—		—	—	—	54	78	75	4"	—	—
2	1630	235.350	—		—	—	—	55	78	75	4"	—	—
1	1635	238.730	—		—	—	—	55	73	71	4"	—	—
PC	1640	242.105	—		—	—	—	—	—	—	—	—	—
3	1642	242.105	—		—	—	—	56	72	70	4"	—	—
2	1647	245.465	—		—	—	—	55	71	70	4"	—	—
1	1652	~~248.796~~	—		—	—	—	54	71	70	4"	—	—
PC	1657	~~248.796~~	—		—	—	—	—	—	—	—	—	—
3	1659	~~248.796~~	—		—	—	—	54	70	69	4"	—	—
2	1704	255.465	—		—	—	—	54	70	69	4"	—	—
1	1709	258.735	—		—	—	—	52	70	69	4"	—	—
E	1714	262.050	—		—	—	—	—	—	—	—	—	—
Average:													

-48 → 790
252 → 150

Comments:

KT 10-15-24

14 of 60

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canyon
LOCATION: UNIT 3
DATE: 10-15-24
RUN NO: 2 - NH3 - 43
OPERATOR: KT
METER BOX NO: 17-WCS
METER ΔH@: 1.819
METER Yd: 0.992
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12, 5
ΔH= 1.5 X ΔP: N/A
Probe Condition, pre/post test: Good/Good
Silica Gel Expanded, Y/N: NO
Filter Condition after Test: NA
Check Weight: 499.9/500.0

AMBIENT TEMPERATURE: 69
BAROMETRIC PRESSURE: 29.74
ASSUMED MOISTURE: 1%
PITOT TUBE COEFF, Cp: NM
PROBE ID NO/MATERIAL: NA / TT
PROBE LENGTH: 8'
NOZZLE ID NO/ MATERIAL: NA
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : <0.005 CFM@ 15 in. Hg.
POST-TEST LEAK RATE: <0.005 CFM@ 12 in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN JS
SAMPLER KT
SAMPLE CUSTODIAN JS

Imp. #	Contents	Post-Test	- Pre-Test	= Difference
1	0.1N H_2SO_4	964.8	766.3	
2	0.1N H_2SO_4	748.9	747.8	
3	MT	600.5	599.7	
4	SG	854.2	845.2	
VR	100 DI	-100.0		
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
3	1755	264.700	NA	1.5	NA	NA	NA	60	70	71	3"		NA
2	1800	268.070						51	70	71	3"		
1	1805	271.355						51	64	64	3"		
PC	1810	274.625						—	—	—	—	–	
3	1812	274.625						51	66	65	3"		
2	1817	277.910						50	66	65	3"		
1	1822	281.170						51	65	64	3"		
PC	1827	284.415						—	—	—	—		
3	1829	284.415						53	66	65	3"		
2	1834	287.655						53	66	65	3"		
1	1839	290.965						51	66	65	3"		
PC	1844	294.270						—	—	—	—		
3	1846	294.270						56	66	65	3"		
2	1851	297.505						53	66	66	3"		
1	1856	300.930						53	66	65	3"		
E	1901	304.215											
Average:													

Comments:

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canyon
LOCATION: UNIT-3
DATE: 10.15.24
RUN NO: FB-NH3-U3
OPERATOR: GC
METER BOX NO: 30 ~~47~~ WC7
METER ΔH@: ~~1.811~~ 1.819
METER Yd: ~~0.993~~ 0.992
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12, 5
ΔH= N/A X ΔP:
Probe Condition, pre/post test: Good / Good
Silica Gel Expanded, Y/N: NO
Filter Condition after Test: NA
Check Weight: 1999/500.0

AMBIENT TEMPERATURE: 72°F
BAROMETRIC PRESSURE: 29.74
ASSUMED MOISTURE: 10%
PITOT TUBE COEFF, Cp: NA
PROBE ID NO/MATERIAL: NA / FT
PROBE LENGTH: 8'
NOZZLE ID NO/ MATERIAL:
NOZZLE DIAMETER: NA
FILTER NO/TYPE:
PRE-TEST LEAK RATE: 0.005 CFM@ 10 in. Hg.
POST-TEST LEAK RATE: 0.005 CFM@ 12 in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN JS
SAMPLER GC
SAMPLE CUSTODIAN JS

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	0.1 NH_2SO_4	845.9	745.8	
2	0.1 NH_2SO_4	749.6	749.2	
3	MT	639.3	639.1	
4	SG	964.2	964.2	
VR	100 DC	700.0		
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
													NA
Average:													

FB-NH3-U3

Comments:

Appendix A.3
Laboratory Data

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS CALCULATION DATA

District Method: SCAQMD 207.1

MONTROSE

Project Number: Proj-046148
Client/Location: Canyon
Sample Location: Unit-3
Sample Date: 10/15/2024
Analysis Date: 10/15/2024
Analyst's Initials: JS

Calibration Curve Slope: -55.0520
Y-intercept: 94.8520
R^2: 0.9993
Thermometer #: #5
ISE Electrode #: #13

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Conc. µg NH3 /ml as N	C_{avg} as N	C_{avg} as NH_3	µg NH_3/ sample
Standard Check: 28 µg NH_3 / ml as N	NA	21.1	16.4	26.611	26.555	32.279	NA
		21.1	16.5	26.499			
1-NH_3	646.2	23.1	85.0	1.510	1.529	1.859	1201.114
		23.0	84.4	1.548			
2-NH_3	613.7	21.5	89.3	1.261	1.275	1.549	950.926
		21.4	88.8	1.288			
Spike 1-NH3	NA	23.1	22.7	20.446	20.532	24.958	NA
		23.1	22.5	20.618			
Standard Check: 28 µg NH_3 / ml as N	NA	22.2	14.0	29.420	29.359	35.688	NA
		22.3	14.1	29.298			
Reagent Blank 0.1N H_2SO_4	NA	21.4	161.1	0.063	0.063	0.077	NA
		21.2	160.7	0.064			
DI H_2O Blank	NA	21.3	151.4	0.094	0.092	0.112	NA
		21.4	152.2	0.091			
Field Blank	417.7	21.2	142.5	0.136	0.135	0.164	68.346
		21.1	143.1	0.133			
Standard Check: 28 µg NH_3 / ml as N	NA	22.1	14.3	29.054	29.176	35.465	NA
		22.0	14.1	29.298			

Notes:

- Measured Concentration of Ammonia (C) in ug NH_3 / ml as N.
- $C=10^{(P-B)/M}$, P = electrode potential (mV), M=slope and B=intercept.
- Average Measured Ammonia Concentration (C_{avg}) = (C_1 + C_2)/2 where C_1, C_2 are results from duplicate analyses (ug NH_3 /ml as N).
- C_{avg} (ug NH_3/ml as NH_3) = C_{avg} (ug NH_3/ ml as N) * 17.03/14.01.
- ug NH_3 / sample = C_{avg} (ug NH_3/ml as NH_3) * TV.
- Used 100 ml of samples and standards with 2 ml ISA and constant stirring rate, analyzed in duplicate.
- Sample pH and temperatures can be found on the laboratory datasheet.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Sample solutions, blanks and C.V. Standard temperature must be within ± 2°C.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS QUALITY CONTROL

District Method: SCAQMD 207.1

MONTROSE

Project Number: Proj-046148
Client/ Location: Canyon
Sample Location: Unit-3
Sample Date: 10/15/2024
Analysis Date: 10/15/2024
Analyst's Initials: JS

Sample	Recovery (%)	RPD (%)	RPA (%)
Standard Check: 28 µg NH_3 / ml as N	NA	0.42	-5.161
1-NH3	NA	-2.51	NA
2-NH3	NA	-2.09	NA
	NA		NA
Spike 1-NH3	98.97	-0.84	NA
Standard Check: 28 µg NH_3 / ml as N	NA	0.42	4.853
Reagent Blank 0.1N H_2SO_4	NA	-1.67	NA
DI H_2O Blank	NA	3.35	NA
Field Blank	NA	2.51	NA
Standard Check: 28 µg NH_3 / ml as N	NA	-0.84	4.198

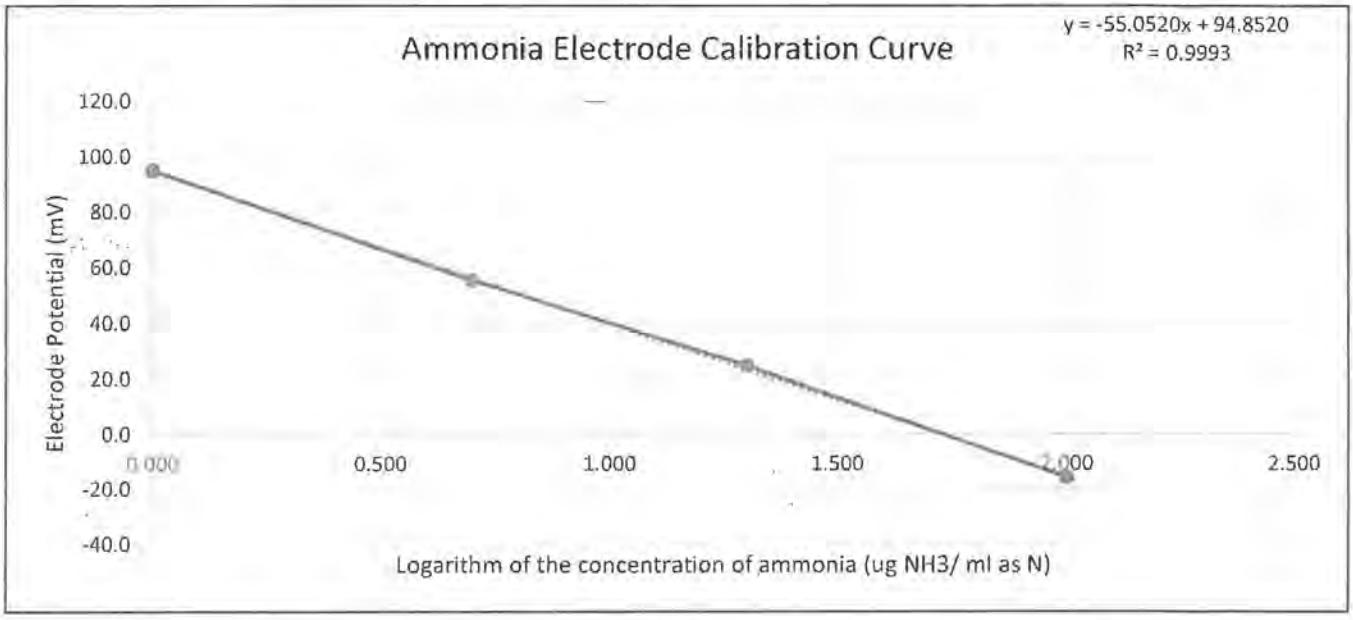
Notes:
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- Matrix Spike Percent Recovery (%R).
- $\%R = (C_{spike}*0.104 - C_{sample}*0.102)/2 *100$.
- Cspike = average result of matrix spike (ug NH_3/ ml as N).
- Relative Percent Difference (RPD) = $(C_1-C_2)/ C_{avg} *100$ **(must be 5% or less).**
- Relative Percent Accuracy (RPA) **(must be 10% or less).**
- RPA = (C_{avg}-theoretical value of standard)/ theoretical value of standard * 100.

AMMONIA ELECTRODE CALIBRATION CURVE DATA

MONTROSE AIR QUALITY SERVICES

District Method: SCAQMD 207.1
Date: October 15, 2024
Project Number: Proj-046148
Client/Location: Canyon/Unit-3

NH_3 concentration (µg NH3 / ml as N)	Log NH_3 concentration	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	0.000	94.9	21.8	22.0
5	0.699	55.4	21.8	22.0
20	1.301	24.9	21.7	22.0
100	2.000	-16.0	21.8	22.0



Slope	Y-Intercept	R^2
-55.0520	94.8520	0.9993

NH_3 concentration (µg NH3 / ml as N)	Value LR line	Difference	% Difference
1	0.9980	-0.0020	-0.2008
5	5.2075	0.2075	4.1505
20	18.6489	-1.3511	-6.7555
100	103.1782	3.1782	3.1782

Notes:

- Regression Line: P=M*log(ug of NH_3/ ml as N)+B.
- Measured Concentration of Ammonia (C) in ug / ml NH_3 as N: $C=10^{(P-B)/M}$ where P = electrode potential, M= slope and B= intercept.
- All standards are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.
- Calibration solution temperature must be within ± 2°C.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS DATA

District Method: SCAQMD 207.1

Project Number: Proj-046148
Client/Location: Can Yon
Sample Location: Unit 3
Sample Date: 10-15-24
Analysis Date: 10-15-24

Calibration Curve: Y= 55.0520x + 94.8520
R^2: 0.9993
Thermometer #: #3
ISE Electrode #: #9
Analyst's Initials: JS

NH3 concentration (µg NH3 / ml as N)	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	94.9	21.6	22.0
5	55.4	21.8	22.0
20	24.9	21.7	22.0
100	-16.0	21.8	22.0

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Blue after ISA (Y/N)	pH
Standard Check: 28 µg NH_3 / ml as N	NA	21.1	16.4	Y	NA
		21.1	16.5	Y	
1-NH_3	6462	23.1	85.0	Y	<2
		23.0	84.4	Y	
2-NH_3	6137	21.5	89.3	Y	<2
		21.4	88.8	Y	
Spike: 1-NH_3	NA	23.1	22.7	Y	NA
		23.1	22.5	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	22.2	14.0	Y	NA
		22.3	14.1	Y	
Reagent Blank 0.1N H_2SO_4	NA	21.4	161.1	Y	NA
		21.2	160.7	Y	
DI H_2O Blank	NA	21.3	151.4	Y	NA
		21.4	152.2	Y	
Field Blank	4177	21.2	142.5	Y	<2
		21.1	143.1	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	22.1	14.3	Y	NA
		22.0	14.1	Y	

Notes:

- Used 100 ml of samples or standards with 2 ml ISA and constant stirring rate.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- All calibration solution and calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All solutions turned blue and remained blue with ISA unless otherwise indicated.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples must have a pH of less than 2.
- Sample solutions, calibration solution and C.V. standard temperature must be within ± 2°C of one another.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater

Appendix A.4
QA/QC Data

Barometric Pressure Determination	
Date: 10/15/24	
Data By: Rik Dupont	
Reference:	https://forecast.weather.gov/MapClick.php?lon=-117.85962867946365&lat=33.863355545614255
Reference Barometer ID	FW0063 Fullerton CSU (F0063)
Reference Barometer Location	Lat: 33.8805°NLon: 117.88417°WElev: 247ft.
Reference Barometer Other Info.	15 Oct 11:00 AM PDT
Reference Barometer Indication, corrected to sea level	30.08
Reference Barometer Reference Elevation	247
Reference Barometer Actual Pressure	29.83
Test Barometer Location/Site	Canyon Power Plant
Location/Site Elevation	279
Location/Site Barometric Pressure	29.80
Sampling Location Height (above/below site elevation)	60
Sampling Location Barometric Pressure	**29.74**

SEMI-ANNUAL DRY GAS METER/ORIFICE CALIBRATION

Model #: C-5000 Source Sampler
ID #: 17-WCS
Date: 7/3/2024
Bar. Pressure: 29.77 (in. Hg)
Performed By: L. Olivares
Reviewed By: Surya Adhikari

DRY GAS METER READINGS									CRITICAL ORIFICE READINGS					
					Initial Temps.		Final Temps.					Ambient Temperature		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
0.13	26.00	443.100	448.480	5.380	77.0	75.0	77.0	75.0	AA-33	0.1555	19.0	68.0	69.0	68.5
0.13	26.00	448.480	453.860	5.380	77.0	75.0	77.0	75.0	AA-33	0.1555	19.0	69.0	69.0	69.0
0.13	26.00	453.860	459.235	5.375	77.0	75.0	77.0	75.0	AA-33	0.1555	19.0	69.0	69.0	69.0
0.65	12.00	426.400	431.890	5.490	79.0	75.0	78.0	75.0	QI-48	0.3440	18.0	68.0	68.0	68.0
0.65	12.00	431.890	437.380	5.490	78.0	75.0	78.0	75.0	QI-48	0.3440	18.0	68.0	67.0	67.5
0.65	12.00	437.380	442.865	5.485	78.0	75.0	79.0	75.0	QI-48	0.3440	18.0	67.0	68.0	67.5
2.00	7.00	408.700	414.250	5.550	78.0	73.0	79.0	73.0	QI-63	0.5998	16.0	70.0	69.0	69.5
2.00	7.00	414.250	419.810	5.560	79.0	73.0	70.0	74.0	QI-63	0.5998	16.0	69.0	68.0	68.5
2.00	7.00	419.810	425.360	5.550	70.0	74.0	80.0	74.0	QI-63	0.5998	16.0	68.0	69.0	68.5
3.70	5.00	391.500	396.860	5.360	79.0	72.0	74.0	72.0	AA-73	0.8123	15.0	70.0	70.0	70.0
3.70	5.00	396.860	402.210	5.350	74.0	72.0	76.0	72.0	AA-73	0.8123	15.0	70.0	70.0	70.0
3.70	5.00	402.210	407.555	5.345	76.0	72.0	78.0	73.0	AA-73	0.8123	15.0	70.0	70.0	70.0

DRY GAS METER		ORIFICE			DRY GAS METER CALIBRATION FACTOR	ORIFICE CALIBRATION FACTOR				
VOLUME CORRECTED Vm(std) (cu ft)	VOLUME CORRECTED Vm(std) (liters)	VOLUME CORRECTED Vcr(std) (cu ft)	VOLUME CORRECTED Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)	Y Value (number)	dH@ Value (in H2O)	Individual Run 0.95 < Y < 1.05?	Individual Orifice Ymax - Ymin < 0.010?	Orifice Average 0.98 < Y/Yd < 1.02?	Orifice Average dH@ - dH@ av < 0.15?
5.273	149.3	5.236	148.3	5.269	0.993	1.771	Pass			
5.273	149.3	5.233	148.2	5.271	0.992	1.773	Pass			
5.268	149.2	5.233	148.2	5.271	0.993	1.773	Pass			
				Average	0.993	1.772		Pass	Pass	Pass
5.380	152.4	5.348	151.5	5.377	0.994	1.808	Pass			
5.382	152.4	5.351	151.5	5.375	0.994	1.806	Pass			
5.375	152.2	5.351	151.5	5.375	0.995	1.806	Pass			
				Average	0.995	1.806		Pass	Pass	Pass
5.467	154.8	5.432	153.8	5.477	0.994	1.841	Pass			
5.495	155.6	5.437	154.0	5.472	0.989	1.838	Pass			
5.480	155.2	5.437	154.0	5.472	0.992	1.835	Pass			
				Average	0.992	1.837		Pass	Pass	Pass
5.317	150.6	5.252	148.7	5.301	0.988	1.863	Pass			
5.314	150.5	5.252	148.7	5.301	0.988	1.863	Pass			
5.297	150.0	5.252	148.7	5.301	0.992	1.861	Pass			
				Average	0.989	1.862		Pass	Pass	Pass

Average Yd: 0.992 dH@: 1.819

Q @ dH = 1: 0.556

Performed by signature: L. Olivares Date: 07/03/2024

Reviewed by signature: Surya Adhikari Date: 7/3/2024

DIGITAL TEMPERATURE READOUT CALIBRATION

Digital Temperature Readout ID: 17-WCS
Readout Description: Control Box
Date: 7/3/2024
Performed By: JS

Calibrated Thermocouple ID: TC-Cal
T1 Reference Thermometer ID: 313010
T2 Reference Thermometer ID: 2736
T3 Reference Thermometer ID: 2786

T/C I.D. **TC-Cal**	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	17-WCS	374	374	374	374	375	375	375	375	1.0	0.1%	Pass
T2 (~212 F)	17-WCS	211	211	211	211	212	212	212	212	1.0	0.1%	Pass
T1 (~ 32 F)	17-WCS	29	29	29	29	32	32	32	32	3.0	0.6%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

Thermocouple Source Readings

	T/C Source S/N	T/C - Readout °F				T/C Source °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T4 (~650 F)	125097	654	654	654	654	650	650	650	650	4.0	0.4%	Pass
T3 (~370 F)	125097	372	372	372	372	375	375	375	375	3.0	0.4%	Pass
T2 (~212 F)	125097	210	210	210	210	212	212	212	212	2.0	0.3%	Pass
T1 (~32 F)	125097	29	29	29	29	32	32	32	32	3.0	0.6%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

APPENDIX B
FACILITY CEMS DATA

Average Values Report
Generated: 10/15/2024 17:30

1-NH3

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 3

Period Start: 10/15/2024 16:09
Period End: 10/15/2024 17:14
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 3_O2 %	Average 3_NOXPPM ppm	Average 3_NOX_CORR ppm	Average 3_NOX_LBHR #/hr	Average 3_NOX_LBMM #/MBTU	Average 3_COPPM ppm	Average 3_CO_CORR ppm	Average 3_CO_LBHR #/hr	Average 3_CO_LBMM #/MBTU	Average 3_GasFlow kscfh	Average 3_LOAD MW	Average 3_STACKFLW kscfm
10/15/2024 16:09	14.56	2.39	2.22	3.91	0.008	3.37	3.14	3.42	0.0070	465.2	49.04	233.8
10/15/2024 16:10	14.57	2.39	2.23	3.91	0.008	3.38	3.15	3.47	0.0071	465.3	49.00	234.2
10/15/2024 16:11	14.57	2.37	2.21	3.91	0.008	3.39	3.16	3.47	0.0071	465.5	48.99	234.3
10/15/2024 16:12	14.57	2.35	2.19	3.91	0.008	3.42	3.19	3.52	0.0072	465.8	49.04	234.4
10/15/2024 16:13	14.56	2.35	2.19	3.92	0.008	3.43	3.19	3.52	0.0072	466.1	49.10	234.2
10/15/2024 16:14	14.56	2.35	2.19	3.92	0.008	3.43	3.19	3.52	0.0072	466.2	49.13	234.2
10/15/2024 16:15	14.57	2.35	2.19	3.91	0.008	3.43	3.20	3.52	0.0072	465.4	48.90	234.2
10/15/2024 16:16	14.57	2.35	2.19	3.92	0.008	3.44	3.21	3.52	0.0072	466.1	48.90	234.6
10/15/2024 16:17	14.57	2.34	2.18	3.91	0.008	3.45	3.22	3.52	0.0072	465.7	48.85	234.4
10/15/2024 16:18	14.57	2.32	2.16	3.92	0.008	3.46	3.22	3.53	0.0072	466.5	49.02	234.8
10/15/2024 16:19	14.57	2.32	2.16	3.92	0.008	3.46	3.22	3.53	0.0072	466.3	49.03	234.7
10/15/2024 16:20	14.56	2.32	2.16	3.92	0.008	3.47	3.23	3.53	0.0072	466.4	49.12	234.3
10/15/2024 16:21	14.57	2.34	2.18	3.92	0.008	3.47	3.23	3.57	0.0073	466.4	48.90	234.7
10/15/2024 16:22	14.57	2.34	2.18	3.92	0.008	3.46	3.22	3.53	0.0072	466.5	49.05	234.8
10/15/2024 16:23	14.57	2.35	2.19	3.91	0.008	3.46	3.22	3.52	0.0072	465.8	49.12	234.4
10/15/2024 16:24	14.57	2.35	2.19	3.92	0.008	3.45	3.22	3.52	0.0072	466.1	48.87	234.6
10/15/2024 16:25	14.56	2.34	2.18	3.92	0.008	3.44	3.20	3.52	0.0072	466.1	49.01	234.2
10/15/2024 16:26	14.57	2.35	2.19	3.91	0.008	3.44	3.21	3.52	0.0072	465.6	48.76	234.3
10/15/2024 16:27	14.58	2.35	2.19	3.91	0.008	3.45	3.22	3.52	0.0072	465.9	49.01	234.8
10/15/2024 16:28	14.58	2.33	2.18	3.92	0.008	3.48	3.25	3.58	0.0073	466.5	49.10	235.1
10/15/2024 16:29	14.56	2.34	2.18	3.91	0.008	3.50	3.26	3.57	0.0073	465.4	49.10	233.9
10/15/2024 16:30	14.58	2.33	2.18	3.92	0.008	3.48	3.25	3.57	0.0073	466.2	48.97	235.0
10/15/2024 16:31	14.57	2.32	2.16	3.91	0.008	3.49	3.25	3.57	0.0073	465.9	49.07	234.5
10/15/2024 16:32	14.57	2.33	2.17	3.92	0.008	3.50	3.26	3.57	0.0073	466.1	49.00	234.6
10/15/2024 16:33	14.58	2.34	2.18	3.91	0.008	3.51	3.28	3.62	0.0074	466.0	48.99	234.9
10/15/2024 16:34	14.58	2.31	2.16	3.91	0.008	3.52	3.29	3.62	0.0074	465.6	49.07	234.7
10/15/2024 16:35	14.57	2.32	2.16	3.92	0.008	3.53	3.29	3.62	0.0074	466.4	49.08	234.7
10/15/2024 16:36	14.58	2.32	2.17	3.91	0.008	3.51	3.28	3.62	0.0074	465.7	49.00	234.7
10/15/2024 16:37	14.59	2.31	2.16	3.91	0.008	3.51	3.28	3.62	0.0074	465.8	48.82	235.2
10/15/2024 16:38	14.57	2.31	2.15	3.92	0.008	3.52	3.28	3.62	0.0074	466.4	48.89	234.7
10/15/2024 16:39	14.58	2.30	2.15	3.91	0.008	3.54	3.30	3.62	0.0074	465.9	48.99	234.8
10/15/2024 16:40	14.57	2.32	2.16	3.92	0.008	3.55	3.31	3.62	0.0074	466.3	49.05	234.7
10/15/2024 16:41	14.58	2.32	2.17	3.92	0.008	3.55	3.31	3.62	0.0074	466.4	49.15	235.1
10/15/2024 16:42	14.58	2.30	2.15	3.92	0.008	3.55	3.31	3.62	0.0074	466.2	49.01	235.0
10/15/2024 16:43	14.58	2.31	2.16	3.92	0.008	3.57	3.33	3.67	0.0075	466.1	48.92	234.9
10/15/2024 16:44	14.57	2.32	2.16	3.91	0.008	3.57	3.33	3.67	0.0075	465.8	49.03	234.4
10/15/2024 16:45	14.59	2.32	2.17	3.92	0.008	3.58	3.35	3.67	0.0075	466.1	48.89	235.3
10/15/2024 16:46	14.60	2.31	2.16	3.92	0.008	3.57	3.34	3.67	0.0075	466.1	48.99	235.7
10/15/2024 16:47	14.57	2.31	2.15	3.91	0.008	3.56	3.32	3.62	0.0074	466.0	49.03	234.5
10/15/2024 16:48	14.58	2.31	2.16	3.91	0.008	3.55	3.31	3.62	0.0074	465.7	49.03	234.7
10/15/2024 16:49	14.58	2.31	2.16	3.92	0.008	3.56	3.32	3.67	0.0075	466.1	48.92	234.9
10/15/2024 16:50	14.58	2.32	2.17	3.91	0.008	3.57	3.33	3.67	0.0075	465.8	48.98	234.8
10/15/2024 16:51	14.59	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	465.8	48.82	235.2
10/15/2024 16:52	14.58	2.34	2.18	3.92	0.008	3.57	3.33	3.67	0.0075	466.2	48.90	235.0
10/15/2024 16:53	14.58	2.33	2.18	3.92	0.008	3.58	3.34	3.67	0.0075	466.4	49.04	235.1
10/15/2024 16:54	14.58	2.33	2.18	3.92	0.008	3.59	3.35	3.67	0.0075	466.5	48.98	235.1
10/15/2024 16:55	14.58	2.34	2.18	3.92	0.008	3.59	3.35	3.67	0.0075	466.5	48.90	235.1
10/15/2024 16:56	14.57	2.35	2.19	3.91	0.008	3.57	3.33	3.67	0.0075	465.9	48.86	234.5
10/15/2024 16:57	14.59	2.35	2.20	3.92	0.008	3.57	3.34	3.67	0.0075	466.4	49.01	235.5
10/15/2024 16:58	14.58	2.36	2.20	3.92	0.008	3.57	3.33	3.67	0.0075	466.5	48.96	235.1
10/15/2024 16:59	14.59	2.37	2.22	3.91	0.008	3.57	3.34	3.67	0.0075	466.0	48.96	235.3
10/15/2024 17:00	14.59	2.35	2.20	3.92	0.008	3.59	3.36	3.67	0.0075	466.1	48.96	235.3

Period Start:	Average 3_O2 %	Average 3_NOXPPM ppm	Average 3_NOX_CORR ppm	Average 3_NOX_LBHR #/hr	Average 3_NOX_LBMM #/MBTU	Average 3_COPPM ppm	Average 3_CO_CORR ppm	Average 3_CO_LBHR #/hr	Average 3_CO_LBMM #/MBTU	Average 3_GasFlow kscfh	Average 3_LOAD MW	Average 3_STACKFLW kscfm
10/15/2024 17:01	14.58	2.33	2.18	3.91	0.008	3.61	3.37	3.72	0.0076	465.9	49.04	234.8
10/15/2024 17:02	14.58	2.33	2.18	3.92	0.008	3.62	3.38	3.72	0.0076	466.2	49.00	235.0
10/15/2024 17:03	14.58	2.35	2.19	3.92	0.008	3.61	3.37	3.72	0.0076	466.3	49.16	235.0
10/15/2024 17:04	14.57	2.34	2.18	3.92	0.008	3.58	3.34	3.67	0.0075	466.5	49.01	234.8
10/15/2024 17:05	14.59	2.34	2.19	3.92	0.008	3.57	3.34	3.67	0.0075	466.4	49.11	235.5
10/15/2024 17:06	14.59	2.36	2.21	3.92	0.008	3.59	3.36	3.67	0.0075	466.1	49.04	235.3
10/15/2024 17:07	14.58	2.37	2.21	3.91	0.008	3.60	3.36	3.67	0.0075	465.6	49.14	234.7
10/15/2024 17:08	14.60	2.36	2.21	3.92	0.008	3.61	3.38	3.72	0.0076	466.2	49.03	235.7
10/15/2024 17:09	14.58	2.36	2.20	3.92	0.008	3.62	3.38	3.72	0.0076	466.1	48.97	234.9
10/15/2024 17:10	14.58	2.35	2.19	3.91	0.008	3.61	3.37	3.72	0.0076	465.6	49.01	234.7
10/15/2024 17:11	14.58	2.35	2.19	3.92	0.008	3.61	3.37	3.72	0.0076	466.2	49.02	235.0
10/15/2024 17:12	14.58	2.36	2.20	3.92	0.008	3.60	3.36	3.67	0.0075	466.2	48.91	235.0
10/15/2024 17:13	14.58	2.36	2.20	3.91	0.008	3.61	3.37	3.72	0.0076	465.7	48.99	234.7
10/15/2024 17:14	14.58	2.36	2.20	3.91	0.008	3.62	3.38	3.72	0.0076	465.9	48.89	234.8
Daily Average*	**14.58**	**2.34**	**2.18**	**3.92**	**0.008**	**3.53**	**3.29**	**3.62**	**0.0074**	**466.0**	**48.99**	**234.8**
Maximum*	**14.60**	**2.39**	**2.23**	**3.92**	**0.008**	**3.62**	**3.38**	**3.72**	**0.0076**	**466.5**	**49.16**	**235.7**
	10/15/2024 17:08	10/15/2024 16:10	10/15/2024 16:10	10/15/2024 17:12	10/15/2024 17:14	10/15/2024 17:14	10/15/2024 17:14	10/15/2024 17:14	10/15/2024 17:14	10/15/2024 17:04	10/15/2024 17:03	10/15/2024 17:08
Minimum*	**14.56**	**2.30**	**2.15**	**3.91**	**0.008**	**3.37**	**3.14**	**3.42**	**0.0070**	**465.2**	**48.76**	**233.8**
	10/15/2024 16:29	10/15/2024 16:42	10/15/2024 16:47	10/15/2024 17:14	10/15/2024 17:14	10/15/2024 16:09	10/15/2024 16:09	10/15/2024 16:09	10/15/2024 16:09	10/15/2024 16:09	10/15/2024 16:26	10/15/2024 16:09

