EXECUTIVE SUMMARY

This report summarizes the efforts enacted by Waste Management's Lancaster Landfill and Recycling Facility (LLRC) to comply with the conditions set forth by the Conditional Use Permit (CUP) 03-170-(5), effective August 1, 2012, and the Implementation and Monitoring Program (IMP) Section X. The period described by this report is November 1, 2024, to October 31, 2025.

Summaries will be supported by attachments containing detailed reports, spreadsheets, or other appropriately detailed documents.

LANDFILL STATUS AND CAPACITY – IMP CONDITION I, IMP CONDITION X 1, IMP CONDITION X 2

For the period reflected in this report (November 1, 2024, to October 31, 2025), LLRC received a total of 163,539.33 tons of waste for disposal. As of October 31, 2025, Lancaster Landfill is as at approximately 45% of the total available capacity. The remaining estimated available disposal capacity is 10,038,683 tons (12,548,354 cubic yards). The percentage of total capacity remaining is calculated by dividing the annual remaining capacity and the solid waste facility permitted capacity (12,548,354 cubic yards divided by 27,700,000 cubic yards). The most recent landfill survey occurred on August 1, 2025, maps of which are maintained on-site and a copy of which is attached (see **Attachment A**).

LANDFILL WEIGHT TO VOLUME RATIO – IMP CONDITION X 3

The ratio of weight to volume utilized in these calculations is 0.80 tons per cubic yard, determined by historic flyovers and airspace reports (**Attachment A**). The airspace utilization factor is calculated by measuring the mass of waste disposed and dividing it by the volume of airspace consumed**.** This density is considered within expected range given that the landfill receives between; on average, 300 and 550 tons of municipal waste per day, is less than 125 feet thick (from liner to base to final cover) and is in an arid ecosystem. There is no regulation or set weight to volume ratio utilized for different landfills, however a weight to volume ratio of 0.6 tons per cubic yard is considered the industry benchmark for an efficiently running landfill. LLRC's ratio of 0.80 tons per cubic yard is considered well above par.

DIVERTED AND REUSED MATERIALS – IMP CONDITION X 4, IMP CONDITION X 5, CUP CONDITION 35 G

For the period of time covered by this report, November 1, 2024, to October 31, 2025, the total tonnages of waste received and disposed including beneficial use materials, are tabulated and attached (see **Attachment B**). Beneficial reuse practices at the Lancaster Landfill and Recycling Center are centered around using as much of the incoming refuse for beneficial reuse, both for the economic relief and environmental protection aspects. Such practices include, but not limited to, removing electronic waste and recyclable materials, including scrap metal and appliances, pulled in LLRC's load check program to responsible third-party recyclers for processing and reuse/resale. As well, concrete/asphalt is crushed into a base material and either utilized on internal haul roads or sold if there is a local market for the material. Green/wood waste is similarly chipped on-site and either used for interim cover for active/inactive cells or reloaded and transported to other facilities for further processing. Construction

and demolition fines are utilized as alternative daily cover (ADC). Construction and demolition debris is transferred to specialized recyclers in the LA basin. Comingle recyclable material is picked up from the local community and taken to Palmdale Landfill for transportation. Practices such as these are enforced at all Waste Management facilities in the Southern California region.

Month	Total Received in tons	Total Disposed in tons
November 2024	29,229.04	19,576.35
December 2024	15,716.54	14,820.36
January 2025	19,269.55	18,486.63
February 2025	16,614.14	15,339.61
March 2025	13,296.48	11,697.07
April 2025	13,689.52	11,380.36
May 2025	15,661.56	12,971.53
June 2025	15,922.06	11,017.95
July 2025	14,007.16	11,514.76
August 2025	16,317.32	12,563.18
September 2025	13,822.15	11,354.13
October 2025	13,824.02	12,817.40
Total:	197,369.54	163,539.33

COMPLAINTS AND MANAGEMENT PRACTICES THEREOF – IMP CONDITION X 6, IMP CONDITION X 7, CUP CONDITION 109

During the period between November 1, 2024, to October 31, 2025, LLRC received zero fugitive odor complaints. LLRC received no residential complaints concerning litter, noise or vector control issues. LLRC currently employs several types of proactive deterrents to negate the likelihood of a public nuisance (wind fences to control litter, falconer to deter birds, periodic spraying from a water truck to control fugitive dust, etc.). One violation from the Antelope Valley Air Quality Management District (AVAQMD) was received during the reporting period (see **Attachment C**). AVAQMD indicated that LLRC had violated the provisions of District Rule 431.1 which included a civil penalty in the sum of $34,000. Pursuant to the expedited investigation, the implementation of enhanced procedural safeguards, and the source test demonstrating compliance with AVAQMD Rule 431.1, the agency was agreeable to reducing the penalty to the requested amount of $17,000. The reduction was conditional upon the submission of a passing source test dated on or around November 1, 2025, (approximately six months after the previous test) showing compliance with District Rule 431.1. Once the passing test was submitted, the $17,000 penalty was paid, and the violation was closed.

SLOPE AND COVER REVEGETATION –IMP CONDITION X. B. 8, CUP CONDITION 51 D

LLRC currently utilizes ground green waste as interim cover for inactive faces of 180 days or more along the landfill cells. By covering with the ground remains of vegetation, it is LLRC's goal to promote vegetation (prior to the vegetation applied as part of the cell's final cover procedure), thereby stabilizing the landfill slope, and preventing erosion during storm events. As the environment is also rather arid, use of the ground, mulched green waste as cover also promotes any seed contained therein with nutrient-rich topsoil, adding to vegetative potential. As per conditions set forth within LLRC Landscape plan (developed in 2000); Waste Management has retained the services of Mariposa Biology to conduct all required biological reviews and assays of the LLRC, the final cover of the completed landfill cells, will be reclaimed and re-vegetated with a seed mix of native and near-native plant species. LLRC has contracted Mariposa Biology to revegetate the final slopes with locally appropriate species to return the completed area to a state that botanically resembles the original site. An annual monitoring report is conducted to show status and progress of the implemented Landscape Plan, last date of site inspection was conducted on July 17, 2025 (see **Attachment D**).

ARCHAEOLOGICAL AND PALEONTOLOGICAL INVESTIGATIONS – IMP CONDITION X 9, IMP CONDITION VII, CUP CONDITION 51 B

Waste Management LLRC has retained the services of Archaeo/Paleo Resource Management to perform all necessary and stipulated investigations as set forth by the CUP and additional permits. Soil excavation occurred in May 2025 and therefore, Archaeological/Paleontological monitoring was conducted. The field survey monitoring sheets resulted in no significant archaeological or paleontological findings. The Archaeological/Paleontological draft report is available for review (see **Attachment E**).

ALTERNATIVE TECHNOLOGIES – IMP CONDITION X. B. 10, CUP CONDITION 101 (IMP INCORRECTLY CITES CUP CONDITION 95 AND CUP CONDITION 102)

Waste Management LLRC promotes several different non-landfill alternative/conversion technologies. Many of these are already active in the waste diversion programs enacted at the site (construction and demolition debris diversion, concrete and asphalt grinding and reuse, electronic waste diversion, co-mingled recyclable diversion, mattress recycling, etc. Lancaster Landfill is now working with Kore Infrastructure to pilot a pyrolysis plant to research the potential of the technology to produce renewable energy (e.g., RNG or Hydrogen) from diverted organics. Using Kore's technology to process select waste streams in compliance with the requirements identified in SB1383. Currently, Kore is in the process of acquiring the necessary permits and utilities to operate (see **Attachment F**) .

TRANSPORTATION IMPROVEMENTS – IMP CONDITION X. B. 11, IMP CONDITION X. B. 12, CUP CONDITION 63, CUP CONDITION 64, and CUP CONDITION 65

Waste Management LLRC has formalized and submitted plans describing the efforts taken to minimize traffic congestion and surface street impact on the surrounding arterial streets (CUP 63, 64, and 65, not CUP 32, 58, 59 or 61 as stated by the IMP). The first of these two plans, submitted July 2012, describes the controls placed on inbound and outbound transfer trucks (CUP condition 65) The

second of these plans, presented October 2012, describes the actions taken to optimize truck trips and minimize queuing along Avenue F at the facility gates (CUP conditions 63 and 64).

WM has schedules for regular customers designed to minimize scalehouse wait times. As well, a system is in place to reserve landfill capacity until 3 p.m. Monday through Friday during normal operating conditions, for small commercial and private users. LLRC implements flat minimum fees for up to one ton to discourage small load deliveries. To prevent and alleviate queuing along Avenue F and the surrounding surface streets, WM utilizes traffic directors and multiple weight scales during heavy delivery days if necessary. In addition, WM LLRC utilizes, as a contingency plan, a plan design where queuing vehicles can be staged along the interior western fence line in (if necessary) multiple parallel lanes to avoid congestion along Avenue F and at the entrance gate.

With regards of the two plans designed above to minimize traffic in and out of Lancaster Landfill, traffic along Avenue F along with the queuing line has yet to become an issue. Proper engineering and scheduling have proven to be a success. Waste Management will continue to utilize the plans set forth until a change of traffic congestion occurs.

ENERGY FROM LANDFILL GAS – IMP CONDITION X.B. 13, CUP CONDITION 54 (IMP INCORRECTLY STATES CUP CONDITION 49)

In conformance with Condition 54 of the CUP (misidentified as Condition 49 under IMP X 13), LLRC is required to evaluate the plausibility (geochemically and economically) of utilizing available landfill gas (LFG) as an alternative fuel source. In a study commissioned in 2006, LLRC evaluated the usage and therefore determined it was not economically feasible for a variety of factors including but not limited to insufficient quantity and quality of landfill gas. Based on review of landfill gas production during the period of this report (November 2024 to October 2025), quantity of methane gas flow and quality of measurable methane remains economically insufficient to warrant attempting recovery for energy use (see **Attachment G**) .

WASTE JURISDICTION OF ORIGIN – CUP CONDITION 94

Waste Management maintains a monthly submission to Los Angeles County through their Solid Waste Information Management System (SWIMS) for the jurisdictions of origin of waste received by the LLRC (see **Attachment H**).

PROHIBITED WASTE ACCEPTANCE – CUP CONDITION 41

Waste Management LLRC maintains, as a standard operating procedure, a management system to ensure prohibited wastes are not disposed of at the facility. Upon reaching the scalehouse, deliverers are required to state the nature of their waste (with specific guidelines for what is and is not acceptable at LLRC). Once cleared by the scalehouse, several trucks per day are chosen at random as well as suspicious loads for load checks by landfill personal. Finally, once dumped, the waste is checked as it is mixed and prepped for disposal. If waste is found to contain prohibited items at either the scalehouse or load check stages, then the items (or the entire load) are rejected, and the deliverer will leave with

the items. If found post-dumping, then the items are isolated and sequestered to a secure area to await pickup from the generator or transported by a hazardous waste transport for proper disposal. Copies of the rejected load log, which identifies the description, quantity of the prohibited waste, and quantity of total waste are maintained on-site and presented in **Attachment I**.

Due to the fact LLRC does not allow the disposal of prohibited waste, a plan is set forth to prevent and capture the income of prohibited waste. Waste Management certifies that the description of the above-described plan and information in this document is true and correct to the best of our knowledge.

MONTHLY WATER USAGE - CUP CONDITION 49

Waste Management LLRC utilizes non-potable water on-site in a variety of manners, but the vast majority of the water usage is for dust control. The water is stored in an elevated tank for ease of dispersal to the water trucks. Per condition 49, LLRC is allowed 60 acre-feet per year (afy). Waste Management used 11,621,800 (approximately 36 afy) gallons during November 2024 to October 2025. A copy of the water usage log is attached (see **Attachment J**).

OFF-SITE LITTER RETRIEVAL – CUP CONDITION 70

Waste Management Lancaster sits on a relatively flat area in an arid, dry biome and therefore, strong winds are a constant possibility across the face of the property. LLRC utilizes several wind-blown litter deterrents across the site, including walled-off areas for mixing waste, portable litter fences around areas where loose litter is likely to be present, and a program requiring trucks entering the site to either be tarped or constructed to minimize waste's exposure to wind. In the event such waste is picked up by the wind currents in the area, LLRC utilizes a staff of temporary workers to retrieve fugitive litter from the boundary roads as detailed in condition 70. A plan detailing these efforts has been submitted (cover date 8/27/2012) to the Department for review and acceptance. In an effort to control litter escaping the site's physical boundaries, an off-site litter inspection log has also been created (see **Attachment K**).

ALTERNATIVE FUEL VEHICLES AND EQUIPMENT – CUP CONDITION 61 B, C, D, AND E

Waste Management LLRC utilizes several heavy-duty earthmovers and various other large-scale mobile equipment in the daily management of the landfill. WM submitted a comprehensive plan for alternative fuel conversion within the listed period as per CUP 61 b (plan submission date September 6, 2013). WM previously submitted a plan to put a hybrid-engine waste dozer into use on the site as a means of complying with the alternative fuel pilot plan as described in CUP condition 61. This plan received AVAQMD acceptance, and the dozer was utilized from January of 2013 through the end of 2015. The dozer was then moved to another site early 2016. LLRC utilizes an electric dozer as part of the fleet and all other heavy equipment runs on bio diesel. Therefore, the site is compliant with Condition 61 as 100% of the fleet has been converted to alternative fuel.

CARB COMPLIANCE REPORT – CUP CONDITION 60

Per CUP condition 60, WM must exhibit compliance with the California Air Resources Board (CARB) regulations concerning diesel particulate matter control measures (Title 13 CCR section 2020 Article 4). Per Article 4 thereof, Waste Management's LLRC fleet must show 100% compliance no later than December 31st, 2010. To date, sufficiently appropriate diesel emission control strategies have been employed for all LLRC vehicles to earn a comprehensive Statement of CARB Compliance for the site. Effective annually (renewed last on March 1, 2021), a Statement of Compliance is posted on-site that meets both the Article 4 requirements as well as the CARB Title 13 CCR Section 2021.2(f)(1)(H) stipulations (compliance statement shall be maintained on-site, with proper terminal number, owner's business name, address, phone number and signature of owner or agent listed, see **Attachment L**).

ATTACHMENT A

WASTE MANAGEMENT

LANCASTER LANDFILL



2025 Airspace Report

LANCASTER LANDFILL
TABLE OF CONTENTS

SHEETS 1-2	VOLUME CALCULATIONS
DRAWING 1	2024 TOPOGRAPHY (FLOWN 8-6-24)
DRAWING 2	2025 TOPOGRAPHY (FLOWN 8-1-25)
DRAWING 3	PERMITTED FINAL GRADING PLAN
DRAWING 4	PERMITTED EXCAVATION GRADES WITH AS-BUILTS
DRAWING 5	OPERATIONAL CONSUMED ISOPACH BETWEEN 8-6-24 TOPO AND 8-1-25 TOPO
DRAWING 6	ABOVE GRADE ISOPACH BETWEEN 8-1-25 TOPO AND PERMITTED FINAL GRADING PLAN
DRAWING 7	BELOW GRADE ISOPACH BETWEEN 8-1-25 TOPO AND EXCAVATION GRADES WITH AS-BUILTS
DRAWING 8	ISOPACH BETWEEN BOTTOM OF WASTE GRADES AND TOP OF WASTE GRADES FOR CAPPING EVENTS
DRAWING 9	ISOPACH BETWEEN BOTTOM OF WASTE GRADES AND TOP OF WASTE GRADES FOR CAPPING EVENTS – EAST LANDFILL

2025 SITE DATA AND REPORT SUMMARY

Facility ID CA0103

Site Name	**Lancaster Landfill**
Street Address	600 E. Ave F
City	Lancaster
State (2-letter code)	CA
Zip	93535
Group	Western

CADD File Name:	Ca25a25_8-1-25.dgn
Date prepared:	21-Aug-25
Previous flyover date:	6-Aug-24
Current flyover date:	1-Aug-25
Aerial Contractor:	Miller Creek

Prepared By:	Title	Phone No.
Scott Sumner	Engineer	714-328-8816
Terri Garcia	CADD Lead	713-328-7331

Landfill Classification		Operating Status	
MSW		**Active**	
MSW	x	Active	x
C&D		Inactive	
Special/Industrial		Exit Closure in Progress	
Hazardous		PC under Area	

Landfill Areas (acres)	2025 Flyover Date 1-Aug-25	2024 Flyover Date 6-Aug-24	2023 Flyover Date 3-Aug-23	2022 Flyover Date 2-Aug-22
Top Grades	Bryan A. Stirrat & Assoc.	Bryan A. Stirrat & Assoc.	Bryan A. Stirrat & Assoc.	Bryan A. Stirrat & Assoc.
Bottom Grades	Bryan A. Stirrat & Assoc.	Bryan A. Stirrat & Assoc.	Bryan A. Stirrat & Assoc.	Bryan A. Stirrat & Assoc.
Total property area controlled by WM	276.0	276.0	276.0	276.0
Permitted waste footprint	210.3	210.3	210.3	210.3
Expansion waste footprint (sum of all phases)	0.0	0.0	0.0	0.0
Total waste footprint	**210.3**	**210.3**	**210.3**	**210.3**
Area with waste in place	129.0	129.0	129.0	123.9
Remaining area without waste in place	81.3	81.3	81.3	86.4
Total lined area	129.0	129.0	129.0	123.9
Area filled to final waste elevation without final cover	75.0	70.6	70.6	70.6
Total capped area	0.0	0.0	0.0	0.0
Total area at final grade	75.0	70.6	70.6	70.6
Cap acres remaining	210.3	210.3	210.3	210.3
Permitted Design Capacities (bcy)	**Not verified by CAD**	**Not verified by CAD**	**Not verified by CAD**	**Not verified by CAD**
Permitted design capacity (waste & cover)	25,377,265	25,377,265	25,377,265	25,377,265
Adjustments (permitted design modifications)	0	0	0	0
Current permitted design capacity (waste & cover)	**25,377,265**	**25,377,265**	**25,377,265**	**25,377,265**
Remaining Capacity (bcy) LF Data E13				
Total remaining airspace (waste & cover)	**12,611,775**	**12,798,055**	**12,904,140**	**13,017,160**
Additional Information (bcy)				
Misc. Adjustments to remaining airspace	0	0	0	0
Potential overbuilds - removed from airspace	(12,235)	(9,930)	(12,680)	(15,110)
Potential overbuilds - no airspace impact	390	390	0	790
Booked expansion airspace	0	0	0	0
Un-booked expansion airspace - not added to airspace	0	0	0	0
Remaining Constructed Capacity Above Current Lined Areas (bcy)				
Remaining constructed airspace (w/dc) (note 4)	**12,611,775**	**1,814,100**	**12,904,140**	**1,840,540**
Representative Operational AUF	0.80	0.83	0.84	0.84
Remaining constructed tonnage	**10,076,808**	**1,507,517**	**10,813,669**	**1,546,054**
Soil Summary (bcy)				
Material available from cell excavation (note 5)	4,279,430	4,279,430	0	4,332,980
Material available from stockpiles	51,395	15,875	14,275	14,275
Material available from borrow areas	0	0	0	0
Total Soil Available (without consideration of soil specifications)	**4,330,825**	**4,295,305**	**14,275**	**4,347,255**
Required final cover material (remaining)	1,386,460	1,386,460	1,386,460	1,386,460
Required liner material (remaining)	227,510	227,510	227,510	240,160
Required backfilling at excavation (remaining)	0	0	0	2,450
Required berm material (remaining)	0	0	0	0
Required cover material (daily & intermediate)	731,483	0	0	650,858
Daily cover % from Fastlane	5.1%	0.0%	0.0%	4.9%
Intermediate cover % from Fastlane	0.7%	0.0%	0.0%	0.1%
Daily cover required (projection)	643,201	0	0	637,841
Intermediate cover required (projection)	88,282	0	0	13,017
Total Remaining Soil Required	**2,345,453**	**1,613,970**	**1,613,970**	**2,279,928**
Landfill Thickness (ft)				
Waste in place - maximum thickness	105	104	108	106
Current permitted design - maximum thickness	113' West & 115' East	113' West & 115' East	113' West & 115' East	113' West & 115' Eas
Permitted with expansion design - maximum thickness	0	0	0	0

2025 SITE DATA AND REPORT SUMMARY

Airspace Consumption

	2025 Flyover Date 1-Aug-25	2024 Flyover Date 6-Aug-24	2023 Flyover Date 3-Aug-23	2022 Flyover Date 2-Aug-22
Waste received in period (tons)	**196,551**	**135,890**	**145,594**	164,223
Operational consumed (cy) (waste & cover)	**227,650**	**192,700**	**180,040**	198,980
Effective consumed (cy) (waste & cover)	**186,280**	**106,085**	**113,020**	179,635
Final cover consumption (cy)				
Final cover in place at previous flyover	0	0	0	0
Final cover put down between flyovers	0	0	0	0
Final cover in place at current flyover	0	0	0	0
Liner material consumption (cy)				
Liner in place at previous flyover	487,315	487,315	474,665	474,665
Liner put down between flyovers	0	0	12,650	0
Liner in place at current flyover	487,315	487,315	487,315	474,665

A.U.F. (operational)

Airspace utilization factor (T/CY)	0.86	0.71	0.81	0.83
Airspace utilization factor (Lbs/CY)	1,727	1,410	1,617	1,651

Airspace Consumption from Tonnage (cy)	Airspace Consumption from Surveys (cy)	Difference Between Consumptions (Tonnage versus Survey) (cy)	% of Annual Consumption
227,650	186,280	41,370	18.2%

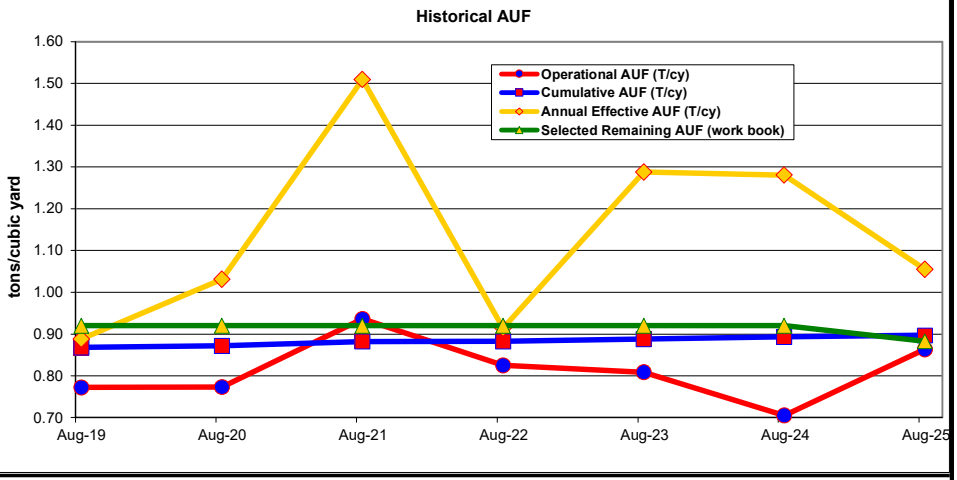
Tonnage and Site Life

Lancaster Landfill

(Tons provided by WM PMT)

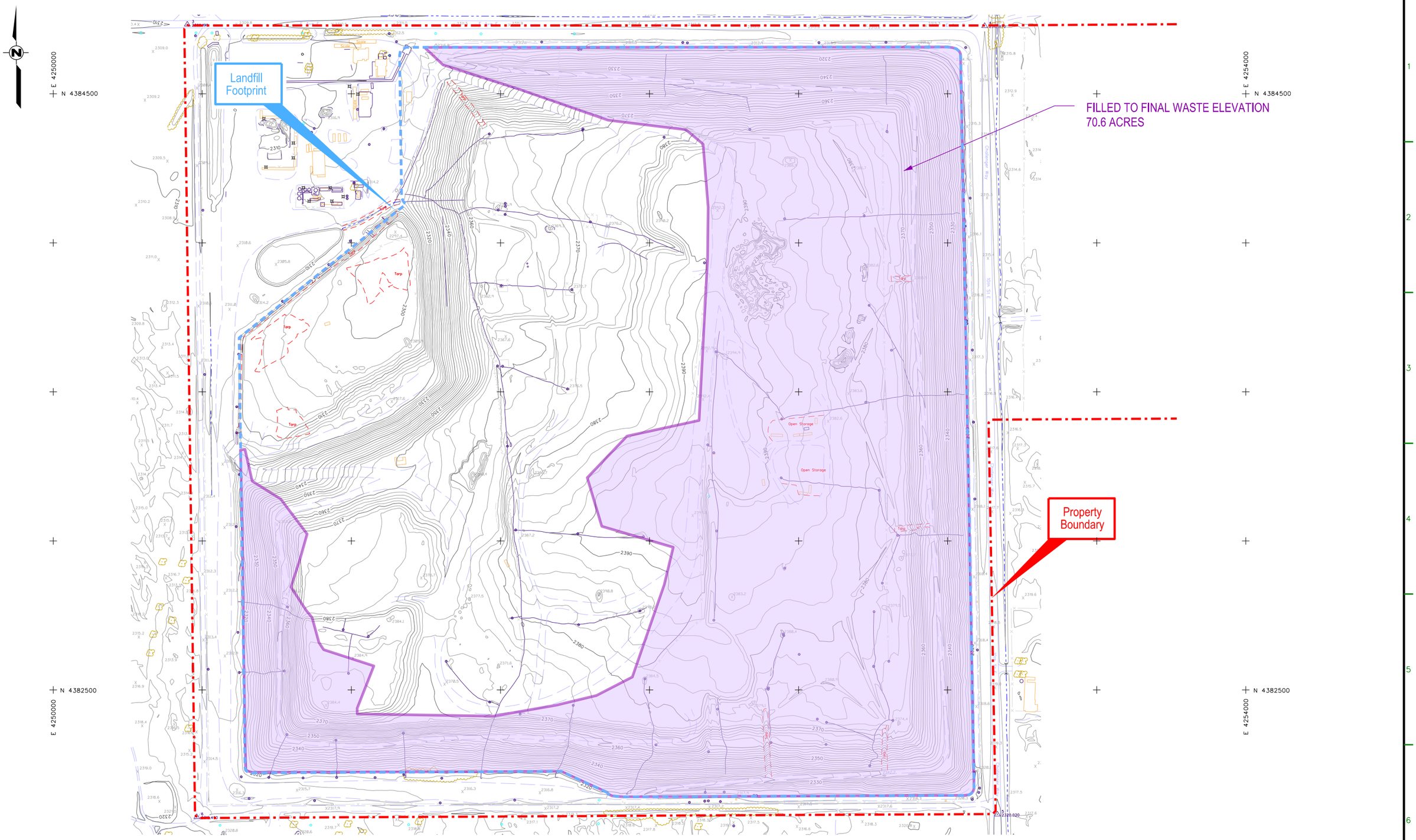
	FLYOVER DATE	ACTUAL TONNAGE DURING PERIOD	ADDITIONAL TONNAGE (PROJECTIONS ONLY)
JAN	-	-	-
FEB	-	-	-
MAR	-	-	-
APR	-	-	-
MAY	-	-	-
JUNE	-	-	-
JULY	-	-	-
AUG	8/6/2024	9,596.8	-
SEPT	-	14,824.5	-
OCT	-	22,293.9	-
NOV	-	28,870.7	-
DEC	-	15,373.8	-
JAN	-	18,816.7	-
FEB	-	16,269.2	-
MAR	-	12,923.4	-
APR	-	13,332.3	-
MAY	-	15,232.9	-
JUNE	-	15,112.8	-
JULY	-	13,302.8	-
AUG	8/1/2025	600.8	-
SEPT	-	-	-
OCT	-	-	-
NOV	-	-	-
DEC	-	-	-
JAN	-	-	-
TOTAL TONS:		**196,551**	

Date of Survey	Operational Consumed Volume (cu.yd.)	Effective Consumed Volume (cu.yd.)	Total In-Place Volume (cu.yd.)	Waste Received In Period (tons)	Total In-Place Tonnage	Operational AUF (T/cy)	Annual Effective AUF (T/cy)	Cumulative AUF (T/cy)	Selected Remaining AUF (work book)
8/5/2019	230,860	200,790	7,596,065	178,327	6,595,793	0.77	0.89	0.87	0.92
8/5/2020	225,895	169,395	7,765,460	174,744	6,770,537	0.77	1.03	0.87	0.92
8/5/2021	203,260	126,050	7,891,510	190,287	6,960,824	0.94	1.51	0.88	0.92
8/2/2022	198,980	179,635	8,071,145	164,223	7,125,047	0.83	0.91	0.88	0.92
8/3/2023	180,040	113,020	8,184,165	145,594	7,270,641	0.81	1.29	0.89	0.92
8/6/2024	192,700	106,085	8,290,250	135,890	7,406,531	0.71	1.28	0.89	0.92
8/1/2025	227,650	186,280	8,476,530	196,551	7,603,082	0.86	1.06	0.90	0.88



Comments

1. Final cover thickness: 4 ft.
2. Liner thickness: 18" side slopes, 1'-9" floor.
3. Concrete material stockpiled is not included in stockpile volume.
4. Airspace Report Sheet 1, Line 44 - 2023 remaining constructed airspace mistakingly included east expansion.
5. Airspace Report Sheet 1, Line 48 - this volume represents the east expansion and is a partial area of the footprint. The entire footprint wasn't surveyed.



150 0 150 300
SCALE 1" = 300'

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Revisions

No.	Description	Date	By

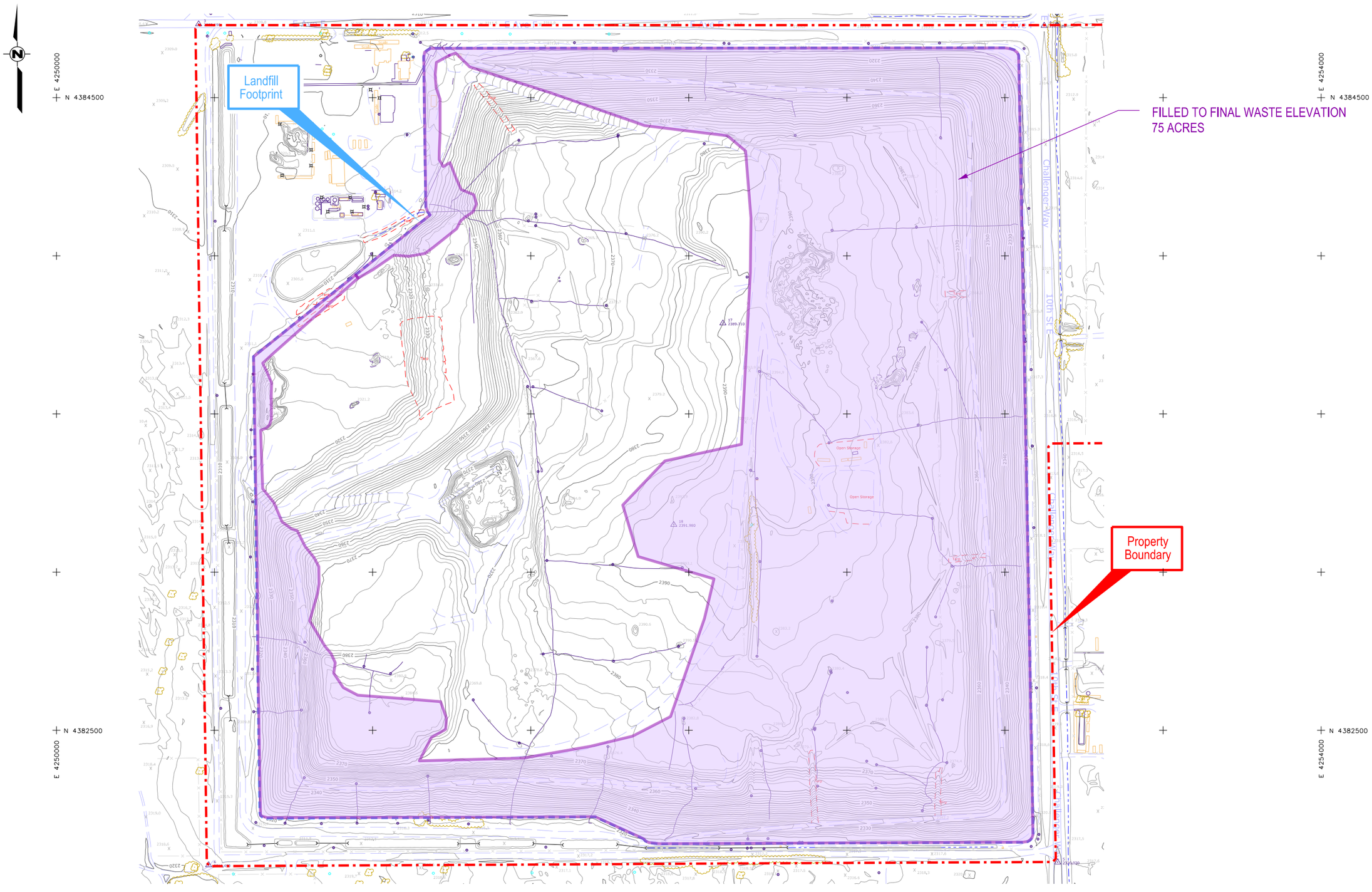
Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

2024 TOPOGRAPHY DATED,
AUGUST 6, 2024

Drawing No. CA25-0103-AIR-01
Scale: As Shown
Date: August 2025
Sheet Number: 1

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SCALE 1" = 300'

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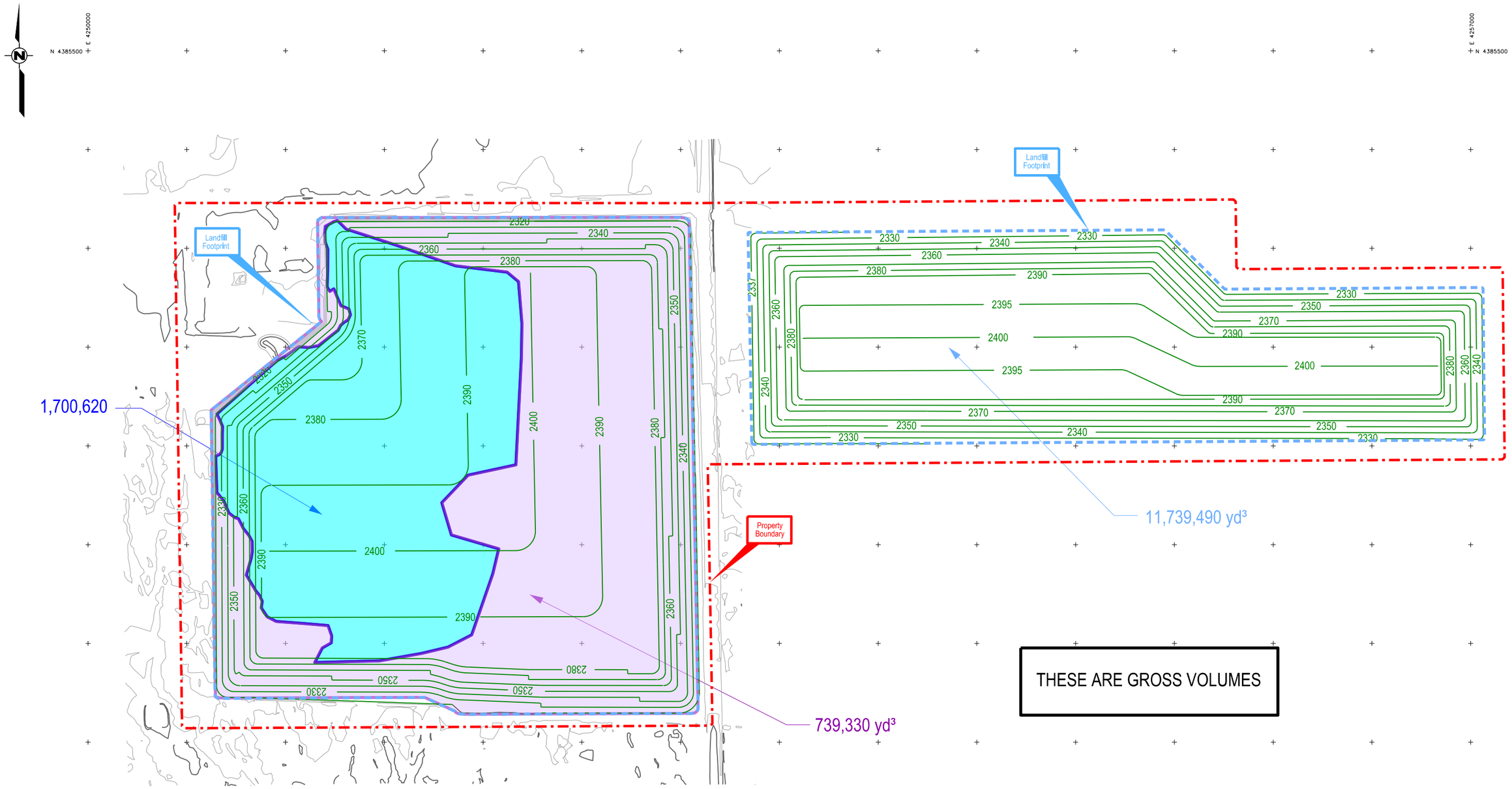
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Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

2025 TOPOGRAPHY DATED, AUGUST 1, 2025

Drawing No. CA25-0103-AIR-02
Scale: As Shown
Date: August 2025
Sheet Number: 2

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SCALE 1" = 500'

WASTE MANAGEMENT

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Revisions

No.	Description	Date	By

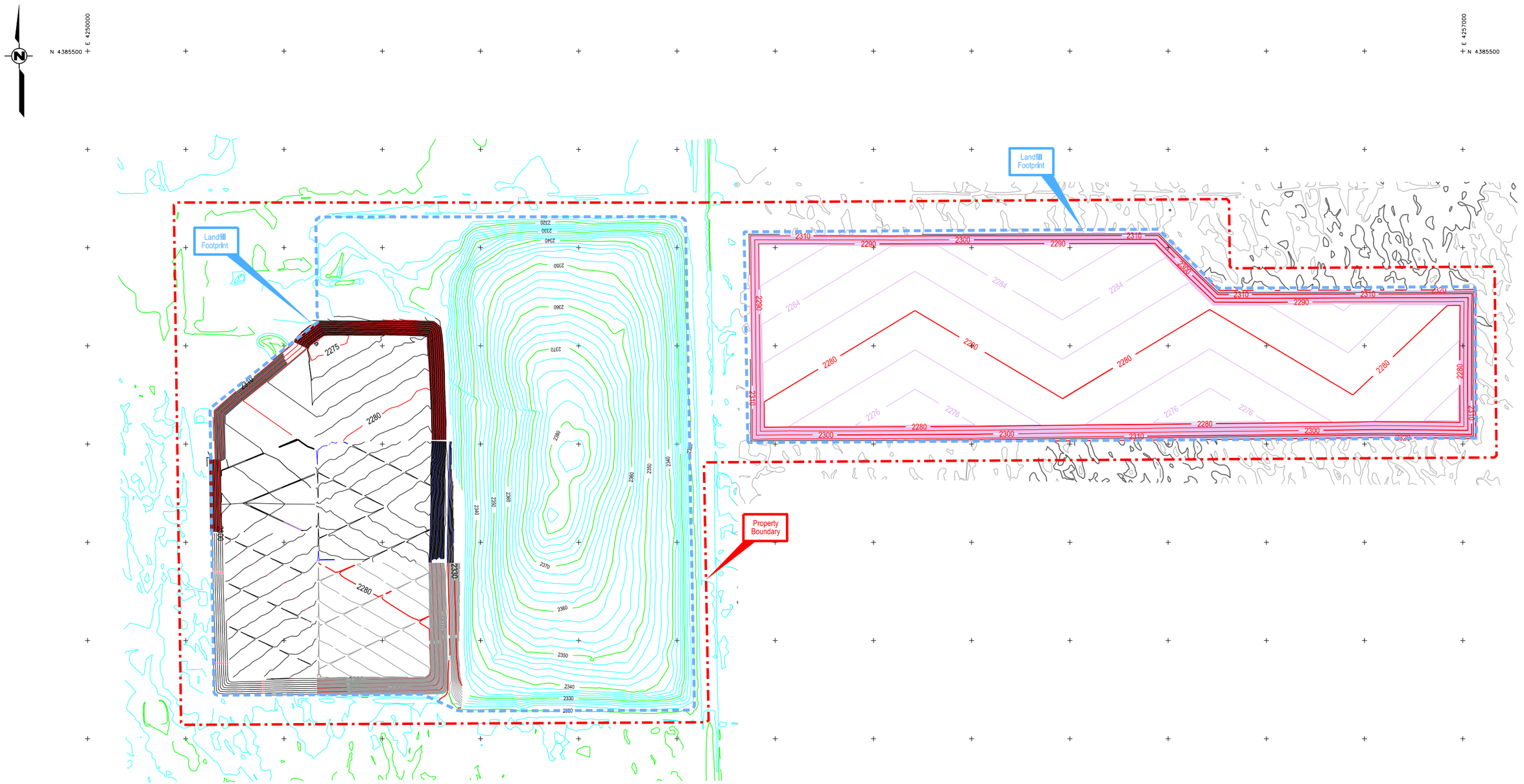
Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

PERMITTED FINAL GRADING PLAN

Drawing No. CA25-0103-AIR-03
Scale: As Shown
Date: August 2025
Sheet Number: 3

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SCALE 1" = 500'

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Checked By:

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Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

PERMITTED EXCAVATION GRADES
WITH AS-BUILTS

Drawing No. CA25-0103-AIR-04
Scale: As Shown
Date: August 2025
Sheet Number: 4

Ca25a25_8-1-25.dgn 8/20/2025 5:43:46 PM

E 4250000
N 4384500

Landfill Footprint

CONSUMED VOLUME BETWEEN
TOPO. DATED 8-6-24 &
TOPO. DATED 8-1-25
227,650 CY

SOIL STOCKPILE VOLUME:
8,205 CY
(No Activity Between Flyovers)

SOIL STOCKPILE VOLUME:
20,660 CY

CONCRETE STOCKPILE VOLUME:
7,535 CY

SOIL STOCKPILE VOLUME:
6,070 CY
(No Activity Between Flyovers)

SOIL GRADING TO INSTALL
GAS WELL LATERAL
16,460 CY

N 4382500
E 4250000

Challenger Way
10th St E

Property Boundary

LEGEND
- FILL CONTOUR
- NO CHANGE IN ELEVATION
- CUT CONTOUR
- WASTE IN PLACE
- STOCKPILE MATERIAL

2' CONTOUR INTERVAL

150 0 150 300
SCALE 1" = 300'

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Revisions

No.	Description	Date	By

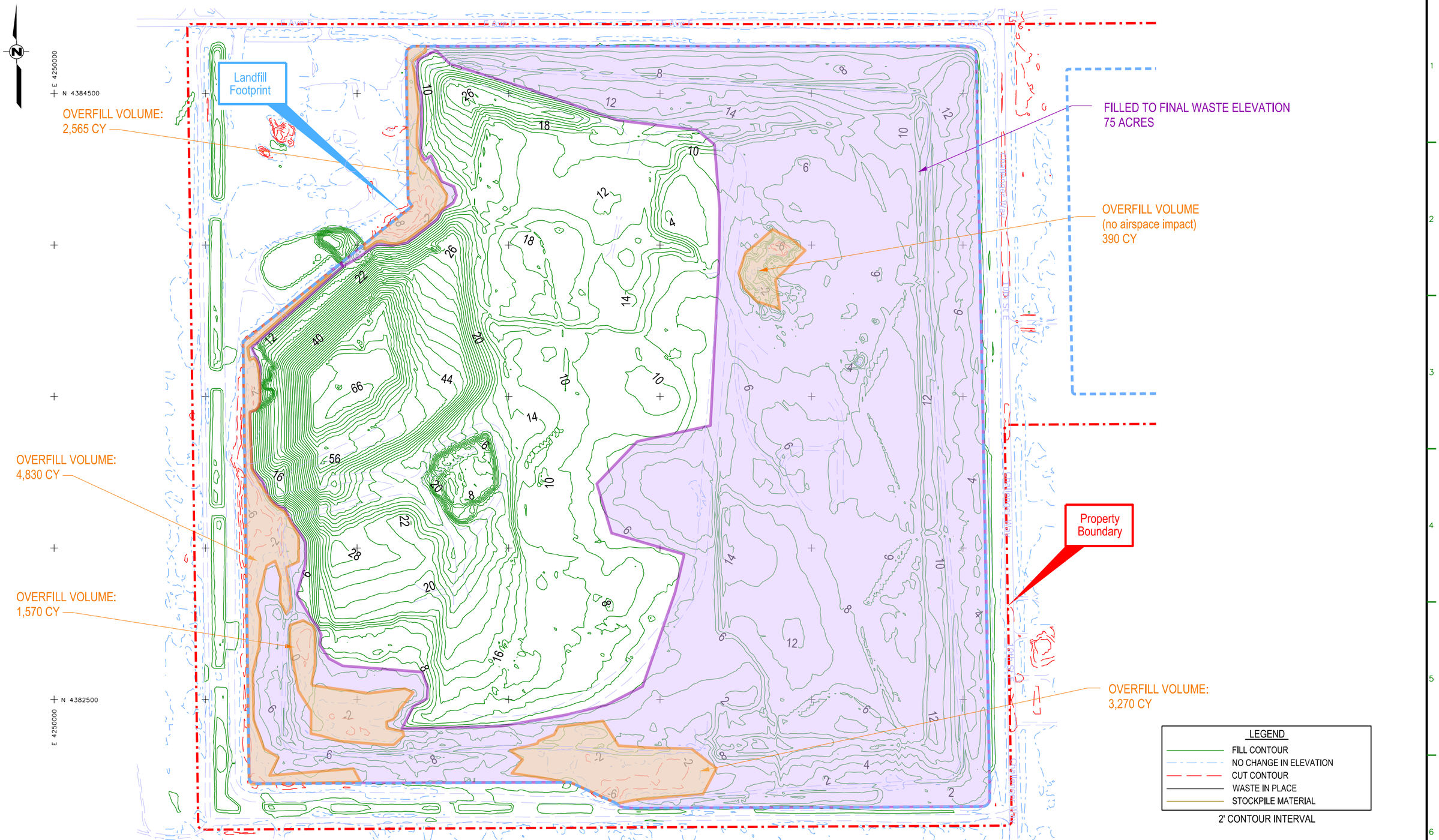
Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

OPERATIONAL CONSUMED ISOPACH
BETWEEN 8-6-24 TOPO. & 8-1-25 TOPO.