* Does not include Invalid Averaging Periods ("N/A")

CEMTEK KVB-Enertec NetDAHS©

Version 48.0

2-WH3

Average Values Report
Generated: 10/15/2024 19:12

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 3

Period Start: 10/15/2024 17:56
Period End: 10/15/2024 19:01
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 3_O2 %	Average 3_NOXPPM ppm	Average 3_NOX_CORR ppm	Average 3_NOX_LBHR #/hr	Average 3_NOX_LBMM #/MBTU	Average 3_COPPM ppm	Average 3_CO_CORR ppm	Average 3_CO_LBHR #/hr	Average 3_CO_LBMM #/MBTU	Average 3_GasFlow kscfh	Average 3_LOAD MW	Average 3_STACKFLW kscfm
10/15/2024 17:56	14.59	2.33	2.18	3.91	0.008	3.56	3.33	3.67	0.0075	465.7	49.20	235.1
10/15/2024 17:57	14.60	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	465.7	48.99	235.5
10/15/2024 17:58	14.60	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	466.0	48.94	235.6
10/15/2024 17:59	14.59	2.34	2.19	3.91	0.008	3.56	3.33	3.67	0.0075	465.6	48.99	235.1
10/15/2024 18:00	14.59	2.34	2.19	3.91	0.008	3.56	3.33	3.67	0.0075	465.9	48.99	235.2
10/15/2024 18:01	14.59	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	465.9	48.84	235.2
10/15/2024 18:02	14.60	2.33	2.18	3.92	0.008	3.57	3.34	3.67	0.0075	466.2	49.02	235.7
10/15/2024 18:03	14.60	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	465.9	49.00	235.6
10/15/2024 18:04	14.60	2.33	2.18	3.92	0.008	3.57	3.34	3.67	0.0075	466.1	48.95	235.7
10/15/2024 18:05	14.60	2.33	2.18	3.92	0.008	3.57	3.34	3.67	0.0075	466.2	49.22	235.7
10/15/2024 18:06	14.59	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	465.9	49.12	235.2
10/15/2024 18:07	14.60	2.33	2.18	3.91	0.008	3.58	3.35	3.67	0.0075	465.9	49.01	235.6
10/15/2024 18:08	14.60	2.33	2.18	3.91	0.008	3.58	3.35	3.67	0.0075	465.9	49.13	235.6
10/15/2024 18:09	14.58	2.33	2.18	3.92	0.008	3.57	3.33	3.67	0.0075	466.2	49.06	235.0
10/15/2024 18:10	14.60	2.33	2.18	3.91	0.008	3.57	3.34	3.67	0.0075	466.0	49.05	235.6
10/15/2024 18:11	14.60	2.34	2.19	3.91	0.008	3.56	3.33	3.67	0.0075	465.8	48.87	235.5
10/15/2024 18:12	14.59	2.34	2.19	3.92	0.008	3.55	3.32	3.62	0.0074	466.1	49.06	235.3
10/15/2024 18:13	14.60	2.33	2.18	3.91	0.008	3.55	3.32	3.67	0.0075	465.9	49.00	235.6
10/15/2024 18:14	14.60	2.35	2.20	3.91	0.008	3.56	3.33	3.67	0.0075	465.8	49.05	235.5
10/15/2024 18:15	14.59	2.35	2.20	3.91	0.008	3.55	3.32	3.62	0.0074	465.9	49.03	235.2
10/15/2024 18:16	14.60	2.35	2.20	3.91	0.008	3.55	3.32	3.67	0.0075	465.8	49.11	235.5
10/15/2024 18:17	14.58	2.37	2.21	3.91	0.008	3.55	3.31	3.62	0.0074	465.9	48.98	234.8
10/15/2024 18:18	14.59	2.37	2.22	3.91	0.008	3.54	3.31	3.62	0.0074	465.3	48.95	234.9
10/15/2024 18:19	14.59	2.38	2.23	3.91	0.008	3.54	3.31	3.62	0.0074	465.5	49.01	235.0
10/15/2024 18:20	14.58	2.37	2.21	3.91	0.008	3.52	3.29	3.62	0.0074	466.0	48.85	234.9
10/15/2024 18:21	14.59	2.38	2.23	3.91	0.008	3.52	3.29	3.62	0.0074	465.3	48.93	234.9
10/15/2024 18:22	14.60	2.40	2.25	3.91	0.008	3.53	3.31	3.62	0.0074	465.6	49.02	235.4
10/15/2024 18:23	14.60	2.38	2.23	3.91	0.008	3.53	3.31	3.62	0.0074	465.9	49.07	235.6
10/15/2024 18:24	14.60	2.37	2.22	3.91	0.008	3.53	3.31	3.62	0.0074	465.3	49.08	235.3
10/15/2024 18:25	14.60	2.37	2.22	3.91	0.008	3.52	3.30	3.61	0.0074	465.1	49.01	235.2
10/15/2024 18:26	14.60	2.38	2.23	3.91	0.008	3.52	3.30	3.62	0.0074	465.5	48.87	235.4
10/15/2024 18:27	14.60	2.39	2.24	3.91	0.008	3.52	3.30	3.62	0.0074	465.4	49.15	235.4
10/15/2024 18:28	14.60	2.39	2.24	3.91	0.008	3.54	3.32	3.62	0.0074	465.5	49.15	235.4
10/15/2024 18:29	14.59	2.39	2.23	3.91	0.008	3.54	3.31	3.61	0.0074	465.1	49.05	234.8
10/15/2024 18:30	14.60	2.39	2.24	3.91	0.008	3.54	3.32	3.61	0.0074	465.1	49.12	235.2
10/15/2024 18:31	14.60	2.39	2.24	3.91	0.008	3.54	3.32	3.62	0.0074	465.7	49.03	235.5
10/15/2024 18:32	14.60	2.39	2.24	3.91	0.008	3.53	3.31	3.61	0.0074	465.0	49.01	235.2
10/15/2024 18:33	14.61	2.38	2.23	3.91	0.008	3.52	3.30	3.62	0.0074	465.4	49.07	235.7
10/15/2024 18:34	14.60	2.37	2.22	3.91	0.008	3.52	3.30	3.62	0.0074	465.4	49.01	235.4
10/15/2024 18:35	14.60	2.37	2.22	3.90	0.008	3.53	3.31	3.61	0.0074	464.8	49.05	235.0
10/15/2024 18:36	14.60	2.38	2.23	3.91	0.008	3.54	3.32	3.62	0.0074	465.7	48.99	235.5
10/15/2024 18:37	14.60	2.38	2.23	3.91	0.008	3.54	3.32	3.61	0.0074	465.1	49.09	235.2
10/15/2024 18:38	14.60	2.38	2.23	3.91	0.008	3.53	3.31	3.62	0.0074	465.4	48.98	235.4
10/15/2024 18:39	14.60	2.38	2.23	3.91	0.008	3.54	3.32	3.61	0.0074	465.0	48.95	235.2
10/15/2024 18:40	14.60	2.38	2.23	3.91	0.008	3.54	3.32	3.62	0.0074	465.5	49.02	235.4
10/15/2024 18:41	14.59	2.38	2.23	3.91	0.008	3.54	3.31	3.61	0.0074	465.0	48.92	234.8
10/15/2024 18:42	14.61	2.37	2.22	3.91	0.008	3.53	3.31	3.61	0.0074	465.1	48.99	235.6
10/15/2024 18:43	14.59	2.37	2.22	3.91	0.008	3.54	3.31	3.61	0.0074	465.2	49.00	234.9
10/15/2024 18:44	14.60	2.38	2.23	3.91	0.008	3.55	3.32	3.67	0.0075	465.4	49.01	235.4
10/15/2024 18:45	14.60	2.39	2.24	3.91	0.008	3.55	3.32	3.67	0.0075	465.5	48.93	235.4
10/15/2024 18:46	14.60	2.39	2.24	3.91	0.008	3.55	3.32	3.67	0.0075	465.4	49.08	235.4
10/15/2024 18:47	14.61	2.38	2.23	3.91	0.008	3.57	3.35	3.67	0.0075	465.8	49.16	235.9

Period Start:	Average 3_O2 %	Average 3_NOXPPM ppm	Average 3_NOX_CORR ppm	Average 3_NOX_LBHR #/hr	Average 3_NOX_LBMM #/MBTU	Average 3_COPPM ppm	Average 3_CO_CORR ppm	Average 3_CO_LBHR #/hr	Average 3_CO_LBMM #/MBTU	Average 3_GasFlow kscfh	Average 3_LOAD MW	Average 3_STACKFLW kscfm
10/15/2024 18:48	14.60	2.39	2.24	3.91	0.008	3.59	3.36	3.67	0.0075	465.6	48.91	235.4
10/15/2024 18:49	14.61	2.39	2.24	3.91	0.008	3.59	3.37	3.72	0.0076	465.6	49.13	235.8
10/15/2024 18:50	14.60	2.40	2.25	3.91	0.008	3.59	3.36	3.67	0.0075	465.8	49.03	235.5
10/15/2024 18:51	14.62	2.38	2.24	3.91	0.008	3.60	3.38	3.71	0.0076	465.4	48.86	236.1
10/15/2024 18:52	14.60	2.38	2.23	3.91	0.008	3.59	3.36	3.66	0.0075	465.2	49.06	235.3
10/15/2024 18:53	14.61	2.37	2.22	3.91	0.008	3.59	3.37	3.72	0.0076	465.7	49.03	235.9
10/15/2024 18:54	14.61	2.37	2.22	3.91	0.008	3.59	3.37	3.72	0.0076	465.7	49.01	235.9
10/15/2024 18:55	14.60	2.38	2.23	3.91	0.008	3.59	3.36	3.67	0.0075	465.8	48.98	235.5
10/15/2024 18:56	14.61	2.39	2.24	3.91	0.008	3.57	3.35	3.67	0.0075	465.9	49.00	236.0
10/15/2024 18:57	14.59	2.39	2.23	3.91	0.008	3.56	3.33	3.67	0.0075	465.9	49.10	235.2
10/15/2024 18:58	14.60	2.39	2.24	3.91	0.008	3.57	3.34	3.67	0.0075	465.5	48.92	235.4
10/15/2024 18:59	14.60	2.40	2.25	3.91	0.008	3.57	3.34	3.67	0.0075	466.0	48.94	235.6
10/15/2024 19:00	14.60	2.41	2.26	3.91	0.008	3.56	3.33	3.67	0.0075	466.0	48.99	235.6
10/15/2024 19:01	14.60	2.40	2.25	3.91	0.008	3.57	3.34	3.67	0.0075	465.4	49.06	235.4
Daily Average*	**14.60**	**2.37**	**2.22**	**3.91**	**0.008**	**3.55**	**3.33**	**3.65**	**0.0075**	**465.6**	**49.02**	**235.4**
Maximum*	**14.62**	**2.41**	**2.26**	**3.92**	**0.008**	**3.60**	**3.38**	**3.72**	**0.0076**	**466.2**	**49.22**	**236.1**
	10/15/2024 18:51	10/15/2024 19:00	10/15/2024 19:00	10/15/2024 18:12	10/15/2024 19:01	10/15/2024 18:51	10/15/2024 18:51	10/15/2024 18:54	10/15/2024 18:54	10/15/2024 18:09	10/15/2024 18:05	10/15/2024 18:51
Minimum*	**14.58**	**2.33**	**2.18**	**3.90**	**0.008**	**3.52**	**3.29**	**3.61**	**0.0074**	**464.8**	**48.84**	**234.8**
	10/15/2024 18:20	10/15/2024 18:13	10/15/2024 18:13	10/15/2024 18:35	10/15/2024 19:01	10/15/2024 18:34	10/15/2024 18:21	10/15/2024 18:43	10/15/2024 18:43	10/15/2024 18:35	10/15/2024 18:01	10/15/2024 18:41

* Does not include Invalid Averaging Periods ("N/A")

APPENDIX C
CALCULATIONS

Appendix C.1
General Emissions Calculations

GENERAL EMISSIONS CALCULATIONS

I. Stack Gas Velocity

A. Stack gas molecular weight, lb/lb-mole

$MW_{dry} = 0.44 * \%\ CO_2 + 0.32 * \%\ O_2 + 0.28 * \%\ N_2$

$MW_{wet} = MW_{dry} * (1 - B_{wo}) + 18 * B_{wo}$

B. Absolute stack pressure, iwg

$$P_s = P_{bar} + \frac{P_{sg}}{13.6}$$

C. Stack gas velocity, ft/sec

$$V_s = 2.9 * C_p * \sqrt{\Delta P} * \sqrt{T_s} * \sqrt{\frac{29.92 * 28.95}{P_s * MW_{wet}}}$$

II. Moisture

A. Sample gas volume, dscf

$$V_{mstd} = 0.03342 * V_m * \left(P_{bar} + \frac{\Delta H}{13.6}\right) * \frac{T_{ref}}{T_m} * Y_d$$

B. Water vapor volume, scf

$$V_{wstd} = 0.0472 * V_{ic} * \frac{T_{ref}}{528°R}$$

C. Moisture content, dimensionless

$$B_{wo} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$$

III. Stack Gas Volumetric Flow Rate

A. Actual stack gas volumetric flow rate, wacfm

$Q = V_s * A_s * 60$

B. Standard stack gas flow rate, dscfm

$$Q_{sd} = Q * (1 - B_{wo}) * \frac{T_{ref}}{T_s} * \frac{P_s}{29.92}$$

IV. Gaseous Mass Emission Rates, lb/hr

$$M = \frac{ppm * MW_i * Q_{sd} * 60}{SV * 10^6}$$

V. Emission Rates, lb/MMBtu

$$\frac{lb}{MMBtu} = \frac{ppm * MW_i * F}{SV * 10^6} * \frac{20.9}{20.9 - \%\ O_2}$$

VI. Percent Isokinetic

$$I = \frac{17.32 * T_s\ (V_{mstd})}{(1 - B_{wo})\ 0 * V_s * P_s * Dn^2} * \frac{520°R}{T_{ref}}$$

VII. Particulate Emissions

(a) Grain loading, gr/dscf
$C = 0.01543\ (M_n/V_{m\ std})$

(b) Grain loading at 12% CO_2, gr/dscf
$C_{12\%}\ CO_2 = C\ (12/\%\ CO_2)$

(c) Mass emissions, lb/hr
$M = C * Q_{sd} * (60\ min/hr) / (7000\ gr/lb)$

(d) Particulate emission factor

$$lb/10^6\ Btu = Cx\ \frac{1\ lb}{7000\ gr} * F * \frac{20.9}{20.9 - \%\ O_2}$$

Nomenclature:

A_s	=	stack area, ft^2
B_{wo}	=	flue gas moisture content, dimensionless
$C_{12\%CO2}$	=	particulate grain loading, gr/dscf corrected to 12% CO_2
C	=	particulate grain loading, gr/dscf
C_p	=	pitot calibration factor, dimensionless
Dn	=	nozzle diameter, inches
F	=	fuel F-Factor, dscf/MMBtu @ 0% O_2
H	=	orifice differential pressure, iwg
I	=	% isokinetics
M_n	=	mass of collected particulate, mg
M_i	=	mass emission rate of specie i, lb/hr
MW	=	molecular weight of flue gas, lb/lb-mole
M_{wi}	=	molecular weight of specie i:
	SO_2:	64
	NO_x:	46
	CO:	28
	HC:	16
0	=	sample time, minutes
ΔP	=	average velocity head, iwg = $(\sqrt{\Delta P})^2$
P_{bar}	=	barometric pressure, inches Hg
P_s	=	stack absolute pressure, inches Hg
P_{sg}	=	stack static pressure, iwb
Q	=	wet stack flow rate at actual conditions, wacfm
Q_{sd}	=	dry standard stack flow rate, dscfm
SV	=	specific molar volume of an ideal gas at standard conditions, ft^3/lb-mole
T_m	=	meter temperature, °R
T_{ref}	=	reference temperature, °R
T_s	=	stack temperature, °R
V_s	=	stack gas velocity, ft/sec
V_{lc}	=	volume of liquid collected in impingers, ml
V_m	=	uncorrected dry meter volume, dcf
V_{mstd}	=	dry meter volume at standard conditions, dscf
V_{wstd}	=	volume of water vapor at standard conditions, scf
Y_d	=	meter calibration coefficient

Appendix C.2
Spreadsheet Summaries

MONTROSE AIR QUALITY SERVICES

SCAQMD METHOD 207.1
DATA WORKSHEET AND SUMMARY

Facility	**Canyon**		Parameter		**NH_3**
Unit	**U3**		Fuel		**Natural gas**
Sample Location	**Stack**		Data By		**RD**
Test Number	1-NH3-U3	2-NH3-U3	Average	Maximum	Limit
Reference Temperature (^oF)	60	60			
Test Date	10/15/2024	10/15/2024			
Test Method	SCAQMD 207.1	SCAQMD 207.1			
Sample Train	30-WCS	30-WCS			
Meter Calibration Factor	0.992	0.992			
Stack Area (ft^2)	106.90	106.90			
Sample Time (Minutes)	60	60			
Barometric Pressure ("Hg)	29.74	29.74			
Start/Stop Time	1608/1714	1755/1901			
Meter Volume (acf)	40.350	39.515			
Meter Temperature (^oF)	73.0	66.3			
Meter Pressure (iwg)	1.5	1.5			
Liquid Volume (ml)	112.6	109.4			
Stack O_2 (%)	14.58	14.60	14.59	(from facility CEMS)	
Unit Load (MW)	49.0	49.0	49.0		
Standard Sample Volume (SCF)	38.957	38.637			
Moisture Fraction	0.118	0.116			
Stack Flow Rate (dscfm, 68 ^oF)	234,800	235,400	235,100	(from facility CEMS)	
Stack Flow Rate (@ Tref)	231,242	231,833	231,538		
Gas Constant (ft-lbf/lb-mole-R)	1545.33	1545.33			
Molecular Weight NH_3 (lb/lb-mole)	17.03	17.03			
Specific Molar Volume (ft^3/lb-mole)	379.5	379.5			
F-Factor (dscf/MMBtu)	8,710	8,710			
HHV(Btu/SCF)	1,050	1,050			
Mass Conversion (lb/ug)	2.2046E-09	2.2046E-09			
O_2 Correction Factor (%)	15	15			
Mass NH_3 (ug)	1,201.114	950.926			
Mass NH_3 (lb)	2.65E-06	2.10E-06			
NH_3 (ppmv, flue gas)	1.51	1.21	1.36	1.51	
NH_3 (ppmv @ O_2 Correction Factor)	1.41	1.13	1.27	1.41	5
NH_3 (lb/hr)	0.94	0.75	0.85	0.94	
NH_3 (lb/MMBtu)	0.002	0.002	0.002	0.002	
NH_3 (lb/MMSCF)	2.02	1.62	1.82	2.02	

Note: SCAQMD Method 207.1 requires the higher of the duplicate runs be reported as the test result.

1-NH3-U3

Point	Meter Volume	Delta H	Tm In	Tm Out
3	221.700	1.5	78	76
2			78	76
1			78	76
3			78	75
2			78	75
1			73	71
3			72	70
2			71	70
1			71	70
3			70	69
2			70	69
1			70	69
Stop	262.050			
Result	**40.350**	**1.5**	**73.0**	

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	931.0	746.2	184.8
2	766.5	748.8	17.7
3	639.3	638.5	0.8
4	970.3	961.0	9.3
Line Rinse	0.0	100.0	-100.0
			112.6

2-NH3-U3

Point	Meter Volume	Delta H	Tm In	Tm Out
3	264.700	1.5	70	71
2			70	71
1			66	64
3			66	65
2			66	65
1			65	64
3			66	65
2			66	65
1			66	65
3			66	65
2			66	66
1			66	65
Stop	304.215			
Result	**39.515**	**1.5**	**66.3**	

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	964.8	766.3	198.5
2	748.9	747.8	1.1
3	600.5	599.7	0.8
4	854.2	845.2	9.0
Line Rinse	0.0	100.0	-100.0
			109.4

SCAQMD 207.1 EXAMPLE CALCULATION
TEST NUMBER: 1-NH3-U3

Identifier	Description	Units	Equation	Value
A	Reference Temperature	F	--	60
B	Reference Temperature	R	A + 460	520
C	Meter Calibration Factor (Yd)	--	--	0.992
D	Barometric Pressure	" Hg	--	29.74
E	Meter Volume	acf	--	40.350
F	Meter Temperature	F	--	73.0
G	Meter Temperature	R	F + 460	533.0
H	Delta H	" H_2O	--	1.5
I	Meter Volume (standard)	dscf	0.03342 * E * (D + H/13.6) * B/G * C	38.957
J	Liquid Collected	grams	--	112.6
K	Water vapor volume	scf	0.0472 * J * B/528	5.234
L	Moisture Content	--	K/(K + I)	0.118
M	Gas Constant	ft-lbf/lb-mole-R	--	1545.33
N	Specific Molar Volume	SCF/lb-mole	385.3 * B / 528	379.5
O	F-Factor	dscf/MMBtu	--	8,710
P	HHV	Btu/SCF	--	1,050
Q	Mass Conversion Factor	lb/ug	--	2.2046E-09
R	O_2 Correction Factor	--	--	15
S	Stack Flow Rate @ 68 F	dscfm	--	234,800
T	Stack Flow Rate @ Tref	dscfm	S * B/528	231,242
U	Mass NH_3	ug	--	1,201
V	Mass NH_3	lb	U * Q	2.65E-06
W	MW of NH_3	lb/lb-mole	--	17.03
X	NH_3	ppm	$(V * N * 10^{p})/(I * W)$	1.5
Y	Flue Gas O_2	%	--	14.58
Z	NH_3	ppmc	X * (20.9 - R)/(20.9 - Y)	1.4
AA	NH_3	lb/hr	$X * T * W * 60/(N * 10^{6})$	0.9
AB	NH_3	lb/MMBtu	$(X * W * O)/(385.3 * 10^{6}) * 20.9/(20.9 - Y)$	0.002
AC	NH_3	lb/MMSCF	AB * P	2.0

Note:

(1) Some values may be slightly different from those shown on the run sheets due to round off errors. This page is intended to show the calculation methodology only.

APPENDIX D
QUALITY ASSURANCE

Appendix D.1
Quality Assurance Program Summary

QUALITY ASSURANCE PROGRAM SUMMARY

As part of Montrose Air Quality Services, LLC (MAQS) ASTM D7036-04 certification, MAQS is committed to providing emission related data which is complete, precise, accurate, representative, and comparable. MAQS quality assurance program and procedures are designed to ensure that the data meet or exceed the requirements of each test method for each of these items. The quality assurance program consists of the following items:

- Assignment of an Internal QA Officer
- Development and use of an internal QA Manual
- Personnel training
- Equipment maintenance and calibration
- Knowledge of current test methods
- Chain-of-custody
- QA reviews of test programs

Assignment of an Internal QA Officer: MAQS has assigned an internal QA Officer who is responsible for administering all aspects of the QA program.

Internal Quality Assurance Manual: MAQS has prepared a QA Manual according to the requirements of ASTM D7036-04 and guidelines issued by EPA. The manual documents and formalizes all of MAQS QA efforts. The manual is revised upon periodic review and as MAQS adds capabilities. The QA manual provides details on the items provided in this summary.

Personnel Testing and Training: Personnel testing and training is essential to the production of high quality test results. MAQS training programs include:

- A requirement for all technical personnel to read and understand the test methods performed
- A requirement for all technical personnel to read and understand the MAQS QA manual
- In-house testing and training
- Quality Assurance meetings
- Third party testing where available
- Maintenance of training records.

Equipment Maintenance and Calibration: All laboratory and field equipment used as a part of MAQS emission measurement programs is maintained according to manufacturer's recommendations. A summary of the major equipment maintenance schedules is summarized in Table 1. In addition to routine maintenance, calibrations are performed on all sampling equipment according to the procedures outlined in the applicable test method. The calibration intervals and techniques for major equipment components is summarized in Table 2. The calibration technique may vary to meet regulatory agency requirements.

Knowledge of Current Test Methods: MAQS maintains current copies of EPA, ARB, and SCAQMD Source Test Manuals and Rules and Regulations.

Chain-of-Custody: MAQS maintains chain-of-custody documentation on all data sheets and samples. Samples are stored in a locked area accessible only to MAQS source test personnel. Data sheets are kept in the custody of the originator, program manager, or in locked storage until return to MAQS office. Electronic field data is duplicated for backup on secure storage media. The original data sheets are used for report preparation and any additions are initialed and dated.

QA Reviews: Periodic field, laboratory, and report reviews are performed by the in-house QA coordinator. Periodically, test plans are reviewed to ensure proper test methods are selected and reports are reviewed to ensure that the methods were followed and any deviations from the methods are justified and documented.

ASTM D7036-04 Required Information

Uncertainty Statement

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is presented in the report appendices.

Performance Data

Performance data are available for review.

Qualified Personnel

A qualified individual (QI), defined by performance on a third party or internal test on the test methods, is present on each test event.

Plant Entry and Safety Requirements

Plant Entry

All test personnel are required to check in with the guard at the entrance gate or other designated area. Specific details are provided by the facility and project manager.

Safety Requirements

All personnel shall have the following personal protective equipment (PPE) and wear them where designated:

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Hearing Protection
- Gloves
- High Temperature Gloves (if required)
- Flame Resistant Clothing (if required)

The following safety measures are followed:

- Good housekeeping
- SDS for all on-site hazardous materials
- Confine selves to necessary areas (stack platform, mobile laboratory, CEMS data acquisition system, control room, administrative areas)
- Knowledge of evacuation procedures

Each facility will provide plant specific safety training.

TABLE 1
EQUIPMENT MAINTENANCE SCHEDULE

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pumps	1. Absence of leaks 2. Ability to draw manufacturers required vacuum and flow	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Replace parts 4. Leak check
Flow Meters	1. Free mechanical movement	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Calibrate
Sampling Instruments	1. Absence of malfunction 2. Proper response to zero span gas	As recommended by manufacturer	As recommended by manufacturer
Integrated Sampling Tanks	1. Absence of leaks	Depends on nature of use	1. Steam clean 2. Leak check
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters 2. Change gas dryer 3. Leak check 4. Check for system contamination
Sampling lines	1. Sample degradation less than 2%	After each test series	1. Blow dry, inert gas through line until dry

TABLE 2
MAJOR SAMPLING EQUIPMENT CALIBRATION REQUIREMENTS

Sampling Equipment	Calibration Frequency	Calibration Procedure	Acceptable Calibration Criteria
Continuous Analyzers	Before and After Each Test Day	3-point calibration error test	< 2% of analyzer range
Continuous Analyzers	Before and After Each Test Run	2-point sample system bias check	< 5% of analyzer range
Continuous Analyzers	After Each Test Run	2-point analyzer drift determination	< 3% of analyzer range
CEMS System	Beginning of Each Day	leak check	< 1 in. Hg decrease in 5 min. at > 20 in. Hg
Continuous Analyzers	Semi-Annually	3-point linearity	< 1% of analyzer range
NO_x Analyzer	Daily	NO_2 -> NO converter efficiency	> 90%
Differential Pressure Gauges (except for manometers)	Semi-Annually	Correction factor based on 5-point comparison to standard	± 5%
Differential Pressure Gauges (except for manometers)	Bi-Monthly	3-point comparison to standard, no correction factor	± 5%
Barometer	Semi-Annually	Adjusted to mercury-in-glass or National Weather Service Station	± 0.1 inches Hg
Dry Gas Meter	Semi-Annually	Calibration check at 4 flow rates using a NIST traceable standard	± 2%
Dry Gas Meter	Bi-Monthly	Calibration check at 2 flow rates using a NIST traceable standard	± 2% of semi-annual factor
Dry Gas Meter Orifice	Annually	4-point calibration for ΔH@	--
Temperature Sensors	Semi-Annually	3-point calibration vs. NIST traceable standard	± 1.5%

Note: Calibration requirements that meet applicable regulatory agency requirements are used.

Appendix D.2
SCAQMD and STAC Certifications

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

September 26, 2024

Mr. John Peterson
Montrose Air Quality Services, LLC
1631 E. Saint Andrew Place
Santa Ana, CA 92705

Subject: LAP Approval Notice
Reference # 96LA1220

Dear Mr. Peterson:

We have completed our review of Montrose Air Quality Services' revised renewal application, which was submitted as notification of Montrose's recent acquisition of AirKinetics, Inc. under the South Coast AQMD Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning September 30, 2024, and ending September 30, 2025, for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement and conditions listed in the attachment to this letter:

South Coast AQMD Methods 1-4
South Coast AQMD Methods 10.1 and 100.1
South Coast AQMD Methods 5.1, 5.2, 5.3, 6.1 (Sampling and Analysis)
South Coast AQMD Methods 25.1 and 25.3 (Sampling)
Rule 1121/ 1146.2 Protocol
Rule 1420/1420.1/1420.2 – (Lead) Source and Ambient Sampling
USEPA CTM-030 and ASTM D6522-00

Your LAP approval to perform nitrogen oxide emissions compliance testing for Rule 1121/ 1146.2 Protocols includes satellite facilities located at:

McKenna Boiler
1510 North Spring Street
Los Angeles, CA 90012

Noritz America Corp.
11160 Grace Avenue
Fountain Valley, CA 92708

Ajax Boiler, Inc.
2701 S. Harbor Blvd.
Santa Ana, CA 92704

VA Laundry Bldg., Greater LA Healthcare Sys.
508 Constitution Avenue
Los Angeles, CA 90049

So Cal Gas – Engr Analysis Ctr, Bldg H
8101 Rosemead Blvd
Pico Rivera, CA 90660

Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions. You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

D. Sarkar

Dipankar Sarkar
Program Supervisor
Source Test Engineering

DS:CE
Attachment

240926 LapRenewal.doc

STAC
STACK TESTING ACCREDITATION COUNCIL

American Association for Laboratory Accreditation

Accredited Air Emission Testing Body

A2LA has accredited

MONTROSE AIR QUALITY SERVICES

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Council (STAC) evaluation process, this laboratory is accredited to perform testing activities in compliance with ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.

Presented this 27th day of February 2024.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3925.01
Valid to February 28, 2026

This accreditation program is not included under the A2LA ILAC Mutual Recognition Arrangement.

MONTROSE AIR QUALITY SERVICES

Appendix D.3
Individual QI Certificate

Certificate of Completion

Rik Dupont

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Methods 1.1 - 4.1

Certificate Number: 002-2021-41

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 12/02/2021

DATE OF EXPIRATION: 12/01/2026

MONTROSE ENVIRONMENTAL

CERTIFICATE OF COMPLETION

Rik Dupont

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Method 207.1

Certificate Number: 002-2021-26

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 8/19/21

DATE OF EXPIRATION: 8/19/26

MONTROSE ENVIRONMENTAL

Appendix D.4
Statement of No Conflict of Interest

STATEMENT OF NO CONFLICT OF INTEREST AS AN INDEPENDENT TESTING LABORATORY

(To be completed by authorized source testing firm representative and included in source test report)

The following facility and equipment were tested by my source testing firm and are the subjects of this statement:

Facility ID:	**153992**
Date(s) Tested:	**October 15, 2024**
Facility Name:	**Canyon Power Plant**
Equipment Address:	**3071 E. Mira Loma Avenue**
	Anaheim, California 92806
Equipment Tested:	**Unit 3**
Device ID, A/N, P/N:	**D13**

I state, as its legally authorized representative, that the source testing firm of:

Source Test Firm:	Montrose Air Quality Services, LLC
Business Address:	1631 E. St. Andrew Pl.
	Santa Ana, California 92705

is an "Independent Testing Laboratory" as defined in ***District Rule 304(k):***

For the purposes of this Rule, when an independent testing laboratory is used for the purposes of establishing compliance with District rules or to obtain a District permit to operate, it must meet all of the following criteria:

(1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company, or any subsidiary thereof -

(2) The company or facility being tested, or parent company or any subsidiary thereof, shall have no financial interest in the testing laboratory;

(3) Any company or facility responsible for the emission of significant quantities of pollutants to the atmosphere, or parent company or any subsidiary thereof shall have no financial interest in the testing laboratory; and

(4) The testing laboratory shall not be in partnership with, own or be owned by, in part or in full, the contractor who has provided or installed equipment (basic or control), or monitoring systems, or is providing maintenance for installed equipment or monitoring systems, for the company being tested.

Furthermore, I state that any contracts or agreements entered into by my source testing firm and the facility referenced above, or its designated contractor(s), either verbal or written, are not contingent upon the outcome of the source testing, or the source testing information provided to the SCAQMD.

Signature: _____ **Date:** **11/14/2024**

Rik Dupont	**Client Project Manager**	**(714) 279-6777**	**11/14/2024**
(Name)	(Title)	(Phone)	(Date)

FORM ST-110 :stevforl.doc (Revised 11/18/98

APPENDIX E
APPLICABLE PERMIT SECTIONS

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
GAS TURBINE, NO. 3, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, 479 MMBTU/HR AT 46 DEG F, WITH INLET CHILLING, WITH WATER INJECTION WITH A/N: 555830 GENERATOR, 50.95 MW	D13	C15	NOX: MAJOR SOURCE**	CO: 4 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1) -BACT, 12-6-2002*]; CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 2005, 12-4-2015]; NOX: 25 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; PM10: 0.01 GRAINS/SCF NATURAL GAS (5A) [RULE 475, 10-8-1976; *RULE 475, 8-7-1978*]; PM10: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]; PM10: 1.67 LBS/HR NATURAL GAS (5C) [RULE 1303(b)(2)-Offset, 5-10-1996; *RULE 1303(b)(2) -Offset, 12-6-2002*]; PM10: 11 LBS/HR NATURAL GAS (5B) [RULE 475, 10-8-1976; *RULE 475, 8-7-1978*]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1)-BACT, 12-6-2002*]	A63.1, A99.1, A99.2, A99.3, A195.1, A195.2, A195.3, A327.1, B61.1, D12.1, D29.2, D29.3, D82.1, D82.2, E193.1, H23.1, I298.3, K40.1

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
CO OXIDATION CATALYST, NO. 3, BASF, 110 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 476660	C15	D13 C16			
SELECTIVE CATALYTIC REDUCTION, NO. 3, CORMETECH CMHT-21, 1012 CU.FT.; WIDTH: 2 FT 6 IN; HEIGHT: 25 FT 9 IN; LENGTH: 18 FT WITH A/N: 476660 AMMONIA INJECTION	C16	C15 S18		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1) -BACT, 12-6-2002*]	A195.6, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, TURBINE NO. 3, HEIGHT: 86 FT ; DIAMETER: 11 FT 8 IN A/N: 555830	S18	C16			

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : C4, C10, C16, C22]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1110.2, 2-1-2008; RULE 1110.2, 11-1-2019; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 9-1-2017; RULE 1470, 5-4-2012; **RULE 2012, 5-6-2005; 40CFR 60 Subpart IIII, 7-7-2016]**

[Devices subject to this condition : D25]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The test(s) shall be conducted quarterly during the first twelve months of operation of the catalytic control device and annually thereafter when four consecutive quarterly source tests demonstrate compliance with the ammonia emission limit. If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the ammonia emissions limits prior to resuming annual source tests.

The South Coast AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

If the turbine is not in operation during one calendar year, then no testing is required during that calendar year.

The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using South Coast AQMD Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted and the results submitted to the South Coast AQMD within 60 days after the test date.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

[RULE 1135, 11-2-2018; **RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1) -BACT, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19]

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Sampling Time	Test Location
SOX emissions	AQMD Labcratory Method 307-91	District-approved averaging time	Fuel sample

THIS IS THE LAST PAGE OF THIS DOCUMENT

If you have any questions, please contact one of the following individuals by email or phone.

Name: Mr. Rik Dupont
Title: Client Project Manager
Region: West
Email: RDupont@montrose-env.com
Phone: (714) 279-6777

Name: Mr. Matt McCune
Title: Regional Vice President
Region: West
Email: MMccune@montrose-env.com
Phone: (714) 279-6777

TEST REPORT FOR
FOURTH QUARTER 2024 AMMONIA SLIP TEST
AT CANYON POWER PLANT UNIT 4
FACILITY ID 153992, DEVICE ID D19

Prepared For:

Canyon Power Plant
3071 E. Mira Loma Avenue.
Anaheim, California 92806

For Submittal To:

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Prepared By:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl.
Santa Ana, California 92705
(714) 279-6777

Rik Dupont

Test Date: **October 16, 2024**
Production Date: **November 14, 2024**
Report Number: **W002AS-046148-RT-6711**

MONTROSE AIR QUALITY SERVICES

STAC ACCREDITED TO ASTM D7036 ONLY CERT #3925.01

CONFIDENTIALITY STATEMENT

Except as otherwise required by law or regulation, this information contained in this communication is intended exclusively for the individual or entity to which it is addressed. This communication may contain information that is proprietary, privileged or confidential or otherwise legally exempt from disclosure. If you are not the named addressee, you are not authorized to read, print, retain, copy, or disseminate this message or any part of it.

REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:  Date: 11/14/2024

Name: Rik Dupont Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  Date: 11/14/2024

Name: Surya Adhikari Title: Senior Reporting QC Specialist

TABLE OF CONTENTS

1.0 INTRODUCTION AND SUMMARY

Montrose Air Quality Services, LLC (MAQS) was contracted by Southern California Public Power Authority (SCPPA) Canyon Power Plant to perform an ammonia slip test at Unit 4 as required by the facility Permit (Facility ID 153992) Condition Number D29.2. This report documents the results of the ammonia slip tests performed on October 16, 2024. The test was performed by Rik Dupont, Jason Sering, Kyle Thomas, and Jorge Contreras. Rik Dupont was the on-site Qualified Individual for MAQS. MAQS qualifies as an independent testing laboratory under SCAQMD Rule 304 (no conflict of interest) and is certified by the SCAQMD to conduct testing for criteria pollutants according to District Methods. Ms. Bertha Hernandez coordinated the test for Canyon Power Plant.

The test consisted of duplicate ammonia tests performed at 49.1 MW. The test program followed the procedures described in the initial compliance test protocol (MAQS document R038842). The results of the test are summarized in Table 1-1. The table shows that the ammonia slip from this unit was less than the permitted limit of 5 ppm corrected to 15% O_2.

TABLE 1-1
RESULTS SUMMARY
CANYON POWER PLANT
UNIT 4
OCTOBER 16, 2024

Parameter/Units	Result(1)	Limit
NH_3		
ppm	1.8	--
ppmc	1.7	5

(1) Maximum of duplicate runs, as required by SCAQMD Method 207.1.

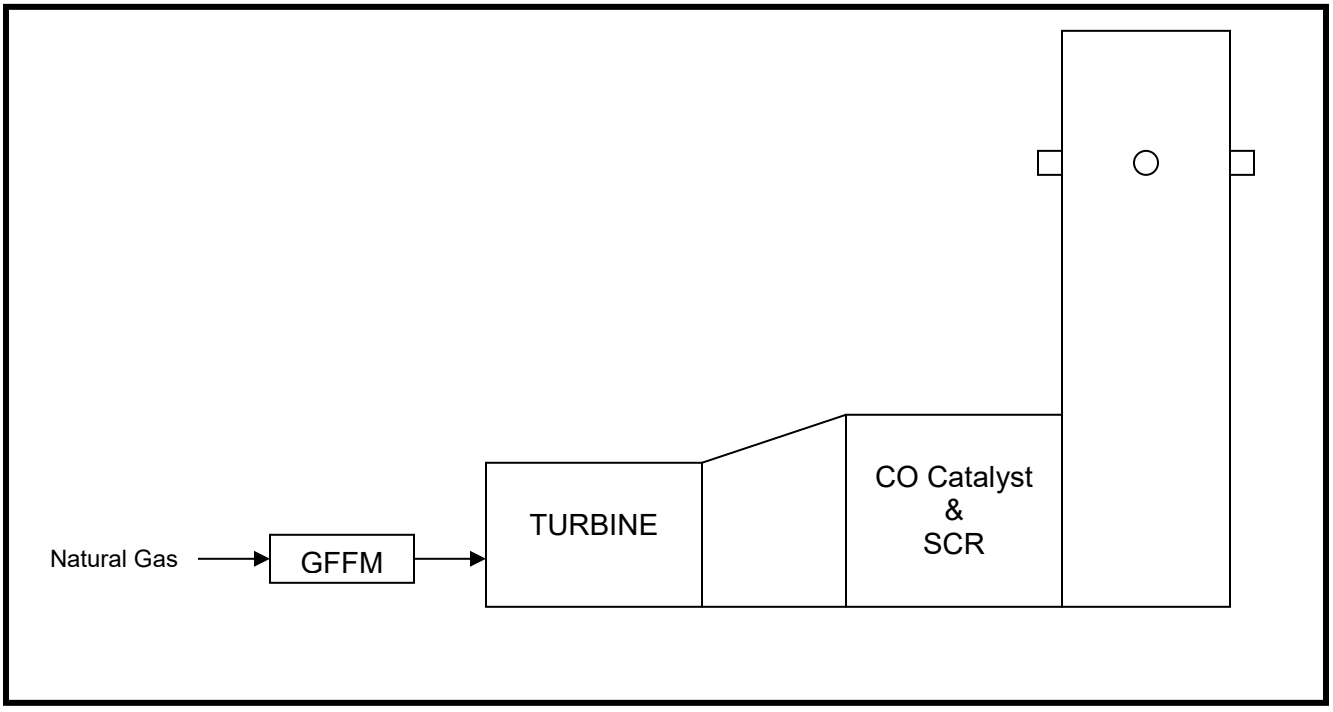
Section 2 of this document provides a brief description of the unit, test conditions, sample location, and CEMS. Details of the test procedures are provided in Section 3. Section 4 provides the results of each individual test. All raw data, calculations, quality assurance data, unit operating conditions, and CEMS data are provided in the appendices.

2.0 UNIT AND CEMS DESCRIPTION

2.1 UNIT DESCRIPTION

The City of Anaheim Canyon Power Plant is located at 3071 E. Mira Loma Avenue, Anaheim, California 92806. The facility consists of four identical generating units. Each unit consists of a natural gas fired, GE Model LM6000PC Sprint simple cycle, gas turbine. The units are natural gas fired with a rated heat input of 479 MMBtu per hour at 46°F, with water injection. The units are equipped with a CO catalyst and Selective Catalytic Reduction (SCR) system for NO_x control. A simplified process block diagram of the unit is presented as Figure 2-1.

FIGURE 2-1
SIMPLIFIED PROCESS BLOCK DIAGRAM
CANYON POWER PLANT
UNIT 4



Stack Inside Diameter:	11 feet, 8 inches
Distance from Upstream Disturbance:	23 feet, 4 inches (2.0 Diameters)
Distance from Stack Exit:	16 feet, 6 inches (1.4 Diameters)

2.2 CEMS DESCRIPTION

NO_x and CO emissions from the unit are monitored by a dry, extractive Continuous Emission Monitoring System (CEMS). Stack flow rate is determined from fuel flow rate, O_2 concentration, standard F-Factor, and fuel higher heating value using EPA Method 19.

2.3 TEST CONDITIONS

The tests were performed with the unit operating at an average load of 49.1 MW. Tests were performed while the unit was firing natural gas and operating under normal conditions. Unit operation was established by the Canyon Power Plant operators.

2.4 SAMPLE LOCATION

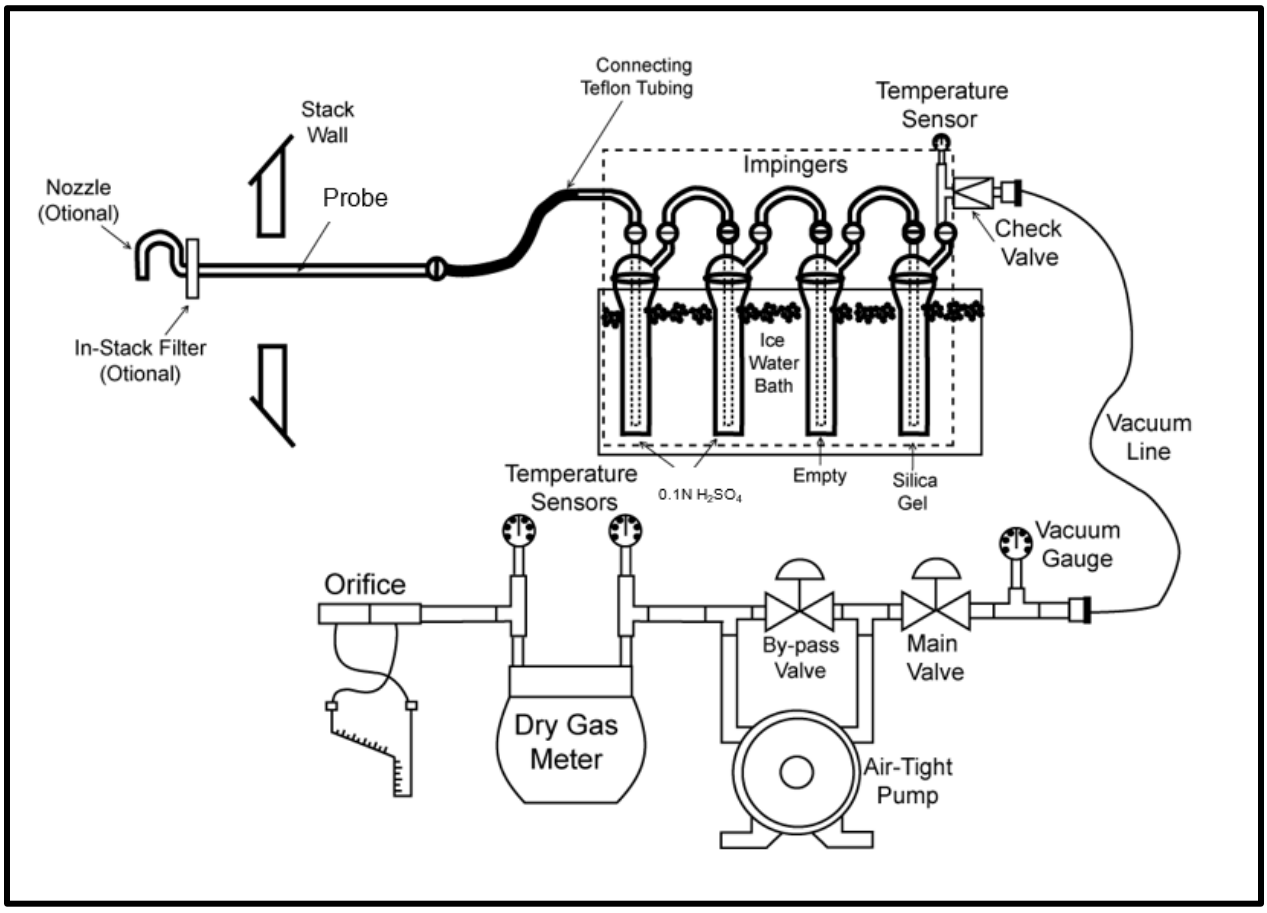
The measurements were made from sample ports located on the exhaust stack. There are four sample ports equally spaced at this location. The stack inside diameter at the sample plane is 11 feet, 8 inches. The sample ports are located 23 feet, 4 inches (2.0 diameters) downstream of the nearest flow disturbance and 16 feet, 6 inches (1.4 diameters) from the stack exit. A diagram of the sample location and individual traverse points is contained in Appendix A.1.

3.0 TEST DESCRIPTION

Flue gas samples were collected non-isokinetically using a SCAQMD Method 207.1 sample train. The samples were collected using a 12-point traverse at the exhaust stack. Each test was performed over a 60-minute interval. The sample gas was drawn through a Titanium probe, Teflon sample line, two impingers each containing 100 ml of 0.1N H_2SO_4, an empty impinger, an impinger containing silica gel, and a dry gas meter. The optional nozzle and filter were not used since the source is natural gas fired. The contents of the sample line and the first three impingers were recovered and analyzed by SCAQMD Method 207.1 for ammonia concentration by Ion Specific Electrode analysis. A diagram of the sampling equipment is presented as Figure 3-1.

Stack O_2 and NO_x concentrations and stack volumetric flow rate data were recorded from the Continuous Emission Monitoring System (CEMS) which is installed on the unit. These data were used to correct the ammonia concentration to 15% O_2.

FIGURE 3-1
SCAQMD METHOD 207.1 SAMPLING EQUIPMENT



4.0 RESULTS AND OVERVIEW

4.1 TEST RESULTS

The results of the test are summarized in Table 4-1. The results show that the maximum ammonia slip was 1.7 ppm @ 15% O_2 which is less than the permitted limit of 5 ppm @ 15% O_2.

TABLE 4-1
DETAILED TEST RESULTS
CANYON POWER PLANT
UNIT 4
OCTOBER 16, 2024

Parameter/Units	1-NH_3	2-NH_3	Average	Maximum(1)	Limit
Start/Stop Time	1611/1717	1747/1853	--	--	--
Stack Flow, dscfm @ T_{ref}(2)	235,280	235,773	235,527	--	--
O_2, %(2)	14.65	14.66	14.66	--	--
NO_x, ppm @ 15% O_2(2)	2.2	2.2	2.2	--	2.5
NH_3					
ppm	1.8	1.4	1.6	1.8	--
ppm 15% O_2	1.7	1.3	1.5	1.7	5
lb/hr	1.1	0.9	1.0	1.1	--
lb/MMBtu	0.002	0.002	0.002	0.002	--
lb/MMSCF	2.4	1.8	2.1	2.4	--

(1) Maximum of duplicate test runs, as required by SCAQMD Method 207.1.
(2) From facility CEMS.

4.2 TEST OVERVIEW

The test program was successful in meeting the program objectives. The QA/QC requirements of SCAQMD Method 207.1 were met. The results are considered representative of the source at the time of the tests.

APPENDIX A
RAW DATA

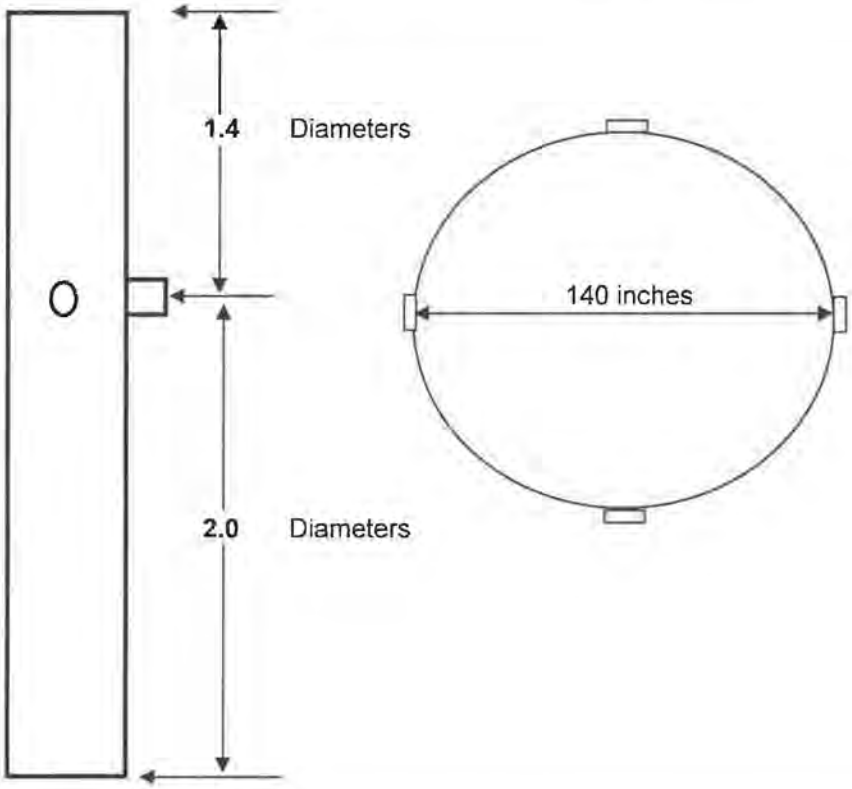
Appendix A.1
SCAQMD Method 1.1 Data

MONTROSE

METHOD 1 DATA SHEET
SAMPLE LOCATION

Client: SCPPA Date: 10/16/24

Sample Location: U4 Performed By: RD



Diameter (in.)	**140.00**
Upstream (ft.)	**23.33**
Downstream (ft.)	**16.50**
Coupling (in.)	**11.25**
Stack Area (ft^2)	**106.90**

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	6.1	17.3
2	14.6	20.5	31.8
3	29.6	41.4	52.7
4	70.4	98.6	109.8
5	85.4	119.5	130.7
6	95.6	133.9	145.2

Appendix A.2
Sample Data Sheets

MONTR

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canyon
LOCATION: UNIT-4
DATE: 10-16-24
RUN NO: 1 - NH_3 - U4
OPERATOR: JAC
METER BOX NO: 47-WCS
METER ΔH@: 1.852
METER Yd: 1.000
STACK AREA, FT^2: 106.90
TRAVERSE POINTS, MIN/POINT: 12, 5
ΔH= 1.5 X ΔP:
Probe Condition, pre/post test: Good / Good
Silica Gel Expanded, Y(N)
Filter Condition after Test: NA
Check Weight: 499.9 / 506.0

AMBIENT TEMPERATURE: 65
BAROMETRIC PRESSURE: 29.63
ASSUMED MOISTURE: 11%
PITOT TUBE COEFF, Cp: NA
PROBE ID NO/MATERIAL: NA / Ti
PROBE LENGTH: 8'
NOZZLE ID NO/ MATERIAL:
NOZZLE DIAMETER: NA
FILTER NO/TYPE:
PRE-TEST LEAK RATE: : 0.001 CFM@ 14 in. Hg.
POST-TEST LEAK RATE: : 0.001 CFM@ 15 in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN SS
SAMPLER JAC
SAMPLE CUSTODIAN 15

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	0.1N H_2SO_4	457.0	762.7	
2	0.1N H_2SO_4	752.4	750.6	
3	mT	604.8	599.7	
4	SG	862.0	854.2	
5	100mls DI	-100.0		
Total:				

Point	Time	Meter Volume, ft^3	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
*43	16:11	860.900	NA	1.5	NA	NA	NA	45	N/A	71	4.0		NA
2	16:16	864.275		1.5				46		71	4.0		
1	16:21	867.645		1.5				48		71	4.0		
PC	16:26	871.040											
3	16:28	871.040		1.5				46		70	4.0		
2	16:33	874.375		1.5				47		71	4.0		
1	16:38	877.715		1.5				47		71	4.0		
PC	16:43	881.075											
3	16:45	881.075		1.5				47		70	4.5		
2	16:50	884.435		1.5				48		71	4.5		
1	16:55	887.795		1.5				48		70	4.5		
PC	17:00	891.145											
3	17:02	891.145		1.5				48		70	4.5		
2	17:07	894.520		1.5				49		70	4.5		
1	17:12	897.885		1.5				48		70	4.5		
E	17:17	901.230											
Average:													

Comments:

*JAC 10/16/24

AA MONTR

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Conyon
LOCATION: UNIT-4
DATE: 10.16.24
RUN NO: ~~5&6~~ NH3-U4 RUNS 5 AND 6 2-NH3-U4
OPERATOR: JAC
METER BOX NO: 47-WCS
METER ΔH@: 1.852
METER Yd: 1.000
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12, 5
ΔH= ___ X ΔP:
Probe Condition, pre/post test: Good/Good
Silica Gel Expanded, Y/N: NO
Filter Condition after Test: NA
Check Weight: 499.9/500.0

AMBIENT TEMPERATURE: 64
BAROMETRIC PRESSURE: 29.63
ASSUMED MOISTURE: 1% NA
PITOT TUBE COEFF, Cp: NA
PROBE ID NO/MATERIAL: NA/ TI
PROBE LENGTH: 8'
NOZZLE ID NO/ MATERIAL: NA
NOZZLE DIAMETER:
FILTER NO/TYPE:
PRE-TEST LEAK RATE: 0.001 CFM@ 14 in. Hg.
POST-TEST LEAK RATE: 0.001 CFM@ 15 in. Hg.
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN JS
SAMPLER JAC
SAMPLE CUSTODIAN JS

Imp. #	Contents	Post-Test	Pre-Test	= Difference
1	0.1N H2SO4	922.8	747.6	
2	0.1N H2SO4	771.2	748.7	
3	mt	639.1	638.6	
4	SG	978.0	970.3	
VP	100 D.F.		-100.0	
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
3	17:47	904.900	NA	1.5	NA	NA	NA	48	N/A	67	3.5		NA
2	17:52	908.265		1.5				47		67	4.0		
1	17:57	911.570		1.5				45		67	4.0		
PC	18:02	914.810											
3	18:04	914.810		1.5				48		67	4.0		
2	18:09	918.215		1.5				47		67	4.0		
1	18:14	921.560		1.5				48		67	4.0		
PC	18:19	924.905											
3	18:21	924.905		1.5				49		67	4.0		
2	18:26	928.035		1.5				48		68	4.0		
1	18:31	931.310		1.5				45		68	4.0		
PC	18:36	934.630											
3	18:38	934.650		1.5				45		68	4.0		
2	18:43	937.940		1.5				45		69	4.0		
1	18:48	941.260		1.5				46		69	4.0		
E	18:53	944.580											
Average:													

Comments:

AA MONTR

WET CHEMICAL SAMPLING SYSTEM DATA AND WORKSHEET – STANDARD

CLIENT: Canyon
LOCATION: UNIT-4
DATE: 10/6-24
RUN NO: FB NH3-U4
OPERATOR: KT/JS
METER BOX NO: 47WCS
METER ΔH@: 1.852
METER Yd: 1.006
STACK AREA, FT²: 106.90
TRAVERSE POINTS, MIN/POINT: 12, 5
ΔH= — X ΔP:
Probe Condition, pre/post test: Good/Good
Silica Gel Expanded, Y/N: N
Filter Condition after Test: NA
Check Weight: 499.9/500.0

AMBIENT TEMPERATURE: 72° F
BAROMETRIC PRESSURE: 29.63
ASSUMED MOISTURE: 1%
PITOT TUBE COEFF, Cp: NA
PROBE ID NO/MATERIAL: NA/TC
PROBE LENGTH: ~8'
NOZZLE ID NO/ MATERIAL: NA
NOZZLE DIAMETER: NA
FILTER NO/TYPE: NA
PRE-TEST LEAK RATE: : <0.005 CFM@ 10 in. Hg.
POST-TEST LEAK RATE: : <0.005 CFM@ 12 in. Hg
PITOT LEAK CHECK - PRE: NA POST: NA
CHAIN OF CUSTODY: SAMPLE CUSTODIAN JS
SAMPLER KT
SAMPLE CUSTODIAN JS

Imp. #	Contents	Post-Test	- Pre-Test	= Difference
1	0.1N H_2SO_4	828.4	728.3	
2	0.1N H_2SO_4	717.2	716.8	
3	MT	642.1	642.1	
4	SG	873.2	873.2	
VR	100.0	-100.0		
Total:				

Point	Time	Meter Volume, ft³	ΔP in. H_2O	ΔH in. H_2O	Stack Temp, °F	Probe Temp, °F	Filter Temp, °F	Imp. Out Temp, °F	Meter Temp, °F In	Meter Temp, °F Out	Vacuum in. Hg.	O_2 %	P. static in. H_2O
													NA
Average:													

FB NH3 - U4

Comments:

Appendix A.3
Laboratory Data

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS CALCULATION DATA

MONTROSE

District Method: SCAQMD 207.1

Project Number: Proj-046148
Client/Location: Canyon
Sample Location: Unit-4
Sample Date: 10/16/2024
Analysis Date: 10/16/2024
Analyst's Initials: JS

Calibration Curve Slope: -58.3133
Y-intercept: 100.9383
R^2: 0.9999
Thermometer #: #3
ISE Electrode #: #9

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Conc. µg NH3 /ml as N	C_{avg} as N	C_{avg} as NH_3	µg NH_3/ sample
Standard Check: 28 µg NH_3 / ml as N	NA	22.3	16.9	27.615	27.561	33.502	NA
		22.3	17.0	27.507			
1-NH_3	585.1	23.6	82.9	2.039	2.031	2.468	1444.207
		23.8	83.1	2.023			
2-NH_3	618.8	21.9	91.8	1.435	1.432	1.740	1076.914
		21.9	91.9	1.429			
Spike 1-NH3	NA	23.6	24.6	20.375	20.456	24.866	NA
		23.8	24.4	20.537			
Standard Check: 28 µg NH_3 / ml as N	NA	22.5	16.7	27.834	27.780	33.768	NA
		22.4	16.8	27.725			
Reagent Blank 0.1N H_2SO_4	NA	22.4	147.3	0.160	0.158	0.192	NA
		22.4	148.1	0.155			
DI H_2O Blank	NA	22.3	159.2	0.100	0.099	0.120	NA
		22.4	159.8	0.098			
Field Blank	385.3	22.2	169.7	0.066	0.066	0.080	30.700
		22.1	170.2	0.065			
Standard Check: 28 µg NH_3 / ml as N	NA	22.4	16.6	27.944	28.055	34.103	NA
		22.3	16.4	28.166			

Notes:

- Measured Concentration of Ammonia (C) in ug NH_3 / ml as N.
- $C=10^{(P-B)/M}$, P = electrode potential (mV), M=slope and B=intercept.
- Average Measured Ammonia Concentration (C_{avg}) = (C_1 + C_2)/2 where C_1, C_2 are results from duplicate analyses (ug NH_3 /ml as N).
- C_{avg} (ug NH_3/ml as NH_3) = C_{avg} (ug NH_3/ ml as N) * 17.03/14.01.
- ug NH_3 / sample = C_{avg} (ug NH_3/ml as NH_3) * TV.
- Used 100 ml of samples and standards with 2 ml ISA and constant stirring rate, analyzed in duplicate.
- Sample pH and temperatures can be found on the laboratory datasheet.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Sample solutions, blanks and C.V. Standard temperature must be within ± 2°C.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS QUALITY CONTROL

District Method: SCAQMD 207.1

MONTROSE AIR QUALITY SERVICES

Project Number: Proj-046148
Client/ Location: Canyon
Sample Location: Unit-4
Sample Date: 10/16/2024
Analysis Date: 10/16/2024
Analyst's Initials: JS

Sample	Recovery (%)	RPD (%)	RPA (%)
Standard Check: 28 µg NH_3 / ml as N	NA	0.39	-1.568
1-NH3	NA	0.79	NA
2-NH3	NA	0.39	NA
	NA		NA
Spike 1-NH3	96.02	-0.79	NA
Standard Check: 28 µg NH_3 / ml as N	NA	0.39	-0.787
Reagent Blank 0.1N H_2SO_4	NA	3.16	NA
DI H_2O Blank	NA	2.37	NA
Field Blank	NA	1.97	NA
Standard Check: 28 µg NH_3 / ml as N	NA	-0.79	0.197

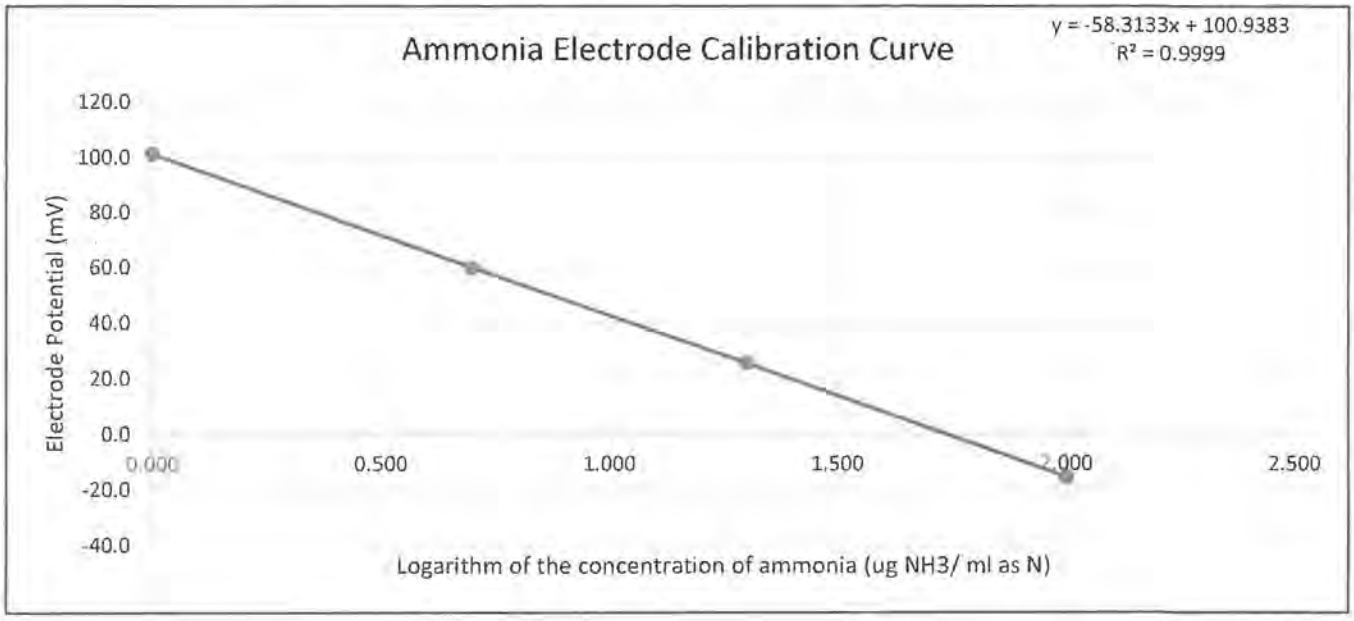
Notes:

- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- Matrix Spike Percent Recovery (%R).
- $\%R = (C_{spike}*0.104 - C_{sample}*0.102)/2 *100$.
- Cspike = average result of matrix spike (ug NH_3/ ml as N).
- Relative Percent Difference (RPD) = $(C_1-C_2)/ C_{avg} *100$ **(must be 5% or less).**
- Relative Percent Accuracy (RPA) **(must be 10% or less).**
- RPA = (C_{avg}-theoretical value of standard)/ theoretical value of standard * 100.