Drawing No. CA25-0103-AIR-05
Scale: As Shown
Date: August 2025
Sheet Number: 5

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SCALE 1" = 300'

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Revisions			
No.	Description	Date	By

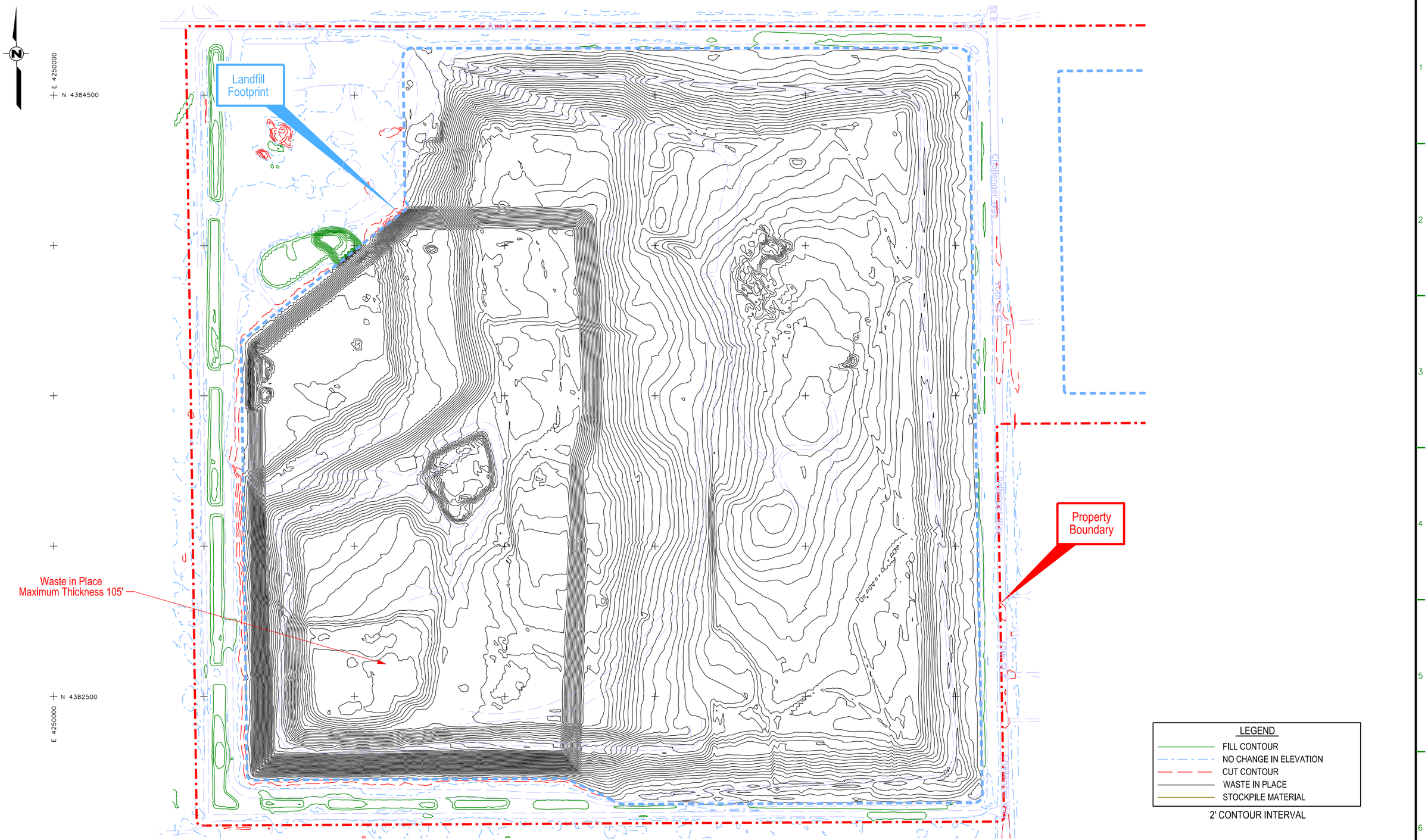
Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

ABOVE GRADE ISOPACH
BETWEEN 2025 TOPO. (DRAWING 2)
AND PERMITTED FINAL GRADES (DRAWING 3)

Drawing No. CA25-0103-AIR-06
Scale: As Shown
Date: August 2025
Sheet Number: 6

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150 0 150 300
SCALE 1" = 300'

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Revisions

No.	Description	Date	By

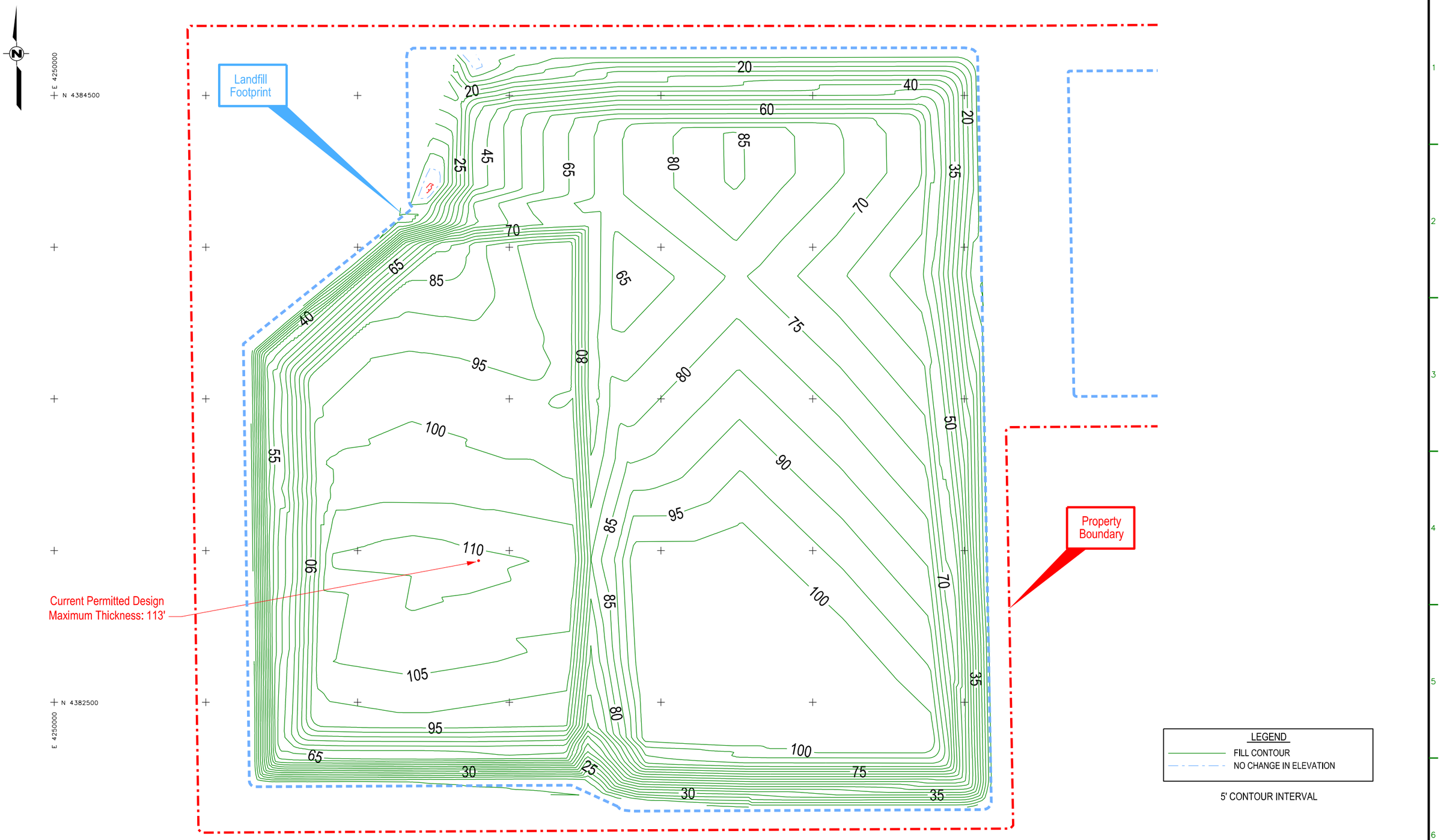
Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

BELOW GRADE ISOPACH BETWEEN 2025 TOPO. (SHEET 2) AND EXCAVATION GRADES WITH AS-BUILTS (SHEET 4)

Drawing No. CA25-0103-AIR-07
Scale: As Shown
Date: August 2025
Sheet Number: 7

Ca25a25_8-1-25.dgn 8/20/2025 5:46:52 PM



150 0 150 300
SCALE 1" = 300'

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No.	Description	Date	By

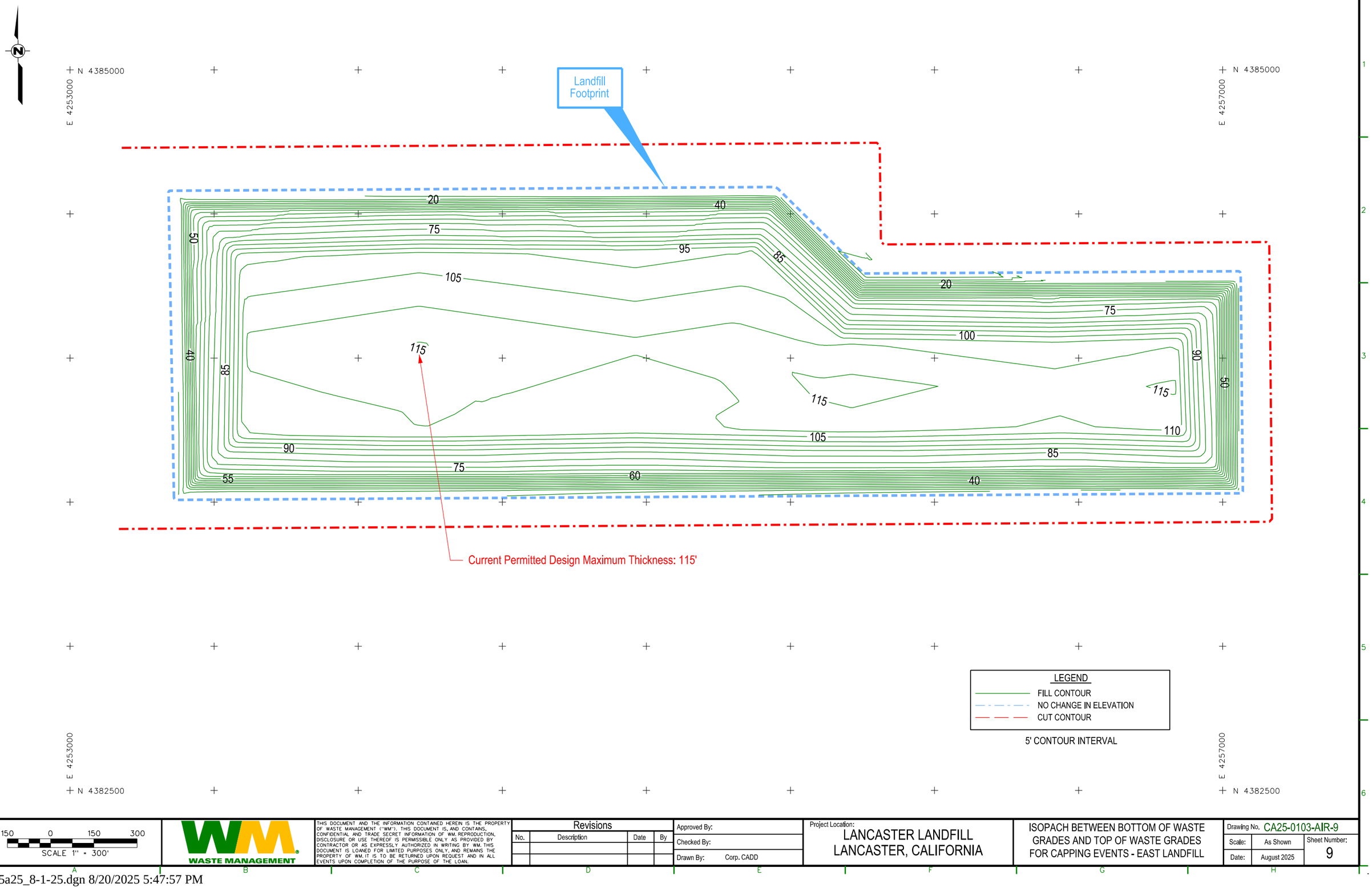
Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

ISOPACH BETWEEN BOTTOM OF WASTE GRADES AND TOP OF WASTE GRADES FOR CAPPING EVENTS

Drawing No. CA25-0103-AIR-08
Scale: As Shown
Date: August 2025
Sheet Number: 8

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150 0 150 300
SCALE 1" = 300'

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No.	Description	Date	By

Approved By:
Checked By:
Drawn By: Corp. CADD

Project Location:
LANCASTER LANDFILL
LANCASTER, CALIFORNIA

ISOPACH BETWEEN BOTTOM OF WASTE GRADES AND TOP OF WASTE GRADES FOR CAPPING EVENTS - EAST LANDFILL

Drawing No. CA25-0103-AIR-9
Scale: As Shown
Date: August 2025
Sheet Number: 9

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ATTACHMENT B

Lancaster Landfill & Recycling Facility

November 2024 Tonnage

	REFUSE (TONS)			RECYCLING TONS												
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
11/01/24	1,116.51	1,097.53	1,097.53	3.89							15.09				156		156
11/02/24	88.02	84.02	84.02	2.03						1.97			2	1	113		113
11/03/24	-	-															0
11/04/24	1,800.84	1,673.30	1,673.30	6.45						87.95	33.14		3		201		201
11/05/24	1,361.10	826.72	826.72			507.03				12.53	14.82	2	1	2	182		182
11/06/24	1,717.82	548.59	548.59			1,144.40				16.80	8.03		2		195		195
11/07/24	1,747.90	707.90	707.90			1,022.97					17.03			2	175		175
11/08/24	1,770.62	460.44	460.44	5.18		1,284.68					20.32		1		188		188
11/09/24	91.75	86.37	86.37	1.33							4.05	2	2	7	101		101
11/10/24	-	-															0
11/11/24	1,712.30	288.42	288.42	1.45		1,412.14					10.29		1	2	168		168
11/12/24	2,010.30	500.91	500.91			1,400.15				94.09	15.15		4	1	213		213
11/13/24	1,835.39	370.17	370.17	4.74		1,386.40				71.34	2.74		2	4	174		174
11/14/24	1,617.11	1,607.98	1,607.98								9.13			1	199		199
11/15/24	1,640.07	1,484.70	1,484.70			143.38					11.99		2		198		198
11/16/24	777.40	248.71	248.71			526.61				2.08		1	7	1	117		117
11/17/24	-	-															0
11/18/24	1,049.21	1,020.08	1,020.08							1.74	27.39		1	1	166		166
11/19/24	1,955.40	1,892.88	1,892.88			20.73					41.79	1	1	1	214		214
11/20/24	2,046.28	2,026.62	2,026.62								19.66		3	4	192		192
11/21/24	1,052.14	1,014.55	1,014.55							30.53	7.06				170		170
11/22/24	1,015.83	963.73	963.73							13.57	38.53	2	1	1	166		166
11/23/24	305.86	297.00	297.00	8.86									2		102		102
11/24/24	-	-															0
11/25/24	866.18	810.55	810.55							41.37	14.26			1	148		148
11/26/24	567.05	543.73	543.73							6.98	16.34	1	3	1	152		152
11/27/24	395.49	361.19	361.19							14.21	20.09			1	126		126
11/28/24	-	-															0
11/29/24	375.85	350.19	350.19	9.50						4.74	11.42		1	3	107		107
11/30/24	312.61	312.61	312.61										3	9	111		111
	-	-															0
	-	-															0
Total	**29,229.04**	**19,578.89**	**19,578.89**	**43.43**	**-**	**8,848.49**	**-**	**-**	**-**	**399.90**	**358.33**	**9**	**42**	**43**	**4,034**	**0**	**4034**

Lancaster Landfill & Recycling Facility

December 2024 Tonnage

	REFUSE (TONS)			RECYCLING TONS												
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
12/01/24	-	-															0
12/02/24	636.28	593.72	593.72							13.62	28.94		1	1	147		147
12/03/24	736.52	699.04	699.04							30.17	7.31		1		168		168
12/04/24	930.12	885.87	885.87	12.65						16.87	14.73	7	5	2	178		178
12/05/24	734.37	699.54	699.54							10.08	24.75			4	159		159
12/06/24	697.12	674.31	674.31	8.78						1.91	12.12			1	157		157
12/07/24	96.00	80.48	80.48	8.95						6.09	0.48		1	2	101		101
12/08/24	-	-															0
12/09/24	789.44	783.03	783.03								6.41			3	156		156
12/10/24	1,105.32	1,039.30	1,039.30	2.77						41.11	22.14				178		178
12/11/24	943.83	879.86	879.86	7.01						47.22	9.74			3	154		154
12/12/24	899.85	850.25	850.25							20.45	29.15			1	165		165
12/13/24	861.72	833.71	833.71	3.42						16.08	8.51				169		169
12/14/24	469.43	448.53	448.53	4.21						16.69			3	2	113		113
12/15/24	-	-															0
12/16/24	658.81	608.76	608.76							35.06	14.99		2	9	159		159
12/17/24	769.20	719.54	719.54							33.50	16.16		4	3	166		166
12/18/24	825.10	770.74	770.74							32.84	21.52				162		162
12/19/24	924.13	889.76	889.76	1.35						18.94	14.08	2			162		162
12/20/24	914.38	898.40	898.40							7.87	8.11				173		173
12/21/24	237.94	207.37	207.37	3.54						27.03					98		98
12/22/24	-	-															0
12/23/24	414.61	365.99	365.99	3.33						31.84	13.45		2		138		138
12/24/24	260.79	229.27	229.27	7.53						5.84	18.15				73		73
12/25/24	-	-															0
12/26/24	418.68	369.83	369.83	1.30						38.06	9.49			2	118		118
12/27/24	412.45	365.64	365.64	0.89						25.61	20.31		1	3	130		130
12/28/24	285.53	283.24	283.24	2.29									2		94		94
12/29/24	-	-															0
12/30/24	382.57	351.10	351.10								31.47			3	162		162
12/31/24	312.35	293.08	293.08								19.27		2	2	130		130
	-	-															0
Total	**15,716.54**	**14,820.36**	**14,820.36**	**68.02**	**-**	**-**	**-**	**-**	**-**	**476.88**	**351.28**	**9**	**24**	**41**	**3,610**	**0**	**3610**

Lancaster Landfill & Recycling Facility

January 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
01/01/25	-	-															0
01/02/25	493.22	466.06	466.06	4.67							22.49			1	147		147
01/03/25	658.73	615.58	615.58	26.21						2.14	14.80		2	1	169		169
01/04/25	629.36	615.42	615.42	13.94									6	3	154		154
01/05/25	-	-															0
01/06/25	829.27	809.89	809.89							15.22	4.16			8	163		163
01/07/25	654.78	608.37	608.37	4.42						16.11	25.88		2	1	156		156
01/08/25	775.65	729.08	729.08	7.03						3.19	36.35				162		162
01/09/25	1,079.59	1,071.41	1,071.41	1.27							6.91			1	167		167
01/10/25	769.28	753.75	753.75	10.46						1.26	3.81			2	170		170
01/11/25	246.37	241.43	241.43	4.94											88		88
01/12/25	-	-															0
01/13/25	718.10	686.39	686.39	3.16						8.42	20.13			2	150		150
01/14/25	789.25	741.60	741.60	1.19						24.27	22.19	3		3	178		178
01/15/25	954.64	924.74	924.74							5.86	24.04	5	2	1	164		164
01/16/25	795.31	739.96	739.96							6.60	48.75	4			160		160
01/17/25	910.83	873.74	873.74	3.22						0.65	33.22				185		185
01/18/25	279.87	273.52	273.52	6.35									1	3	103		103
01/19/25	-	-															0
01/20/25	692.87	652.50	652.50							17.37	23.00			2	140		140
01/21/25	747.96	714.12	714.12	2.53						12.75	18.56				150		150
01/22/25	687.92	671.23	671.23								16.69		1	1	136		136
01/23/25	920.06	865.06	865.06	2.34						17.15	35.51		1		153		153
01/24/25	815.10	769.83	769.83	8.01						31.05	6.21		1		155		155
01/25/25	484.53	474.06	474.06	5.17						5.30					114		114
01/26/25	-	-															0
01/27/25	596.17	561.02	561.02	20.97							14.18	2	2	1	119		119
01/28/25	1,025.99	988.32	988.32	16.43						4.32	16.92			2	178		178
01/29/25	831.07	815.01	815.01	2.47							13.59			1	156		156
01/30/25	811.71	800.00	800.00							6.48	5.23				144		144
01/31/25	1,071.92	1,024.54	1,024.54	3.47						3.65	40.26		1	5	183		183
	-	-															0
Total	**19,269.55**	**18,486.63**	**18,486.63**	**148.25**	**-**	**-**	**-**	**-**	**-**	**181.79**	**452.88**	**14**	**19**	**38**	**3,944**	**0**	**3944**