AMMONIA ELECTRODE CALIBRATION CURVE DATA

District Method: SCAQMD 207.1
Date: October 16, 2024
Project Number: Proj-046148
Client/Location: Canyon

NH_3 concentration (µg NH3 / ml as N)	Log NH_3 concentration	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	0.000	101.1	22.2	23.0
5	0.699	59.7	22.2	23.0
20	1.301	25.5	22.2	23.0
100	2.000	-15.8	22.2	23.0



Slope	Y-Intercept	R^2
-58.3133	100.9383	0.9999

NH_3 concentration (µg NH3 / ml as N)	Value LR line	Difference	% Difference
1	0.9936	-0.0064	-0.6364
5	5.0955	0.0955	1.9096
20	19.6640	-0.3360	-1.6799
100	100.4420	0.4420	0.4420

Notes:

- Regression Line: P=M*log(ug of NH_3/ ml as N)+B.
- Measured Concentration of Ammonia (C) in ug / ml NH_3 as N: $C=10^{(P-B)/M}$ where P = electrode potential, M= slope and B= intercept.
- All standards are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.
- Calibration solution temperature must be within ± 2°C.

AMMONIA BY ION SELECTIVE ELECTRODE ANALYSIS DATA

District Method: SCAQMD 207.1

Project Number: Proj 046148
Client/Location: Canyon
Sample Location: WH-1-4
Sample Date: 10-16-24
Analysis Date: 10-16-24

Calibration Curve: $y = 58.3133x + 160.9383$
R^2: 0.9999
Thermometer #: #3
ISE Electrode #: #9
Analyst's Initials: JS

NH3 concentration (µg NH3 / ml as N)	Electrode Potential (mV)	Sample Temperature (°C)	Room Temperature (°C)
1	101.1	22.2	23.0
5	59.7	22.2	23.0
20	25.5	22.2	23.0
100	-15.8	22.2	23.0

Sample	Total Volume (mL)	Sample Temperature (°C)	Electrode Potential (mV)	Blue after ISA (Y/N)	pH
Standard Check: 28 µg NH_3 / ml as N	NA	22.3	16.9	Y	NA
		22.3	17.0	Y	
1-NH_3	585.1	23.6	82.9	Y	<2
		23.8	83.1	Y	
2-NH_3	618.8	21.9	91.8	Y	<2
		21.9	91.9	Y	
Spike: 1-NH_3	NA	23.6	24.6	Y	NA
		23.8	24.4	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	22.5	16.7	Y	NA
		22.4	16.8	Y	
Reagent Blank 0.1N H_2SO_4	NA	22.4	147.3	Y	NA
		22.4	148.1	Y	
DI H_2O Blank	NA	22.3	159.2	Y	NA
		22.4	159.8	Y	
Field Blank	385.3	22.2	169.7	Y	<2
		22.1	170.2	Y	
Standard Check: 28 µg NH_3 / ml as N	NA	22.4	16.6	Y	NA
		22.3	16.4	Y	

Notes:

- Used 100 ml of samples or standards with 2 ml ISA and constant stirring rate.
- Spike: 100 ml sample + 2 ml 1000ppm NH_3 as N.
- All calibration solution and calibration verification standard (C.V.) are prepared in 0.04N H_2SO_4 and allowed to equilibrate to room temperature.
- All samples are collected in 0.1N H_2SO_4 and allowed to equilibrate to room temperature.
- All solutions turned blue and remained blue with ISA unless otherwise indicated.
- Maximum number of samples (including blanks) between 28 ug/ml check standard is 5 samples analyzed in duplicate.
- All samples must have a pH of less than 2.
- Sample solutions, calibration solution and C.V. standard temperature must be within ± 2°C of one another.
- Slope of calibration curve must be between -54 and -60.
- R^2 must be 0.997 or greater.

Appendix A.4
QA/QC Data

Barometric Pressure Determination	
Date: 10/16/24	
Data By: Rik Dupont	
Reference:	https://forecast.weather.gov/MapClick.php?lon=-117.85962867946365&lat=33.863355545614255
Reference Barometer ID	FW0063 Fullerton CSU (F0063)
Reference Barometer Location	Lat: 33.8805°NLon: 117.88417°WElev: 247ft.
Reference Barometer Other Info.	16 Oct 01:30 PM PDT
Reference Barometer Indication, corrected to sea level	29.97
Reference Barometer Reference Elevation	247
Reference Barometer Actual Pressure	29.72
Test Barometer Location/Site	Canyon Power Plant
Location/Site Elevation	279
Location/Site Barometric Pressure	29.69
Sampling Location Height (above/below site elevation)	60
Sampling Location Barometric Pressure	**29.63**

SEMI-ANNUAL DRY GAS METER/ORIFICE CALIBRATION

Model #: C-5000 Source Sampler
ID #: 47-WCS
Date: 7/2/2024
Bar. Pressure: 29.74 (in. Hg)
Performed By: L. Olivares
Reviewed By: Surya Adhikari

DRY GAS METER READINGS									CRITICAL ORIFICE READINGS					
					Initial Temps.		Final Temps.					Ambient Temperature		
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
0.13	26.00	209.200	214.515	5.315		78.0		78.0	AA-33	0.1555	19.0	77.0	78.0	77.5
0.13	26.00	214.515	219.835	5.320		78.0		78.0	AA-33	0.1555	19.0	78.0	78.0	78.0
0.13	26.00	219.835	225.150	5.315		78.0		79.0	AA-33	0.1555	19.0	78.0	78.0	78.0
0.65	12.00	192.800	198.210	5.410		76.0		77.0	QI-48	0.3440	18.0	76.0	76.0	76.0
0.65	12.00	198.210	203.640	5.430		77.0		78.0	QI-48	0.3440	18.0	76.0	77.0	76.5
0.65	12.00	203.640	209.055	5.415		78.0		78.0	QI-48	0.3440	18.0	77.0	76.0	76.5
2.00	7.00	175.700	181.175	5.475		73.0		74.0	QI-63	0.5998	17.0	75.0	75.0	75.0
2.00	7.00	181.175	186.650	5.475		74.0		75.0	QI-63	0.5998	17.0	75.0	75.0	75.0
2.00	7.00	186.650	192.120	5.470		75.0		76.0	QI-63	0.5998	17.0	75.0	75.0	75.0
3.80	5.00	159.500	164.755	5.255		71.0		71.0	AA-73	0.8123	16.0	73.0	73.0	73.0
3.80	5.00	164.755	169.990	5.235		71.0		72.0	AA-73	0.8123	16.0	73.0	74.0	73.5
3.80	5.00	169.990	175.230	5.240		72.0		73.0	AA-73	0.8123	16.0	74.0	75.0	74.5

DRY GAS METER		ORIFICE			DRY GAS METER CALIBRATION FACTOR	ORIFICE CALIBRATION FACTOR				
VOLUME CORRECTED Vm(std) (cu ft)	VOLUME CORRECTED Vm(std) (liters)	VOLUME CORRECTED Vcr(std) (cu ft)	VOLUME CORRECTED Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)	Y Value (number)	dH@ Value (in H2O)	Individual Run 0.95 < Y < 1.05?	Individual Orifice Ymax - Ymin < 0.010?	Orifice Average 0.98 < Y/Yd < 1.02?	Orifice Average dH@ - dH@ av < 0.155?
5.184	146.8	5.186	146.9	5.314	1.000	1.793	Pass			
5.189	147.0	5.184	146.8	5.316	0.999	1.794	Pass			
5.180	146.7	5.184	146.8	5.316	1.001	1.793	Pass			
				Average	1.000	1.793		Pass	Pass	Pass
5.299	150.1	5.303	150.2	5.418	1.001	1.832	Pass			
5.308	150.3	5.300	150.1	5.420	0.998	1.830	Pass			
5.289	149.8	5.300	150.1	5.420	1.002	1.828	Pass			
				Average	1.000	1.830		Pass	Pass	Pass
5.410	153.2	5.398	152.9	5.505	0.998	1.861	Pass			
5.400	152.9	5.398	152.9	5.505	1.000	1.857	Pass			
5.385	152.5	5.398	152.9	5.505	1.002	1.854	Pass			
				Average	1.000	1.857		Pass	Pass	Pass
5.241	148.4	5.232	148.2	5.316	0.998	1.929	Pass			
5.216	147.7	5.230	148.1	5.318	1.003	1.929	Pass			
5.211	147.6	5.225	148.0	5.323	1.003	1.929	Pass			
				Average	1.001	1.929		Pass	Pass	Pass

Average Yd: 1.000 dH@: 1.852

Q @ dH = 1: 0.551

Performed by signature: _____ Date: 07/02/2024

Reviewed by signature: _____ Date: 07/02/2024

Note: Control box not equipped with meter inlet temperature reading.

DIGITAL TEMPERATURE READOUT CALIBRATION

Digital Temperature Readout ID: 47-WCS
Readout Description: Control box
Date: 7/3/2024
Performed By: JS

Calibrated Thermocouple ID: TC-Cal
T1 Reference Thermometer ID: 313010
T2 Reference Thermometer ID: 2736
T3 Reference Thermometer ID: 2786

T/C I.D. TC-Cal	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	47-WCS	376	376	376	376	375	375	375	375	1.0	0.1%	Pass
T2 (~212 F)	47-WCS	215	215	215	215	212	212	212	212	3.0	0.4%	Pass
T1 (~ 32 F)	47-WCS	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

Thermocouple Source Readings

	T/C Source S/N	T/C - Readout °F				T/C Source °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T4 (~650 F)	125097	658	658	658	658	650	650	650	650	8.0	0.7%	Pass
T3 (~370 F)	125097	378	378	378	378	375	375	375	375	3.0	0.4%	Pass
T2 (~212 F)	125097	212	212	212	212	212	212	212	212	0.0	0.0%	Pass
T1 (~32 F)	125097	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
2) Pass if all Differences are less than 1.5% (°R)

APPENDIX B
FACILITY CEMS DATA

CEMTEK KVB-Enertec NetDAHS©

1-NH3

Version 48.0

Average Values Report
Generated: 10/16/2024 17:31

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 4

Period Start: 10/16/2024 16:12
Period End: 10/16/2024 17:17
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 4_O2 %	Average 4_NOXPPM ppm	Average 4_NOX_CORR ppm	Average 4_NOX_LBMM #/MBTU	Average 4_NOX_LBHR #/hr	Average 4_COPPM ppm	Average 4_CO_CORR ppm	Average 4_CO_LBHR #/hr	Average 4_CO_LBMM #/MBTU	Average 4_GasFlow kscfh	Average 4_LOAD MW	Average 4_STACKFLW kscfm
10/16/2024 16:12	14.66	2.41	2.28	0.008	3.94	3.13	2.96	3.25	0.0066	469.0	49.12	239.5
10/16/2024 16:13	14.66	2.41	2.28	0.008	3.94	3.13	2.96	3.25	0.0066	468.9	49.06	239.4
10/16/2024 16:14	14.64	2.41	2.27	0.008	3.94	3.15	2.97	3.30	0.0067	468.7	49.12	238.5
10/16/2024 16:15	14.64	2.43	2.29	0.008	3.94	3.15	2.97	3.30	0.0067	468.8	49.14	238.6
10/16/2024 16:16	14.65	2.45	2.31	0.009	4.43	3.14	2.96	3.25	0.0066	468.6	49.13	238.8
10/16/2024 16:17	14.64	2.43	2.29	0.008	3.94	3.13	2.95	3.25	0.0066	468.8	49.28	238.6
10/16/2024 16:18	14.64	2.44	2.30	0.008	3.94	3.13	2.95	3.25	0.0066	468.7	49.19	238.5
10/16/2024 16:19	14.63	2.45	2.31	0.008	3.94	3.14	2.95	3.25	0.0066	469.1	49.13	238.4
10/16/2024 16:20	14.64	2.43	2.29	0.008	3.94	3.15	2.97	3.30	0.0067	468.6	49.15	238.5
10/16/2024 16:21	14.63	2.39	2.25	0.008	3.94	3.16	2.97	3.30	0.0067	468.8	49.16	238.2
10/16/2024 16:22	14.64	2.38	2.24	0.008	3.94	3.18	3.00	3.30	0.0067	468.7	49.11	238.5
10/16/2024 16:23	14.66	2.38	2.25	0.008	3.94	3.19	3.02	3.35	0.0068	469.5	49.13	239.7
10/16/2024 16:24	14.65	2.36	2.23	0.008	3.94	3.20	3.02	3.35	0.0068	468.9	49.11	239.0
10/16/2024 16:25	14.67	2.35	2.23	0.008	3.94	3.20	3.03	3.34	0.0068	468.5	49.16	239.6
10/16/2024 16:26	14.64	2.35	2.21	0.008	3.93	3.21	3.03	3.34	0.0068	468.4	49.16	238.4
10/16/2024 16:27	14.65	2.35	2.22	0.008	3.94	3.20	3.02	3.35	0.0068	468.7	49.13	238.9
10/16/2024 16:28	14.64	2.35	2.21	0.008	3.94	3.19	3.01	3.30	0.0067	468.5	49.00	238.4
10/16/2024 16:29	14.64	2.35	2.21	0.008	3.93	3.18	3.00	3.30	0.0067	468.4	49.21	238.4
10/16/2024 16:30	14.66	2.36	2.23	0.008	3.94	3.17	3.00	3.30	0.0067	468.7	49.18	239.3
10/16/2024 16:31	14.65	2.35	2.22	0.008	3.94	3.18	3.00	3.30	0.0067	468.5	49.14	238.8
10/16/2024 16:32	14.66	2.35	2.22	0.008	3.93	3.16	2.99	3.30	0.0067	468.4	49.17	239.1
10/16/2024 16:33	14.65	2.35	2.22	0.008	3.93	3.18	3.00	3.29	0.0067	468.2	49.13	238.6
10/16/2024 16:34	14.66	2.35	2.22	0.008	3.94	3.18	3.01	3.30	0.0067	468.5	49.17	239.2
10/16/2024 16:35	14.64	2.36	2.22	0.008	3.93	3.17	2.99	3.30	0.0067	468.4	49.13	238.4
10/16/2024 16:36	14.64	2.37	2.23	0.008	3.94	3.16	2.98	3.30	0.0067	468.5	49.14	238.4
10/16/2024 16:37	14.65	2.37	2.24	0.008	3.93	3.15	2.97	3.29	0.0067	468.0	49.19	238.5
10/16/2024 16:38	14.66	2.37	2.24	0.008	3.93	3.14	2.97	3.29	0.0067	468.2	49.14	239.0
10/16/2024 16:39	14.65	2.38	2.25	0.008	3.94	3.13	2.95	3.25	0.0066	468.7	49.04	238.9
10/16/2024 16:40	14.65	2.38	2.25	0.008	3.93	3.13	2.95	3.25	0.0066	468.4	49.19	238.7
10/16/2024 16:41	14.64	2.38	2.24	0.008	3.94	3.13	2.95	3.25	0.0066	468.5	49.21	238.4
10/16/2024 16:42	14.64	2.38	2.24	0.008	3.94	3.12	2.94	3.25	0.0066	468.5	49.09	238.4
10/16/2024 16:43	14.64	2.40	2.26	0.008	3.93	3.12	2.94	3.24	0.0066	467.5	49.23	237.9
10/16/2024 16:44	14.66	2.40	2.27	0.008	3.94	3.13	2.96	3.25	0.0066	468.6	49.14	239.2
10/16/2024 16:45	14.67	2.38	2.25	0.008	3.94	3.15	2.98	3.30	0.0067	468.5	49.10	239.6
10/16/2024 16:46	14.66	2.36	2.23	0.008	3.93	3.15	2.98	3.29	0.0067	468.2	49.09	239.0
10/16/2024 16:47	14.66	2.37	2.24	0.008	3.93	3.15	2.98	3.30	0.0067	468.4	49.35	239.1
10/16/2024 16:48	14.65	2.37	2.24	0.008	3.94	3.14	2.96	3.25	0.0066	468.5	49.31	238.8
10/16/2024 16:49	14.64	2.37	2.23	0.008	3.93	3.15	2.97	3.29	0.0067	468.3	49.08	238.3
10/16/2024 16:50	14.66	2.38	2.25	0.008	3.94	3.15	2.98	3.30	0.0067	469.1	49.05	239.5
10/16/2024 16:51	14.65	2.39	2.26	0.008	3.94	3.15	2.97	3.30	0.0067	468.7	49.21	238.9
10/16/2024 16:52	14.65	2.37	2.24	0.008	3.93	3.16	2.98	3.29	0.0067	468.3	49.12	238.7
10/16/2024 16:53	14.65	2.37	2.24	0.008	3.94	3.16	2.98	3.30	0.0067	468.8	49.26	238.9
10/16/2024 16:54	14.65	2.37	2.24	0.008	3.93	3.17	2.99	3.30	0.0067	468.4	49.11	238.7
10/16/2024 16:55	14.66	2.37	2.24	0.008	3.94	3.18	3.01	3.30	0.0067	468.9	49.16	239.4
10/16/2024 16:56	14.66	2.36	2.23	0.008	3.94	3.19	3.02	3.35	0.0068	468.8	49.15	239.3
10/16/2024 16:57	14.65	2.35	2.22	0.008	3.93	3.18	3.00	3.30	0.0067	468.4	49.14	238.7
10/16/2024 16:58	14.67	2.35	2.23	0.008	3.93	3.17	3.00	3.29	0.0067	468.3	49.01	239.5
10/16/2024 16:59	14.65	2.35	2.22	0.008	3.94	3.18	3.00	3.30	0.0067	468.6	49.06	238.8
10/16/2024 17:00	14.67	2.34	2.22	0.008	3.94	3.19	3.02	3.35	0.0068	469.0	49.21	239.8
10/16/2024 17:01	14.66	2.35	2.22	0.008	3.93	3.20	3.03	3.34	0.0068	468.2	49.01	239.0
10/16/2024 17:02	14.66	2.35	2.22	0.008	3.94	3.20	3.03	3.35	0.0068	469.0	49.18	239.5
10/16/2024 17:03	14.66	2.34	2.21	0.008	3.93	3.21	3.04	3.34	0.0068	468.4	49.35	239.1

Period Start:	Average 4_O2 %	Average 4_NOXPPM ppm	Average 4_NOX_CORR ppm	Average 4_NOX_LBMM #/MBTU	Average 4_NOX_LBHR #/hr	Average 4_COPPM ppm	Average 4_CO_CORR ppm	Average 4_CO_LBHR #/hr	Average 4_CO_LBMM #/MBTU	Average 4_GasFlow kscfh	Average 4_LOAD MW	Average 4_STACKFLW kscfm
10/16/2024 17:04	14.66	2.32	2.19	0.008	3.94	3.24	3.06	3.40	0.0069	468.9	49.11	239.4
10/16/2024 17:05	14.66	2.33	2.20	0.008	3.93	3.25	3.07	3.39	0.0069	468.4	49.08	239.1
10/16/2024 17:06	14.67	2.35	2.23	0.008	3.93	3.24	3.07	3.39	0.0069	468.4	49.15	239.5
10/16/2024 17:07	14.65	2.35	2.22	0.008	3.94	3.23	3.05	3.35	0.0068	468.8	49.02	238.9
10/16/2024 17:08	14.66	2.34	2.21	0.008	3.94	3.21	3.04	3.34	0.0068	468.5	49.21	239.2
10/16/2024 17:09	14.65	2.36	2.23	0.008	3.94	3.21	3.03	3.35	0.0068	468.9	49.32	239.0
10/16/2024 17:10	14.66	2.36	2.23	0.008	3.94	3.20	3.03	3.35	0.0068	468.8	49.21	239.3
10/16/2024 17:11	14.64	2.38	2.24	0.008	3.93	3.18	3.00	3.30	0.0067	468.4	49.00	238.4
10/16/2024 17:12	14.66	2.39	2.26	0.008	3.94	3.16	2.99	3.30	0.0067	468.9	49.12	239.4
10/16/2024 17:13	14.65	2.39	2.26	0.008	3.94	3.16	2.98	3.30	0.0067	468.8	49.35	238.9
10/16/2024 17:14	14.66	2.39	2.26	0.008	3.93	3.17	3.00	3.30	0.0067	468.4	49.15	239.1
10/16/2024 17:15	14.67	2.41	2.28	0.008	3.94	3.18	3.01	3.35	0.0068	468.7	49.12	239.7
10/16/2024 17:16	14.65	2.39	2.26	0.008	3.94	3.17	2.99	3.30	0.0067	468.7	49.20	238.9
10/16/2024 17:17	14.66	2.38	2.25	0.008	3.93	3.16	2.99	3.30	0.0067	468.4	49.06	239.1
Daily Average*	**14.65**	**2.37**	**2.24**	**0.008**	**3.94**	**3.17**	**2.99**	**3.30**	**0.0067**	**468.6**	**49.15**	**238.9**
Maximum*	**14.67**	**2.45**	**2.31**	**0.009**	**4.43**	**3.25**	**3.07**	**3.40**	**0.0069**	**469.5**	**49.35**	**239.8**
	10/16/2024 17:15	10/16/2024 16:19	10/16/2024 16:19	10/16/2024 16:16	10/16/2024 16:16	10/16/2024 17:05	10/16/2024 17:06	10/16/2024 17:04	10/16/2024 17:06	10/16/2024 16:23	10/16/2024 17:13	10/16/2024 17:00
Minimum*	**14.63**	**2.32**	**2.19**	**0.008**	**3.93**	**3.12**	**2.94**	**3.24**	**0.0066**	**467.5**	**49.00**	**237.9**
	10/16/2024 16:21	10/16/2024 17:04	10/16/2024 17:04	10/16/2024 17:17	10/16/2024 17:17	10/16/2024 16:43	10/16/2024 16:43	10/16/2024 16:43	10/16/2024 16:48	10/16/2024 16:43	10/16/2024 17:11	10/16/2024 16:43

* Does not include Invalid Averaging Periods ("N/A")

CEMTEK KVB-Enertec NetDAHS©

Version 48.0

2-NOx3

Average Values Report
Generated: 10/16/2024 19:03

Company: City Of Anaheim
Plant: 3071 Miraloma Ave.,
City/St: Anaheim, CA, 92806
Source: 4

Period Start: 10/16/2024 17:48
Period End: 10/16/2024 18:53
Validation Type: 1/1 min
Averaging Period: 1 min
Type: Block Avg

Period Start:	Average 4_O2 %	Average 4_NOXPPM ppm	Average 4_NOX_CORR ppm	Average 4_NOX_LBMM #/MBTU	Average 4_NOX_LBHR #/hr	Average 4_COPPM ppm	Average 4_CO_CORR ppm	Average 4_CO_LBHR #/hr	Average 4_CO_LBMM #/MBTU	Average 4_GasFlow kscfh	Average 4_LOAD MW	Average 4_STACKFLW kscfm
10/16/2024 17:48	14.65	2.37	2.24	0.008	3.94	3.21	3.03	3.35	0.0068	468.6	49.16	238.8
10/16/2024 17:49	14.67	2.38	2.25	0.008	3.94	3.20	3.03	3.35	0.0068	468.6	49.10	239.6
10/16/2024 17:50	14.66	2.38	2.25	0.008	3.93	3.20	3.03	3.34	0.0068	468.3	49.03	239.1
10/16/2024 17:51	14.66	2.37	2.24	0.008	3.94	3.20	3.03	3.35	0.0068	468.7	49.11	239.3
10/16/2024 17:52	14.66	2.36	2.23	0.008	3.93	3.20	3.03	3.34	0.0068	468.1	49.05	239.0
10/16/2024 17:53	14.67	2.36	2.23	0.008	3.93	3.21	3.04	3.34	0.0068	468.4	49.14	239.5
10/16/2024 17:54	14.66	2.38	2.25	0.008	3.93	3.21	3.04	3.34	0.0068	468.4	49.10	239.1
10/16/2024 17:55	14.67	2.38	2.25	0.008	3.93	3.20	3.03	3.34	0.0068	468.3	49.17	239.5
10/16/2024 17:56	14.66	2.37	2.24	0.008	3.94	3.20	3.03	3.35	0.0068	468.6	49.04	239.2
10/16/2024 17:57	14.66	2.35	2.22	0.008	3.94	3.20	3.03	3.35	0.0068	468.7	49.01	239.3
10/16/2024 17:58	14.66	2.35	2.22	0.008	3.93	3.20	3.03	3.34	0.0068	468.1	49.16	239.0
10/16/2024 17:59	14.66	2.36	2.23	0.008	3.93	3.20	3.03	3.34	0.0068	468.1	48.98	239.0
10/16/2024 18:00	14.67	2.36	2.23	0.008	3.93	3.20	3.03	3.34	0.0068	468.0	49.10	239.3
10/16/2024 18:01	14.67	2.34	2.22	0.008	3.93	3.21	3.04	3.34	0.0068	468.3	49.12	239.5
10/16/2024 18:02	14.67	2.34	2.22	0.008	3.93	3.21	3.04	3.34	0.0068	468.2	49.14	239.4
10/16/2024 18:03	14.66	2.34	2.21	0.008	3.93	3.22	3.04	3.34	0.0068	468.0	49.20	238.9
10/16/2024 18:04	14.66	2.35	2.22	0.008	3.94	3.23	3.05	3.40	0.0069	468.8	49.15	239.3
10/16/2024 18:05	14.66	2.35	2.22	0.008	3.93	3.21	3.04	3.34	0.0068	468.1	49.12	239.0
10/16/2024 18:06	14.67	2.37	2.24	0.008	3.94	3.18	3.01	3.35	0.0068	468.6	49.32	239.6
10/16/2024 18:07	14.67	2.37	2.24	0.008	3.93	3.18	3.01	3.34	0.0068	468.1	49.13	239.4
10/16/2024 18:08	14.67	2.35	2.23	0.008	3.94	3.18	3.01	3.35	0.0068	468.6	49.08	239.6
10/16/2024 18:09	14.67	2.36	2.23	0.008	3.93	3.18	3.01	3.34	0.0068	468.4	49.21	239.5
10/16/2024 18:10	14.66	2.35	2.22	0.008	3.94	3.18	3.01	3.30	0.0067	468.6	49.23	239.2
10/16/2024 18:11	14.66	2.35	2.22	0.008	3.94	3.19	3.02	3.35	0.0068	469.1	49.12	239.5
10/16/2024 18:12	14.66	2.36	2.23	0.008	3.93	3.19	3.02	3.34	0.0068	468.1	49.15	239.0
10/16/2024 18:13	14.67	2.38	2.25	0.008	3.93	3.19	3.02	3.34	0.0068	468.3	49.24	239.5
10/16/2024 18:14	14.66	2.36	2.23	0.008	3.93	3.20	3.03	3.34	0.0068	468.0	49.28	238.9
10/16/2024 18:15	14.66	2.34	2.21	0.008	3.94	3.20	3.03	3.35	0.0068	468.8	49.16	239.3
10/16/2024 18:16	14.67	2.33	2.21	0.008	3.93	3.20	3.03	3.34	0.0068	468.3	49.03	239.5
10/16/2024 18:17	14.67	2.33	2.21	0.008	3.94	3.19	3.02	3.35	0.0068	468.7	49.18	239.7
10/16/2024 18:18	14.66	2.35	2.22	0.008	3.93	3.19	3.02	3.34	0.0068	468.0	49.12	238.9
10/16/2024 18:19	14.65	2.36	2.23	0.008	3.94	3.19	3.01	3.34	0.0068	468.5	49.12	238.8
10/16/2024 18:20	14.65	2.37	2.24	0.008	3.94	3.19	3.01	3.35	0.0068	468.6	49.18	238.8
10/16/2024 18:21	14.66	2.37	2.24	0.008	3.94	3.20	3.03	3.35	0.0068	468.9	49.26	239.4
10/16/2024 18:22	14.66	2.37	2.24	0.008	3.93	3.19	3.02	3.34	0.0068	468.1	49.08	239.0
10/16/2024 18:23	14.66	2.37	2.24	0.008	3.94	3.18	3.01	3.30	0.0067	468.5	49.03	239.2
10/16/2024 18:24	14.66	2.36	2.23	0.008	3.94	3.18	3.01	3.30	0.0067	468.6	49.00	239.2
10/16/2024 18:25	14.66	2.35	2.22	0.008	3.94	3.19	3.02	3.35	0.0068	468.6	49.15	239.2
10/16/2024 18:26	14.65	2.35	2.22	0.008	3.94	3.19	3.01	3.35	0.0068	468.7	49.01	238.9
10/16/2024 18:27	14.66	2.36	2.23	0.008	3.94	3.19	3.02	3.35	0.0068	469.0	49.14	239.5
10/16/2024 18:28	14.67	2.36	2.23	0.008	3.94	3.20	3.03	3.35	0.0068	468.7	49.17	239.7
10/16/2024 18:29	14.66	2.36	2.23	0.008	3.94	3.20	3.03	3.35	0.0068	468.7	49.31	239.3
10/16/2024 18:30	14.67	2.37	2.24	0.008	3.94	3.21	3.04	3.34	0.0068	468.5	49.19	239.6
10/16/2024 18:31	14.67	2.37	2.24	0.008	3.94	3.21	3.04	3.35	0.0068	469.1	49.25	239.9
10/16/2024 18:32	14.66	2.37	2.24	0.008	3.94	3.21	3.04	3.35	0.0068	468.7	49.04	239.3
10/16/2024 18:33	14.67	2.38	2.25	0.008	3.94	3.20	3.03	3.35	0.0068	469.1	49.18	239.9
10/16/2024 18:34	14.66	2.37	2.24	0.008	3.94	3.20	3.03	3.35	0.0068	468.8	49.10	239.3
10/16/2024 18:35	14.67	2.36	2.23	0.008	3.94	3.20	3.03	3.34	0.0068	468.5	49.15	239.6
10/16/2024 18:36	14.66	2.35	2.22	0.008	3.94	3.21	3.04	3.35	0.0068	469.0	49.17	239.5
10/16/2024 18:37	14.67	2.35	2.23	0.008	3.94	3.20	3.03	3.35	0.0068	468.8	49.18	239.7
10/16/2024 18:38	14.66	2.36	2.23	0.008	3.94	3.20	3.03	3.35	0.0068	469.2	49.04	239.6
10/16/2024 18:39	14.66	2.36	2.23	0.008	3.94	3.21	3.04	3.35	0.0068	468.6	49.07	239.2

Period Start:	Average 4_O2 %	Average 4_NOXPPM ppm	Average 4_NOX_CORR ppm	Average 4_NOX_LBMM #/MBTU	Average 4_NOX_LBHR #/hr	Average 4_COPPM ppm	Average 4_CO_CORR ppm	Average 4_CO_LBHR #/hr	Average 4_CO_LBMM #/MBTU	Average 4_GasFlow kscfh	Average 4_LOAD MW	Average 4_STACKFLW kscfm
10/16/2024 18:40	14.67	2.35	2.23	0.008	3.94	3.21	3.04	3.35	0.0068	468.8	49.28	239.7
10/16/2024 18:41	14.67	2.35	2.23	0.008	3.94	3.21	3.04	3.35	0.0068	468.7	49.07	239.7
10/16/2024 18:42	14.67	2.36	2.23	0.008	3.94	3.21	3.04	3.34	0.0068	468.5	49.19	239.6
10/16/2024 18:43	14.67	2.35	2.23	0.008	3.93	3.21	3.04	3.34	0.0068	468.4	49.14	239.5
10/16/2024 18:44	14.67	2.33	2.21	0.008	3.93	3.21	3.04	3.34	0.0068	468.2	49.16	239.4
10/16/2024 18:45	14.67	2.32	2.20	0.008	3.94	3.21	3.04	3.35	0.0068	468.8	49.26	239.7
10/16/2024 18:46	14.67	2.32	2.20	0.008	3.93	3.21	3.04	3.34	0.0068	468.2	49.17	239.4
10/16/2024 18:47	14.67	2.32	2.20	0.008	3.93	3.23	3.06	3.39	0.0069	468.3	49.15	239.5
10/16/2024 18:48	14.67	2.33	2.21	0.008	3.94	3.23	3.06	3.40	0.0069	468.7	49.33	239.7
10/16/2024 18:49	14.67	2.33	2.21	0.008	3.93	3.22	3.05	3.34	0.0068	468.1	49.08	239.4
10/16/2024 18:50	14.67	2.33	2.21	0.008	3.93	3.21	3.04	3.34	0.0068	468.4	49.24	239.5
10/16/2024 18:51	14.67	2.35	2.23	0.008	3.93	3.21	3.04	3.34	0.0068	468.4	49.03	239.5
10/16/2024 18:52	14.67	2.35	2.23	0.008	3.94	3.20	3.03	3.35	0.0068	468.7	49.22	239.7
10/16/2024 18:53	14.67	2.35	2.23	0.008	3.94	3.18	3.01	3.35	0.0068	468.7	49.12	239.7
Daily Average*	**14.66**	**2.36**	**2.23**	**0.008**	**3.94**	**3.20**	**3.03**	**3.35**	**0.0068**	**468.5**	**49.14**	**239.4**
Maximum*	**14.67**	**2.38**	**2.25**	**0.008**	**3.94**	**3.23**	**3.06**	**3.40**	**0.0069**	**469.2**	**49.33**	**239.9**
	10/16/2024 18:53	10/16/2024 18:33	10/16/2024 18:33	10/16/2024 18:53	10/16/2024 18:53	10/16/2024 18:48	10/16/2024 18:48	10/16/2024 18:48	10/16/2024 18:48	10/16/2024 18:38	10/16/2024 18:48	10/16/2024 18:33
Minimum*	**14.65**	**2.32**	**2.20**	**0.008**	**3.93**	**3.18**	**3.01**	**3.30**	**0.0067**	**468.0**	**48.98**	**238.8**
	10/16/2024 18:26	10/16/2024 18:47	10/16/2024 18:47	10/16/2024 18:53	10/16/2024 18:51	10/16/2024 18:53	10/16/2024 18:53	10/16/2024 18:24	10/16/2024 18:24	10/16/2024 18:18	10/16/2024 17:59	10/16/2024 18:20

* Does not include Invalid Averaging Periods ("N/A")

APPENDIX C
CALCULATIONS

Appendix C.1
General Emissions Calculations

GENERAL EMISSIONS CALCULATIONS

I. Stack Gas Velocity

A. Stack gas molecular weight, lb/lb-mole

$MW_{dry} = 0.44 * \% CO_2 + 0.32 * \% O_2 + 0.28 * \% N_2$

$MW_{wet} = MW_{dry} * (1 - B_{wo}) + 18 * B_{wo}$

B. Absolute stack pressure, iwg

$$P_s = P_{bar} + \frac{P_{sg}}{13.6}$$

C. Stack gas velocity, ft/sec

$$V_s = 2.9 * C_p * \sqrt{\Delta P} * \sqrt{T_s} * \sqrt{\frac{29.92 * 28.95}{P_s * MW_{wet}}}$$

II. Moisture

A. Sample gas volume, dscf

$$V_{mstd} = 0.03342 * V_m * \left(P_{bar} + \frac{\Delta H}{13.6}\right) * \frac{T_{ref}}{T_m} * Y_d$$

B. Water vapor volume, scf

$$V_{wstd} = 0.0472 * V_{ic} * \frac{T_{ref}}{528°R}$$

C. Moisture content, dimensionless

$$B_{wo} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$$

III. Stack Gas Volumetric Flow Rate

A. Actual stack gas volumetric flow rate, wacfm

$Q = V_s * A_s * 60$

B. Standard stack gas flow rate, dscfm

$$Q_{sd} = Q * (1 - B_{wo}) * \frac{T_{ref}}{T_s} * \frac{P_s}{29.92}$$

IV. Gaseous Mass Emission Rates, lb/hr

$$M = \frac{ppm * MW_i * Q_{sd} * 60}{SV * 10^6}$$

V. Emission Rates, lb/MMBtu

$$\frac{lb}{MMBtu} = \frac{ppm * MW_i * F}{SV * 10^6} * \frac{20.9}{20.9 - \%\ O_2}$$

VI. Percent Isokinetic

$$I = \frac{17.32 * T_s\ (V_{mstd})}{(1 - B_{wo})\ 0 * V_s * P_s * Dn^2} * \frac{520°R}{T_{ref}}$$

VII. Particulate Emissions

(a) Grain loading, gr/dscf
$C = 0.01543\ (M_n/V_{m\ std})$

(b) Grain loading at 12% CO_2, gr/dscf
$C_{12\%}\ CO_2 = C\ (12/\%\ CO_2)$

(c) Mass emissions, lb/hr
$M = C * Q_{sd} * (60\ min/hr) / (7000\ gr/lb)$

(d) Particulate emission factor

$$lb/10^6\ Btu = Cx\ \frac{1\ lb}{7000\ gr} * F * \frac{20.9}{20.9 - \%\ O_2}$$

Nomenclature:

A_s	=	stack area, ft^2
B_{wo}	=	flue gas moisture content, dimensionless
$C_{12\%CO2}$	=	particulate grain loading, gr/dscf corrected to 12% CO_2
C	=	particulate grain loading, gr/dscf
C_p	=	pitot calibration factor, dimensionless
Dn	=	nozzle diameter, inches
F	=	fuel F-Factor, dscf/MMBtu @ 0% O_2
H	=	orifice differential pressure, iwg
I	=	% isokinetics
M_n	=	mass of collected particulate, mg
M_i	=	mass emission rate of specie i, lb/hr
MW	=	molecular weight of flue gas, lb/lb-mole
M_{wi}	=	molecular weight of specie i:
	SO_2:	64
	NO_x:	46
	CO:	28
	HC:	16
0	=	sample time, minutes
ΔP	=	average velocity head, iwg = $(\sqrt{\Delta P})^2$
P_{bar}	=	barometric pressure, inches Hg
P_s	=	stack absolute pressure, inches Hg
P_{sg}	=	stack static pressure, iwb
Q	=	wet stack flow rate at actual conditions, wacfm
Q_{sd}	=	dry standard stack flow rate, dscfm
SV	=	specific molar volume of an ideal gas at standard conditions, ft^3/lb-mole
T_m	=	meter temperature, °R
T_{ref}	=	reference temperature, °R
T_s	=	stack temperature, °R
V_s	=	stack gas velocity, ft/sec
V_{lc}	=	volume of liquid collected in impingers, ml
V_m	=	uncorrected dry meter volume, dcf
V_{mstd}	=	dry meter volume at standard conditions, dscf
V_{wstd}	=	volume of water vapor at standard conditions, scf
Y_d	=	meter calibration coefficient

Appendix C.2
Spreadsheet Summaries

SCAQMD METHOD 207.1
DATA WORKSHEET AND SUMMARY

Facility	Canyon		Parameter		NH_3
Unit	U4		Fuel		Natural gas
Sample Location	Stack		Data By		RD
Test Number	1-NH3-U4	2-NH3-U4	Average	Maximum	Limit
Reference Temperature (°F)	60	60			
Test Date	10/16/2024	10/16/2024			
Test Method	SCAQMD 207.1	SCAQMD 207.1			
Sample Train	47-WCS	47-WCS			
Meter Calibration Factor	1.000	1.000			
Stack Area (ft^2)	106.90	106.90			
Sample Time (Minutes)	60	60			
Barometric Pressure ("Hg)	29.63	29.63			
Start/Stop Time	1611/1717	1747/1853			
Meter Volume (acf)	40.330	39.680			
Meter Temperature (°F)	70.5	67.6			
Meter Pressure (iwg)	1.5	1.5			
Liquid Volume (ml)	109.0	105.9			
Stack O_2 (%)	14.65	14.66	14.66	(from facility CEMS)	
Unit Load (MW)	49.15	49.14	49.1		
Standard Sample Volume (SCF)	39.291	38.871			
Moisture Fraction	0.114	0.112			
Stack Flow Rate (dscfm, 68 °F)	238,900	239,400	239,150	(from facility CEMS)	
Stack Flow Rate (@ Tref)	235,280	235,773	235,527		
Gas Constant (ft-lbf/lb-mole-R)	1545.33	1545.33			
Molecular Weight NH_3 (lb/lb-mole)	17.03	17.03			
Specific Molar Volume (ft^3/lb-mole)	379.5	379.5			
F-Factor (dscf/MMBtu)	8,710	8,710			
HHV(Btu/SCF)	1,050	1,050			
Mass Conversion (lb/ug)	2.2046E-09	2.2046E-09			
O_2 Correction Factor (%)	15	15			
Mass NH_3 (ug)	1,444.207	1,076.914			
Mass NH_3 (lb)	3.18E-06	2.37E-06			
NH_3 (ppmv, flue gas)	1.81	1.36	1.58	1.81	
NH_3 (ppmv @ O_2 Correction Factor)	1.70	1.29	1.50	1.70	5
NH_3 (lb/hr)	1.14	0.86	1.00	1.14	
NH_3 (lb/MMBtu)	0.002	0.002	0.002	0.002	
NH_3 (lb/MMSCF)	2.44	1.84	2.14	2.44	

Note: SCAQMD Method 207.1 requires the higher of the duplicate runs be reported as the test result.

1-NH3-U4

Point	Meter Volume	Delta H	Tm In	Tm Out
3	660.900	1.5	NA	71
2				71
1				71
3				70
2				71
1				71
3				70
2				71
1				70
3				70
2				70
1				70
Stop	901.230			
Result	**40.330**	**1.5**		**70.5**

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	957.0	762.7	194.3
2	752.4	750.6	1.8
3	604.8	599.7	5.1
4	862.0	854.2	7.8
Line Rinse	0.0	100.0	-100.0
			109.0

2-NH3-U4

Point	Meter Volume	Delta H	Tm In	Tm Out
3	904.900	1.5	NA	67
2				67
1				67
3				67
2				67
1				67
3				67
2				68
1				68
3				68
2				69
1				69
Stop	944.580			
Result	**39.680**	**1.5**		**67.6**

Impinger Weights

#	Post-Test	Pre-Test	Difference
1	922.8	747.6	175.2
2	771.2	748.7	22.5
3	639.1	638.6	0.5
4	978.0	970.3	7.7
Line Rinse	0.0	100.0	-100.0
			105.9

SCAQMD 207.1 EXAMPLE CALCULATION
TEST NUMBER: 1-NH3-U4

Identifier	Description	Units	Equation	Value
A	Reference Temperature	F	--	60
B	Reference Temperature	R	A + 460	520
C	Meter Calibration Factor (Yd)	--	--	1.000
D	Barometric Pressure	" Hg	--	29.63
E	Meter Volume	acf	--	40.330
F	Meter Temperature	F	--	70.5
G	Meter Temperature	R	F + 460	530.5
H	Delta H	" H_2O	--	1.5
I	Meter Volume (standard)	dscf	0.03342 * E * (D + H/13.6) * B/G * C	39.291
J	Liquid Collected	grams	--	109.0
K	Water vapor volume	scf	0.0472 * J * B/528	5.067
L	Moisture Content	--	K/(K + I)	0.114
M	Gas Constant	ft-lbf/lb-mole-R	--	1545.33
N	Specific Molar Volume	SCF/lb-mole	385.3 * B / 528	379.5
O	F-Factor	dscf/MMBtu	--	8,710
P	HHV	Btu/SCF	--	1,050
Q	Mass Conversion Factor	lb/ug	--	2.2046E-09
R	O_2 Correction Factor	--	--	15
S	Stack Flow Rate @ 68 F	dscfm	--	238,900
T	Stack Flow Rate @ Tref	dscfm	S * B/528	235,280
U	Mass NH_3	ug	--	1,444
V	Mass NH_3	lb	U * Q	3.18E-06
W	MW of NH_3	lb/lb-mole	--	17.03
X	NH_3	ppm	$(V * N * 10^b)/(I * W)$	1.8
Y	Flue Gas O_2	%	--	14.65
Z	NH_3	ppmc	X * (20.9 - R)/(20.9 - Y)	1.7
AA	NH_3	lb/hr	$X * T * W * 60/(N * 10^b)$	1.1
AB	NH_3	lb/MMBtu	$(X * W * O)/(385.3 * 10^b) * 20.9/(20.9 - Y)$	0.002
AC	NH_3	lb/MMSCF	AB * P	2.4

Note:

(1) Some values may be slightly different from those shown on the run sheets due to round off errors. This page is intended to show the calculation methodology only

APPENDIX D
QUALITY ASSURANCE

Appendix D.1
Quality Assurance Program Summary

QUALITY ASSURANCE PROGRAM SUMMARY

As part of Montrose Air Quality Services, LLC (MAQS) ASTM D7036-04 certification, MAQS is committed to providing emission related data which is complete, precise, accurate, representative, and comparable. MAQS quality assurance program and procedures are designed to ensure that the data meet or exceed the requirements of each test method for each of these items. The quality assurance program consists of the following items:

- Assignment of an Internal QA Officer
- Development and use of an internal QA Manual
- Personnel training
- Equipment maintenance and calibration
- Knowledge of current test methods
- Chain-of-custody
- QA reviews of test programs

Assignment of an Internal QA Officer: MAQS has assigned an internal QA Officer who is responsible for administering all aspects of the QA program.

Internal Quality Assurance Manual: MAQS has prepared a QA Manual according to the requirements of ASTM D7036-04 and guidelines issued by EPA. The manual documents and formalizes all of MAQS QA efforts. The manual is revised upon periodic review and as MAQS adds capabilities. The QA manual provides details on the items provided in this summary.

Personnel Testing and Training: Personnel testing and training is essential to the production of high quality test results. MAQS training programs include:

- A requirement for all technical personnel to read and understand the test methods performed
- A requirement for all technical personnel to read and understand the MAQS QA manual
- In-house testing and training
- Quality Assurance meetings
- Third party testing where available
- Maintenance of training records.

Equipment Maintenance and Calibration: All laboratory and field equipment used as a part of MAQS emission measurement programs is maintained according to manufacturer's recommendations. A summary of the major equipment maintenance schedules is summarized in Table 1. In addition to routine maintenance, calibrations are performed on all sampling equipment according to the procedures outlined in the applicable test method. The calibration intervals and techniques for major equipment components is summarized in Table 2. The calibration technique may vary to meet regulatory agency requirements.

Knowledge of Current Test Methods: MAQS maintains current copies of EPA, ARB, and SCAQMD Source Test Manuals and Rules and Regulations.

Chain-of-Custody: MAQS maintains chain-of-custody documentation on all data sheets and samples. Samples are stored in a locked area accessible only to MAQS source test personnel. Data sheets are kept in the custody of the originator, program manager, or in locked storage until return to MAQS office. Electronic field data is duplicated for backup on secure storage media. The original data sheets are used for report preparation and any additions are initialed and dated.

QA Reviews: Periodic field, laboratory, and report reviews are performed by the in-house QA coordinator. Periodically, test plans are reviewed to ensure proper test methods are selected and reports are reviewed to ensure that the methods were followed and any deviations from the methods are justified and documented.

ASTM D7036-04 Required Information

Uncertainty Statement

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is presented in the report appendices.

Performance Data

Performance data are available for review.

Qualified Personnel

A qualified individual (QI), defined by performance on a third party or internal test on the test methods, is present on each test event.

Plant Entry and Safety Requirements

Plant Entry

All test personnel are required to check in with the guard at the entrance gate or other designated area. Specific details are provided by the facility and project manager.

Safety Requirements

All personnel shall have the following personal protective equipment (PPE) and wear them where designated:

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Hearing Protection
- Gloves
- High Temperature Gloves (if required)
- Flame Resistant Clothing (if required)

The following safety measures are followed:

- Good housekeeping
- SDS for all on-site hazardous materials
- Confine selves to necessary areas (stack platform, mobile laboratory, CEMS data acquisition system, control room, administrative areas)
- Knowledge of evacuation procedures

Each facility will provide plant specific safety training.

TABLE 1
EQUIPMENT MAINTENANCE SCHEDULE

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pumps	1. Absence of leaks 2. Ability to draw manufacturers required vacuum and flow	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Replace parts 4. Leak check
Flow Meters	1. Free mechanical movement	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Calibrate
Sampling Instruments	1. Absence of malfunction 2. Proper response to zero span gas	As recommended by manufacturer	As recommended by manufacturer
Integrated Sampling Tanks	1. Absence of leaks	Depends on nature of use	1. Steam clean 2. Leak check
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters 2. Change gas dryer 3. Leak check 4. Check for system contamination
Sampling lines	1. Sample degradation less than 2%	After each test series	1. Blow dry, inert gas through line until dry

TABLE 2
MAJOR SAMPLING EQUIPMENT CALIBRATION REQUIREMENTS

Sampling Equipment	Calibration Frequency	Calibration Procedure	Acceptable Calibration Criteria
Continuous Analyzers	Before and After Each Test Day	3-point calibration error test	< 2% of analyzer range
Continuous Analyzers	Before and After Each Test Run	2-point sample system bias check	< 5% of analyzer range
Continuous Analyzers	After Each Test Run	2-point analyzer drift determination	< 3% of analyzer range
CEMS System	Beginning of Each Day	leak check	< 1 in. Hg decrease in 5 min. at > 20 in. Hg
Continuous Analyzers	Semi-Annually	3-point linearity	< 1% of analyzer range
NO_x Analyzer	Daily	NO_2 -> NO converter efficiency	> 90%
Differential Pressure Gauges (except for manometers)	Semi-Annually	Correction factor based on 5-point comparison to standard	± 5%
Differential Pressure Gauges (except for manometers)	Bi-Monthly	3-point comparison to standard, no correction factor	± 5%
Barometer	Semi-Annually	Adjusted to mercury-in-glass or National Weather Service Station	± 0.1 inches Hg
Dry Gas Meter	Semi-Annually	Calibration check at 4 flow rates using a NIST traceable standard	± 2%
Dry Gas Meter	Bi-Monthly	Calibration check at 2 flow rates using a NIST traceable standard	± 2% of semi-annual factor
Dry Gas Meter Orifice	Annually	4-point calibration for ΔH@	--
Temperature Sensors	Semi-Annually	3-point calibration vs. NIST traceable standard	± 1.5%

Note: Calibration requirements that meet applicable regulatory agency requirements are used.

Appendix D.2
SCAQMD and STAC Certifications

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

September 26, 2024

Mr. John Peterson
Montrose Air Quality Services, LLC
1631 E. Saint Andrew Place
Santa Ana, CA 92705

Subject: LAP Approval Notice
Reference # 96LA1220

Dear Mr. Peterson:

We have completed our review of Montrose Air Quality Services' revised renewal application, which was submitted as notification of Montrose's recent acquisition of AirKinetics, Inc. under the South Coast AQMD Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning September 30, 2024, and ending September 30, 2025, for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement and conditions listed in the attachment to this letter:

South Coast AQMD Methods 1-4
South Coast AQMD Methods 10.1 and 100.1
South Coast AQMD Methods 5.1, 5.2, 5.3, 6.1 (Sampling and Analysis)
South Coast AQMD Methods 25.1 and 25.3 (Sampling)
Rule 1121/ 1146.2 Protocol
Rule 1420/1420.1/1420.2 – (Lead) Source and Ambient Sampling
USEPA CTM-030 and ASTM D6522-00

Your LAP approval to perform nitrogen oxide emissions compliance testing for Rule 1121/ 1146.2 Protocols includes satellite facilities located at:

McKenna Boiler
1510 North Spring Street
Los Angeles, CA 90012

Noritz America Corp.
11160 Grace Avenue
Fountain Valley, CA 92708

Ajax Boiler, Inc.
2701 S. Harbor Blvd.
Santa Ana, CA 92704

VA Laundry Bldg., Greater LA Healthcare Sys.
508 Constitution Avenue
Los Angeles, CA 90049

So Cal Gas – Engr Analysis Ctr, Bldg H
8101 Rosemead Blvd
Pico Rivera, CA 90660

Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions. You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

D. Sarkar

Dipankar Sarkar
Program Supervisor
Source Test Engineering

DS:CE
Attachment

240926 LapRenewal.doc

American Association for Laboratory Accreditation

STAC
STACK TESTING ACCREDITATION COUNCIL

Accredited Air Emission Testing Body

A2LA has accredited

MONTROSE AIR QUALITY SERVICES

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Council (STAC) evaluation process, this laboratory is accredited to perform testing activities in compliance with ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.

Presented this 27th day of February 2024.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3925.01
Valid to February 28, 2026

This accreditation program is not included under the A2LA ILAC Mutual Recognition Arrangement.

MONTROSE AIR QUALITY SERVICES

Appendix D.3
Individual QI Certificate

Certificate of Completion

Rik Dupont

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Methods 1.1 - 4.1

Certificate Number: 002-2021-41

Tate Strickler, VP – Quality Systems

DATE OF ISSUE: 12/02/2021

DATE OF EXPIRATION: 12/01/2026

MONTROSE ENVIRONMENTAL

CERTIFICATE OF COMPLETION

Rik Dupont

This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):

SCAQMD Method 207.1

Certificate Number: 002-2021-26

DATE OF ISSUE: 8/19/21

Tate Strickler, VP – Quality Systems

DATE OF EXPIRATION: 8/19/26

MONTROSE ENVIRONMENTAL

Appendix D.4
Statement of No Conflict of Interest

STATEMENT OF NO CONFLICT OF INTEREST AS AN INDEPENDENT TESTING LABORATORY

(To be completed by authorized source testing firm representative and included in source test report)

The following facility and equipment were tested by my source testing firm and are the subjects of this statement:

Facility ID:	**153992**
Date(s) Tested:	**October 16, 2024**
Facility Name:	**Canyon Power Plant**
Equipment Address:	**3071 E. Mira Loma Avenue**
	Anaheim, California 92806
Equipment Tested:	**Unit 4**
Device ID, A/N, P/N:	**D19**

I state, as its legally authorized representative, that the source testing firm of:

Source Test Firm:	Montrose Air Quality Services, LLC
Business Address:	1631 E. St. Andrew Pl.
	Santa Ana, California 92705

is an "Independent Testing Laboratory" as defined in ***District Rule 304(k):***

For the purposes of this Rule, when an independent testing laboratory is used for the purposes of establishing compliance with District rules or to obtain a District permit to operate, it must meet all of the following criteria:

(1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company, or any subsidiary thereof -

(2) The company or facility being tested, or parent company or any subsidiary thereof, shall have no financial interest in the testing laboratory;

(3) Any company or facility responsible for the emission of significant quantities of pollutants to the atmosphere, or parent company or any subsidiary thereof shall have no financial interest in the testing laboratory; and

(4) The testing laboratory shall not be in partnership with, own or be owned by, in part or in full, the contractor who has provided or installed equipment (basic or control), or monitoring systems, or is providing maintenance for installed equipment or monitoring systems, for the company being tested.

Furthermore, I state that any contracts or agreements entered into by my source testing firm and the facility referenced above, or its designated contractor(s), either verbal or written, are not contingent upon the outcome of the source testing, or the source testing information provided to the SCAQMD.

Signature: _____ **Date:** **11/14/2024**

Rik Dupont	**Client Project Manager**	**(714) 279-6777**	**11/14/2024**
(Name)	(Title)	(Phone)	(Date)

FORM ST-110 :stevforl.doc (Revised 11/18/98

APPENDIX E
APPLICABLE PERMIT SECTIONS

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
GAS TURBINE, NO. 4, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, 479 MMBTU/HR AT 46 DEG F, WITH INLET CHILLING, WITH WATER INJECTION WITH A/N: 555831 GENERATOR, 50.95 MW	D19	C21	NOX: MAJOR SOURCE**	**CO: 4 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1) -BACT, 12-6-2002*]; **CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 2005, 12-4-2015]; NOX: 25 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; PM10: 0.01 GRAINS/SCF NATURAL GAS (5A) [RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **PM10: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]; PM10: 1.67 LBS/HR NATURAL GAS (5C) [RULE 1303(b)(2)-Offset, 5-10-1996;** *RULE 1303(b)(2) -Offset, 12-6-2002*]; **PM10: 11 LBS/HR NATURAL GAS (5B) [RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A63.1, A99.1, A99.2, A99.3, A195.1, A195.2, A195.3, A327.1, B61.1, D12.1, D29.2, D29.3, D82.1, D82.2, E193.1, H23.1, I298.4, K40.1

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: POWER GENERATION					
CO OXIDATION CATALYST, NO. 4, BASF, 110 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 476663	C21	D19 C22			
SELECTIVE CATALYTIC REDUCTION, NO. 4, CORMETECH CMHT-21, 1012 CU.FT.; WIDTH: 2 FT 6 IN; HEIGHT: 25 FT 9 IN; LENGTH: 18 FT WITH A/N: 476663 AMMONIA INJECTION	C22	C21 S24		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; *RULE 1303(a)(1) -BACT, 12-6-2002*]	A195.7, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, TURBINE NO. 4, HEIGHT: 86 FT ; DIAMETER: 11 FT 8 IN A/N: 555831	S24	C22			
System 2: INTERNAL COMBUSTION ENGINE					

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : C4, C10, C16, C22]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1110.2, 2-1-2008; RULE 1110.2, 11-1-2019; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 9-1-2017; RULE 1470, 5-4-2012; **RULE 2012, 5-6-2005; 40CFR 60 Subpart IIII, 7-7-2016]**

[Devices subject to this condition : D25]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The test(s) shall be conducted quarterly during the first twelve months of operation of the catalytic control device and annually thereafter when four consecutive quarterly source tests demonstrate compliance with the ammonia emission limit. If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the ammonia emissions limits prior to resuming annual source tests.

The South Coast AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

If the turbine is not in operation during one calendar year, then no testing is required during that calendar year.

The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using South Coast AQMD Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted and the results submitted to the South Coast AQMD within 60 days after the test date.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

[RULE 1135, 11-2-2018; **RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1) -BACT, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19]

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Sampling Time	Test Location
SOX emissions	AQMD Laboratory Method 307-91	District-approved averaging time	Fuel sample

THIS IS THE LAST PAGE OF THIS DOCUMENT

If you have any questions, please contact one of the following individuals by email or phone.

Name: Mr. Rik Dupont
Title: Client Project Manager
Region: West
Email: RDupont@montrose-env.com
Phone: (714) 279-6777

Name: Mr. Matt McCune
Title: Regional Vice President
Region: West
Email: MMccune@montrose-env.com
Phone: (714) 279-6777

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 17

AQ-14 & AQ-24
RTC INVENTORY

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

December 27, 2023

BERTHA A. HERNANDEZ
ENVIRONMENTAL SERVICES SPECIALIST
CANYON POWER PLANT (ID: 153992)
3071 E MIRALOMA AVE
ANAHEIM CA, 92806

Dear BERTHA A. HERNANDEZ:

Enclosed is your re-issued Facility Permit for Compliance Year 2024 (January 1, 2024 – December 31, 2024). This reissuance is an Administrative Permit Revision to your RECLAIM/Title V Facility Permit and includes the Title Page, Table of Contents, and Section B (RECLAIM Annual Emission Allocations) in accordance with Rule 2002(b)(4).

Please review the enclosed Section B carefully, as it will be part of your official Facility Permit. The changes are stated below. Please note that the South Coast Air Quality Management District (South Coast AQMD) rules allow you to appeal the terms and conditions of any section(s) of the enclosed Facility Permit by petitioning the Hearing Board within thirty days of receipt of the permit.

We recently sent you an invoice for the annual operating renewal fee for your facility permit. This must be paid on or before the due date indicated on the invoice or your facility permit will expire due to non-payment of fees.

A. Facility Permit

The enclosed Facility Permit contains changes described as follows:

1. The revision numbers and dates of the Title Page and the Table of Contents have been updated to reflect the reissuance of the relevant permit sections.

2. Section B – RECLAIM Annual Emission Allocation

   Section B has been updated to reflect all approved RECLAIM Trading Credit (RTC) transactions approved as of December 14, 2023. Therefore, if you have submitted any RTC transactions in December, please review your records carefully to ensure that you take into account any RTC transactions that have not been approved as of that date and make necessary changes to your facility's RTC balances when reconciling your facility's emissions.

   In addition, the South Coast AQMD has updated Section B of the Facility Permit to list your facility's allocation balances for the next fifteen years pursuant to Rule

2002(b)(4). Also, your facility's Starting Allocation and Non-Tradable RTCs in Compliance Year 1994 are listed within this section. This establishes the level used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) – Trading Zone Restrictions.

B. Appeals

As previously mentioned, if you determine that certain changes or clarifications need to be made to the enclosed permit, you may appeal the terms and conditions by petitioning the Hearing Board within thirty days of receipt. If you determine there are administrative errors in these permit sections, please notify South Coast AQMD staff within thirty days of receipt of your permit sections. Your facility is still bound by the requirements of your entire Facility Permit while your appeal is under consideration by South Coast AQMD staff and/or Hearing Board.

Any comments or questions regarding your RECLAIM/Title V Facility Permit may be directed to Shannon Lee, Senior Air Quality Engineering Manager at (909) 396-2153 or slee1@aqmd.gov.