Lancaster Landfill & Recycling Facility

February 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
02/01/25	573.45	557.85	557.85	5.48						9.45	0.67		1		129		129
02/02/25	-	-															0
02/03/25	700.30	667.49	667.49	1.94				24.78			6.09			2	153	1	154
02/04/25	865.91	712.68	712.68	2.89				122.28		10.20	17.86		3	2	167	5	172
02/05/25	1,203.39	1,096.72	1,096.72	2.91				97.08			6.68		2	1	193	4	197
02/06/25	1,076.15	1,015.74	1,015.74	2.93				48.92			8.56	6	1	1	176	2	178
02/07/25	872.79	767.88	767.88					48.30		19.88	36.73				160	2	162
02/08/25	145.61	89.13	89.13	1.89				47.93		6.66			2	2	99	2	101
02/09/25	-	-															0
02/10/25	843.42	796.88	796.88							19.42	27.12	2	2		154		154
02/11/25	775.24	695.49	695.49	6.62				47.29			25.84	1		5	159	2	161
02/12/25	903.17	845.80	845.80	4.70				24.58		5.61	22.48				180	1	181
02/13/25	564.53	384.67	384.67					146.16			33.70			2	92	6	98
02/14/25	486.87	439.03	439.03	1.80				24.52		10.29	11.23				117	1	118
02/15/25	139.91	103.32	103.32	1.70				24.82		10.07			1	9	95	1	96
02/16/25	-	-															0
02/17/25	625.87	587.53	587.53							9.89	28.45			5	147		147
02/18/25	549.15	510.44	510.44	13.63						13.12	11.96				157		157
02/19/25	686.95	666.90	666.90	1.52						12.36	6.17	10			159		159
02/20/25	594.60	550.47	550.47	2.43						28.86	12.84				147		147
02/21/25	678.45	657.43	657.43							9.18	11.84		2	2	186		186
02/22/25	221.65	210.68	210.68	1.79						9.18			3		124		124
02/23/25	-	-															0
02/24/25	629.45	624.90	624.90	0.71							3.84				154		154
02/25/25	852.30	817.84	817.84	2.88						8.77	22.81				172		172
02/26/25	978.83	925.55	925.55	2.96						31.29	19.03		1		185		185
02/27/25	836.01	810.65	810.65								25.36			2	155		155
02/28/25	810.13	804.54	804.54								5.59	1	2	1	177		177
Total	**16,614.14**	**15,339.61**	**15,339.61**	**58.78**	**-**	**-**	**-**	**656.66**	**-**	**214.23**	**344.86**	**20**	**20**	**34**	**3,637**	**27**	**3664**

Lancaster Landfill & Recycling Facility

March 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
03/01/25	271.72	261.27	261.27	10.45								2	2		122		122
03/02/25	-	-															0
03/03/25	416.14	367.82	367.82					23.76		16.78	7.78		3	2	119	1	120
03/04/25	618.47	484.44	484.44	27.13				72.52		12.90	21.48		1	2	159	3	162
03/05/25	733.51	557.63	557.63	8.04				96.85		60.99	10.00				139	4	143
03/06/25	479.28	421.93	421.93					22.82			34.53	2			105	1	106
03/07/25	574.24	541.36	541.36								32.88			1	132		132
03/08/25	151.31	149.35	149.35								1.96			2	92		92
03/09/25	-	-															0
03/10/25	583.10	543.92	543.92	9.22						6.22	23.74			4	145		145
03/11/25	854.42	830.87	830.87	3.12							20.43				163		163
03/12/25	893.68	865.76	865.76							16.87	11.05	18			157		157
03/13/25	478.08	441.93	441.93	2.07						13.24	20.84			1	97		97
03/14/25	459.59	455.77	455.77	3.82											131		131
03/15/25	91.02	88.28	88.28	2.74											88		88
03/16/25	-	-															0
03/17/25	568.38	534.72	534.72								33.66	2		3	168		168
03/18/25	473.10	453.10	453.10							1.98	18.02		1		127		127
03/19/25	566.21	543.52	543.52							3.44	19.25		2	1	141		141
03/20/25	539.17	495.09	495.09	1.88						8.93	33.27	33	2	1	136		136
03/21/25	624.47	604.09	604.09	0.53						5.06	14.79			1	160		160
03/22/25	138.60	138.60	138.60											1	115		115
03/23/25	-	-															0
03/24/25	583.83	478.95	478.95	2.22				73.33		4.52	24.81			1	154	3	157
03/25/25	587.46	471.05	471.05	8.28				73.32		13.46	21.35	1			159	3	162
03/26/25	661.85	459.86	459.86	60.64				122.81		9.93	8.61		4		154	5	159
03/27/25	569.20	422.63	422.63	17.37				119.49		7.53	2.18				136	5	141
03/28/25	587.05	490.00	490.00	4.93				49.56		35.39	7.17	1		4	166	2	168
03/29/25	133.49	75.36	75.36	7.79				49.56		0.78			1	5	97	2	99
03/30/25	-	-															0
03/31/25	659.11	519.77	519.77	80.49				48.51		5.06	5.28			2	161	2	163
	-	-															0
Total	**13,296.48**	**11,697.07**	**11,697.07**	**250.72**	**-**	**-**	**-**	**752.53**	**-**	**223.08**	**373.08**	**59**	**16**	**31**	**3,523**	**31**	**3554**

Lancaster Landfill & Recycling Facility

April 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
04/01/25	581.32	536.33	536.33							2.64	42.35		2		168		168
04/02/25	512.24	480.03	480.03							24.31	7.90	12	1		133		133
04/03/25	460.01	425.41	425.41	0.90						20.27	13.43		4		143		143
04/04/25	479.03	462.00	462.00	0.73						10.26	6.04		47	4	139		139
04/05/25	555.14	543.27	543.27	5.49						4.00	2.38	26	1	37	148		148
04/06/25	-	-															0
04/07/25	419.16	390.71	390.71	18.81							9.64		4	1	148		148
04/08/25	447.61	428.41	428.41							8.51	10.69			2	141		141
04/09/25	729.42	575.78	575.78					96.84		47.04	9.76			1	162	4	166
04/10/25	600.44	429.81	429.81	1.14				147.14		16.23	6.12			2	131	6	137
04/11/25	728.70	585.32	585.32	0.53				121.64		9.60	11.61			8	164	5	169
04/12/25	131.24	79.51	79.51	0.75				49.01		1.97			4	10	100	2	102
04/13/25	-	-															0
04/14/25	621.42	430.90	430.90	1.06				148.04		33.73	7.69				152	6	158
04/15/25	530.70	413.29	413.29	41.89				49.57		19.72	6.23		5	2	151	2	153
04/16/25	633.32	543.32	543.32	1.54				48.97		21.20	18.29	2	1	1	155	2	157
04/17/25	629.18	495.46	495.46	5.94				98.79		9.39	19.60				141	4	145
04/18/25	549.46	488.02	488.02	0.48				47.31		0.68	12.97		3	2	151	2	153
04/19/25	238.51	146.32	146.32	28.91				48.23		6.47	8.58			4	136	2	138
04/20/25	-	-															0
04/21/25	686.88	527.61	527.61	8.53				122.49		3.25	25.00		2		161	5	166
04/22/25	515.30	429.36	429.36	1.26				49.74		27.58	7.36				138	2	140
04/23/25	729.25	549.18	549.18	9.73				146.52		8.76	15.06				152	6	158
04/24/25	588.97	445.57	445.57	38.05				72.54		11.31	21.50		2	2	144	3	147
04/25/25	630.08	525.27	525.27	6.07				49.19		6.57	42.98		1		177	2	179
04/26/25	107.02	79.59	79.59					24.31		3.12			2	2	83	1	84
04/27/25	-	-															0
04/28/25	525.02	483.15	483.15	2.89						24.66	14.32		3		158		158
04/29/25	504.05	431.10	431.10	0.61				49.49		5.50	17.35			4	141	2	143
04/30/25	556.05	455.64	455.64	6.39				49.45		24.24	20.33		3	1	150	2	152
																	0
																	0
Total	**13,689.52**	**11,380.36**	**11,380.36**	**181.70**	**-**	**-**	**-**	**1,419.27**	**-**	**351.01**	**357.18**	**40**	**85**	**83**	**3,767**	**58**	**3825**

Lancaster Landfill & Recycling Facility

May 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
05/01/25	579.57	447.94	447.94	0.82				97.53		17.88	15.40		1	1	139	4	143
05/02/25	556.85	454.03	454.03					73.95		6.16	22.71				138	3	141
05/03/25	127.28	125.36	125.36	1.92								1	1		123		123
05/04/25	-	-															0
05/05/25	595.04	433.61	433.61					145.33		1.79	14.31			1	153	6	159
05/06/25	672.42	510.69	510.69	3.57				98.68		41.34	18.14		2	2	153	4	157
05/07/25	781.40	524.44	524.44	10.91				146.53		84.98	14.54	3	1		143	6	149
05/08/25	733.09	551.60	551.60	4.22				97.81		60.49	18.97		4	5	147	4	151
05/09/25	639.84	533.63	533.63	2.42				74.07			29.72		2		155	3	158
05/10/25	199.31	172.73	172.73					24.33		2.25				3	95	1	96
05/11/25	-	-															0
05/12/25	618.97	530.59	530.59					49.40		15.85	23.13		3	1	149	2	151
05/13/25	622.54	572.43	572.43	8.70						33.48	7.93		2		154		154
05/14/25	781.66	697.07	697.07	0.61				49.16		1.86	32.96	22	1		163	2	165
05/15/25	790.33	720.43	720.43					49.14		10.07	10.69			2	145	2	147
05/16/25	678.49	625.10	625.10	4.82				23.92		2.28	22.37			1	163	1	164
05/17/25	320.35	247.29	247.29					73.06				2	2	3	135	3	138
05/18/25	-	-															0
05/19/25	697.16	556.11	556.11					122.50			18.55	2	1	4	159	5	164
05/20/25	733.23	546.52	546.52					98.49		67.36	20.86	4		2	154	4	158
05/21/25	800.36	670.18	670.18					96.26		10.03	23.89	13	2		157	4	161
05/22/25	514.18	483.45	483.45							1.05	29.68			5	133		133
05/23/25	737.83	648.27	648.27	1.61				49.35		9.89	28.71	2	6	1	171	2	173
05/24/25	115.31	90.38	90.38					24.93					3		117	1	118
05/25/25	-	-															0
05/26/25	-	-															0
05/27/25	791.28	717.20	717.20	1.38				48.93		18.36	5.41		3	1	196	2	198
05/28/25	720.01	589.08	589.08					97.65			33.28		1		170	4	174
05/29/25	547.35	512.65	512.65					24.49		9.20	1.01		4	1	139	1	140
05/30/25	782.29	593.59	593.59					148.56		12.00	28.14		2		179	6	185
05/31/25	525.42	417.16	417.16	1.44				98.57			8.25	2	8	6	151	4	155
	-	-															0
Total	**15,661.56**	**12,971.53**	**12,971.53**	**42.42**	**-**	**-**	**-**	**1,812.64**	**-**	**406.32**	**428.65**	**51**	**49**	**39**	**3,881**	**74**	**3955**

Lancaster Landfill & Recycling Facility

June 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
06/01/25	-	-															0
06/02/25	599.57	492.35	492.35	5.10				72.78			29.34		4	2	160	3	163
06/03/25	670.93	545.55	545.55					73.96		23.55	27.87		1	3	155	3	158
06/04/25	772.81	618.08	618.08	2.22				99.42		18.38	34.71	2	1	2	179	4	183
06/05/25	744.91	606.84	606.84	10.43				73.67			53.97			1	161	3	164
06/06/25	722.56	588.88	588.88	10.95				96.94			25.79		1	1	181	4	185
06/07/25	264.68	207.83	207.83	7.54				49.31					5	9	131	2	133
06/08/25	-	-															0
06/09/25	729.38	555.00	555.00					120.02		1.76	52.60		1	5	168	5	173
06/10/25	731.16	604.72	604.72					70.93		11.84	43.67			3	157	3	160
06/11/25	739.78	584.86	584.86	15.21				49.59		29.07	61.05		1	2	166	2	168
06/12/25	645.16	526.28	526.28	2.16				47.83		45.67	23.22			1	138	2	140
06/13/25	699.74	553.48	553.48	15.34				72.35		22.15	36.42		3	5	160	3	163
06/14/25	109.11	82.23	82.23					24.61		2.27			2		111	1	112
06/15/25	-	-															0
06/16/25	486.70	396.21	396.21	11.55				22.14		33.64	23.16	4	1		147	1	148
06/17/25	537.73	412.81	412.81	2.07				48.98		22.43	51.44			1	156	2	158
06/18/25	485.28	442.03	442.03	2.01						2.94	38.30	34			143		143
06/19/25	485.40	343.53	343.53	1.89				96.30			43.68			16	123	4	127
06/20/25	1,177.84	492.58	492.58	5.14		534.56		122.56			23.00				174	5	179
06/21/25	173.09	119.37	119.37	4.03				49.69				2	1	12	119	2	121
06/22/25	-	-															0
06/23/25	586.63	425.69	425.69	2.03				97.82		3.55	57.54		1	1	144	4	148
06/24/25	613.00	340.84	340.84	1.90				98.01		79.10	93.15		1	4	149	4	153
06/25/25	616.91	530.72	530.72	19.93				49.05			17.21	1	1		157	2	159
06/26/25	504.68	447.64	447.64	1.41						29.04	26.59		1	3	161		161
06/27/25	1,987.93	486.25	486.25	3.29		1,407.90		73.02		1.70	15.77		1	1	247	3	250
06/28/25	173.59	89.65	89.65	9.79				72.94		1.21			1	2	136	3	139
06/29/25	-	-															0
06/30/25	663.49	524.53	524.53	2.71				98.23		7.22	30.80	3	3	4	223	4	227
	-	-															0
	-	-															0
Total	**15,922.06**	**11,017.95**	**11,017.95**	**136.70**	**-**	**1,942.46**	**-**	**1,680.15**	**-**	**335.52**	**809.28**	**46**	**30**	**78**	**3,946**	**69**	**4015**

Lancaster Landfill & Recycling Facility

July 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Transfers (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
07/01/25	561.93	367.41	367.41					98.24		13.12	83.16		3	1	157	4	161
07/02/25	548.17	516.32	516.32	0.65						18.59	12.61		2	2	158	1	159
07/03/25	462.46	404.00	404.00	1.69				23.14			33.63			1	157		157
07/04/25	-	-															0
07/05/25	402.13	399.54	399.54								2.59		1	5	102		102
07/06/25	-	-															0
07/07/25	465.69	408.07	408.07	11.79						12.52	33.31		2	1	157		157
07/08/25	412.31	377.02	377.02							9.35	25.94			1	141		141
07/09/25	572.23	541.40	541.40							12.99	17.84		2	2	157		157
07/10/25	479.64	427.56	427.56							31.01	21.07		2		139		139
07/11/25	648.50	581.56	581.56	6.52						23.69	36.73				172		172
07/12/25	111.93	111.85	111.85								0.08	3	2	3	110		110
07/13/25	-	-															0
07/14/25	589.67	531.92	531.92							24.64	33.11		1	1	162		162
07/15/25	438.48	375.12	375.12							14.76	48.60		1	3	142		142
07/16/25	543.38	498.75	498.75							22.75	21.88				151		151
07/17/25	414.81	396.14	396.14							3.51	15.16	2	4	1	144		144
07/18/25	520.58	474.12	474.12	5.39						11.69	29.38	4			160		160
07/19/25	149.26	134.90	134.90	6.99							7.37		1	2	117		117
07/20/25	-	-															0
07/21/25	599.50	491.65	491.65					73.72			34.13		1	1	164	3	167
07/22/25	597.13	489.31	489.31	7.80						37.63	62.39		2		184		184
07/23/25	649.91	559.60	559.60					48.43		22.47	19.41	15	1	2	203	2	205
07/24/25	814.90	686.99	686.99					73.71		22.04	32.16		1	1	173	3	176
07/25/25	1,417.43	522.49	522.49	1.41		845.77				15.96	31.80			2	183	4	187
07/26/25	248.78	140.85	140.85					97.95		9.98			2	4	130		130
07/27/25	-	-															0
07/28/25	766.96	683.44	683.44					73.35			10.17			2	190	3	193
07/29/25	453.82	402.24	402.24	4.57				24.38			22.63	6	1	4	134	1	135
07/30/25	553.16	482.85	482.85					23.70			46.61			1	154	1	155
07/31/25	584.40	509.66	509.66					48.49		3.65	22.60		2	4	172	2	174
	-	-															0
Total	**14,007.16**	**11,514.76**	**11,514.76**	**46.81**	**-**	**845.77**	**-**	**####**	**-**	**310.35**	**704.36**	**30**	**31**	**44**	**4,013**	**24**	**4037**

Lancaster Landfill & Recycling Facility

August 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Transfers (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
08/01/25	618.21	461.24	461.24	0.97				98.38		40.25	17.37			2	155	4	159
08/02/25	102.56	76.23	76.23					25.06		1.27				1	90	1	91
08/03/25	-	-															0
08/04/25	629.43	479.78	479.78	3.78				72.24		25.25	48.38		3	7	170	3	173
08/05/25	535.94	495.69	495.69	6.25				23.92		10.08	-		1	1	162	1	163
08/06/25	496.15	474.14	474.14							11.95	10.06				141		141
08/07/25	558.77	484.69	484.69					48.27		13.61	12.20				127	2	129
08/08/25	607.59	527.73	527.73	4.19				74.14		0.86	0.67		2	2	149	3	152
08/09/25	155.94	77.07	77.07	4.42				74.45				1	1		95	3	98
08/10/25	-	-															0
08/11/25	757.71	565.72	565.72	15.57				146.82		9.60	20.00				171	6	177
08/12/25	645.65	499.63	499.63					98.17		30.97	16.88				165	4	169
08/13/25	658.91	573.31	573.31					70.97		5.29	9.34		3		146	3	149
08/14/25	752.63	563.30	563.30	2.94				118.86		56.51	11.02			3	149	5	154
08/15/25	716.22	590.85	590.85	6.47				70.33		22.97	25.60		1	5	185	3	188
08/16/25	163.59	61.91	61.91	4.09				97.47			0.12	4		6	87	4	91
08/17/25	-	-															0
08/18/25	846.64	625.57	625.57	97.18				96.73		10.16	17.00			5	175	4	179
08/19/25	814.71	664.60	664.60	4.18				74.04		49.68	22.21				199	3	202
08/20/25	703.12	600.17	600.17					73.67			29.28	16			169	3	172
08/21/25	626.41	523.59	523.59					73.59		14.35	14.88				156	3	159
08/22/25	1,623.26	769.43	769.43			717.02		49.23		60.12	27.46				222	2	224
08/23/25	67.87	56.47	56.47	6.40						2.03	2.97				84		84
08/24/25	-	-															0
08/25/25	748.29	636.06	636.06	3.96	11.85			49.11		24.95	22.36	4		1	175	2	177
08/26/25	977.21	812.42	812.42	4.99	19.60			121.08		2.81	16.31				180	5	185
08/27/25	814.22	629.00	629.00	6.13				146.19		3.80	29.10	12			138	6	144
08/28/25	876.33	705.55	705.55	3.26				142.30		3.68	21.54		1	1	149	6	155
08/29/25	716.59	508.63	508.63					146.39		33.37	28.20		1	2	147	6	153
08/30/25	103.37	100.40	100.40							2.97			1	3	101		101
08/31/25	-	-															0
	-	-															0
Total	16,317.32	12,563.18	12,563.18	174.78	31.45	717.02	-	1,991.41	-	436.53	402.95	37	14	39	3,887	82	3969

Lancaster Landfill & Recycling Facility

September 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Transfers (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
09/01/25	816.88	645.40	645.40					146.30			25.18		4	2	167	6	173
09/02/25	789.36	653.03	653.03	13.47				96.52		1.40	24.94		3	1	152	4	156
09/03/25	617.23	521.64	521.64					48.34		13.50	33.75	2	1	1	149	2	151
09/04/25	670.92	552.84	552.84					49.16		11.78	57.14		1	1	165	2	167
09/05/25	382.21	357.53	357.53					24.18		0.50		2	2	1	133	1	134
09/06/25	-	-															0
09/07/25	745.73	523.93	523.93	2.63				145.32		53.09	20.76				178	6	184
09/08/25	590.52	472.91	472.91	7.16				72.89		18.56	19.00			3	161	3	164
09/09/25	654.35	531.09	531.09	5.01				98.33		9.01	10.91		5		166	4	170
09/10/25	496.44	421.72	421.72	5.92				47.94		18.57	2.29		2		131	2	133
09/11/25	596.28	510.46	510.46	5.30				49.26			31.26			1	167	2	169
09/12/25	134.07	83.30	83.30	1.69				49.08						7	104	2	106
09/13/25	-	-															0
09/14/25	693.38	483.68	483.68	7.13				145.70		18.35	38.52			1	149	6	155
09/15/25	606.36	450.62	450.62	17.32	10.51			96.49		6.62	24.80			3	160	4	164
09/16/25	716.60	628.85	628.85	17.31				25.09			45.35	12	1		164	1	165
09/17/25	700.43	584.43	584.43					97.08		6.20	12.72				146	4	150
09/18/25	657.87	556.94	556.94	16.98				48.75		8.14	27.06	15	2		151	2	153
09/19/25	201.06	94.75	94.75	3.90				97.80		4.61			3		107	4	111
09/20/25	-	-															0
09/21/25	560.62	447.55	447.55	11.77				72.95		0.31	28.04	1		4	155	3	158
09/22/25	416.28	355.82	355.82	26.13						18.01	16.32		1		132		132
09/23/25	603.96	531.38	531.38	35.34						18.93	18.31	12	3	1	157		157
09/24/25	578.08	469.46	469.46	19.95						78.64	10.03	1	1	1	140		140
09/25/25	576.69	564.44	564.44	3.33							8.92		2	2	161		161
09/26/25	87.82	71.79	71.79	2.81						12.14	1.08		3	1	90		90
09/27/25	-	-															0
09/28/25	502.89	464.77	464.77							26.30	11.82		1	9	150		150
09/29/25	426.12	375.80	375.80	15.07						16.79	18.46		1		136		136
09/30/25	-	-															0
	-	-															0
	-	-															0
Total	13,822.15	11,354.13	11,354.13	218.22	10.51	-	-	1,411.18	-	341.45	486.66	45	36	39	3,671	58	3729

Lancaster Landfill & Recycling Facility

December 2024 Tonnage

	REFUSE (TONS)			RECYCLING TONS												
Date	**Gross Tons**	**Net Tons**	**MSW**	**Fill Dirt**	**Beneficial TPH Soil**	**Coversoil**	**Compost Overs**	**Processed Inerts**	**Curbside GW/ GW / Wood**	**Concrete / Asphalt**	**C&D**	**Tires (by Quantity)**	**Appliances (by Quantity)**	**CRT'S**	**Vehicles (excluding ADC)**	**Transfers (ADC)**	**Total Vehicles**
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
12/01/24	-	-															0
12/02/24	636.28	593.72	593.72							13.62	28.94		1	1	147		147
12/03/24	736.52	699.04	699.04							30.17	7.31		1		168		168
12/04/24	930.12	885.87	885.87	12.65						16.87	14.73	7	5	2	178		178
12/05/24	734.37	699.54	699.54							10.08	24.75			4	159		159
12/06/24	697.12	674.31	674.31	8.78						1.91	12.12			1	157		157
12/07/24	96.00	80.48	80.48	8.95						6.09	0.48		1	2	101		101
12/08/24	-	-															0
12/09/24	789.44	783.03	783.03								6.41			3	156		156
12/10/24	1,105.32	1,039.30	1,039.30	2.77						41.11	22.14				178		178
12/11/24	943.83	879.86	879.86	7.01						47.22	9.74			3	154		154
12/12/24	899.85	850.25	850.25							20.45	29.15			1	165		165
12/13/24	861.72	833.71	833.71	3.42						16.08	8.51				169		169
12/14/24	469.43	448.53	448.53	4.21						16.69			3	2	113		113
12/15/24	-	-															0
12/16/24	658.81	608.76	608.76							35.06	14.99		2	9	159		159
12/17/24	769.20	719.54	719.54							33.50	16.16		4	3	166		166
12/18/24	825.10	770.74	770.74							32.84	21.52				162		162
12/19/24	924.13	889.76	889.76	1.35						18.94	14.08	2			162		162
12/20/24	914.38	898.40	898.40							7.87	8.11				173		173
12/21/24	237.94	207.37	207.37	3.54						27.03					98		98
12/22/24	-	-															0
12/23/24	414.61	365.99	365.99	3.33						31.84	13.45		2		138		138
12/24/24	260.79	229.27	229.27	7.53						5.84	18.15				73		73
12/25/24	-	-															0
12/26/24	418.68	369.83	369.83	1.30						38.06	9.49			2	118		118
12/27/24	412.45	365.64	365.64	0.89						25.61	20.31		1	3	130		130
12/28/24	285.53	283.24	283.24	2.29									2		94		94
12/29/24	-	-															0
12/30/24	382.57	351.10	351.10								31.47			3	162		162
12/31/24	312.35	293.08	293.08								19.27		2	2	130		130
	-	-															0
Total	**15,716.54**	**14,820.36**	**14,820.36**	**68.02**	**-**	**-**	**-**	**-**	**-**	**476.88**	**351.28**	**9**	**24**	**41**	**3,610**	**0**	**3610**

Lancaster Landfill & Recycling Facility

January 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
01/01/25	-	-															0
01/02/25	493.22	466.06	466.06	4.67							22.49			1	147		147
01/03/25	658.73	615.58	615.58	26.21						2.14	14.80		2	1	169		169
01/04/25	629.36	615.42	615.42	13.94									6	3	154		154
01/05/25	-	-															0
01/06/25	829.27	809.89	809.89							15.22	4.16			8	163		163
01/07/25	654.78	608.37	608.37	4.42						16.11	25.88		2	1	156		156
01/08/25	775.65	729.08	729.08	7.03						3.19	36.35				162		162
01/09/25	1,079.59	1,071.41	1,071.41	1.27							6.91			1	167		167
01/10/25	769.28	753.75	753.75	10.46						1.26	3.81			2	170		170
01/11/25	246.37	241.43	241.43	4.94											88		88
01/12/25	-	-															0
01/13/25	718.10	686.39	686.39	3.16						8.42	20.13			2	150		150
01/14/25	789.25	741.60	741.60	1.19						24.27	22.19	3		3	178		178
01/15/25	954.64	924.74	924.74							5.86	24.04	5	2	1	164		164
01/16/25	795.31	739.96	739.96							6.60	48.75	4			160		160
01/17/25	910.83	873.74	873.74	3.22						0.65	33.22				185		185
01/18/25	279.87	273.52	273.52	6.35									1	3	103		103
01/19/25	-	-															0
01/20/25	692.87	652.50	652.50							17.37	23.00			2	140		140
01/21/25	747.96	714.12	714.12	2.53						12.75	18.56				150		150
01/22/25	687.92	671.23	671.23								16.69		1	1	136		136
01/23/25	920.06	865.06	865.06	2.34						17.15	35.51		1		153		153
01/24/25	815.10	769.83	769.83	8.01						31.05	6.21		1		155		155
01/25/25	484.53	474.06	474.06	5.17						5.30					114		114
01/26/25	-	-															0
01/27/25	596.17	561.02	561.02	20.97							14.18	2	2	1	119		119
01/28/25	1,025.99	988.32	988.32	16.43						4.32	16.92			2	178		178
01/29/25	831.07	815.01	815.01	2.47							13.59			1	156		156
01/30/25	811.71	800.00	800.00							6.48	5.23				144		144
01/31/25	1,071.92	1,024.54	1,024.54	3.47						3.65	40.26		1	5	183		183
	-	-															0
Total	**19,269.55**	**18,486.63**	**18,486.63**	**148.25**	**-**	**-**	**-**	**-**	**-**	**181.79**	**452.88**	**14**	**19**	**38**	**3,944**	**0**	**3944**

Lancaster Landfill & Recycling Facility

February 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
02/01/25	573.45	557.85	557.85	5.48						9.45	0.67		1		129		129
02/02/25	-	-															0
02/03/25	700.30	667.49	667.49	1.94				24.78			6.09			2	153	1	154
02/04/25	865.91	712.68	712.68	2.89				122.28		10.20	17.86		3	2	167	5	172
02/05/25	1,203.39	1,096.72	1,096.72	2.91				97.08			6.68		2	1	193	4	197
02/06/25	1,076.15	1,015.74	1,015.74	2.93				48.92			8.56	6	1	1	176	2	178
02/07/25	872.79	767.88	767.88					48.30		19.88	36.73				160	2	162
02/08/25	145.61	89.13	89.13	1.89				47.93		6.66			2	2	99	2	101
02/09/25	-	-															0
02/10/25	843.42	796.88	796.88							19.42	27.12	2	2		154		154
02/11/25	775.24	695.49	695.49	6.62				47.29			25.84	1		5	159	2	161
02/12/25	903.17	845.80	845.80	4.70				24.58		5.61	22.48				180	1	181
02/13/25	564.53	384.67	384.67					146.16			33.70			2	92	6	98
02/14/25	486.87	439.03	439.03	1.80				24.52		10.29	11.23				117	1	118
02/15/25	139.91	103.32	103.32	1.70				24.82		10.07			1	9	95	1	96
02/16/25	-	-															0
02/17/25	625.87	587.53	587.53							9.89	28.45			5	147		147
02/18/25	549.15	510.44	510.44	13.63						13.12	11.96				157		157
02/19/25	686.95	666.90	666.90	1.52						12.36	6.17	10			159		159
02/20/25	594.60	550.47	550.47	2.43						28.86	12.84				147		147
02/21/25	678.45	657.43	657.43							9.18	11.84		2	2	186		186
02/22/25	221.65	210.68	210.68	1.79						9.18			3		124		124
02/23/25	-	-															0
02/24/25	629.45	624.90	624.90	0.71							3.84				154		154
02/25/25	852.30	817.84	817.84	2.88						8.77	22.81				172		172
02/26/25	978.83	925.55	925.55	2.96						31.29	19.03		1		185		185
02/27/25	836.01	810.65	810.65								25.36			2	155		155
02/28/25	810.13	804.54	804.54								5.59	1	2	1	177		177
Total	**16,614.14**	**15,339.61**	**15,339.61**	**58.78**	**-**	**-**	**-**	**656.66**	**-**	**214.23**	**344.86**	**20**	**20**	**34**	**3,637**	**27**	**3664**

Lancaster Landfill & Recycling Facility

March 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
03/01/25	271.72	261.27	261.27	10.45								2	2		122		122
03/02/25	-	-															0
03/03/25	416.14	367.82	367.82					23.76		16.78	7.78		3	2	119	1	120
03/04/25	618.47	484.44	484.44	27.13				72.52		12.90	21.48		1	2	159	3	162
03/05/25	733.51	557.63	557.63	8.04				96.85		60.99	10.00				139	4	143
03/06/25	479.28	421.93	421.93					22.82			34.53	2			105	1	106
03/07/25	574.24	541.36	541.36								32.88			1	132		132
03/08/25	151.31	149.35	149.35								1.96			2	92		92
03/09/25	-	-															0
03/10/25	583.10	543.92	543.92	9.22						6.22	23.74			4	145		145
03/11/25	854.42	830.87	830.87	3.12							20.43				163		163
03/12/25	893.68	865.76	865.76							16.87	11.05	18			157		157
03/13/25	478.08	441.93	441.93	2.07						13.24	20.84			1	97		97
03/14/25	459.59	455.77	455.77	3.82											131		131
03/15/25	91.02	88.28	88.28	2.74											88		88
03/16/25	-	-															0
03/17/25	568.38	534.72	534.72								33.66	2		3	168		168
03/18/25	473.10	453.10	453.10							1.98	18.02		1		127		127
03/19/25	566.21	543.52	543.52							3.44	19.25		2	1	141		141
03/20/25	539.17	495.09	495.09	1.88						8.93	33.27	33	2	1	136		136
03/21/25	624.47	604.09	604.09	0.53						5.06	14.79			1	160		160
03/22/25	138.60	138.60	138.60											1	115		115
03/23/25	-	-															0
03/24/25	583.83	478.95	478.95	2.22				73.33		4.52	24.81			1	154	3	157
03/25/25	587.46	471.05	471.05	8.28				73.32		13.46	21.35	1			159	3	162
03/26/25	661.85	459.86	459.86	60.64				122.81		9.93	8.61		4		154	5	159
03/27/25	569.20	422.63	422.63	17.37				119.49		7.53	2.18				136	5	141
03/28/25	587.05	490.00	490.00	4.93				49.56		35.39	7.17	1		4	166	2	168
03/29/25	133.49	75.36	75.36	7.79				49.56		0.78			1	5	97	2	99
03/30/25	-	-															0
03/31/25	659.11	519.77	519.77	80.49				48.51		5.06	5.28			2	161	2	163
	-	-															0
Total	**13,296.48**	**11,697.07**	**11,697.07**	**250.72**	**-**	**-**	**-**	**752.53**	**-**	**223.08**	**373.08**	**59**	**16**	**31**	**3,523**	**31**	**3554**

Lancaster Landfill & Recycling Facility

April 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
04/01/25	581.32	536.33	536.33							2.64	42.35		2		168		168
04/02/25	512.24	480.03	480.03							24.31	7.90	12	1		133		133
04/03/25	460.01	425.41	425.41	0.90						20.27	13.43		4		143		143
04/04/25	479.03	462.00	462.00	0.73						10.26	6.04		47	4	139		139
04/05/25	555.14	543.27	543.27	5.49						4.00	2.38	26	1	37	148		148
04/06/25	-	-															0
04/07/25	419.16	390.71	390.71	18.81							9.64		4	1	148		148
04/08/25	447.61	428.41	428.41							8.51	10.69			2	141		141
04/09/25	729.42	575.78	575.78					96.84		47.04	9.76			1	162	4	166
04/10/25	600.44	429.81	429.81	1.14				147.14		16.23	6.12			2	131	6	137
04/11/25	728.70	585.32	585.32	0.53				121.64		9.60	11.61			8	164	5	169
04/12/25	131.24	79.51	79.51	0.75				49.01		1.97			4	10	100	2	102
04/13/25	-	-															0
04/14/25	621.42	430.90	430.90	1.06				148.04		33.73	7.69				152	6	158
04/15/25	530.70	413.29	413.29	41.89				49.57		19.72	6.23		5	2	151	2	153
04/16/25	633.32	543.32	543.32	1.54				48.97		21.20	18.29	2	1	1	155	2	157
04/17/25	629.18	495.46	495.46	5.94				98.79		9.39	19.60				141	4	145
04/18/25	549.46	488.02	488.02	0.48				47.31		0.68	12.97		3	2	151	2	153
04/19/25	238.51	146.32	146.32	28.91				48.23		6.47	8.58			4	136	2	138
04/20/25	-	-															0
04/21/25	686.88	527.61	527.61	8.53				122.49		3.25	25.00		2		161	5	166
04/22/25	515.30	429.36	429.36	1.26				49.74		27.58	7.36				138	2	140
04/23/25	729.25	549.18	549.18	9.73				146.52		8.76	15.06				152	6	158
04/24/25	588.97	445.57	445.57	38.05				72.54		11.31	21.50		2	2	144	3	147
04/25/25	630.08	525.27	525.27	6.07				49.19		6.57	42.98		1		177	2	179
04/26/25	107.02	79.59	79.59					24.31		3.12			2	2	83	1	84
04/27/25	-	-															0
04/28/25	525.02	483.15	483.15	2.89						24.66	14.32		3		158		158
04/29/25	504.05	431.10	431.10	0.61				49.49		5.50	17.35			4	141	2	143
04/30/25	556.05	455.64	455.64	6.39				49.45		24.24	20.33		3	1	150	2	152
																	0
																	0
Total	**13,689.52**	**11,380.36**	**11,380.36**	**181.70**	**-**	**-**	**-**	**1,419.27**	**-**	**351.01**	**357.18**	**40**	**85**	**83**	**3,767**	**58**	**3825**

Lancaster Landfill & Recycling Facility

May 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
05/01/25	579.57	447.94	447.94	0.82				97.53		17.88	15.40		1	1	139	4	143
05/02/25	556.85	454.03	454.03					73.95		6.16	22.71				138	3	141
05/03/25	127.28	125.36	125.36	1.92								1	1		123		123
05/04/25	-	-															0
05/05/25	595.04	433.61	433.61					145.33		1.79	14.31			1	153	6	159
05/06/25	672.42	510.69	510.69	3.57				98.68		41.34	18.14		2	2	153	4	157
05/07/25	781.40	524.44	524.44	10.91				146.53		84.98	14.54	3	1		143	6	149
05/08/25	733.09	551.60	551.60	4.22				97.81		60.49	18.97		4	5	147	4	151
05/09/25	639.84	533.63	533.63	2.42				74.07			29.72		2		155	3	158
05/10/25	199.31	172.73	172.73					24.33		2.25				3	95	1	96
05/11/25	-	-															0
05/12/25	618.97	530.59	530.59					49.40		15.85	23.13		3	1	149	2	151
05/13/25	622.54	572.43	572.43	8.70						33.48	7.93		2		154		154
05/14/25	781.66	697.07	697.07	0.61				49.16		1.86	32.96	22	1		163	2	165
05/15/25	790.33	720.43	720.43					49.14		10.07	10.69			2	145	2	147
05/16/25	678.49	625.10	625.10	4.82				23.92		2.28	22.37			1	163	1	164
05/17/25	320.35	247.29	247.29					73.06				2	2	3	135	3	138
05/18/25	-	-															0
05/19/25	697.16	556.11	556.11					122.50			18.55	2	1	4	159	5	164
05/20/25	733.23	546.52	546.52					98.49		67.36	20.86	4		2	154	4	158
05/21/25	800.36	670.18	670.18					96.26		10.03	23.89	13	2		157	4	161
05/22/25	514.18	483.45	483.45							1.05	29.68			5	133		133
05/23/25	737.83	648.27	648.27	1.61				49.35		9.89	28.71	2	6	1	171	2	173
05/24/25	115.31	90.38	90.38					24.93					3		117	1	118
05/25/25	-	-															0
05/26/25	-	-															0
05/27/25	791.28	717.20	717.20	1.38				48.93		18.36	5.41		3	1	196	2	198
05/28/25	720.01	589.08	589.08					97.65			33.28		1		170	4	174
05/29/25	547.35	512.65	512.65					24.49		9.20	1.01		4	1	139	1	140
05/30/25	782.29	593.59	593.59					148.56		12.00	28.14		2		179	6	185
05/31/25	525.42	417.16	417.16	1.44				98.57			8.25	2	8	6	151	4	155
	-	-															0
Total	**15,661.56**	**12,971.53**	**12,971.53**	**42.42**	**-**	**-**	**-**	**1,812.64**	**-**	**406.32**	**428.65**	**51**	**49**	**39**	**3,881**	**74**	**3955**

Lancaster Landfill & Recycling Facility

June 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS											VEHICLE COUNT		
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (excluding ADC)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
06/01/25	-	-															0
06/02/25	599.57	492.35	492.35	5.10				72.78			29.34		4	2	160	3	163
06/03/25	670.93	545.55	545.55					73.96		23.55	27.87		1	3	155	3	158
06/04/25	772.81	618.08	618.08	2.22				99.42		18.38	34.71	2	1	2	179	4	183
06/05/25	744.91	606.84	606.84	10.43				73.67			53.97			1	161	3	164
06/06/25	722.56	588.88	588.88	10.95				96.94			25.79		1	1	181	4	185
06/07/25	264.68	207.83	207.83	7.54				49.31					5	9	131	2	133
06/08/25	-	-															0
06/09/25	729.38	555.00	555.00					120.02		1.76	52.60		1	5	168	5	173
06/10/25	731.16	604.72	604.72					70.93		11.84	43.67			3	157	3	160
06/11/25	739.78	584.86	584.86	15.21				49.59		29.07	61.05		1	2	166	2	168
06/12/25	645.16	526.28	526.28	2.16				47.83		45.67	23.22			1	138	2	140
06/13/25	699.74	553.48	553.48	15.34				72.35		22.15	36.42		3	5	160	3	163
06/14/25	109.11	82.23	82.23					24.61		2.27			2		111	1	112
06/15/25	-	-															0
06/16/25	486.70	396.21	396.21	11.55				22.14		33.64	23.16	4	1		147	1	148
06/17/25	537.73	412.81	412.81	2.07				48.98		22.43	51.44			1	156	2	158
06/18/25	485.28	442.03	442.03	2.01						2.94	38.30	34			143		143
06/19/25	485.40	343.53	343.53	1.89				96.30			43.68			16	123	4	127
06/20/25	1,177.84	492.58	492.58	5.14		534.56		122.56			23.00				174	5	179
06/21/25	173.09	119.37	119.37	4.03				49.69				2	1	12	119	2	121
06/22/25	-	-															0
06/23/25	586.63	425.69	425.69	2.03				97.82		3.55	57.54		1	1	144	4	148
06/24/25	613.00	340.84	340.84	1.90				98.01		79.10	93.15		1	4	149	4	153
06/25/25	616.91	530.72	530.72	19.93				49.05			17.21	1	1		157	2	159
06/26/25	504.68	447.64	447.64	1.41						29.04	26.59		1	3	161		161
06/27/25	1,987.93	486.25	486.25	3.29		1,407.90		73.02		1.70	15.77		1	1	247	3	250
06/28/25	173.59	89.65	89.65	9.79				72.94		1.21			1	2	136	3	139
06/29/25	-	-															0
06/30/25	663.49	524.53	524.53	2.71				98.23		7.22	30.80	3	3	4	223	4	227
	-	-															0
	-	-															0
Total	**15,922.06**	**11,017.95**	**11,017.95**	**136.70**	**-**	**1,942.46**	**-**	**1,680.15**	**-**	**335.52**	**809.28**	**46**	**30**	**78**	**3,946**	**69**	**4015**

Lancaster Landfill & Recycling Facility

July 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Transfers (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
07/01/25	561.93	367.41	367.41					98.24		13.12	83.16		3	1	157	4	161
07/02/25	548.17	516.32	516.32	0.65						18.59	12.61		2	2	158	1	159
07/03/25	462.46	404.00	404.00	1.69				23.14			33.63			1	157		157
07/04/25	-	-															0
07/05/25	402.13	399.54	399.54								2.59		1	5	102		102
07/06/25	-	-															0
07/07/25	465.69	408.07	408.07	11.79						12.52	33.31		2	1	157		157
07/08/25	412.31	377.02	377.02							9.35	25.94			1	141		141
07/09/25	572.23	541.40	541.40							12.99	17.84		2	2	157		157
07/10/25	479.64	427.56	427.56							31.01	21.07		2		139		139
07/11/25	648.50	581.56	581.56	6.52						23.69	36.73				172		172
07/12/25	111.93	111.85	111.85								0.08	3	2	3	110		110
07/13/25	-	-															0
07/14/25	589.67	531.92	531.92							24.64	33.11		1	1	162		162
07/15/25	438.48	375.12	375.12							14.76	48.60		1	3	142		142
07/16/25	543.38	498.75	498.75							22.75	21.88				151		151
07/17/25	414.81	396.14	396.14							3.51	15.16	2	4	1	144		144
07/18/25	520.58	474.12	474.12	5.39						11.69	29.38	4			160		160
07/19/25	149.26	134.90	134.90	6.99							7.37		1	2	117		117
07/20/25	-	-															0
07/21/25	599.50	491.65	491.65					73.72			34.13		1	1	164	3	167
07/22/25	597.13	489.31	489.31	7.80						37.63	62.39		2		184		184
07/23/25	649.91	559.60	559.60					48.43		22.47	19.41	15	1	2	203	2	205
07/24/25	814.90	686.99	686.99					73.71		22.04	32.16		1	1	173	3	176
07/25/25	1,417.43	522.49	522.49	1.41		845.77				15.96	31.80			2	183	4	187
07/26/25	248.78	140.85	140.85					97.95		9.98			2	4	130		130
07/27/25	-	-															0
07/28/25	766.96	683.44	683.44					73.35			10.17			2	190	3	193
07/29/25	453.82	402.24	402.24	4.57				24.38			22.63	6	1	4	134	1	135
07/30/25	553.16	482.85	482.85					23.70			46.61			1	154	1	155
07/31/25	584.40	509.66	509.66					48.49		3.65	22.60		2	4	172	2	174
	-	-															0
Total	**14,007.16**	**11,514.76**	**11,514.76**	**46.81**	**-**	**845.77**	**-**	**####**	**-**	**310.35**	**704.36**	**30**	**31**	**44**	**4,013**	**24**	**4037**