Sincerely,

Shannon Lee
Senior Air Quality Engineering Manager
Mechanical/Chemical/Energy/Terminals

Enclosure

cc: Gerardo Rios, U.S. EPA (via cdx.epa.gov)
Kevin Orellana, Sr. Enforcement Manager – Compliance (for all Terminal, Refinery, and Energy facilities)

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Title Page
Facility ID: 153992
Revision #: 20
Date: January 01, 2024

FACILITY PERMIT TO OPERATE

CANYON POWER PLANT
3071 E MIRALOMA AVE
ANAHEIM, CA 92806

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Wayne Nastri
Executive Officer

By for
Jason Aspell
Deputy Executive Officer
Engineering and Permitting

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Table of Content
Facility ID: 153992
Revision #: 20
Date: January 01, 2024

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

TABLE OF CONTENTS

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year Begin (month/year)	Year End	Zone	NOx RTC Initially Allocated	NOx RTC[1] Holding as of 01/01/2024 (pounds)	Non-Tradable[2] Non-Usable RTCs (pounds)
7/2021	6/2022	Coastal	0	5368	2585
1/2022	12/2022	Coastal	0	1001	6543
7/2022	6/2023	Coastal	0	4027	5133
1/2023	12/2023	Coastal	0	37141	0
7/2023	6/2024	Coastal	0	21527	0
1/2024	12/2024	Coastal	0	37141	0
7/2024	6/2025	Coastal	0	21527	0
1/2025	12/2025	Coastal	0	37141	0
7/2025	6/2026	Coastal	0	21527	0
1/2026	12/2026	Coastal	0	37141	0
7/2026	6/2027	Coastal	0	21527	0
1/2027	12/2027	Coastal	0	37141	0
7/2027	6/2028	Coastal	0	21527	0
1/2028	12/2028	Coastal	0	37141	0
7/2028	6/2029	Coastal	0	21527	0
1/2029	12/2029	Coastal	0	37141	0
7/2029	6/2030	Coastal	0	21527	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.

2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year Begin (month/year)	Year End	Zone	NOx RTC Initially Allocated	NOx RTC[1] Holding as of 01/01/2024 (pounds)	Non-Tradable[2] Non-Usable RTCs (pounds)
1/2030	12/2030	Coastal	0	37141	0
7/2030	6/2031	Coastal	0	21527	0
1/2031	12/2031	Coastal	0	37141	0
7/2031	6/2032	Coastal	0	21527	0
1/2032	12/2032	Coastal	0	37141	0
7/2032	6/2033	Coastal	0	21527	0
1/2033	12/2033	Coastal	0	37141	0
7/2033	6/2034	Coastal	0	21527	0
1/2034	12/2034	Coastal	0	37141	0
7/2034	6/2035	Coastal	0	21527	0
1/2035	12/2035	Coastal	0	37141	0
7/2035	6/2036	Coastal	0	21527	0
1/2036	12/2036	Coastal	0	37141	0
7/2036	6/2037	Coastal	0	21527	0
1/2037	12/2037	Coastal	0	37141	0
7/2037	6/2038	Coastal	0	21527	0
1/2038	12/2038	Coastal	0	37141	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.

2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year Begin (month/year)	Year End	Zone	NOx RTC Initially Allocated	NOx RTC[1] Holding as of 01/01/2024 (pounds)	Non-Tradable[2] Non-Usable RTCs (pounds)
7/2038	6/2039	Coastal	0	21527	0
1/2039	12/2039	Coastal	0	37141	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.
2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.

FACILITY PERMIT TO OPERATE
CANYON POWER PLANT

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. If the facility submits a permit application to increase in an annual allocation to a level greater than the facility's starting Allocation plus Non-Tradable credits as listed below, the application will be evaluated for compliance with Rule 2005 (c)(4). Rule 2005 (e) - Trading Zone Restrictions applies if an annual allocation is increased to a level greater than the facility's Starting Allocation plus Non-Tradable Credits:

Year		Zone	RTC Starting Allocation (pounds)	Non-Tradable Credits(NTC) (pounds)
Begin (month/year)	End			

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 18

AQ-17
NH3 FLOW METER ACCURACY REPORTS

HRD 6

HOMER R. DULIN CO.

729 EAST WILLOW STREET
SIGNAL HILL, CALIFORNIA 90755
(562) 424-8533 HRDULIN@AOL.COM

CERT. NO. 3-202-24

CALIBRATION CERTIFICATION

SUBMITTED BY: SCPPA - CANYON POWER PLANT

FLOWMETER SERIAL NO: _____ MFG. SERIAL NO: 14832375

MANUFACTURER: MICRO MOTION MODEL: CMF025M313N2BAEZZZ

TUBE NO: N/A FLOAT NO: N/A

DATA IS: As Found/As Left ; In Tolerance

See Remarks ☑
Calibrated @ customer's facility ☐

REMARKS: DIRECT READING ELECTRONIC INDICATOR TRANSMITTER S/N: 14832375, CALIBRATED IN LBS/HR H2O @ 75°F. SP.GR. 1.0 METER IS VERY UNSTABLE.

ACCURACY ± 1% RATE

INDICATED	ACTUAL
LB/HR	LBS/HR
150.63	151.51
134.32	135.01
121.68	122.06
110.03	110.16
92.75	93.01
76.39	76.26
61.82	62.00
49.85	50.05
35.64	35.50
20.64	20.50

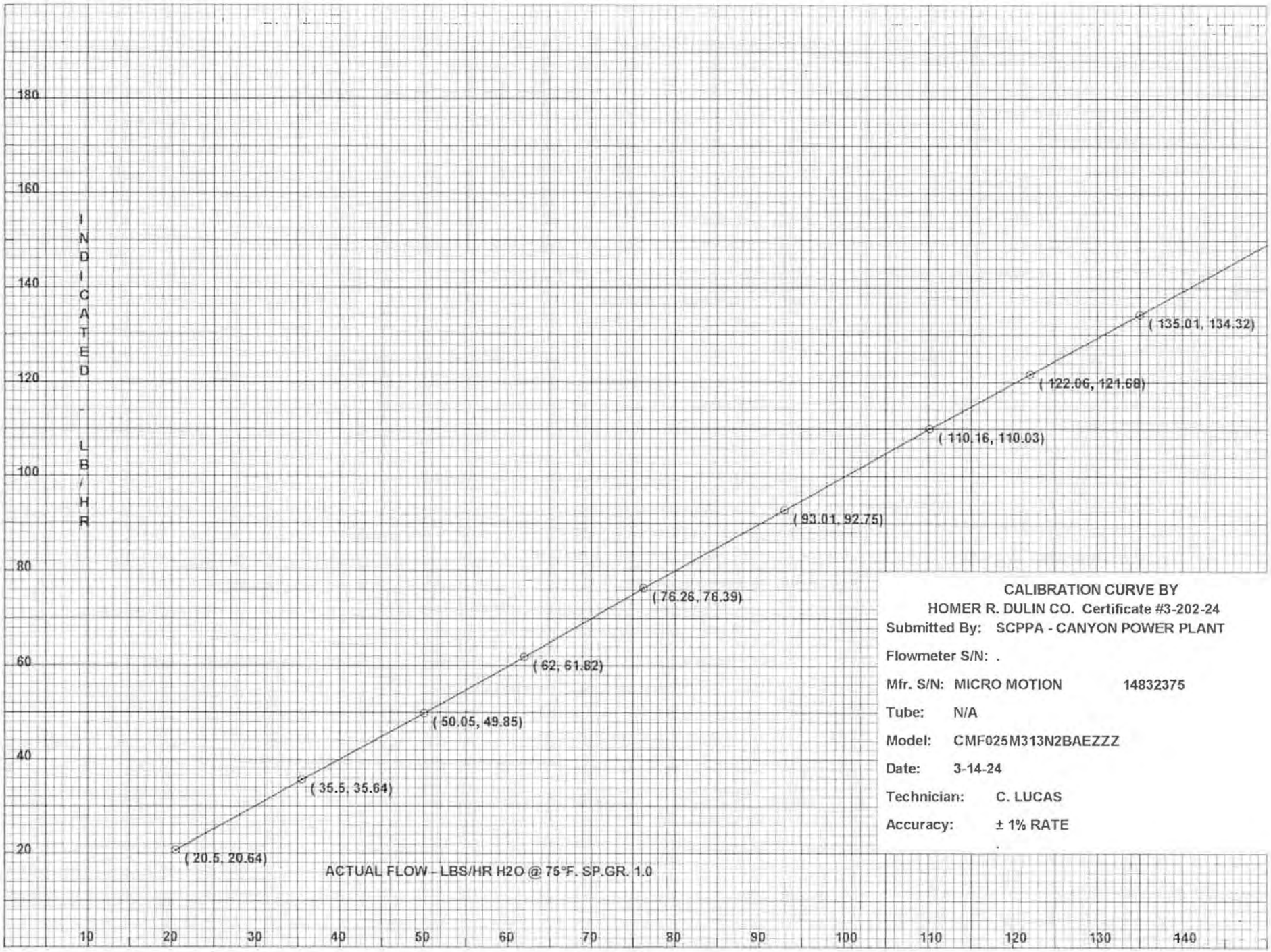
Flowmeter Certified with HOMER R. DULIN CO.

Equip. No.: 11605 Accuracy: 0.005% Equip. Cal. Date: 9/13/21 Cal. Due: 9/13/24

NIST Cert. No.: MSML CC #21188 A Procedure No.: ISA:RP 16.6

P.O. No.: SCPPA-2400096 Shipper No.: _____

3-14-24	3-14-25	C. LUCAS C. Lucas
CALIBRATION DATE	RECALIBRATION DUE	CALIBRATION TECHNICIAN


INDICATED - LB/HR
ACTUAL FLOW - LBS/HR H2O @ 75°F. SP.GR. 1.0
(20.5, 20.64)
(35.5, 35.64)
(50.05, 49.85)
(62, 61.82)
(76.26, 76.39)
(93.01, 92.75)
(110.16, 110.03)
(122.06, 121.68)
(135.01, 134.32)
CALIBRATION CURVE BY
HOMER R. DULIN CO. Certificate #3-202-24
Submitted By: SCPPA - CANYON POWER PLANT
Flowmeter S/N: .
Mfr. S/N: MICRO MOTION 14832375
Tube: N/A
Model: CMF025M313N2BAEZZZ
Date: 3-14-24
Technician: C. LUCAS
Accuracy: ± 1% RATE

HOMER R. DULIN CO.
729 EAST WILLOW STREET
SIGNAL HILL, CALIFORNIA 90755
(562) 424-8533 HRDULIN@AOL.COM

CERT. NO. 3-334-24
CALIBRATION CERTIFICATION

SUBMITTED BY: SCPPA - CANYON POWER PLANT

FLOWMETER SERIAL NO: MFG. SERIAL NO: 14139410

MANUFACTURER: MICRO MOTION MODEL: CMF025M313NQBUEZZZ

TUBE NO: N/A FLOAT NO: N/A

DATA IS: As Found/As Left ; In Tolerance

See Remarks ☑
Calibrated @ customer's facility ☐

REMARKS: DIRECT READING ELECTRONIC INDICATOR TRANSMITTER S/N: 14139410, CALIBRATED IN LBS/HR H2O @ 75°F. SP.GR. 1.0 METER IS UNSTABLE

ACCURACY ± 1% RATE

INDICATED		ACTUAL	
LB/HR		LBS/HR	
150.35		150.06	
135.17		135.01	
120.60		120.16	
106.10		105.61	
92.01		91.81	
78.60		78.51	
64.62		64.51	
49.70		49.55	
35.15		35.05	
19.75		19.70	

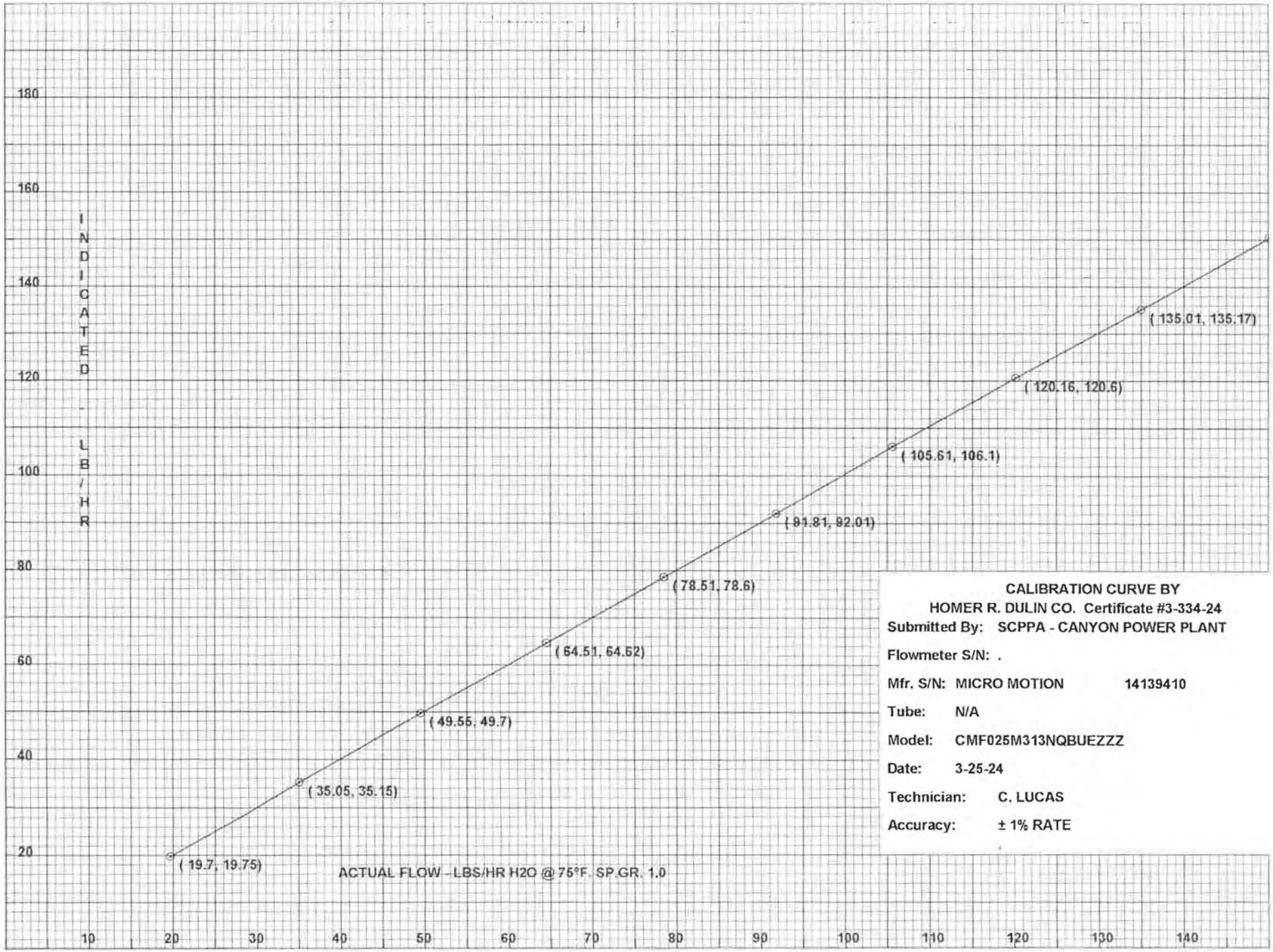
Flowmeter Certified with HOMER R. DULIN CO.

Equip. No.: 11605 Accuracy: 0.005% Equip. Cal. Date: 9/13/21 Cal. Due: 9/13/24

NIST Cert. No.: MSML CC #21188 A Procedure No.: ISA:RP 16.6

P.O. No.: SCPPA-2400096 Shipper No.:

3-25-24	3-25-25	C. LUCAS C. Lucas
CALIBRATION DATE	RECALIBRATION DUE	CALIBRATION TECHNICIAN


INDICATED - LB/HR
ACTUAL FLOW - LBS/HR H2O @ 75°F, SP.GR. 1.0
(19.7, 19.75)
(35.05, 35.15)
(49.55, 49.7)
(64.51, 64.52)
(78.51, 78.6)
(91.81, 92.01)
(105.61, 106.1)
(120.16, 120.6)
(135.01, 135.17)
CALIBRATION CURVE BY
HOMER R. DULIN CO. Certificate #3-334-24
Submitted By: SCPPA - CANYON POWER PLANT
Flowmeter S/N: .
Mfr. S/N: MICRO MOTION 14139410
Tube: N/A
Model: CMF025M313NQBUEZZZ
Date: 3-25-24
Technician: C. LUCAS
Accuracy: ± 1% RATE

HRD 6

HOMER R. DULIN CO.

729 EAST WILLOW STREET
SIGNAL HILL, CALIFORNIA 90755
(562) 424-8533 HRDULIN@AOL.COM

CERT. NO. 4-144-24

CALIBRATION CERTIFICATION

SUBMITTED BY: SCPPA - CANYON POWER PLANT

FLOWMETER SERIAL NO: MFG. SERIAL NO: 14134531

MANUFACTURER: MICRO MOTION MODEL: CMF025M313NQBUEZZZ

TUBE NO: N/A FLOAT NO: N/A

DATA IS: As Found/As Left ; In Tolerance

See Remarks ☑
Calibrated @ customer's facility

REMARKS: DIRECT READING ELECTRONIC INDICATOR TRANSMITTER S/N: 14134531, CALIBRATED IN LBS/HR H2O @ 75°F. SP.GR. 1.0 METER READINGS ARE UNSTABLE.

ACCURACY ± 1% RATE

INDICATED	ACTUAL
LB/H	LBS/HR
150.68	149.47
131.84	130.81
125.98	125.04
114.84	113.94
94.66	93.90
76.31	75.68
57.03	56.58
47.93	47.60
37.54	37.25
19.75	19.61

Flowmeter Certified with HOMER R. DULIN CO.

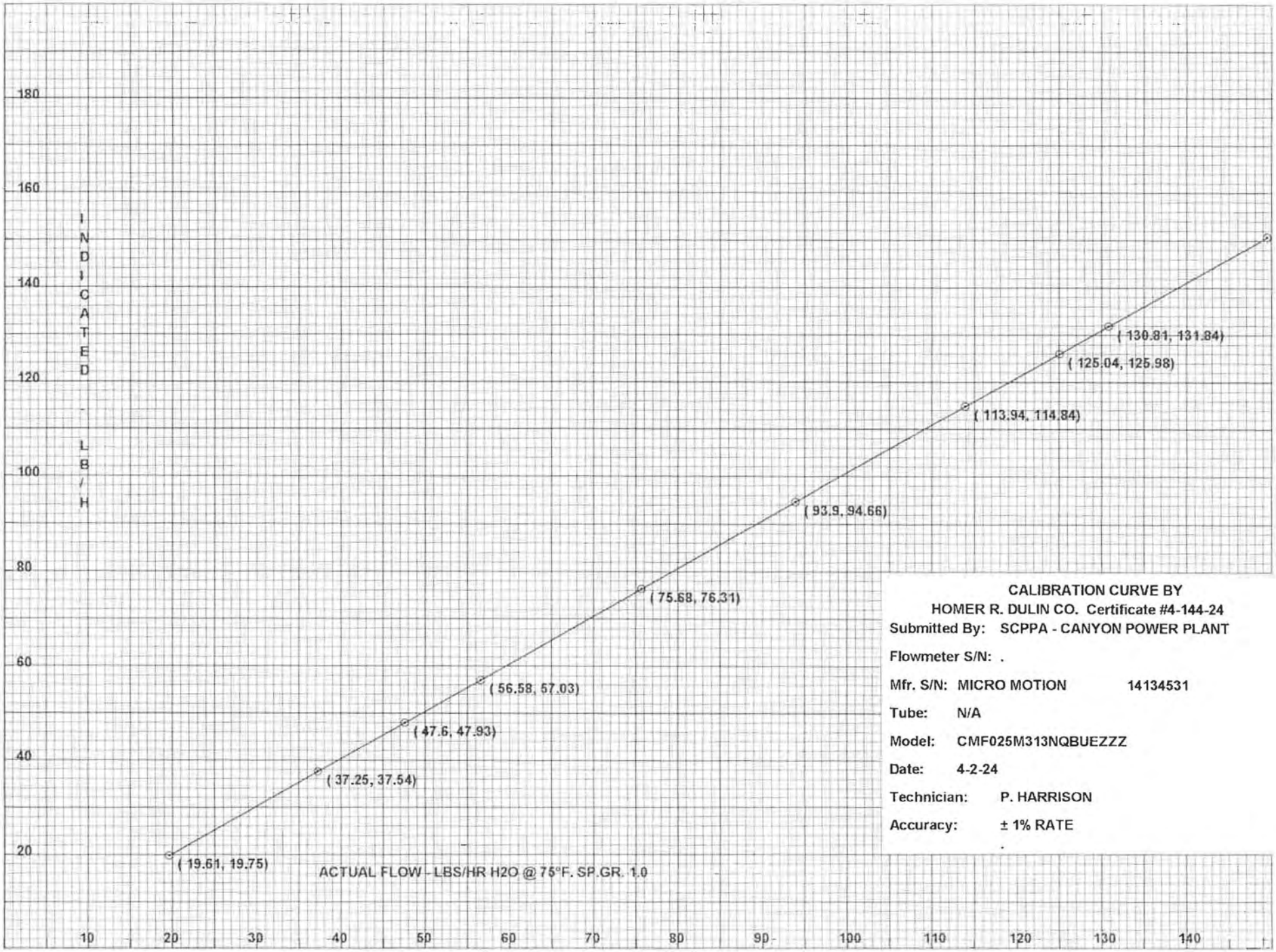
Equip. No.: 11605 Accuracy: 0.005% Equip. Cal. Date: 9/13/21 Cal. Due: 9/13/24

NIST Cert. No.: MSML CC #21188 A Procedure No.: ISA:RP 16.6

Our standards are certified by or are traceable to the National Institute of Standards and Technology and systems comply with MIL-STD 45662A, ANSI/NCSL Z540.3, ISO/IEC 17025, and ISO 10012. The collective uncertainty of the standards used in this calibration does not exceed 25% of the certified accuracy of the instrument under test. This document may not be reproduced, except in full, without prior written approval of the Homer R. Dulin Co. Rev.2 Dated 4/16/22

P.O. No.: SCPPA-2400096 Shipper No.:

4-2-24	4-2-25	P. HARRISON Paul Harrison
CALIBRATION DATE	RECALIBRATION DUE	CALIBRATION TECHNICIAN


INDICATED - LB/H
ACTUAL FLOW - LBS/HR H2O @ 75°F. SP.GR. 1.0
(19.61, 19.75)
(37.25, 37.54)
(47.6, 47.93)
(56.58, 57.03)
(75.68, 76.31)
(93.9, 94.66)
(113.94, 114.84)
(125.04, 125.98)
(130.81, 131.84)
CALIBRATION CURVE BY
HOMER R. DULIN CO. Certificate #4-144-24
Submitted By: SCPPA - CANYON POWER PLANT
Flowmeter S/N: .
Mfr. S/N: MICRO MOTION 14134531
Tube: N/A
Model: CMF025M313NQBUEZZZ
Date: 4-2-24
Technician: P. HARRISON
Accuracy: ± 1% RATE

HRD 6

HOMER R. DULIN CO.

729 EAST WILLOW STREET
SIGNAL HILL, CALIFORNIA 90755
(562) 424-8533 HRDULIN@AOL.COM

CERT. NO. 4-220-24

CALIBRATION CERTIFICATION

SUBMITTED BY: SCPPA - CANYON POWER PLANT

FLOWMETER SERIAL NO: _____ MFG. SERIAL NO: 14136005

MANUFACTURER: MICRO MOTION MODEL: CMF025M313NQBUEZZZ

TUBE NO: N/A FLOAT NO: N/A

DATA IS: As Found/As Left ; In Tolerance

See Remarks ☑
Calibrated @ customer's facility ☐

REMARKS: DIRECT READING ELECTRONIC INDICATOR TRANSMITTER S/N: 14136005, CALIBRATED IN LBS/HR H2O @ 75°F. SP.GR. 1.0 METER READINGS ARE AVERAGED. METER IS VERY UNSTABLE

ACCURACY ± 1% RATE

INDICATED		ACTUAL	
LB/H		LBS/HR	
148.89		150.17	
132.10		133.17	
121.73		122.66	
106.23		107.04	
91.94		92.59	
77.31		77.84	
64.03		64.49	
49.35		49.63	
34.77		35.01	
26.68		26.50	

Flowmeter Certified with HOMER R. DULIN CO.

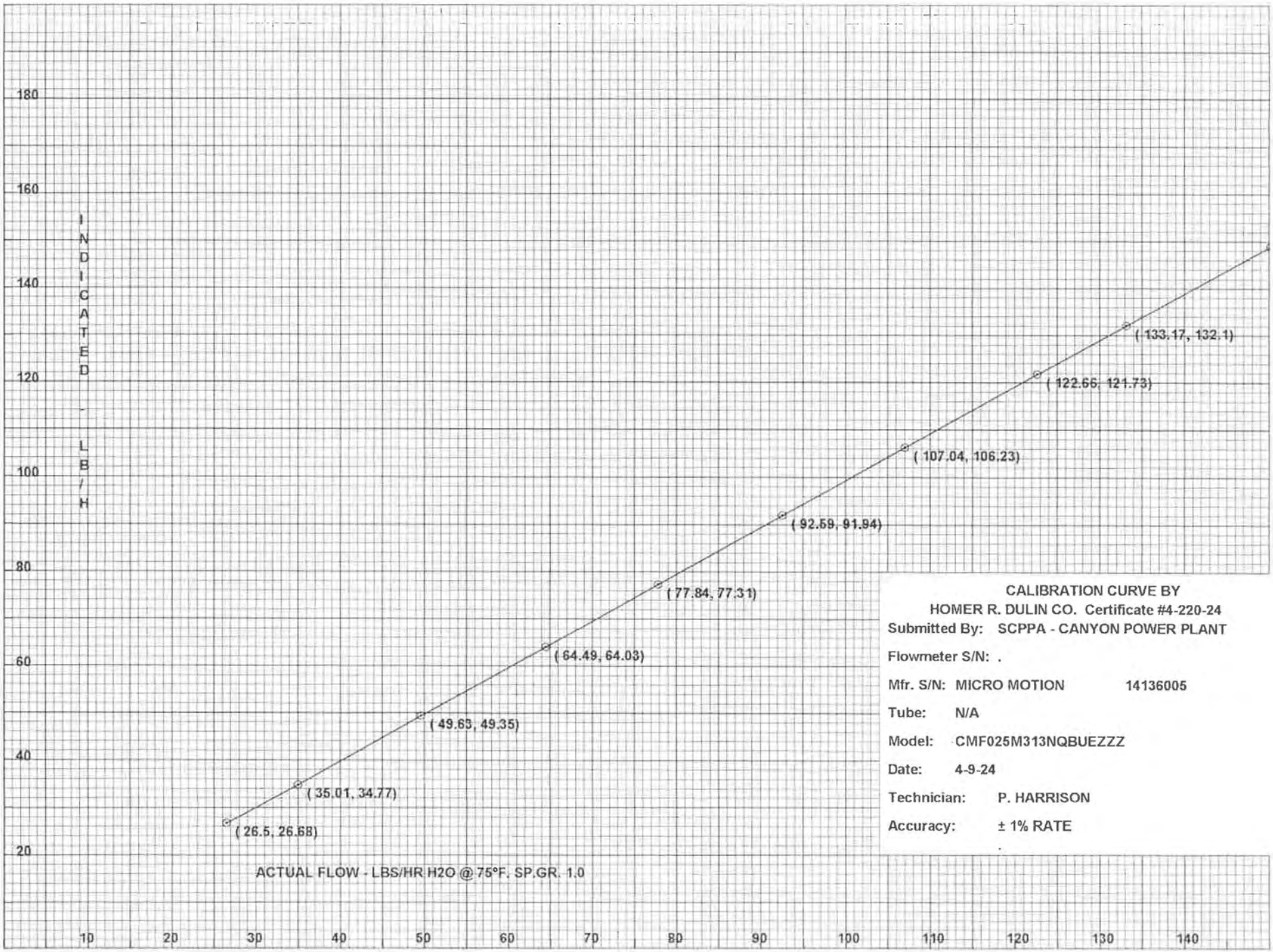
Equip. No.: 11605 Accuracy: 0.005% Equip. Cal. Date: 9/13/21 Cal. Due: 9/13/24

NIST Cert. No.: MSML CC #21188 A Procedure No.: ISA:RP 16.6

Our standards are certified by or are traceable to the National Institute of Standards and Technology and systems comply with MIL-STD 45662A, ANSI/NCSL Z540.3, ISO/IEC 17025, and ISO 10012. The collective uncertainty of the standards used in this calibration does not exceed 25% of the certified accuracy of the instrument under test. This document may not be reproduced, except in full, without prior written approval of the Homer R. Dulin Co. Rev.2 Dated 4/16/22

P.O. No.: SCPPA-2400096 Shipper No.: _____

4-9-24	4-9-25	P. HARRISON Paul Harrison
CALIBRATION DATE	RECALIBRATION DUE	CALIBRATION TECHNICIAN



CALIBRATION CURVE BY
HOMER R. DULIN CO. Certificate #4-220-24

Submitted By: SCPPA - CANYON POWER PLANT

Flowmeter S/N: .