Lancaster Landfill & Recycling Facility

August 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Transfers (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
08/01/25	618.21	461.24	461.24	0.97				98.38		40.25	17.37			2	155	4	159
08/02/25	102.56	76.23	76.23					25.06		1.27				1	90	1	91
08/03/25	-	-															0
08/04/25	629.43	479.78	479.78	3.78				72.24		25.25	48.38		3	7	170	3	173
08/05/25	535.94	495.69	495.69	6.25				23.92		10.08	-		1	1	162	1	163
08/06/25	496.15	474.14	474.14							11.95	10.06				141		141
08/07/25	558.77	484.69	484.69					48.27		13.61	12.20				127	2	129
08/08/25	607.59	527.73	527.73	4.19				74.14		0.86	0.67		2	2	149	3	152
08/09/25	155.94	77.07	77.07	4.42				74.45				1	1		95	3	98
08/10/25	-	-															0
08/11/25	757.71	565.72	565.72	15.57				146.82		9.60	20.00				171	6	177
08/12/25	645.65	499.63	499.63					98.17		30.97	16.88				165	4	169
08/13/25	658.91	573.31	573.31					70.97		5.29	9.34		3		146	3	149
08/14/25	752.63	563.30	563.30	2.94				118.86		56.51	11.02			3	149	5	154
08/15/25	716.22	590.85	590.85	6.47				70.33		22.97	25.60		1	5	185	3	188
08/16/25	163.59	61.91	61.91	4.09				97.47			0.12	4		6	87	4	91
08/17/25	-	-															0
08/18/25	846.64	625.57	625.57	97.18				96.73		10.16	17.00			5	175	4	179
08/19/25	814.71	664.60	664.60	4.18				74.04		49.68	22.21				199	3	202
08/20/25	703.12	600.17	600.17					73.67			29.28	16			169	3	172
08/21/25	626.41	523.59	523.59					73.59		14.35	14.88				156	3	159
08/22/25	1,623.26	769.43	769.43			717.02		49.23		60.12	27.46				222	2	224
08/23/25	67.87	56.47	56.47	6.40						2.03	2.97				84		84
08/24/25	-	-															0
08/25/25	748.29	636.06	636.06	3.96	11.85			49.11		24.95	22.36	4		1	175	2	177
08/26/25	977.21	812.42	812.42	4.99	19.60			121.08		2.81	16.31				180	5	185
08/27/25	814.22	629.00	629.00	6.13				146.19		3.80	29.10	12			138	6	144
08/28/25	876.33	705.55	705.55	3.26				142.30		3.68	21.54		1	1	149	6	155
08/29/25	716.59	508.63	508.63					146.39		33.37	28.20		1	2	147	6	153
08/30/25	103.37	100.40	100.40							2.97			1	3	101		101
08/31/25	-	-															0
	-	-															0
Total	16,317.32	12,563.18	12,563.18	174.78	31.45	717.02	-	1,991.41	-	436.53	402.95	37	14	39	3,887	82	3969

Lancaster Landfill & Recycling Facility

September 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Transfers (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
09/01/25	816.88	645.40	645.40					146.30			25.18		4	2	167	6	173
09/02/25	789.36	653.03	653.03	13.47				96.52		1.40	24.94		3	1	152	4	156
09/03/25	617.23	521.64	521.64					48.34		13.50	33.75	2	1	1	149	2	151
09/04/25	670.92	552.84	552.84					49.16		11.78	57.14		1	1	165	2	167
09/05/25	382.21	357.53	357.53					24.18		0.50		2	2	1	133	1	134
09/06/25	-	-															0
09/07/25	745.73	523.93	523.93	2.63				145.32		53.09	20.76				178	6	184
09/08/25	590.52	472.91	472.91	7.16				72.89		18.56	19.00			3	161	3	164
09/09/25	654.35	531.09	531.09	5.01				98.33		9.01	10.91		5		166	4	170
09/10/25	496.44	421.72	421.72	5.92				47.94		18.57	2.29		2		131	2	133
09/11/25	596.28	510.46	510.46	5.30				49.26			31.26			1	167	2	169
09/12/25	134.07	83.30	83.30	1.69				49.08						7	104	2	106
09/13/25	-	-															0
09/14/25	693.38	483.68	483.68	7.13				145.70		18.35	38.52			1	149	6	155
09/15/25	606.36	450.62	450.62	17.32	10.51			96.49		6.62	24.80			3	160	4	164
09/16/25	716.60	628.85	628.85	17.31				25.09			45.35	12	1		164	1	165
09/17/25	700.43	584.43	584.43					97.08		6.20	12.72				146	4	150
09/18/25	657.87	556.94	556.94	16.98				48.75		8.14	27.06	15	2		151	2	153
09/19/25	201.06	94.75	94.75	3.90				97.80		4.61			3		107	4	111
09/20/25	-	-															0
09/21/25	560.62	447.55	447.55	11.77				72.95		0.31	28.04	1		4	155	3	158
09/22/25	416.28	355.82	355.82	26.13						18.01	16.32		1		132		132
09/23/25	603.96	531.38	531.38	35.34						18.93	18.31	12	3	1	157		157
09/24/25	578.08	469.46	469.46	19.95						78.64	10.03	1	1	1	140		140
09/25/25	576.69	564.44	564.44	3.33							8.92		2	2	161		161
09/26/25	87.82	71.79	71.79	2.81						12.14	1.08		3	1	90		90
09/27/25	-	-															0
09/28/25	502.89	464.77	464.77							26.30	11.82		1	9	150		150
09/29/25	426.12	375.80	375.80	15.07						16.79	18.46		1		136		136
09/30/25	-	-															0
	-	-															0
	-	-															0
Total	13,822.15	11,354.13	11,354.13	218.22	10.51	-	-	1,411.18	-	341.45	486.66	45	36	39	3,671	58	3729

Lancaster Landfill & Recycling Facility

October 2025 Tonnage

	REFUSE (TONS)			RECYCLING TONS													
Date	Gross Tons	Net Tons	MSW	Fill Dirt	Beneficial TPH Soil	Coversoil	Compost Overs	Processed Inerts	Curbside GW/ GW / Wood	Concrete / Asphalt	C&D	Tires (by Quantity)	Appliances (by Quantity)	CRT'S	Vehicles (MSW)	Transfers (ADC)	Total Vehicles
			MSW	RGC	RGC	RGC	RGC	RGC	OYW	C&D	RDW	RDW	RDW	RDW			
10/01/25	499.83	479.46	479.46							5.90	14.47		2		143	0	143
10/02/25	563.84	511.97	511.97	4.62						20.49	26.76		1	1	162	0	162
10/03/25	539.66	512.61	512.61	9.89						5.64	11.52	8	1	9	163	0	163
10/04/25	576.38	564.53	564.53	1.44						9.41	1.00	7	26	30	487	0	487
10/05/25	-	-															0
10/06/25	511.13	476.89	476.89								34.24		4		158	0	158
10/07/25	470.83	414.19	414.19	0.72						28.57	27.35				129	0	129
10/08/25	620.83	609.50	609.50								11.33	2	3	1	164	0	164
10/09/25	593.61	536.41	536.41							19.73	37.47			5	159	0	159
10/10/25	671.11	576.17	576.17							58.45	36.49		2		172	0	172
10/11/25	128.04	119.08	119.08	8.96									1		124	0	124
10/12/25	-	-															0
10/13/25	529.73	487.60	487.60	2.91						31.38	7.84		1		168	0	168
10/14/25	526.89	521.38	521.38								5.51				128	0	128
10/15/25	563.45	501.65	501.65	1.96						26.17	33.67		1		149	0	149
10/16/25	502.70	483.23	483.23							0.91	18.56		1		152	0	152
10/17/25	577.56	555.68	555.68							2.04	19.84		1	5	172	0	172
10/18/25	128.20	123.01	123.01	3.00						2.19			2	1	112	0	112
10/19/25	-	-															0
10/20/25	640.56	592.40	592.40	13.81							34.35	1			165	0	165
10/21/25	511.46	488.36	488.36							3.55	19.55	1	2		153	0	153
10/22/25	663.21	621.54	621.54	1.31							40.36		2		177	0	177
10/23/25	609.38	500.88	500.88							49.34	59.16				141	0	141
10/24/25	539.55	509.48	509.48	0.64						7.02	22.41		3	1	144	0	144
10/25/25	85.89	82.05	82.05	3.84									1	1	94	0	94
10/26/25	-	-															0
10/27/25	598.09	543.29	543.29							36.25	18.55		2		139	0	139
10/28/25	528.80	464.34	464.34							57.10	7.36		2		152	0	152
10/29/25	601.82	567.99	567.99							8.95	24.88				148	0	148
10/30/25	478.58	457.15	457.15							11.12	10.31		1	4	124	0	124
10/31/25	562.89	516.56	516.56	23.76						5.36	17.21		2	1	139	0	139
	-	-															0
Total	13,824.02	12,817.40	12,817.40	76.86	-	-	-	-	-	389.57	540.19	19	61	59	4,318	0	4318

ATTACHMENT C

Antelope Valley Air Quality Management District
2551 West Avenue H
Lancaster, CA 93536
661-723-8070
www.AVAQMD.ca.gov

June 18, 2025

Waste Management of California, Inc
Attn: Michael Dudley
600 E Avenue F
Lancaster, CA, 93535

SENT via EMAIL and/or FIRST CLASS
MAILTO ENSURE DELIVERY

RE: NOTICE OF VIOLATION #AV00000271

Dear Michael Dudley:

The purpose of this Notice of Violation is to inform you of violations that have occurred on a property that is under your control: 600 E Avenue F, Lancaster, CA, 93535.

A review of the information available to the Antelope Valley Air Quality Management District (District) indicates that Lancaster Landfill and Recycling Facility has violated the provisions of District Rule 431.1. Therefore, the District has issued the attached Notice of Violation.

Enclosed is a proposed settlement letter explaining how this matter can be resolved without further litigation. The letter will propose conditions for settlement and give you an opportunity to respond. Please review it carefully.

Sincerely,

Barbara Lods

Barbara Lods
Executive Director\ APCO

Encl: NOV #AV00000271
NOV Response Sheet

NOTICE OF VIOLATION NUMBER AV00000271

COMPANY:	*Waste Management of California, Inc*	*COMPANY #:*	*2976*
FACILITY:	Los Angeles County Public Works	*FACILITY #:*	*2129*
CONTACT:	*Michael Dudley*	*PTO/ATC #'S:*	*C006906*
MAILING	*600 E Avenue F*	*INSPECTOR:*	*Barbara Lods*
ADDRESS:	*Lancaster, CA, 93535*	*INSPECTION DATE:*	*06/18/2025*

The District has a policy of attempting to mutually resolve all Notice of Violations. In an effort to resolve this, and after reviewing the information available in this matter, the District is willing to settle the violation on the terms and conditions set forth herein:

Conditions of settling the Notice of Violation -

1. Payment of a civil penalty in the sum of **$ 34,000.00.**

2. Complete and return the enclosed response sheet.

Terms of settling the Notice of Violation -

Release of the alleged violator(s) from any and all claims for civil or criminal penalties arising out of the incident referred to in the above Notice of Violations. The District reserves the right to rely upon the alleged violation and may offer proof thereof in connection with any petition for a variance, permit revocation, or abatement order before the District Hearing Board or in connection with the determination of the appropriate penalty in the event similar Notices of Violation are issued in the future. The settlement shall not constitute an admission of liability, nor shall any such admission be inferred in any administrative or judicial proceeding.

In determining the amount of penalty several factors, as required by the Health and Safety Code, were taken into consideration. These factors include, but are not limited to: the severity of the violation, the frequency of past violations and the corrective action, if any, taken by the violator.

Response to this NOV must be received no later than 07/03/2025.

If the terms are unacceptable please contact the District immediately at (661) 723-8070 x23.
If this settlement is not accepted, or if alternate arrangements have not been made within the time period set forth above, the offer will be revoked and the violation will be referred to our counsel for further action.

Thank you for your cooperation in bringing this matter to a close.

Sincerely,

Barbara Lods

Barbara Lods
Executive Director\APCO

COMPLETE AND RETURN TO:
Antelope Valley Air Quality Management District
2551 W Avenue H
Lancaster, CA 93536

NOTICE OF VIOLATION NUMBER AV00000271

COMPANY:	*Waste Management of California, Inc*	*COMPANY #:*	*2976*
FACILITY:	*Los Angeles County Public Works*	*FACILITY #:*	*2129*
CONTACT:	*Michael Dudley*	*PTO/ATC #'S:*	*C006906*
MAILING ADDRESS:	*600 E Avenue F Lancaster, CA, 93535*	*INSPECTOR:*	*Barbara Lods*
		INSPECTION DATE:	*06/18/2025*

Date on which the violation(s) was corrected:	**Enclosed is a check in the amount of $**
Actions taken to correct the violation(s) set forth in the NOV:	

Actions taken to prevent future violation(s) of the same nature as the violation(s) listed:
Any other information relevant to the NOV (attach additional information if needed):

Signature:	**Date:**
Name:	**Title:**
Address:	
Telephone:	**Email:**

Antelope Valley Air Quality Management District

Company: Waste Management of California Lancaster Landfill & Recycling NOV # AV00000271

1. Penalty for Violations
   Maximum Penalty $ 1,000.00 x 34 Days in Violation = $ 34,000.00
   (Time period March 28 to May 1)

2. Reduction Factor #1
   First Offense ____%
   Second Offense ____%
   Third Offense ____% $____

3. Reduction Factor #2
   Current Maintenance Records ____%
   Swift Corrective Action ____% $____

4. Reduction Factor#3
   Innovative/Unproven Controls ____%
   Research/Development Project ____% $____

5. Reduction Factor #4
   Small Co. (<$500K/yr), 0-20% ____%
   Medium Co. (<$5M/yr), 0-20% ____%
   Large Co. (>$5M/yr) 0 % $____

6. Reduction Factor #5
   Other factors ____%
   Attach written explanation
   Attach DAPCO approval ____% $____
   Reduction 51 to 75%

7. Total Reduction Factors $____

8. Mutual Settlement Offer
   Subtract line 7 from line 1 $____

Barbara Lods
Prepared By

June 18, 2025
Date

COMPLETE AND RETURN TO:
Antelope Valley Air Quality Management District
2551 W Avenue H
Lancaster, CA 93536

NOTICE OF VIOLATION NUMBER AV00000271

COMPANY:	*Waste Management of California, Inc*	*COMPANY #:*	*2976*
FACILITY:	*Los Angeles County Public Works*	*FACILITY #:*	*2129*
CONTACT:	*Michael Dudley*	*PTO/ATC #'S:*	*C006906*
MAILING ADDRESS:	*600 E Avenue F Lancaster, CA, 93535*	*INSPECTOR:*	*Barbara Lods*
		INSPECTION DATE:	*06/18/2025*

Date on which the violation(s) was corrected:	**Enclosed is a check in the amount of $**
October 6, 2025	$17,000 (Submitted separately)
Actions taken to correct the violation(s) set forth in the NOV: Flare re-tested, also see attached WMCI letter and AVAQMD response.	

Actions taken to prevent future violation(s) of the same nature as the violation(s) listed: See attached WMCI letter and AVAQMD response.
Any other information relevant to the NOV (attach additional information if needed):

Signature: 	**Date:** 12/18/2025
Name: Michael Dudley	**Title:** District Manager
Address: 1200 W. City Ranch Road	
Telephone: 805-206-7689	**Email:** mdudley1@wm.com

WASTE MANAGEMENT OF CALIFORNIA, INC.
600 E Avenue F
Lancaster, CA 93535
(661) 223-3418

July 3, 2025

CONFIDENTIAL SETTLEMENT COMMUNICATION
BUSINESS PROPRIETARY/TRADE SECRET INFORMATION
NOT SUBJECT TO PUBLIC DISCLOSURE

Barbara Lods
Antelope Valley Air Quality Management District
2551 West Avenue H
Lancaster, CA 93536

Subject: Lancaster Landfill and Recycling Center Response to Notice of Violation #AV00000271

Dear Mrs. Lods,

Lancaster Landfill and Recycling Center ("LLRC") is in receipt of the Notice of Violation #AV00000271 (#AV271) issued on June 18, 2025, regarding the violation of Antelope Valley Air Quality Management District (AVAQMD) Rule 431.1, Condition (C)(2), Table 1 for Landfill Gas (LFG) at LLRC. For the reasons stated below, LLRC requests the AVAQMD to reduce the proposed penalty to $17,000.

It is LLRC's understanding that the penalty listed in #AV271 is based on the number of days that LLRC was over the 250 parts per million (ppm) threshold for sulfur compounds listed in the above referenced Table 1 from March 28, 2025 through May 1, 2025. This was due to an LFG lab sample that was taken on March 28, 2025, but unfortunately LLRC did not receive the results until April 21, 2025 showing the high sulfur compounds. Upon receipt, LLRC immediately investigated the issue, which resulted in the discovery of a bypass valve for the centralized sulfur treatment system inadvertently being switched open during source test preparation/maintenance work for the flare onsite. The bypass valve was immediately closed, a lock was added on the valve, a new lab sample was taken on May 1, 2025, and compliant results (2.84 ppm) were reported to LLRC on May 9, 2025. In the interim, LLRC also received preliminary results on April 18, 2025 from the flare source test conducted on March 21, 2025, incorrectly showing sulfur compounds well below the 250 ppm threshold. It took several days and a deep dive into the preliminary results before discovering the source test company's miscalculation.

Pursuant to Health and Safety Code section 42403, AVAQMD is required to consider the eight statutory factors in arriving at penalty for violations of air quality management district rules

WASTE MANAGEMENT OF CALIFORNIA, INC.
600 E Avenue F
Lancaster, CA 93535
(661) 223-3418

and regulations. LLRC requests that AVAQMD consider the following facts when reviewing those statutory factors:

(1) The extent of harm caused by the violation.

According to LLRC's research, the Antelope Valley air basin is currently in attainment for the SO_2 ambient air quality standard. When the LFG treatment system is in normal operation, LFG emissions are approximately one percent of the Rule 431.1 limit. This brief excursion over the limit would not have a material effect on ambient air quality in the air basin on either an acute or chronic basis.

(2) The nature and persistence of the violation.

As described previously, this violation was the result of human error tied to preparations for the annual source test. Moreover, part of the reason for the human error is that the employee involved is a new employee that is part of the Company's overall efforts to increase landfill gas management staff across Southern California.

(3) The length of time over which the violation occurs.

The violation occurred over a period of 35 days; however, as mentioned this period was longer due to delays on the part of the analytical laboratory, as well as data quality issues from the testing company – delays which are outside of the control of LLRC.

(4) The frequency of past violations.

There have been no violations of AVAQMD rules or Division 26 of the Health and Safety Code at this facility in the past five years.

(5) The record of maintenance.

From 2022 to 2024, LLRC maintained an average GCCS uptime of 97.7% per the site's annual GHG reports. For the 2023 source test, LLRC was 0.6% of the sulfur oxides tons/year limit and 1.2% of the PPM limit (3/250). Excluding the anomalous high H_2S result, LLRC's average inlet TRS to the flare, based on quarterly lab samples from 2024 to present, has been 19 ppm, keeping LLRC well below the 431.1 regulatory limit.

(6) The unproven or innovative nature of the control equipment.

The equipment involved in this incident is neither unproven nor innovative.

(7) Any action taken by the defendant, including the nature, extent, and time of response of the cleanup and construction undertaken, to mitigate the violation.

WASTE MANAGEMENT OF CALIFORNIA, INC.
600 E Avenue F
Lancaster, CA 93535
(661) 223-3418

As mentioned above, LLRC's root causes analysis is that human error that occurred in preparing for the annual source test resulted in the bypass valve being left open. LLRC has now included a lock system on this valve. By placing a lock on this valve, the valve will be subject to enhanced procedural protections when decisions are made to open or close the valve. This is intended to ensure that this same error does not recur.

(8) The financial burden to the defendant.

This factor is not relevant to this matter.

Therefore, due to multiple extenuating circumstances, information delays, and LLRC's longstanding and steadfast commitment to compliance with AVAQMD rules – including the installation of a centralized LFG sulfur treatment system at LLRC in 2023 – we request that the penalty for this violation be reduced to $17,000. Please be assured that LLRC staff takes its compliance obligations seriously. We greatly appreciate our relationship with AVAQMD and work hard to maintain a positive and cooperative relationship with our regulators. Thank you for considering the information provided with this letter, we look forward to your response. Should you have any questions or would like to address our request further, please contact the undersigned at (510) 714-6098.

Kindest Regards,



Collin Pavelchik
EP Air Quality Specialist
Waste Management

CC: Mr. Michael Dudley, Waste Management of California, Inc.
Ms. Tracy Freeman, Waste Management
Mr. Tim Miller, Waste Management

Antelope Valley Air Quality Management District
2551 West Avenue H Lancaster, CA 93536
661-723-8070
www.avaqmd.ca.gov
Barbara Lods, Executive Director/APCO

July 10, 2025

Waste Management of California, Inc
Attn: Collin Pavelchik
600 E Avenue F
Lancaster, CA 93535

Subject: Lancaster Landfill and Recycling Center – Notice of Violation #AV00000271

Dear Mr. Pavelchik

Antelope Vally Air Quality Management is in receipt of your response dated July 3, 2025, regarding violation #AV00000271 (#AV271).

Pursuant to the expedited investigation, the implementation of enhanced procedural safeguards, and the source test demonstrating compliance with AVAQMD Rule 431.1, the District is agreeable to reducing the penalty to the requested amount of $17,000.

This reduction is conditional upon the submission of a passing source test dated on or around November 1, 2025, (approximately six months after the previous test) showing compliance with District Rule 431.1. Once the passing test is submitted, the $17,000 penalty can be submitted, and the violation will be closed.

AVAQMD sincerely appreciates Waste Management's dedication to maintaining compliance and your ongoing cooperation with the District.

If you have any questions, please feel free to contact me at (661) 723-8070 x23

Sincerely,

Barbara Lods

Barbara Lods
Antelope Valley AQMD
Executive Director/APCO

CC: Michael Dudley
Tracy Freeman

ATTACHMENT D

Mariposa Biology
4729 ROLANDO BLVD SAN DIEGO, CA 92115 cjones171@cox.net
TEL 714-671-8037

July 29, 2025

Ms. Tracy Freeman
Lancaster Landfill
600 E Ave F
Lancaster, CA 93535

RE: Lancaster Landfill CUP 03-170-(5) Condition 51 Annual Report for 2025

Dear Ms. Freeman,

This Annual Report describes compliance with Condition 51 of the Lancaster Landfill Conditional Use Permit (CUP). Condition 51 has to do with landfill cover and revegetation and all conditions have been satisfied as of 2025.

A site visit was conducted at Lancaster Landfill on July 17, 2025. The photographs in this report are from this site visit. Figure 1 shows an aerial view of the landfill.

The average annual rainfall for the area is 6.68 inches. A total of 1.77 inches of rain fell during the 2024-2025 rainfall season.

The CUP measure are listed below. Details on the compliance are described below each CUP measure.

Condition 51a

- Three copies of a landscape plan shall be submitted to and approved by the Director of the Department within 180 days after the Effective Date.The landscape plan shall show size, type, and location of all plants, trees, and watering facilities. All landscaping shall be maintained in a neat, clean, and healthful condition, including proper pruning, weeding, removal of litter, fertilizing, and replacement of plants when necessary.

A landscape plan was prepared by Craig Thomas Duncan Landscape Architecture in 2000 and was submitted to the Planning Department of Los Angeles County to fulfill this condition. The landscaped area is in front of the office buildings and landfill entrance on Ave F.

In 2021, the landscaping was improved. Older trees and shrubs were trimmed or removed, depending on their condition. Removed plants were replaced with 56 new 5-gallon drought tolerant plants. The irrigation system was also upgraded to accommodate the new planting design.

Photograph 1 shows the landscaping in 2025. The landscaping is on E Avenue F in front of the office. The trees and shrubs were in healthy condition during the site visit.

Condition 51b

- An annual monitoring report shall be prepared by an independent, qualified biologist and submitted to the Director of the Department providing status and progress of the provisions in this Condition No. 51. The monitoring report may be submitted as part of the annual report required pursuant to Part X of the IMP.

This report is the 2025 Annual Report and satisfies Condition 51b. This report is based on site conditions that were observed on July 17, 2025.

Condition 51c

- The Permittee shall employ an expert or.experts, including an independent, qualified biologist, to satisfy this Condition No. 51. Soil sampling and laboratory analysis shall be conducted in areas that are required to be re vegetated before any re vegetation occurs to identify chemical or physical soil properties that may adversely affect plant growth or establishment. Soil amendments and fertilizer recommendations shall be applied and plant materials selected, based on the above referenced testing procedure and results.

Revegetation of the landfill is planned to take place after the landfill closes and soil sampling will be conducted at that time. As of 2025, soil sampling has not been needed.

Condition 51d

- The Permittee shall apply a temporary vegetation cover on any slope or other landfill area that is projected to be inactive for a period greater than 180 days, as set forth in the IMP. The Permittee shall identify such slope or area in the annual monitoring described in subsection (b) above, and include an interim reclamation and re-vegetation plan as well as the timing of the proposed work for review and approval by the Director of the Department.

There are four inactive slopes on the exterior of the landfill with two types of temporary vegetation cover. One type of temporary cover is green waste grindings and wood chips. This is found primarily on the southern slope.

The more common type is natural vegetation and consists of a dense mixture of native and non-native grasses, wildflowers, and some native and non-native shrubs. Photograph 2 shows the vegetation cover on an exterior landfill slope.

During the site visit, two California ground squirrel (*Otospermophilus beecheyi*) burrows were found on the eastern landfill slope on Challenger Way. Photograph 3 shows the larger burrow system. During the site visit, there was no evidence of landfill slope structural issues with the burrows. These burrows were flagged for future observation.

The landfill and the landfill's adjacent borrow site do not provide suitable habitat for the state-threatened Mojave ground squirrel (*Xerospemophilus mohavensis*). The Lancaster Landfill and surrounding areas were evaluated for this species in 2010 (Leitner 2010). Habitat conditions at the landfill and the landfill's borrow site have not changed since the 2010 survey.

The slopes with temporary vegetation cover are shown in Photographs 4-7. The slopes were intact during the site visit and vegetation was dense, particularly on the north and east slopes.

At the base of the south slope, several surface water detention ponds were built since the 2024 site visit. Photograph 8 shows one of the new detention ponds.

Condition 51e

- Except as otherwise provided in this Condition No 51, all final fill slopes shall be reclaimed and re-vegetated in lifts substantially in conformance with Mitigation Monitoring Program.
- There were no final fill slopes in 2025.

Condition 51f

- Notwithstanding the foregoing provisions of this Condition No. 51, the Permittee shall comply with the requirements of State regulations, the Department, and the TAC, so long as the Limits of Fill are not exceeded, if in consultation with the Department of Public Works, the Department determines that a different vegetation design or play:

  i. would better protect public health and safety;

  ii. would enable re-vegetation of the final slopes at least as well as described in subsection (e), above; and/or

  iii. would be required because the minimum standards adopted by the CalRecycle have been amended:

This condition pertains to final fill slopes and there were no final fill slopes in 2025.

Condition 51g

- All Joshua trees to be impacted by development of the Project shall be preserved and transplanted at the existing Facility with best management practices known prior to the commencement of grading operations.

There have been no impacts to Joshua trees from borrow site grading.

References Cited

Leitner, P. 2010. *Mohave Ground Squirrel Habitat Assessment for the Lancaster Borrow Site*. Prepared for Waste Management. Prepared by Philip Leitner. October 5.

If you have any questions or concerns regarding this report, please contact me at 714-671-8037 or cjones171@cox.net.

Sincerely,



Cynthia Jones Daverin



SITE LOCATION

LANCASTER LANDFILL
MARIPOSA BIOLOGY

JULY 2025 FIGURE 1

C:\EIS\orante\SC0481_EIS\orante\Bio\2025\Landcaster\Landcaster2025.aprx



Photograph 1. View of the landscaped trees and shrubs at the landfill entrance on E Avenue F.



Photograph 2. Temporary vegetation cover on the exterior landfill slope.



Photograph 3. A California ground squirrel burrow on the Challenger Way slope.



Photograph 4. The view of the northern landfill slope, looking west along E Avenue F.



Photograph 5. The eastern slope along Challenger Way, looking south.



Photograph 6. The south landfill slope looking west.



Photograph 7. The western slope of the landfill, looking north.



Photograph 8. A new surface water detention pond at the base of the south slope.

ATTACHMENT E

ArchaeoPaleo Resource Management, Inc.
A full-service Archaeology and Paleontology company
SBE/WBE/WOSB/EBE/DBE/UDBE/LBE/LSBE/CBE/VSBE/MicroBE Certified

Archaeological and Paleontological Findings Report
Lancaster Landfill and Recycling Center – Eastern Borrow Pit EEA
City of Lancaster, Los Angeles County, California

Prepared for:

Waste Management, Inc.
Lancaster Landfill & Recycling Center
600 East Avenue F
Lancaster, California 93535

Authors:

Don F. Ricketts, M.A.
Robin D. Turner, M.A.
Sam Parekh, B.A.
John Flynn, B.A.

Edited by:

Robin D. Turner, M.A.
John Flynn, B.A.
Sam Parekh, B.A.

Date: June 2025

Keywords: Lancaster Landfill, City of Lancaster, Recycling Center, CEQA, Archaeological Resource Construction Monitoring, Paleontological Resource Construction Monitoring

CONFIDENTIALITY NOTE: This document contains sensitive or confidential information regarding the location of archaeological and paleontologic sites that should not be disclosed to the general public or other unauthorized person(s). Archaeological, paleontologic, and other heritage resources can be damaged or destroyed through uncontrolled public disclosure or information regarding their location. Therefore, information regarding the location, character, or ownership of archaeological or other heritage resources is exempt from the Freedom of Information Act pursuant to 16 USC 470w-3 (National Historic Preservation Act) and 16 USC Section 470(h) (Archaeological Resources Protections Act). This report and records that relate to archaeological and paleontologic site information are exempt from the California Public Records Act (Government Code Section 6250 et seq., Government Code Section 6254.19). Government Code Section 6254 explicitly authorizes public agencies to withhold information from the public relating to Native American graves, cemeteries, and scared places maintained by the Native American Heritage Commission.

EXECUTIVE SUMMARY

ArchaeoPaleo Resource Management, Inc. (APRMI) was contracted by Waste Management, Inc. (WM), who initiated the excavation of a new landfill "Borrow Pit Area" (BPA) for the Lancaster Landfill and Recycling Center in March of 2024 for this facility. The Project required the excavation of approximately 6 acres east of Challenger Way (10th Street East) directly east of the Lancaster Landfill and Recycling Center, in unincorporated Los Angeles County, approximately 2 miles north of the eastern portion of the City of Lancaster. Construction excavation activities primarily consisted of the mechanical excavation of native soils, exposing the alluvial and lacustrine deposits of the East Antelope Basin and the Lake Thompson Beds Formation.

Since the Project had been previously determined to be highly sensitive for the presence of archaeological and paleontological resources, ArchaeoPaleo Resource Management, Inc. was contracted to conduct an on-site survey and construction monitoring services. The site survey was conducted on March 26, 2024, with monitoring services started between March 27, 2024, through April 26, 2024, then continued the next year between May 6, 2025, through June 2, 2025. This report documents the methods and results of the monitoring services of landfill-operation-related mechanical excavation, which started at existing surface grade to approximately 11 feet deep across the length and width of the BPA.

No significant amount of archaeological or paleontological resources were found as a result of monitoring services. However, a Native American worked stone isolate was found on the surface of the west side perimeter of the site. Within the site, a partial fossilized lower left jaw isolate belonging to an unidentified species of rodent was recovered at an elevation of 2312 ft. towards the east side of the BPA. Towards the west side of the BPA at an elevation of 2307 ft., a femur isolate belonging to a Desert Mouse (*Chaetodipus penicillatus*) was found while salvaging a few scattered remains of a Bison, which included a single complete hoof with metatarsal and 258 associated lower jawbone fragments. 86 of these fragments were later used in the reconstruction of a partial lower jawbone. Even though no significant number of fossils were recovered during monitoring services, there is however, a strong possibility that significant paleontological and archaeological resources may be exposed if the excavation of the BPA continues or areas near this location are excavated in the future.

ACRONYMS

APRMI	ArchaeoPaleo Resource Management, Inc.
Amsl	Above mean sea level
BP	Before Present
BPA	Borrow Pit Area
CEQA	California Environmental Quality Act
CRM	Cultural Resource Management
EIC	Eastern Information Center
EIR	Environmental Impact Report
GIS	Geographic Information Systems
GPS	Global Positioning System
HSC	California Health and Safety Code
LLRC	Lancaster Landfill and Recycling Center
MLD	Most Likely Descendant
mya	Million Years Ago
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PBDB	Paleobiology Database
PPE	Personal protective equipment
Qal	Quaternary Alluvium
Qop	Quaternary-age old paralic deposits
Qpl	Quaternary playa deposits
Sc	Stream channel deposits
SVP	Society for Vertebrate Paleontology
SCCIC	South Central Coastal Information Center
USGS	United States Geologic Service
WEAP	Workers' Environmental Awareness Program
WSC	Western Science Center
YR	Year

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1. INTRODUCTION

1.1 Project Description

Waste Management, Inc. (WM) operates the Lancaster Landfill and Recycling Center (LLRC) which is situated within an unincorporated portion of northern Los Angeles County, California (Figure 1). The 276-acre LLRC is located approximately 2 miles north of the City of Lancaster, within two grided sections East of Longitude 34 Degrees 44' 40" North resting on Latitude 118 Degrees 7' 20" West (Figure 2). The area that is subject to the present report entailed the use of mechanical excavation of the native soil down to 11 feet below the original surface grade of approximately a 6-acre area in the BPA of the LLRC, which is located east of Challenger Way (10th Street East) directly east of the LLRC. The native soil was moved to a stockpile area located toward the center of the LLRC and used to cap the active landfill of the LLRC. The excavation of the BPA was halted prior to its projected completion on April 26, 2024, at the request of WM, then continued to completion the next year between May 6, 2025, through June 2, 2025, again at the request of WM. This report focuses solely on the archaeological and paleontological resources monitoring services of the BPA project-related mechanical excavation of the area that was excavated.



Figure 1. Topographic regional overview of Lancaster Landfill and Recycling Center, marked by a red star.

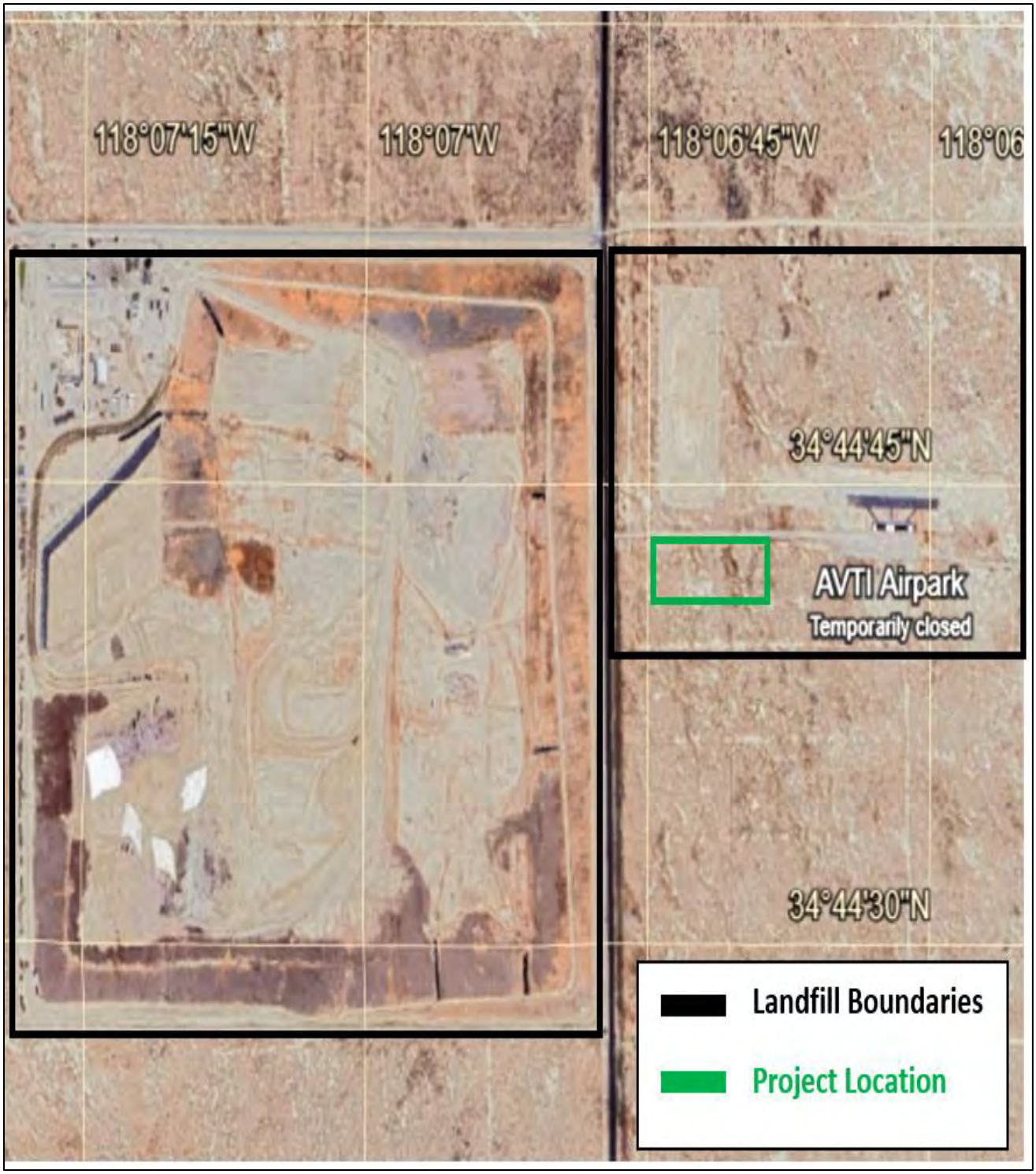


Figure 2. Project location in green within LLRC (in black) on Google Earth map of the Lancaster area.

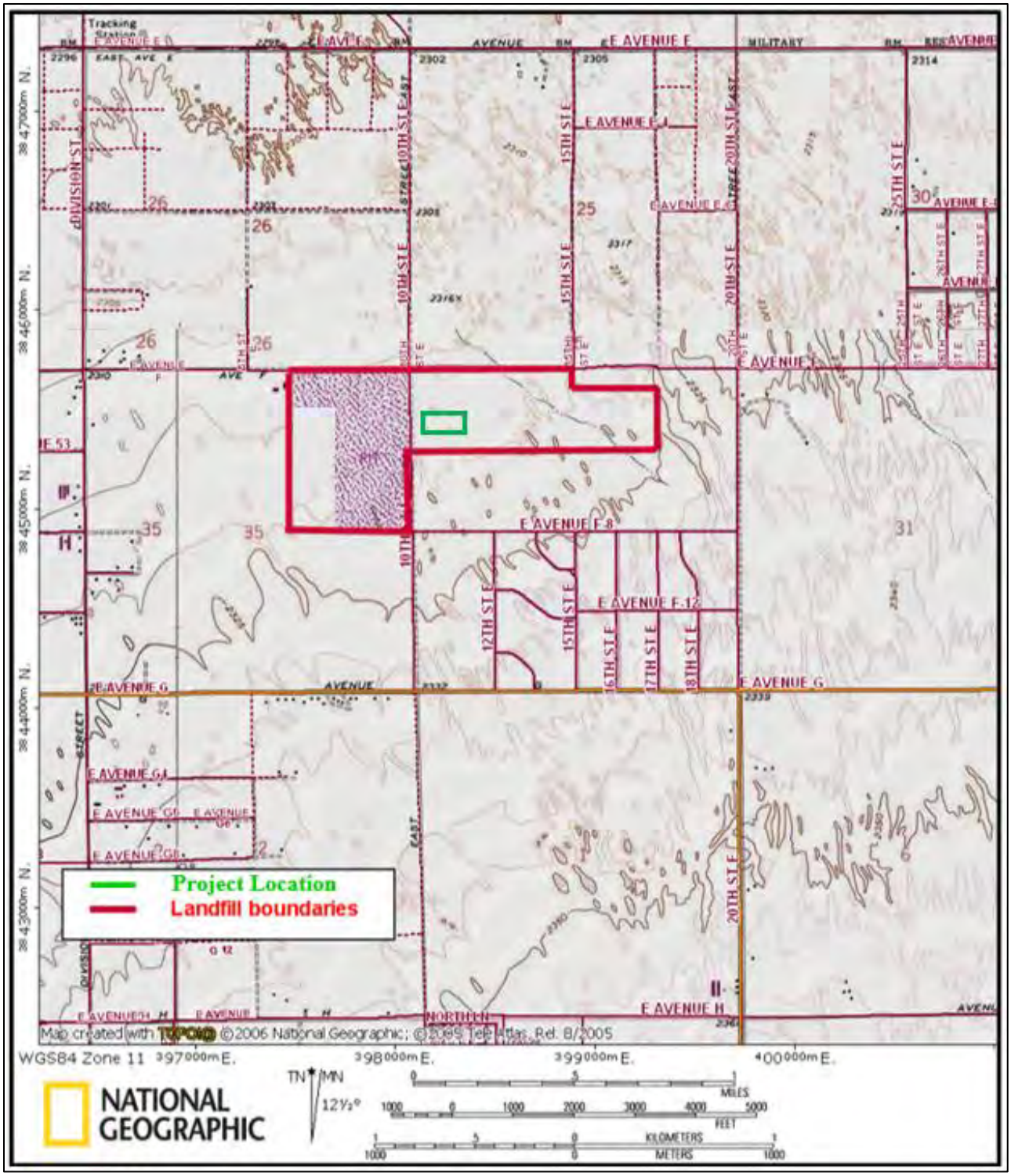


Figure 3. Project location in green within National Geographic Topographic map of the Lancaster area.

2. CULTURAL SETTING

2.1 Prehistoric Background

The prehistoric period is divided into traditions, which generally represent the presence of a cultural group across space and time. These are further subdivided into patterns, which generally indicate a more specific geographic area and cultural sub-group, and phases, which indicate a more specific time period. Chronological organization and absolute dating of patterns and phases is a difficult process, and the information presented here represents the best estimation based on available data rather than complete certainty.

2.1.1 Mojavean Tradition, Lakebed Pattern, Phases I-II (13,200 – 12,000 BP)

The Mojavean Tradition and Lakebed Pattern are themselves subsets of the Clovis culture, originally thought to represent the first human occupation of the Americas. Although several sites and artifacts have been proposed as evidence of pre-Clovis occupation of the Mojave Desert, these dates are highly speculative and are generally considered non-credible (Sutton 2023, 10). It must be noted that during this period the area known as the Mojave Desert had not yet become a desert. Lakes, streams, and springs were common, and portions of the region were in fact wetland environments. Evidence of occupation of the Mojave Desert during the period of the Lakebed Pattern is restricted to the former shores and channels of China Lake, perhaps because other lakes further east and south were less large and economically productive at the time of humans' arrival in the area, or because mammoths were only present in the northwest of the region during this period. However, isolated finds of Lakebed artifacts throughout the Mojave Desert indicate that the people of this Pattern at least occasionally traveled across it, perhaps in the course of hunting trips (Sutton 2023, 13).

The Lakebed Pattern economy was likely lacustrine- and hunting-focused, with marsh plants and lake animals being easily accessible. The remains of mammoths have also been found in general association with Lakebed artifacts, and it seems likely that other terrestrial animals were hunted as well (Sutton 2023, 13). Lakebed Phase I is distinguished by the exclusive presence of the Western Fluted Point, which have a lanceolate outline, a plano-convex cross-section, concave bases, thinned basal edges produced through grinding, and are fluted on either one or both sides. Blade edges and general shape were produced through pressure flaking (Yohe and Gardner 2016). Other stone tools found in Lakebed Pattern sites include scrapers, choppers, and hammerstones of various varieties. Notably absent are any implements for the grinding or milling of plants, likely because the marsh plants which made up the vegetal portion of the diet could be processed by hand without difficulty (Justice 2002, 73-74; Sutton 2023, 11).