Mfr. S/N: MICRO MOTION 14136005

Tube: N/A

Model: CMF025M313NQBUEZZZ

Date: 4-9-24

Technician: P. HARRISON

Accuracy: ± 1% RATE

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 19

AQ-18
SCR INLET TEMPERATURE SENSOR

CALIBRATION REPORTS

Calibration: SCR Inlet Temperature
Unit 1 TE-403A-403D

Calibration Certificate

Certificate Number:

Position ID: 1-TE-403A

Printed: 1/18/2024 11:21:11 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U1/

Device

Device ID	1-TE-403A	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U1 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

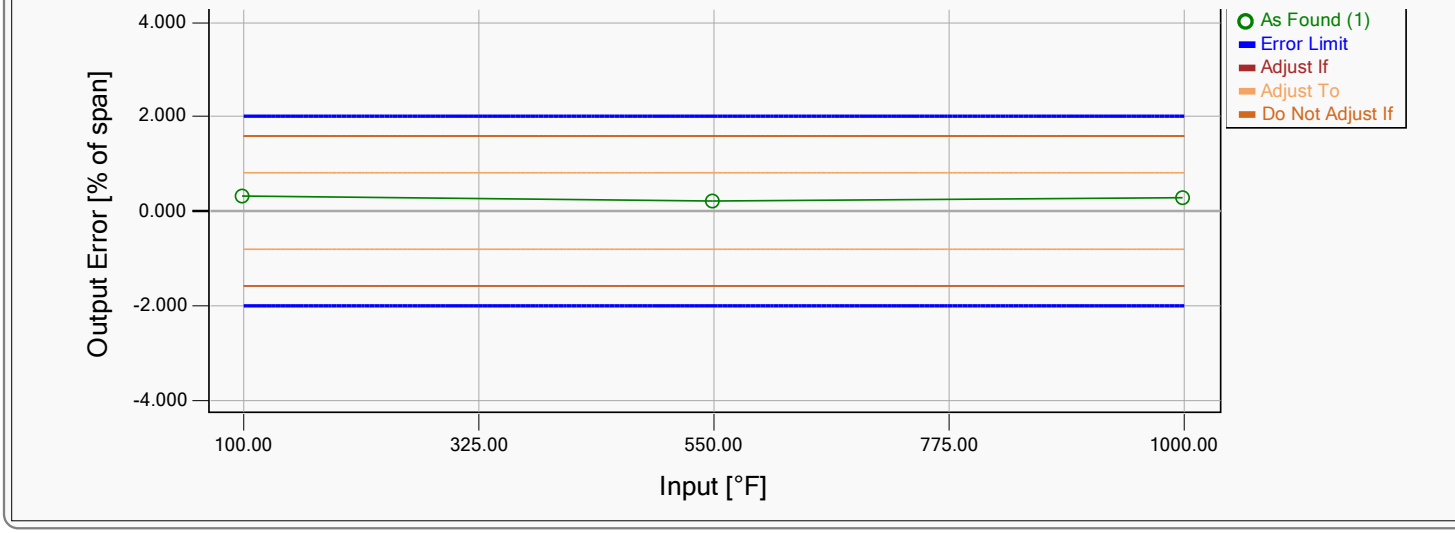
Calibration time	1/17/2024 8:28:00 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.334 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	99.99	100.0	103.000	0.334
550.0	549.99	550.0	552.000	0.223
1000.0	999.99	1000.0	1002.500	0.279

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 8:28:00 AM

Calibration Certificate

Certificate Number:

Position ID: 1-TE-403B

Printed: 1/18/2024 11:21:11 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U1/

Device

Device ID	1-TE-403B	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U1 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

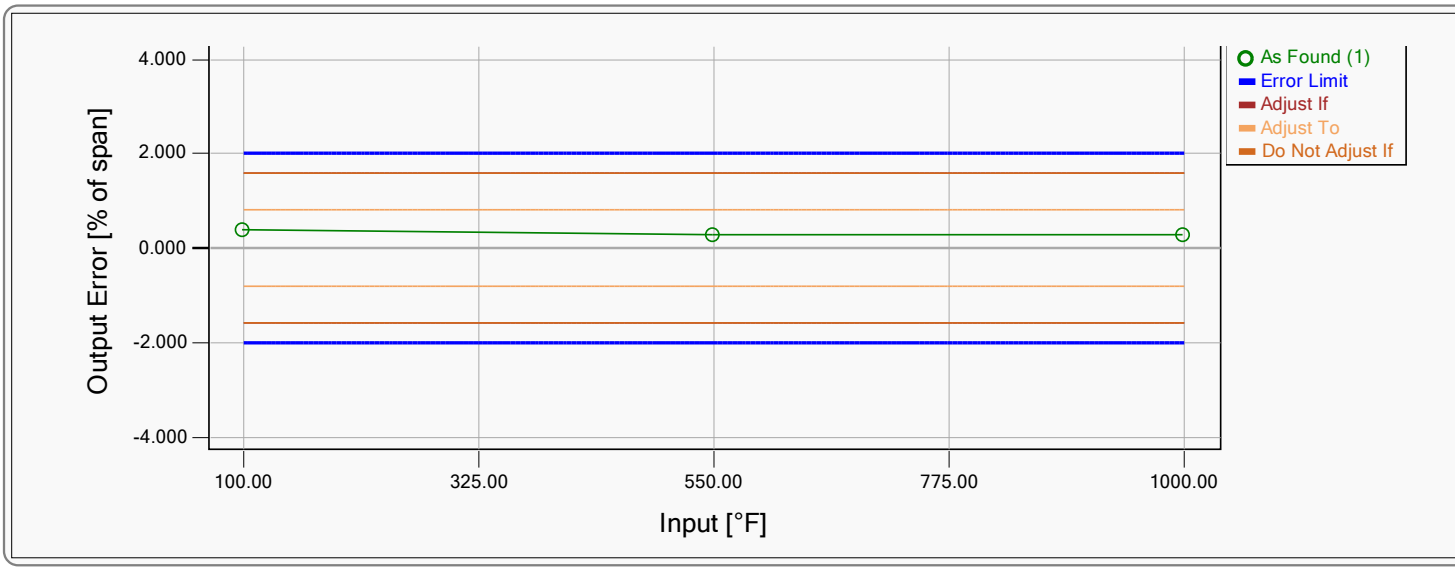
Calibration time	1/17/2024 8:31:48 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.390 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	99.99	100.0	103.500	0.390
550.0	549.99	550.0	552.500	0.279
1000.0	999.99	1000.0	1002.500	0.279

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 8:31:48 AM

Calibration Certificate

Certificate Number:

Position ID: 1-TE-403C

Printed: 1/18/2024 11:21:11 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U1/

Device

Device ID	1-TE-403C	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U1 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

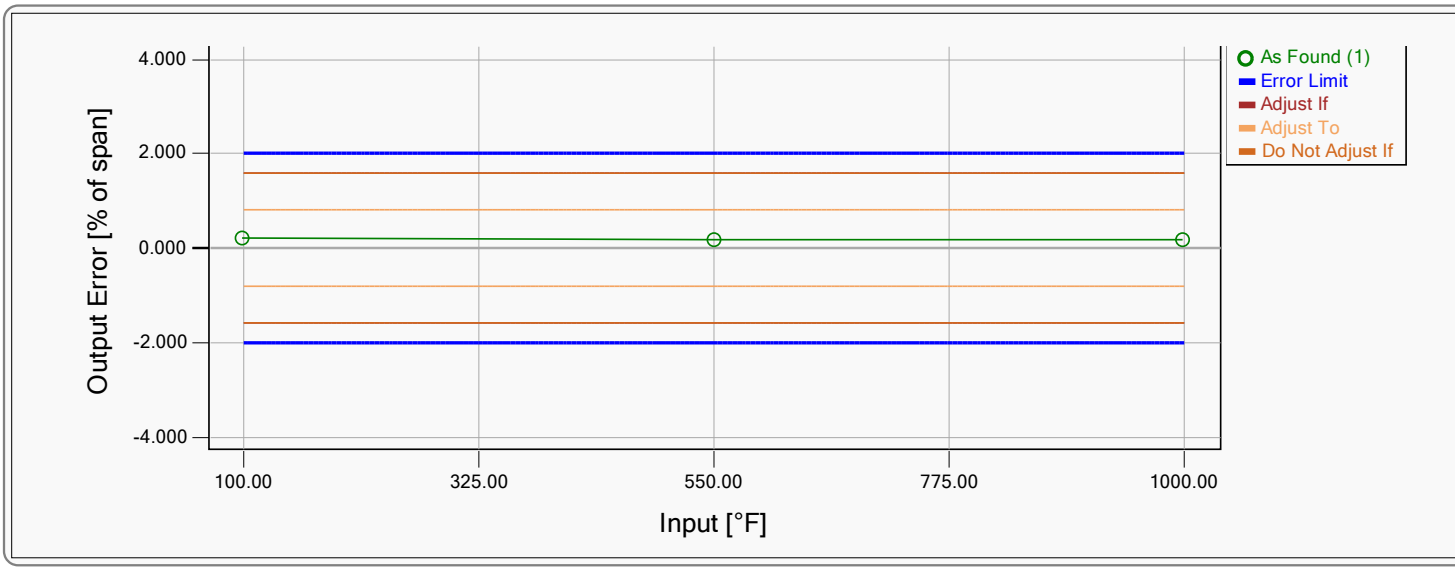
Calibration time	1/17/2024 8:34:43 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.223 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	99.99	100.0	102.000	0.223
550.0	550.00	550.0	551.500	0.167
1000.0	999.99	1000.0	1001.500	0.168

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 8:34:43 AM

Calibration Certificate

Certificate Number:

Position ID: 1-TE-403D

Printed: 1/18/2024 11:21:11 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U1/

Device

Device ID	1-TE-403D	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U1 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

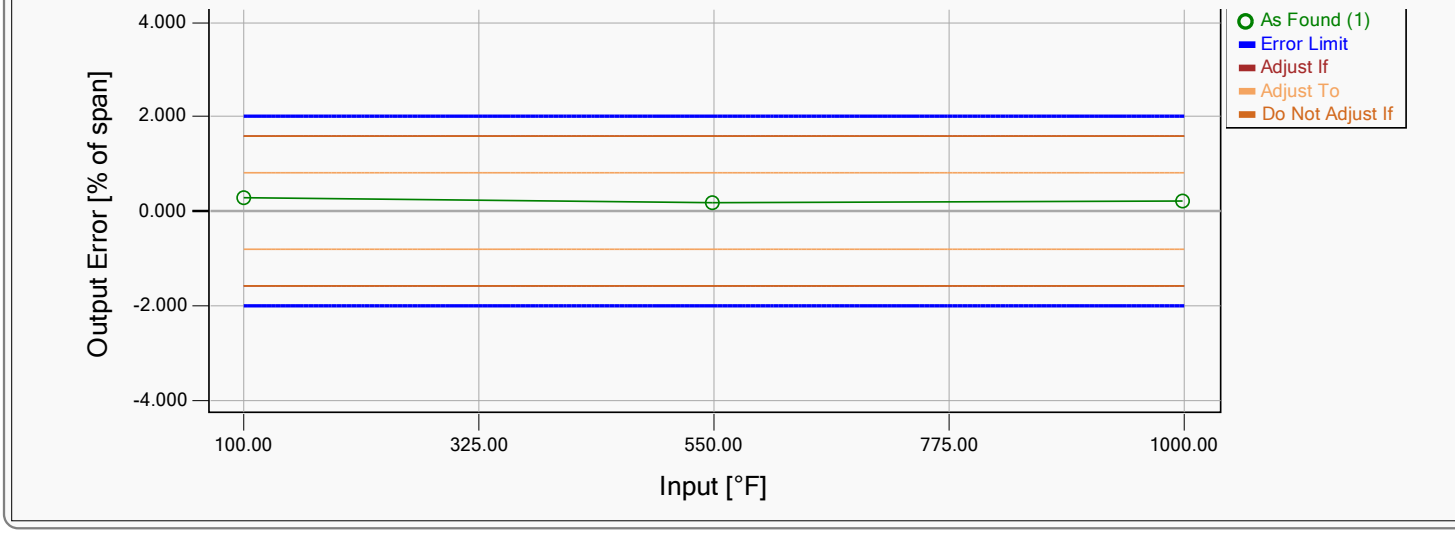
Calibration time	1/17/2024 8:37:10 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.278 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.00	100.0	102.500	0.278
550.0	549.99	550.0	551.500	0.168
1000.0	999.99	1000.0	1002.000	0.223

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 8:37:10 AM

Calibration: SCR Inlet Temperature
Unit 2 TE-403A-403D

Calibration Certificate

Certificate Number:

Position ID: 2-TE-403A

Printed: 1/18/2024 11:24:38 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U2/

Device

Device ID	2-TE-403A	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U2 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

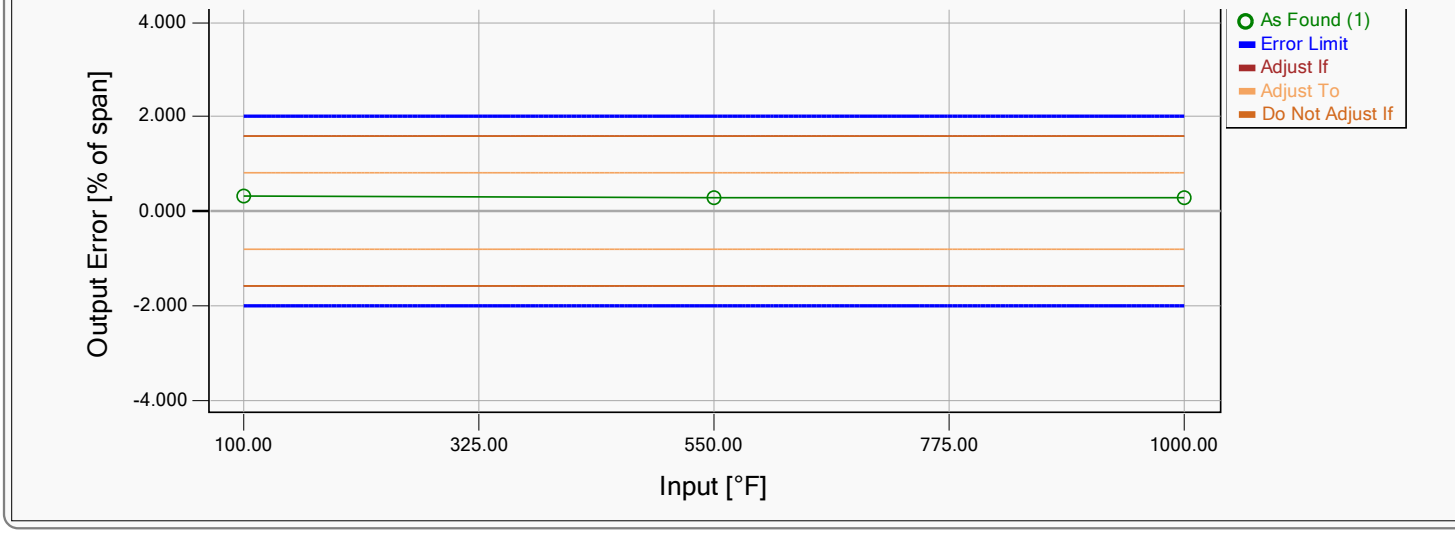
Calibration time	1/17/2024 9:00:36 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.333 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.00	100.0	103.000	0.333
550.0	550.00	550.0	552.500	0.278
1000.0	1000.00	1000.0	1002.500	0.278

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:00:36 AM

Calibration Certificate

Certificate Number:

Position ID: 2-TE-403B

Printed: 1/18/2024 11:24:38 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U2/

Device

Device ID	2-TE-403B	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U2 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

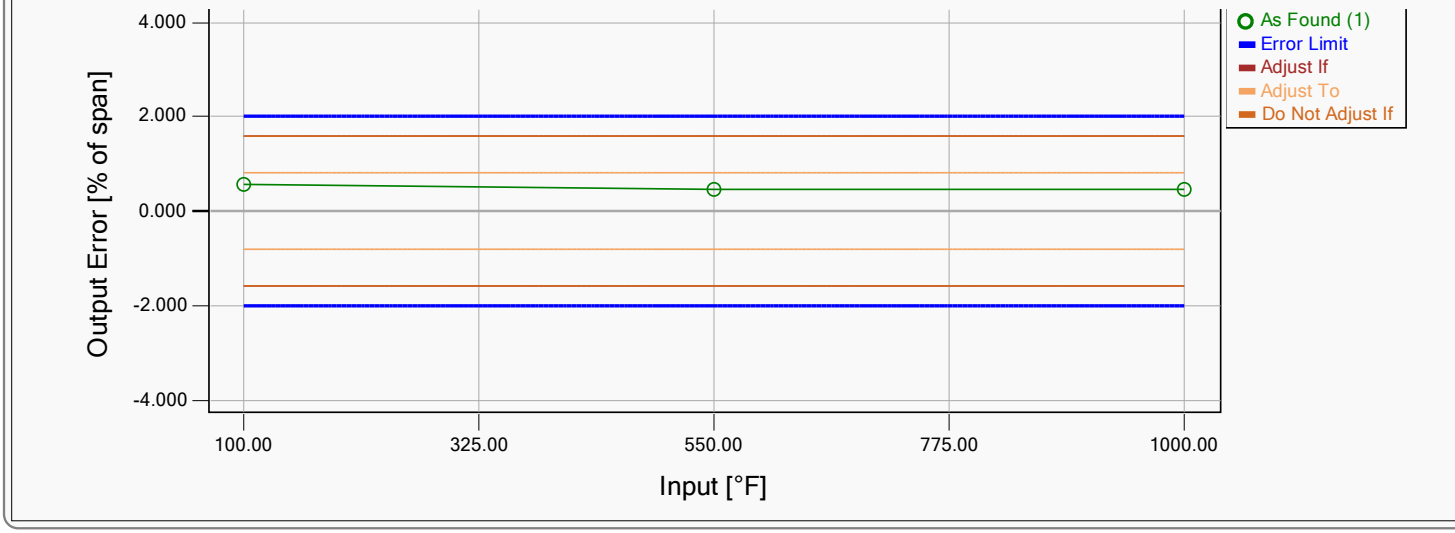
Calibration time	1/17/2024 9:03:29 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.556 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.00	100.0	105.000	0.556
550.0	550.00	550.0	554.000	0.444
1000.0	1000.00	1000.0	1004.000	0.444

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:03:29 AM

Calibration Certificate

Certificate Number:

Position ID: 2-TE-403C

Printed: 1/18/2024 11:24:38 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U2/

Device

Device ID	2-TE-403C	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U2 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

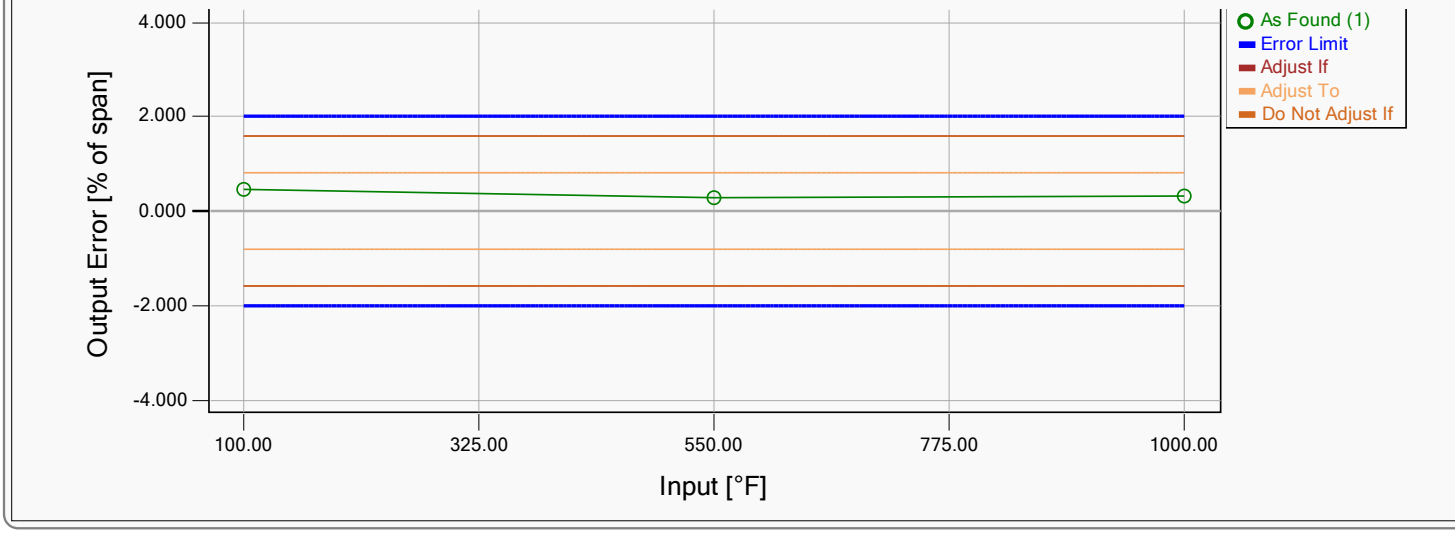
Calibration time	1/17/2024 9:06:15 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.443 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.01	100.0	104.000	0.443
550.0	550.00	550.0	552.500	0.278
1000.0	1000.00	1000.0	1003.000	0.333

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:06:15 AM

Calibration Certificate

Certificate Number:

Position ID: 2-TE-403D

Printed: 1/18/2024 11:24:38 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U2/

Device

Device ID	2-TE-403D	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U2 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

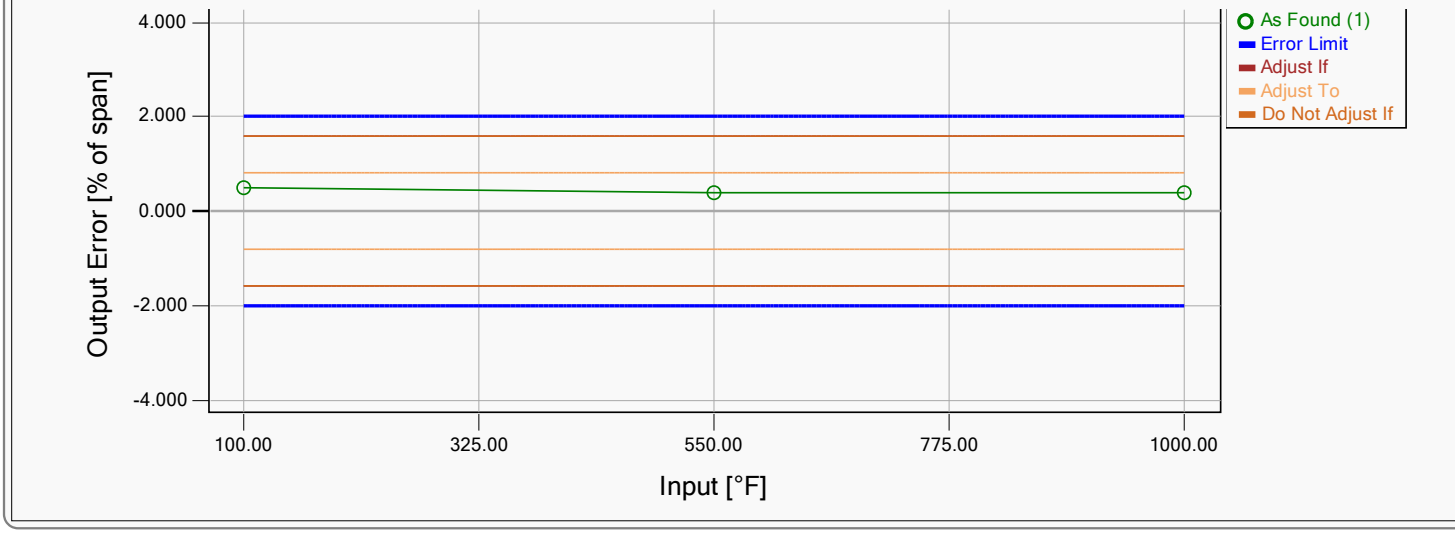
Calibration time	1/17/2024 9:08:23 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.500 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.00	100.0	104.500	0.500
550.0	550.00	550.0	553.500	0.389
1000.0	1000.00	1000.0	1003.500	0.389

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:08:23 AM

Calibration: SCR Inlet Temperature
Unit 3 TE-403A-403D

Calibration Certificate

Certificate Number:

Position ID: 3-TE-403A

Printed: 1/18/2024 11:27:13 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U3/

Device

Device ID	3-TE-403A	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U3 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

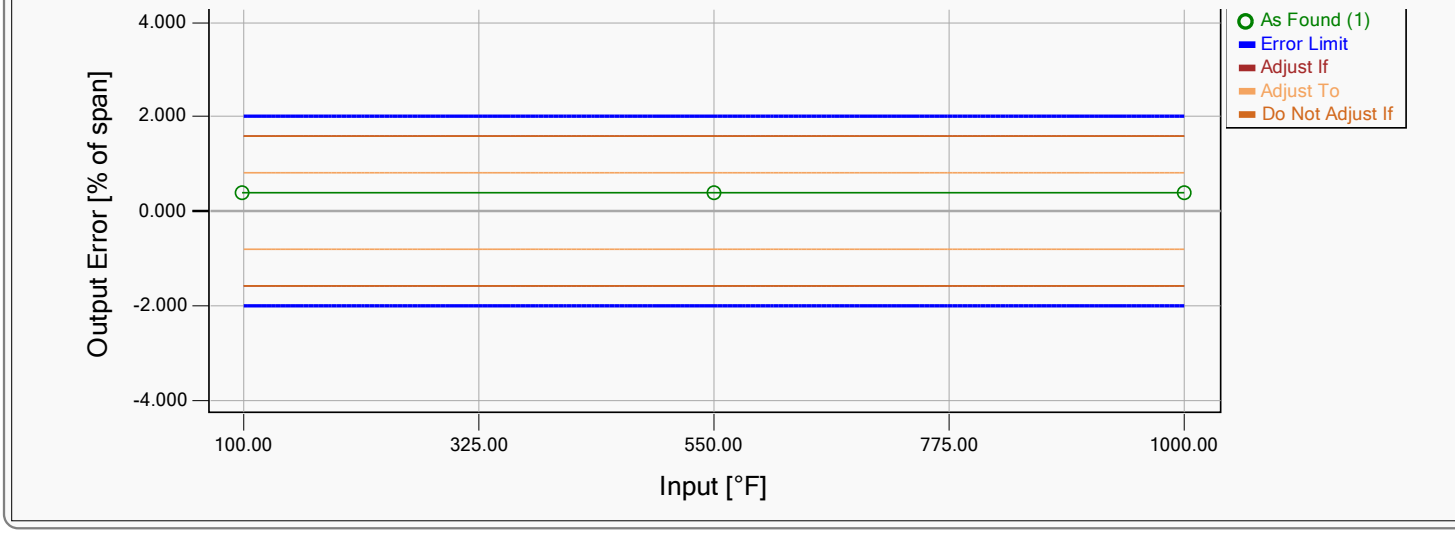
Calibration time	1/17/2024 9:30:56 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.390 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	99.99	100.0	103.500	0.390
550.0	550.00	550.0	553.500	0.389
1000.0	1000.00	1000.0	1003.500	0.389

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:30:56 AM

Calibration Certificate

Certificate Number:

Position ID: 3-TE-403B

Printed: 1/18/2024 11:27:13 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U3/

Device

Device ID	3-TE-403B	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U3 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

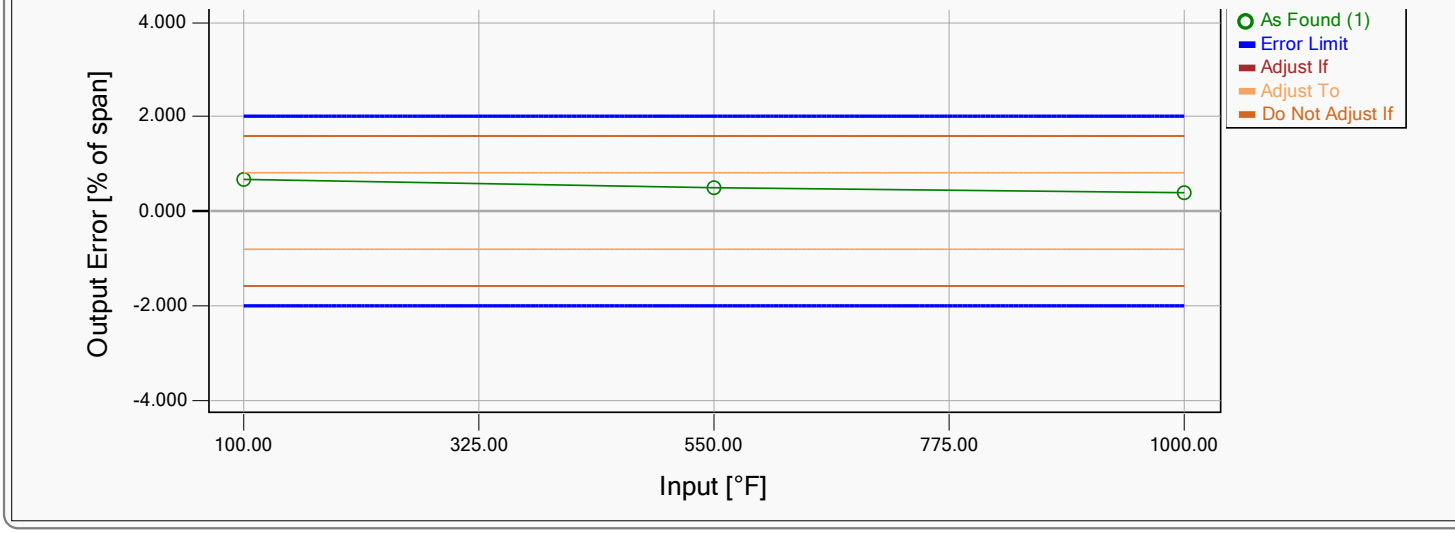
Calibration time	1/17/2024 9:33:33 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.666 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.01	100.0	106.000	0.666
550.0	550.00	550.0	554.500	0.500
1000.0	1000.00	1000.0	1003.500	0.389

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:33:33 AM

Calibration Certificate

Certificate Number:

Position ID: 3-TE-403C

Printed: 1/18/2024 11:27:13 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U3/

Device

Device ID	3-TE-403C	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U3 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

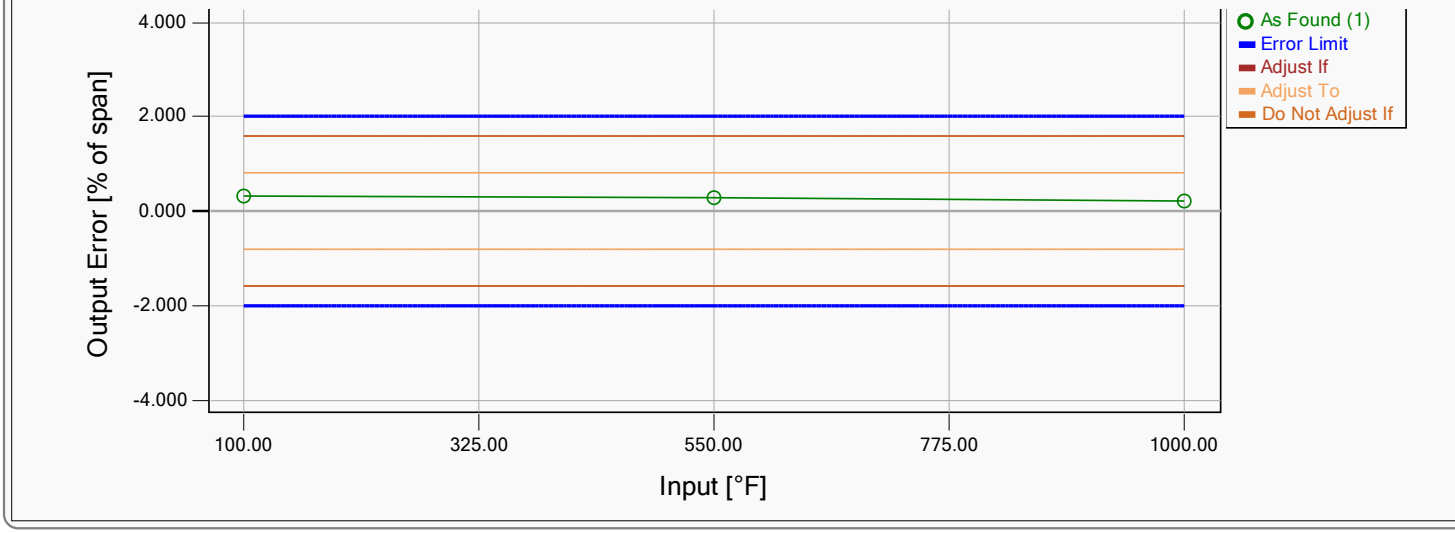
Calibration time	1/17/2024 9:35:49 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.332 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.01	100.0	103.000	0.332
550.0	550.01	550.0	552.500	0.277
1000.0	1000.00	1000.0	1002.000	0.222

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:35:49 AM

Calibration Certificate

Certificate Number:

Position ID: 3-TE-403D

Printed: 1/18/2024 11:27:13 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U3/

Device

Device ID	3-TE-403D	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U3 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

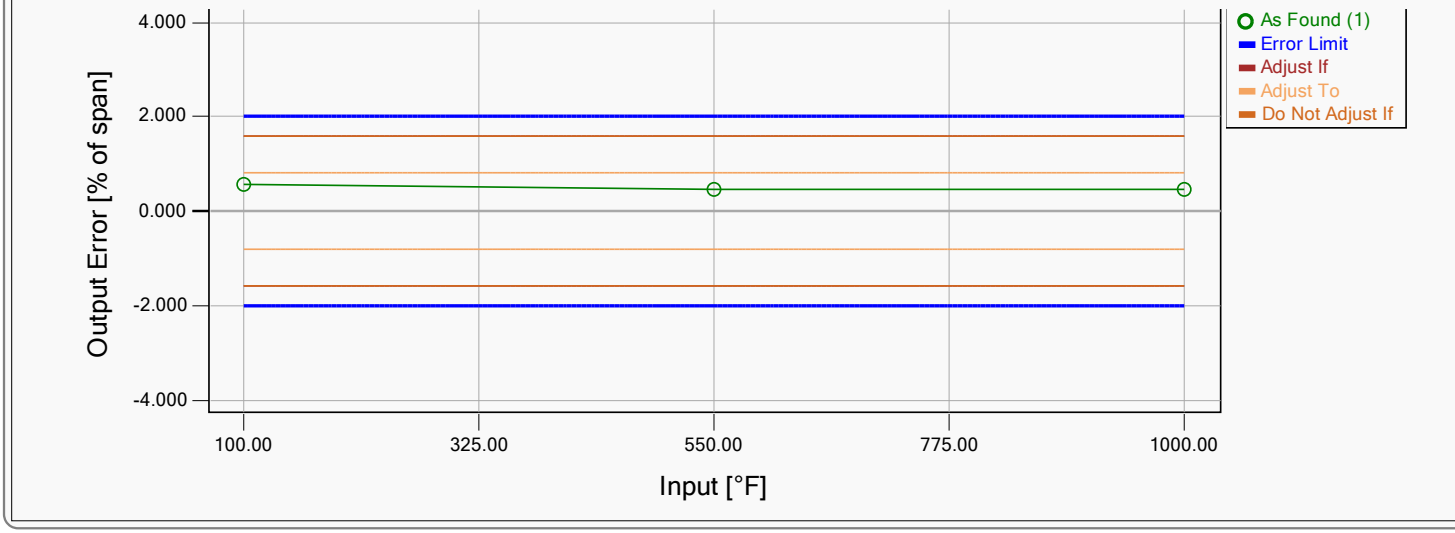
Calibration time	1/17/2024 9:38:10 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.554 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.01	100.0	105.000	0.554
550.0	550.01	550.0	554.000	0.443
1000.0	1000.00	1000.0	1004.000	0.444

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 9:38:10 AM

Calibration: SCR Inlet Temperature
Unit 4 TE-403A-403D

Calibration Certificate

Certificate Number:

Position ID: 4-TE-403A

Printed: 1/18/2024 11:28:52 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U4/

Device

Device ID	4-TE-403A	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U4 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

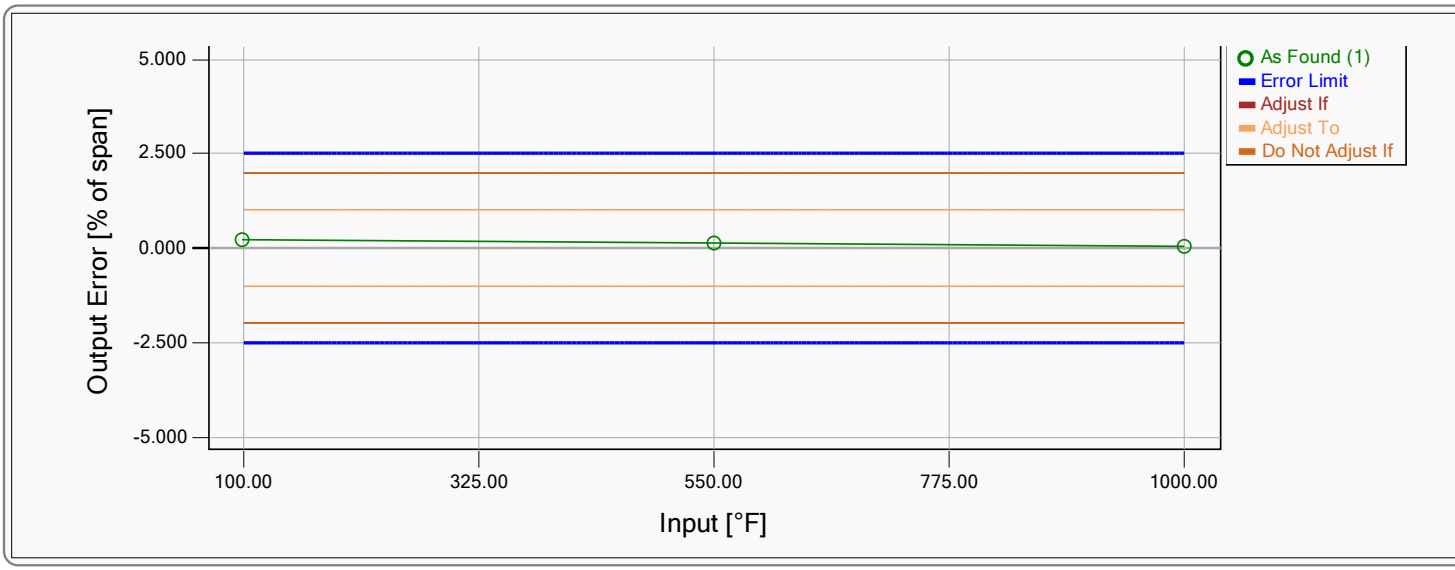
Calibration time	1/17/2024 10:11:52 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2.5 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.223 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	99.99	100.0	102.000	0.223
550.0	550.00	550.0	551.000	0.111
1000.0	1000.00	1000.0	1000.500	0.056

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 10:11:52 AM

Calibration Certificate

Certificate Number:

Position ID: 4-TE-403B

Printed: 1/18/2024 11:28:52 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U4/

Device

Device ID	4-TE-403B	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U4 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

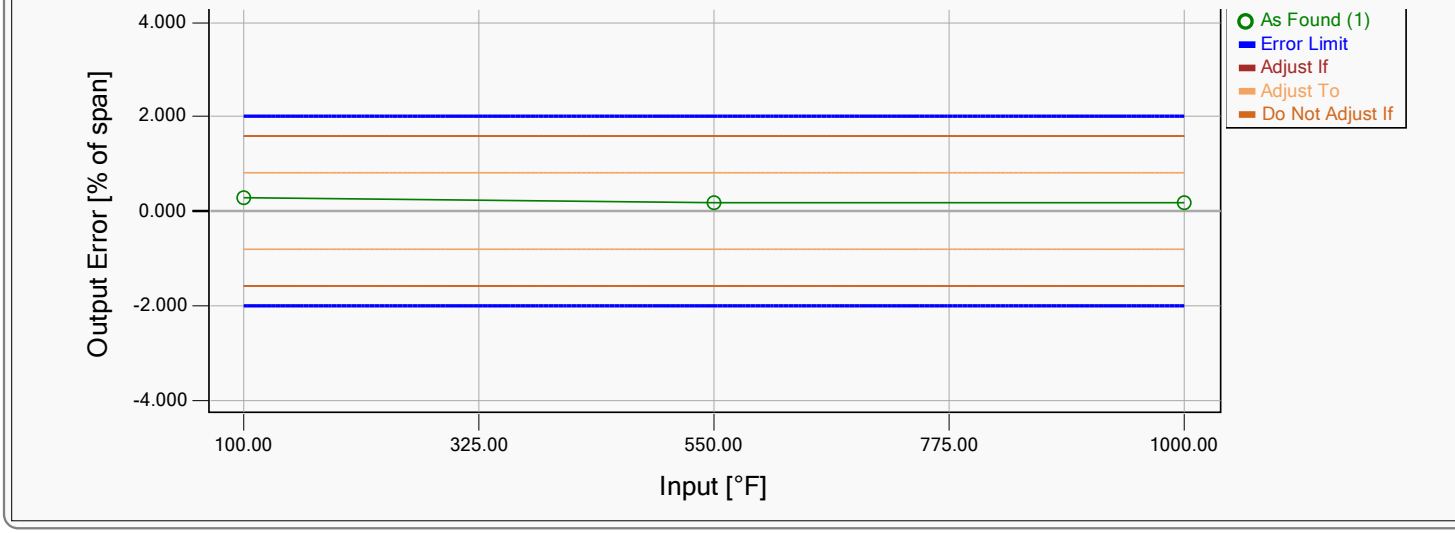
Calibration time	1/17/2024 10:14:19 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.276 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.02	100.0	102.500	0.276
550.0	550.01	550.0	551.500	0.166
1000.0	1000.01	1000.0	1001.500	0.166

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 10:14:19 AM

Calibration Certificate

Certificate Number:

Position ID: 4-TE-403C

Printed: 1/18/2024 11:28:52 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U4/

Device

Device ID	4-TE-403C	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U4 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

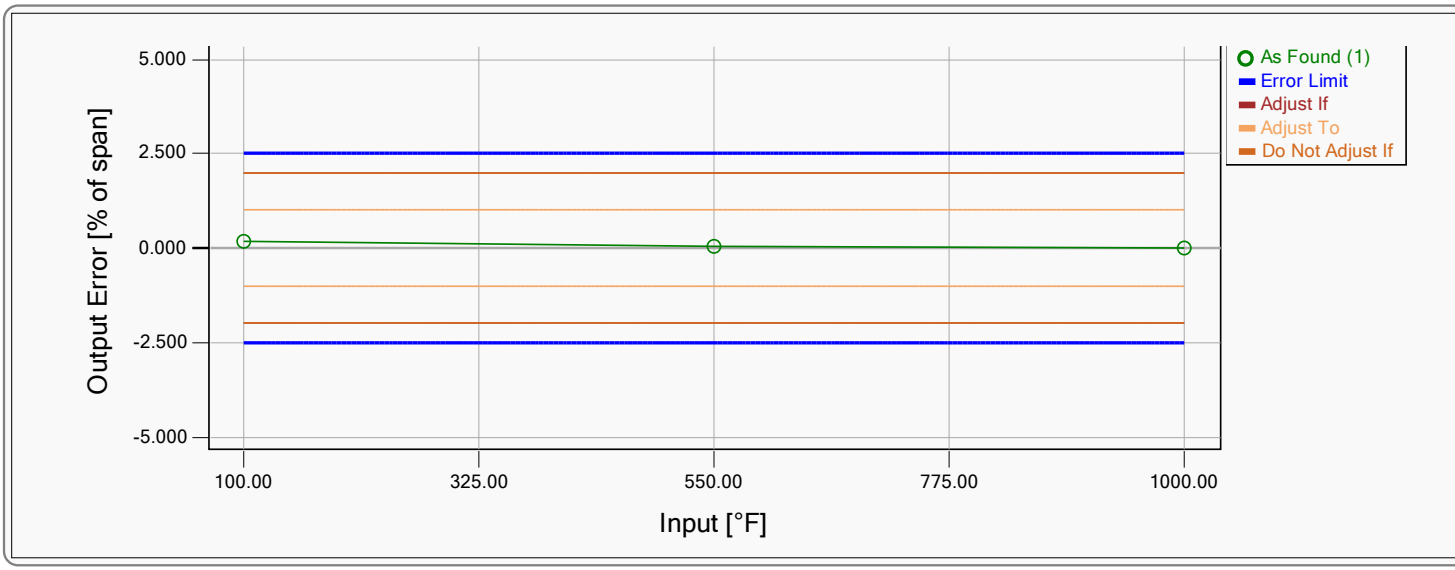
Calibration time	1/17/2024 10:16:52 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2.5 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.167 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.00	100.0	101.500	0.167
550.0	550.00	550.0	550.500	0.056
1000.0	1000.00	1000.0	1000.000	0.000

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 10:16:52 AM

Calibration Certificate

Certificate Number:

Position ID: 4-TE-403D

Printed: 1/18/2024 11:28:52 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	SCR INLET TEMP
Work Order Number	
Location	NH3 INJ SKID
Plant	CANYON/ERU/U4/

Device

Device ID	4-TE-403D	
Serial Number		
Manufacturer		
Rangeability		
Operating		Operating Humidity

Function

Name	U4 SCR INLET TEMP (ud)	
Transfer Function	Linear	
Range	100 ... 1000 °F	100 ... 1000 °F

Calibration Event

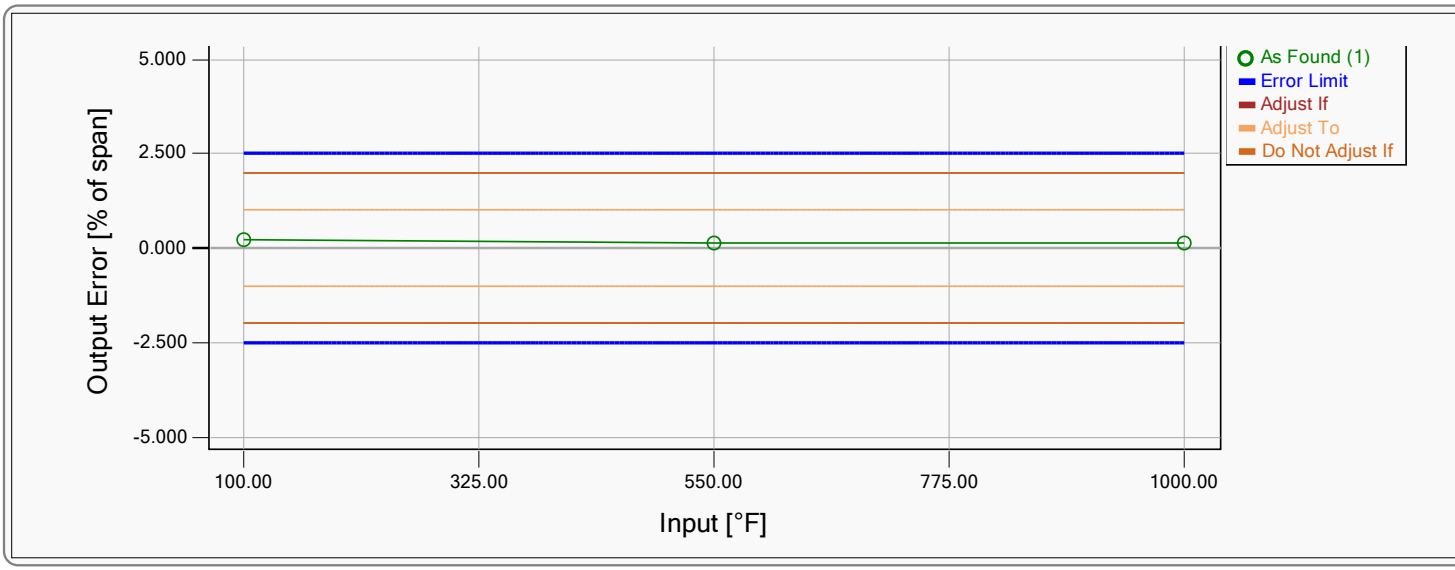
Calibration time	1/17/2024 10:19:25 AM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/17/2025	Interval	1 years
Reject If Error >	2.5 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	TC-R-OUT/ TC1 : 65279	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	TC-R-OUT/ R1 : 65279	Due Date: 2/15/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.222 % of span

Nominal Input [°F]	Actual Input [°F]	Nominal Output [°F]	Actual Output [°F]	Found Error [% of span]
100.0	100.00	100.0	102.000	0.222
550.0	550.00	550.0	551.000	0.111
1000.0	1000.00	1000.0	1001.000	0.111

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/17/2024 10:19:25 AM

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 20

AQ-19
SCR DIFFERENTIAL PRESSURE SENSOR

CALIBRATION REPORTS

Calibration Report: SCR Differential Pressure Sensor
Unit 1 PDIT-403

Calibration Certificate

Certificate Number:

Position ID: 1-PDIT-403

Printed: 2/27/2024 10:28:28 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	U1 SCR DP
Work Order Number	
Location	U1 ERU
Plant	CANYON/ERU/U1/

Device

Device ID	1-PDIT-403
Serial Number	
Manufacturer	Rosemount 3051S2CD1A2F12A1AB3E5L4M5Q4
Rangeability	
Operating	Operating Humidity

Function

Name	U1 SCR DP (ud)	
Transfer Function	Linear	
Range	0 ... 10 inH2O (G)	4 ... 20 mA

Calibration Event

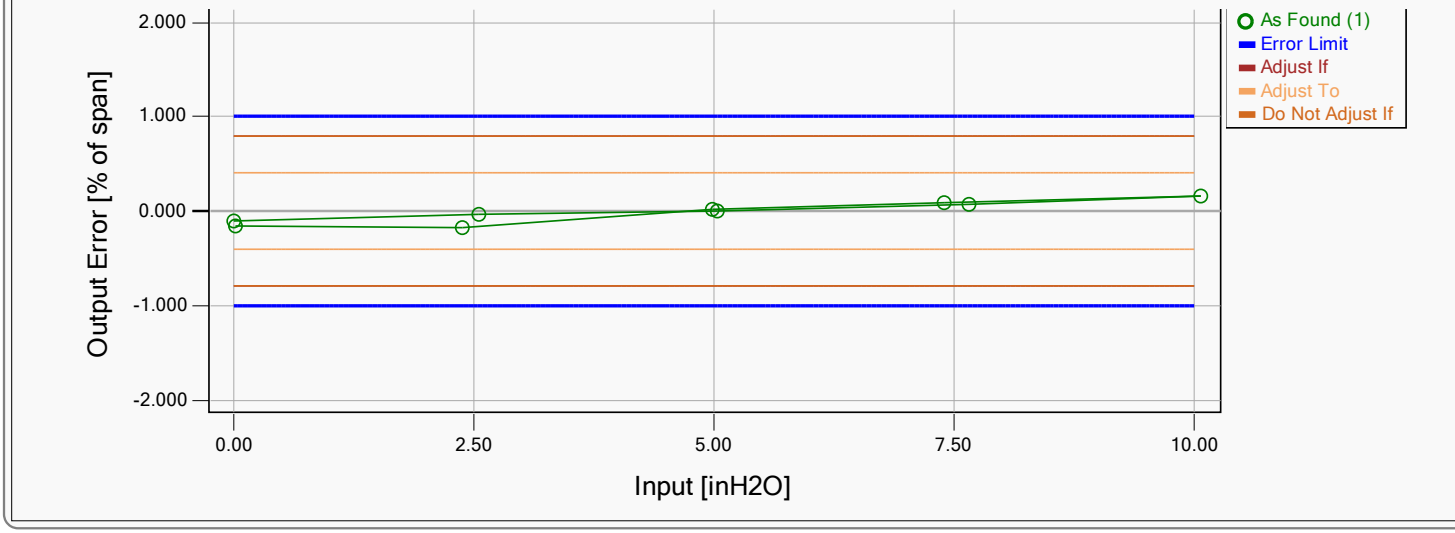
Calibration time	2/23/2024 8:06:34 AM
Next Calibration	
Environment	Environment

Calibration Procedure

Due Date	2/23/2025	Interval	1 years
Reject If Error >	1 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/1/2025
Input Module	P2C : 69381	Due Date: 2/6/2025
Output Calibrator	MC6 : 605835	Due Date: 2/1/2025
Output Module	IN : 25613	Due Date: 2/1/2025



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: -0.172 % of span

Nominal Input [inH2O]	Actual Input [inH2O]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of span]
0.0000	0.00	4.0000	3.9835	-0.103
2.500	2.56	8.000	8.0899	-0.038
5.000	5.05	12.000	12.0793	-0.004
7.500	7.67	16.000	16.2824	0.065
10.000	10.07	20.000	20.1361	0.151
7.500	7.41	16.000	15.8690	0.081
5.000	4.99	12.000	11.9873	0.021
2.500	2.39	8.000	7.7965	-0.172
0.0000	0.03	4.0000	4.0232	-0.155

Calibration Note: INITIAL FIELD CAL AFTER INSTALLATION.

Calibrated by: VINCENT NGUYEN
2/23/2024 8:06:34 AM

Calibration Report: SCR Differential Pressure Sensor
Unit 2 PDIT-403

Calibration Certificate

Certificate Number:

Position ID: 2-PDIT-403

Printed: 1/18/2024 11:23:13 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	U2 SCR DP
Work Order Number	
Location	U2 ERU
Plant	CANYON/ERU/U2/

Device

Device ID	2-PDIT-403
Serial Number	
Manufacturer	Rosemount 3051S2CD1A2F12A1AB3E5L4M5Q4
Rangeability	
Operating	Operating Humidity

Function

Name	U2 SCR DP (ud)	
Transfer Function	Linear	
Range	0 ... 10 inH2O (G)	4 ... 20 mA

Calibration Event

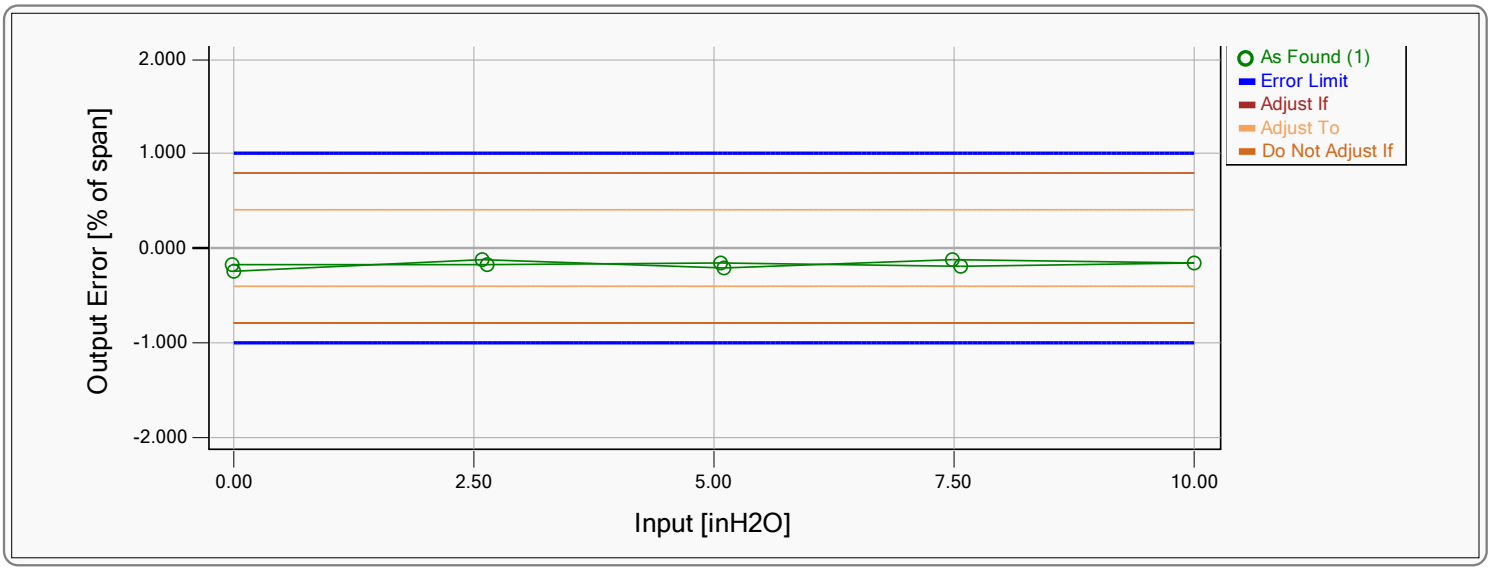
Calibration time	1/16/2024 10:37:20 AM
Next Calibration	
Environment	Environment

Calibration Procedure

Due Date	1/16/2025	Interval	1 years
Reject If Error >	1 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	P2C : 69381	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	IN : 25613	Due Date: 2/16/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: -0.251 % of span

Nominal Input [inH2O]	Actual Input [inH2O]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of span]
0.0000	0.00	4.0000	3.9599	-0.251
2.500	2.60	8.000	8.1392	-0.130
5.000	5.11	12.000	12.1425	-0.209
7.500	7.49	16.000	15.9634	-0.129
10.000	10.01	20.000	19.9905	-0.159
7.500	7.57	16.000	16.0802	-0.199
5.000	5.07	12.000	12.0853	-0.167
2.500	2.64	8.000	8.1951	-0.181
0.0000	-0.01	4.0000	3.9566	-0.171

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/16/2024 10:37:20 AM

Calibration Report: SCR Differential Pressure Sensor
Unit 3 PDIT-403

Calibration Certificate

Certificate Number:

Position ID: 3-PDIT-403

Printed: 1/18/2024 11:25:30 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	U3 SCR DP
Work Order Number	
Location	U3 ERU
Plant	CANYON/ERU/U3/

Device

Device ID	3-PDIT-403
Serial Number	
Manufacturer	Rosemount 3051S2CD1A2F12A1AB3E5L4M5Q4
Rangeability	
Operating	Operating Humidity

Function

Name	U3 SCR DP (ud)	
Transfer Function	Linear	
Range	0 ... 10 inH2O (G)	4 ... 20 mA

Calibration Event

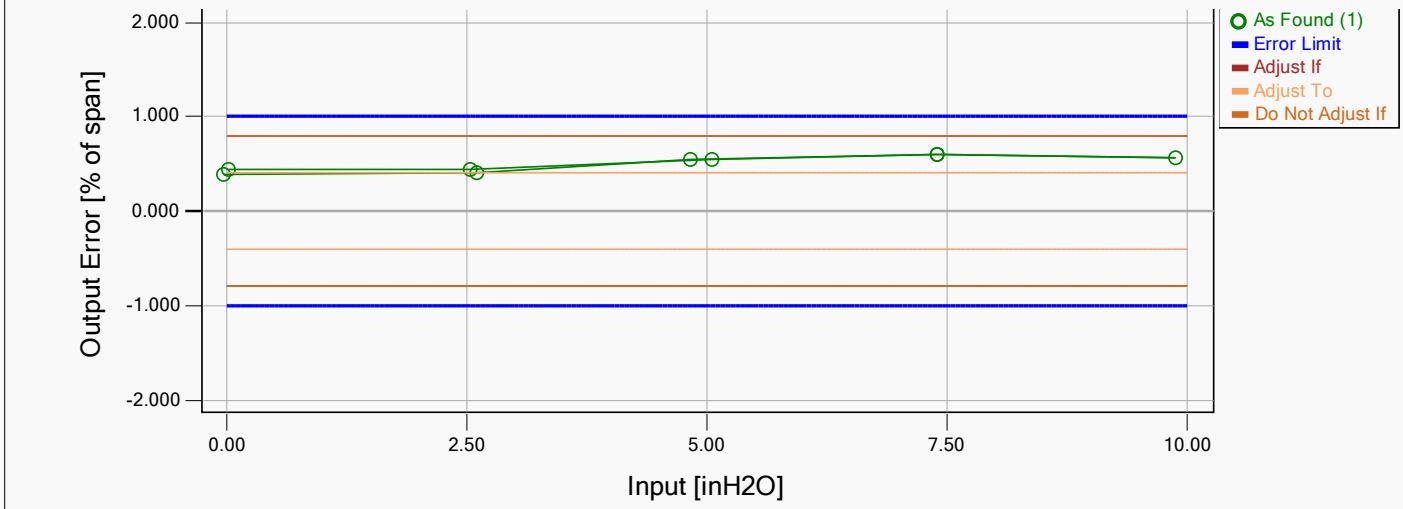
Calibration time	1/16/2024 12:18:16 PM
Next Calibration	
Environment	Environment

Calibration Procedure

Due Date	1/16/2025	Interval	1 years
Reject If Error >	1 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	P2C : 69381	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	IN : 25613	Due Date: 2/16/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.600 % of span

Nominal Input [inH2O]	Actual Input [inH2O]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of span]
0.0000	-0.02	4.0000	4.0289	0.381
2.500	2.61	8.000	8.2417	0.411
5.000	4.83	12.000	11.8152	0.545
7.500	7.41	16.000	15.9520	0.600
10.000	9.89	20.000	19.9132	0.558
7.500	7.40	16.000	15.9345	0.591
5.000	5.06	12.000	12.1824	0.540
2.500	2.55	8.000	8.1503	0.439
0.0000	0.02	4.0000	4.1035	0.447

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/16/2024 12:18:16 PM

Calibration Report: SCR Differential Pressure Sensor
Unit 4 PDIT-403

Calibration Certificate

Certificate Number:

Position ID: 4-PDIT-403

Printed: 1/18/2024 11:27:59 AM
Printed by: vnguyen
CMX Version: 2.14.114.0 (2.14)

Position

Name	U4 SCR DP
Work Order Number	
Location	U4 ERU
Plant	CANYON/ERU/U4/

Device

Device ID	4-PDIT-403	
Serial Number	393481	
Manufacturer	Rosemount 3051C	
Rangeability		
Operating		Operating Humidity

Function

Name	U4 SCR DP (ud)	
Transfer Function	Linear	
Range	0 ... 10 inH2O (G)	4 ... 20 mA

Calibration Event

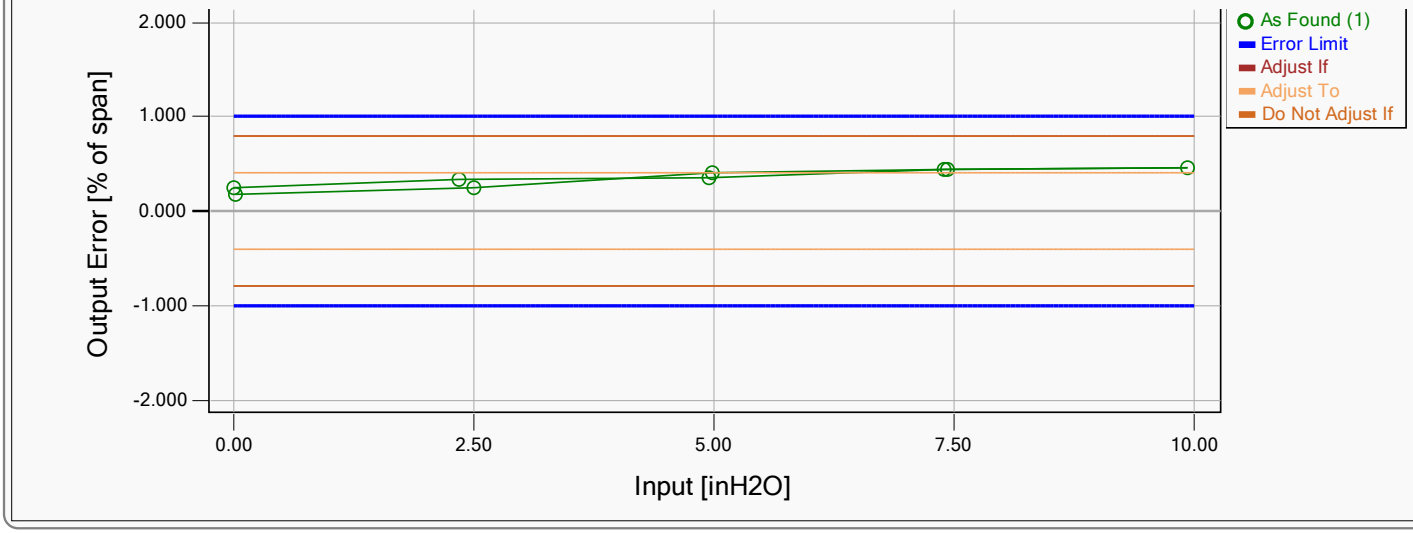
Calibration time	1/16/2024 12:57:11 PM	
Next Calibration		
Environment		Environment

Calibration Procedure

Due Date	1/16/2025	Interval	1 years
Reject If Error >	1 % of span		
Adjust To Error <	40 % of Reject If Error	Classification	
Calibration Strategy			

Calibrators

Input Calibrator	MC6 : 605835	Due Date: 2/16/2024
Input Module	P2C : 69381	Due Date: 2/15/2024
Output Calibrator	MC6 : 605835	Due Date: 2/16/2024
Output Module	IN : 25613	Due Date: 2/16/2024



1. As Found

PASSED, DO NOT ADJUST

Maximum Error: 0.454 % of span

Nominal Input [inH2O]	Actual Input [inH2O]	Nominal Output [mA]	Actual Output [mA]	Found Error [% of span]
0.0000	0.03	4.0000	4.0769	0.181
2.500	2.51	8.000	8.0564	0.253
5.000	4.99	12.000	12.0476	0.398
7.500	7.44	16.000	15.9747	0.442
10.000	9.94	20.000	19.9766	0.454
7.500	7.40	16.000	15.9095	0.434
5.000	4.96	12.000	11.9922	0.351
2.500	2.35	8.000	7.8147	0.342
0.0000	0.01	4.0000	4.0562	0.251

Calibration Note:

Calibrated by: VINCENT NGUYEN
1/16/2024 12:57:11 PM

CANYON POWER PLANT

ANNUAL COMPLIANCE REPORT

ATTACHMENT 21

WASTE-10
COOLING TOWER SLUDGE TESTING

No Sludge developed for CY 2024

THIS IS THE LAST PAGE OF THIS DOCUMENT