Lakebed Phase II, which begins circa 12,900, is distinguished by the addition of the Great Basin Concave Base Point (GBCBP), a smaller version of the Western Fluted Point. The use of the GBCBP perhaps represents the greater focus of Lakebed Phase II people on smaller (but still relatively large) even-toed ungulates as the mammoth population decreased (Sutton 2023, 14). Both fluted points, who's lack of shoulders and extension past the haft of a spear would minimize friction through fur and flesh, were likely intended for close-range ambush tactics targeting very large animals, in which the high potential penetration depth of a thrown or thrust spear was the most important criteria. The vitals of mammoths, for example, were generally buried deeply within its body, and killing such a target before it can effectively retaliate would be crucial for a hunting party's safety. Durability of the point is a less important factor, as the chances of a spear missing

and impacting on rock is relatively low (Vierra 2012, 190). It should be noted that the distinction between Western Fluted Points and GBCBPs is contested, and many archaeologists group the categories together in the far more general categories of "Clovis" or "Western Clovis" points, both of which also include points from many other regions of North America (Yohe and Gardner 2016).

2.1.2 Mojavean Tradition, Lake Mojave Pattern, Phases I-II (12,000 – 8,500 BP)

The Lake Mojave Pattern represents the significant expansion of the occupation zone in the Mojave Desert to other lacustrine, riparian, and spring environments present throughout the region. This perhaps was spurred by the extinction of the mammoth in the northwest of the Mojave Desert, or a gradual fading of the area's productivity to a level equivalent to the rest of the region, either of which could have removed the features which made the northwest uniquely attractive to Lakebed peoples (Sutton 2023, 15-16). The entirety of the period saw a gradual decline in water levels, the productivity of lacustrine environments, and a reduction in the average size of animals in the region.

As the mammoth disappeared, so did the tools used for hunting it - the Western Fluted Point was no longer utilized by the time of Lake Mojave Phase I, and the GBCBP disappeared during Phase II, circa 9,300 BP. In their place, tools for the hunting of even-toed ungulates, along with smaller mammals and reptiles, became more highly developed, and Phase I is marked by the introduction of the Great Basin Stemmed Point, which in turn is divided into the subtypes of Lake Mojave and Silver Lake points. Lake Mojave points are a stemmed lanceolate design, with weak shoulders and a biconvex cross-section. Most points of this type were likely originally elongated and slender, but many are found after a series of resharpening episodes and so are much reduced in size, with the stem longer than the blade. Initial reduction of preforms occurred through percussion, with final shaping and sharpening occurring through pressure flaking. Stems were shaped through pressure flaking from the lateral margins, with little to no thinning of the basal edge (Justice 2002, 89-90). Silver Lake points are typically short, with wider stems in comparison to the blade and relatively strong shoulders, although these have sometimes been worn away through resharpening. Weak side notches at the shoulder/stem junction are present in some examples, but most others, especially in Southern California, have wider, straight-sided stems with round, square, or slightly indented bases. Manufacture is through a similar process to the Lake Mojave point, with preforms being made through percussion shaping and final shaping and sharpening occurring through random pressure flaking (Justice 2002, 98). As the earlier close-range ambush tactic was abandoned due to a lack of prey, longer-distance hunting of a wider range of targets was likely adopted (Vierra 2012, 190-191). Shoulders increased the chance that a thrown dart would remain inside the animal, slowing it during a chase and presumably increasing the chance of a dart's recovery.

Crescents and stone grinding/milling tools also appear during Lake Mojave Phase I. The exact use case and the typology of crescents is heavily debated, but they are generally divided into Lunate Crescents (also known as Great Transverse points), Winged Crescents, and Eccentric Crescents (Justice 2002, 116 f.). Lunate and Winged Crescents may have been used as atlatl dart points, designed for hunting birds and waterfowl, since their wider area would aid in bringing down flying targets and their relatively blunt edge would suffice to stun birds without damaging the meat. They may have also served as multipurpose knives, similar to ulus, or scrapers. Eccentric Crescents may have been attached to the top of a staff and had a ritual purpose. (Moss and Erlandson 2013, 186 f.). The stone grinding and milling tools indicate that as the productivity of Lake Mojave peoples

had expanded their foraging from purely marsh plants to riparian and desert species as well, adding flowers, seeds, roots, and possibly mesquite pods to the diet (Sutton 2023, 16).

2.1.3 Mojavean Tradition, Pinto Pattern, Phases I-III (8,500 – 4,000 BP)

The Pinto Pattern represents a series of adaptations to the increasingly desiccated Mojave Desert. During Phase I, the lakes which had previously been the centers of human habitation became too saline to support life, or even dried up altogether, and occupation zones constricted to the remaining streams and springs. As the large animals and marsh plants which had previously made up much of the diet of Mojavean Tradition peoples became more scarce, utilization of desert and riparian plants was increased to compensate, and the stone milling equipment required to process them became more common, whereas the crescents theorized to hunt lacustrine bird populations disappeared (Sutton 2023, 19).

Pinto Points, the introduction of which marks the beginning of Pinto Phase I, are characterized by bifurcate bases and robust basal ears, and were manufactured through soft hammer percussion of bifaces, slabs, and flake blanks followed by varying degrees pressure flaking. Points of this type were manufactured with either horizontal or downwards-projecting shoulders, but continual resharpening often wore these away either completely or into a variety of other forms (Justice 2002, 126 f.). Pinto points likely evolved from Silver Lake points, and both of these types, along with Lake Mojave points, were used together until Pinto Phase II, circa 7,500 BP. What advantage Pinto points provided over Silver Lake points is somewhat unclear, but the bifurcate bases may have eased the hafting process or provided the point a stronger attachment to the dart shaft. The area of occupation and size of human population further decreased during Pinto Phase II as the region suffered greater desiccation, lakes completely dried up, and the size of streams was reduced. The tribes of earlier periods likely fragmented into small familial units, although some association between them was likely maintained for trading and marriage purposes.

By the end of Phase II, in circa 5,000 BP, the social and economic system of the Mojave Desert had completely collapsed, and with the possible exception of a few outlying settlements around springs which still produced water, surviving Pinto Pattern peoples relocated into the foothills of the mountains surrounding the Mojave Desert. Pinto Phase III is defined by the abandonment of the desert, with only occasional forays being made into the area. Most productive activities likely took place either in the montane environments of the foothills or further upslope, in the mountains proper (Sutton 2023, 20).

2.1.4 Montane Tradition, Northern Mojave Pattern, Montane Phase I, Koehn Lake Phase, and Montane Phase II (5,000 – 200 BP)

The possible continuity of the Montane Tradition with the peoples of the Mojavean Tradition is as yet undetermined. Conventional linguistic models indicate that Northern-Uto-Aztecan, the language group which Montane Tradition groups belong to, originally evolved in Mexico before moving northwards into the Mojave Desert circa 5,000 BP, indicating that Montane Tradition peoples absorbed or replaced the remnants of the Mojavean Tradition peoples surviving in the foothills, signified archaeologically by the final replacement of Pinto points by Elko and Gypsum points around 4,000 BP (Sutton 2023, 31). However, an alternate model by Merrill et al. suggests that instead Proto-Uto-Aztecan groups arrived in the Mojave Desert circa 8,500 BP, and then diverged into Northern-Uto-Aztecan, which remained in the area, and Southern-Uto Aztecan which then moved southwards into Mexico, represented archaeologically by the coexistence and

gradual replacement of Silver Lake and Lake Mojave points with Pinto points around 7,500 BP (Merrill et al. 2009). This theory would recategorize the Pinto Pattern into the Montane Tradition.

Northern Mojave Pattern Peoples primarily occupied the foothills of the mountains bordering the north and west of the Mojave Desert, including the southern Sierra Nevadas, Tehachapi Mountains, Sierra Pelona Mountains, and Coso Range. It should be noted that the San Gabriel and San Bernadino mountains were already occupied by Greven Knoll groups, to be discussed below. The Mojave Desert itself was utilized as a Common Pool Resource (CPR) zone, and a few exceptions, was not the location of permanent settlements. The Northern Mojave Pattern in general is characterized by the relatively abundant presence of shell beads, brought by traders from the Pacific Coast, and large cemeteries or "mass-burials" (Sutton 2023, 31 f.). Settlements during Montane Phase I were generally small villages, located around springs in the foothills. Occasional sites have been found on the desert floor, but these were likely occupied for at most a few days at a time by specialized resource gathering expeditions. (Sutton 2023, 33). The diet during this phase included acorns, pinyon nuts, and other assorted montane plants, in addition to medium-sized and small game, such as antelope, rodents, and lagomorphs (rabbits and their close relatives).

As discussed above, Montane Phase I is marked by the introduction of Elko and Gypsum points. Elko points are divided into two subtypes – Elko Eared and Elko Corner-Notched. Both subtypes, however, possess narrow and deep corner-notches with basal ears and wide shoulder barbs, and are in fact distinguished by the bases, which are indented or concave in the case of Elko Eared points and straight in the case of Elko Corner Notched points. Both subtypes were manufactured from trianguloid preforms through an initial percussion shaping followed by substantial amounts of pressure flaking. (Justice 2002, 298-9). Gypsum is a relatively ill-defined type of point, being distinguished only by their triangular form and their contracting stem, which is widest at the intersection of the haft and blade of the point. They are manufactured through a combination of percussion and pressure flaking, with the flaking being the predominant method for shaping. (Justice 2002, 291). It is possible some "Gypsum" points within the Mojave Desert are in fact Coastal Contracting Stem points, which are highly morphologically similar to the Gypsum points but likely originated independently along the Southern California coast and were manufactured through a different process. It has also been proposed that Gypsum points are in fact a third subtype of Elko points, and they should instead be named Elko Contracting Stem points, although this has not gathered much traction. Towards the end of Montane Phase I, circa 1,800 BP, Rose Spring points also appear in the record, signifying the adoption of the bow and arrow. Rose Spring points are generally significantly smaller than preceding points, and are narrow and triangular, with corner notches at the junction of stem and blade and semi-pronounced shoulders, although errors in manufacturing or damage during use sometimes broke one or both shoulders away (Justice 2002, 320-1).

Montane Phase I is followed in the Antelope Valley by the Koehn Lake Phase, which began circa 1,300 BP and is marked by the disappearance of Elko and Gypsum Points together with the appearance of Cottonwood points and brown ware pottery. Cottonwood points are an extremely broad category, but can be loosely defined as small, unnotched, lightweight, triangular points intended for use on arrows (Justice 2002, 367). Points during this phase were generally manufactured from the obsidian found in the Coso Range. The Koehn Lake Phase involved settlements on a larger scale than the relatively small villages of Montane Phase I, and a limited return to occupation of the desert floor, as a few lakes, including the eponymous Koehn Lake,

refilled. The diet of people during this phase expanded to include mesquite and placed a greater emphasis on the hunting of lagomorphs than previously (Sutton 2023, 33).

The Koehn Lake Phase is followed by Montane Phase II in 600 BP, during which the temporary return of a wet climate to the Mojave Desert ends, and the settlements on the desert floor are once again abandoned. Most pictographic petroglyphs in the Mojave Desert are tentatively dated to this phase, and it is distinguished technologically by the introduction of glass beads and Desert Side-Notched points. Desert Side-Notched points are similar to Cottonwood Triangulars, with the addition of two typically narrow and deep side notches which are placed towards the basal edge of the blade, leaving angular ears. The pre-forms are manufactured through percussion, and then finished with extensive pressure flaking (Justice 2002, 379). Use of obsidian for point manufacture declines during this phase, shifting instead to silicate stone (Sutton 2023, 37). This phase continues until the first arrival of Europeans in the area during the early 1800s.

2.1.5 Encinitas Tradition, Greven Knoll Pattern, Phases I-III (9,400 – 1,000 BP)

The Encinitas Tradition (formerly known as the Millingstone Horizon) represents the culture of coastal tribal groups in Southern California prior to circa 3500 BP. It was notably conservative, and relatively little about the technology and diet of its people changed from the beginning to the end of the tradition. The Greven Knoll Pattern is its more inland form, which survived longer than other patterns and primarily existed southwards of the Transverse Ranges, but extended into the San Gabriel and San Bernadino Mountains and the southern edges of the western Mojave Desert as well (Sutton and Gardner 2006, 25 f.). This pattern is primarily distinguished by an abundance of manos and metates, used for grinding seeds and grains. Settlement sites were generally intensely occupied and located next to streams and springs on valley floors. Mortuary practices are typically flexed inhumations, with the body buried in the fetal position under a cairn, although cremations were also used (Sutton and Gardner 2006, 31). Cogged stones and discoidals, which are typical markers of this tradition, are rare in the Greven Knoll pattern and disappear entirely by Phase III, perhaps indicating significant cultural influence from other contemporary Mojave Desert and Transverse Range groups (Sutton 2023, 23 f.). Projectile points are also rare, and are typically Pinto points during Phase I, although it may be possible that these were only adopted after the Greven Knoll entered the desert and very early sites contained stemmed projectile points of an uncertain type.

Phase II, beginning circa 4,000 BP, is distinguished by the replacement of Pinto points by Elko points, and Phase III (formerly known as the Sayles Complex), beginning circa 3,000 BP, is marked by the addition of scraper planes and roasting pits, likely representing the addition of yucca to the diet (Sutton and Gardner 2006, 29 f.). Greven Knoll sites sometimes overlay Pinto III sites and are in turn consistently overlaid by Palomar Tradition sites, establishing a fairly clear chronology of cultural adoption which aligns with that of other Encinitas Tradition patterns by Palomar Tradition groups further west.

2.1.6 Palomar Tradition, Southern Mojave Pattern, Transverse Range Phase (1,000 – 200 BP)

While genetics indicate that the actual population of previously Greven-Knoll occupied areas changed little, tribal groups in these areas significantly altered their material culture and diets around 1,000 BP and adopted subsistence strategies and cultural traits from the Takic groups which had migrated south from the Sierra Nevadas to occupy the southern Californian coast around 3,500 BP (Sutton 2023, 41). This eastern mountain-and-desert branch of the Takic language and cultural group is named Serrano and discussed in somewhat more detail in Section 4.2 below. This process

is distinguished archaeologically by the presence of bedrock mortars, large dark middens, obsidian, shell, and steatite artifacts, rock pictographs, and Desert Side-Notched points. These points are small and triangular, with a straight to concave base and two narrow and deep side notches which are placed towards the basal edge of the blade, leaving angular ears. The pre-forms are manufactured through percussion and then finished with extensive pressure flaking (Justice 2002, 379). The diet expanded to include pinyon nuts, and mortuary practices shifted from predominantly inhumations to predominantly cremations (Sutton 2023, 42). Settlement patterns possessed significant continuity with Greven Knoll III, however, as did the relative abundance of manos and metates, indicating that gathering of wild nuts and seeds likely still formed the primary method of subsistence.

2.2 Ethnographic History

2.2.1 Tataviam

At the time of European contact Tataviam territory may have ranged east of Piru, within the entire upper Santa Clara River region, northwards to Pastoria Creek and east to Mt. Gleason (Figure 5). It appears that the Tataviam lived in close contact with their eastern Chumash and Tongva neighbors to the south (Hanks 1971; King and Blackburn 1978; Moratto 1984) as hunter and gatherers. Like many California cultural groups known as hunter/gatherers, the Tataviam lived in small villages and satellite camps near water sources originating in the local mountains, foothills, and adjacent desert areas. Evidence suggests that during the later periods many of these groups displayed a chiefdom level of social complexity. Their subsistence consisted primarily of plants and animals found in the foothills, such as acorns, seeds, berries, deer and rabbit. Many other plants were also utilized, such as yucca, cactus, and screw beans (King 1974; Moratto 1984; Robinson 1987; Sutton 1996). Seasonal settlement and resource exploitation rounds may have included the lake beds of the Antelope Valley (Lake Rosamond and Lake Rogers), and natural spring areas as well as the foothill creeks that drain into Soledad Canyon, and onto the Antelope Valley floor. These hunter/gatherer groups were prolific lithic tool manufacturers and basket makers, as evidenced in the archaeological record. The Tataviam people were a socially complex hunter/gatherer group that occupied the area. Culturally, they were very similar to their Chumash and Tongva neighbors. Unfortunately, most of the culturally significant information, such as religious beliefs, traditions, oral histories, and folklore of the Tataviam and Gabrielino/Tongva people was lost during the Mission Period. This was the result of forced cultural assimilation by the Spanish, and the decline of population due to the introduction of European diseases to the region.

2.2.2 Kitanemuk

The Kitanemuk, like the Tataviam, are a prehistoric cultural mystery. The Kitanemuk are considered a Serrano division of the Shoshonean group, yet the term Serrano (Spanish for mountain people) or perhaps even Vanyume is somewhat of a misnomer for the "Kitanemuk do not know themselves as Serranos, but extend the epithet to their neighbors the Kawaiisu, quite correctly in an etymological sense, since these people happen to live higher in the mountains than they" (Kroeber 1925). As with much of the Antelope Valley, little written archaeological or ethnographic data exists (Blackburn and Bean, 1978; Harrington 1917 as cited; Kroeber, 1925). The Kitanemuk are known to have occupied the western Antelope Valley (a contentious sharing of territory with their southerly neighbors the Tataviam), as well as the Tehachapi Mountains,

and eastern High Sierras. The Kitanemuk were "primarily mountain dwellers, although during [the] cooler season of the year they did range into the arid lowlands to the south [Antelope Valley]" (Blackburn and Bean 1978). Spanish Explorer Francisco Garcés is believed to have visited a Kitanemuk village in 1776 (Coues 1900; as cited in Blackburn and Bean 1978), although this is of debate given conflicting accounts in the early 20th Century ethnographer John P. Harrington's notes of 1917. Further, the Kitanemuk are believed to have been forcibly relocated to San Fernando, San Gabriel and San Buenaventura (Ventura) missions during the Spanish colonization and missionization efforts of the mid-18th Century. Later in the mid- century, they were documented as residing at Fort Tejon and the Tule River Reservation (Blackburn and Bean 1978).

In 1917, Harrington indicated that the cultural affiliation of the Kitanemuk was one of amicable trade and ceremony between them and the Chumash and Tubatulabal as well as the Mohave and Quechan tribes, but they had a relationship of enmity with the Yokut and the Tataviam tribes. The Kitanemuk, like other Takic groups, were hunter/gatherers, socially and culturally complex. The groups observed a patrilineal system of familial organization, exogamous marriage, practiced a chief system of tribal organization, possessed shamanism and ceremonial or religious leadership, and complex cosmology and belief systems, including gender moieties pertaining to puberty and marriage as well as practiced hunting magic and birth and death formalities (Blackburn and Bean 1978).

Akin to their Tataviam neighbors to the south, the Kitanemuk likely practiced a seasonal rounds-based system of subsistence. Their primary base camps and villages were probably mostly centered in the Tehachapi Mountains and foothills, as well as further north, thus allowing expected winter/spring exploitation of the Antelope Valley floor. As with other hunter and gatherer groups, the Kitanemuk excelled at lithic tool manufacture, and were likely skilled basket makers as evidenced by the occurrence of basket-mortar hoppers cited in the archaeological record.

2.3 Historic Background

The Historic Period in California is divided into four general phases: The Exploration Period (1542 to 1769 CE), the Spanish Period (1769 to 1821 CE), the Mexican Period (1821 to 1846 CE), and the American Period (1846 CE to Present).

2.3.1 Exploration Period (1542 to 1769 CE)

European explorers made sporadic visits into the general Los Angeles area during the 16th Century. For example, Juan Rodríguez Cabrillo, an ethnic Portuguese explorer working for the Spanish crown, arrived at San Pedro Bay in 1542 (Chartkoff and Chartkoff 1984), although the bay was not named until 1602 by Sebastian Vizcaíno during his survey of the Pacific shore between Acapulco and Oregon (Gumprecht 1999). Extensive Spanish interaction with the Gabrieleño began in 1769 when Gaspar de Portolá led an overland expedition from San Diego across southern California with Franciscan Padre Juan Crespí as part of a plan to affirm Spanish control over California that was threatened by the Russians and the British. Juan Crespí recorded this particular expedition in diaries and records. According to interpretations of these documents, the expedition party traveled through present day Elysian Park during the beginning of August and was awed by a river that flowed from the northwest, past Elysian Park, and southward. It was Portolá who named the river El Rio de Nuestra Señora la Reina de los Angeles de Porciúncula, which translates to "The River of Our Lady Queen of the Angels of Porciúncula." (The river Porciúncula is the present-day Los Angeles River, now mainly a concrete waterway.) The expedition travelers

camped in that area. It is documented that they crossed the San Gabriel and Santa Ana Rivers as well. While much of the water of the Los Angeles and San Gabriel Rivers flows underground, the waters of the Los Angeles River were forced above the river sands at Griffith Park and Elysian Park by underground geological formations before they dropped again below the sands south of what is now downtown Los Angeles. Only during severe winter floods would there be substantial aboveground water that would appear in the riverbeds of all three rivers. Crespí described the Los Angeles River as only slightly smaller than the two other rivers. The Los Angeles River's main riverbed, downstream from the Los Angeles area and Bunker Hill, may well have been near what is now Washington Boulevard and Ballona Creek as it was during the early 1800s, though Crespí's chronicle indicates it following its more currently known southerly flow. A major flood in 1825 shifted its main course southward to join the San Gabriel River at one of that river's old course alignments (Gumprecht 1999). The Portola expedition returned to Los Angeles during the winter on its way back to San Diego from the San Francisco Bay area, having missed its initial destination, Monterey Bay. Portolá would head another expedition through Los Angeles in the spring of 1770, again on the way to Monterey Bay (Starr 2005).

2.3.2 Spanish Period (1769 to 1821 CE)

Twelve years after Portola's voyages, an expedition organized by the Spanish Governor of California, Felipe de Neve, established a pueblo on the coastal plain of the Los Angeles River. This new town was one day's ride north of San Pedro and was dedicated on September 4, 1781. The town, like the river, was named after St. Francis of Assisi's first church, St. Mary of the Angels, or El Pueblo de (Nuestra Señora) la Reina de los Angeles (de Porciúncula). The company of settlers was recruited by de Neve from the Mexican states of Sonora and Sinaloa and was known as Los Pobladores (the "townspeople" or "populators"). The original group was led by Captain Fernando Javier Rivera y Moncada and was comprised of eleven families made up of 11 men, 11 women, and 22 children. The settlers were of various ethnicities including those of Spanish, African, and Native American descent, as well as some of mixed race (mulattos and mestizos). Over time, the area known as the Ciudad de Los Angeles became the "City of Angels," and on April 4, 1850, it became known as the City of Los Angeles (Mason 2004; Pitt and Pitt 1997).

The goal of the Spanish colonization effort was not only to create local populations of settling peasants and merchants, but also to include native peoples who already occupied the region into those populations. In order to incorporate the indigenous tribes, efforts were made to educate them and convert them to Christianity, turning them from "savages" into "intelligent beings—gente de razón" (Chartkoff and Chartkoff 1984: 258). It is for this reason that religious missions became the cornerstone of colonization. Padre Junípero Serra, who founded 21 missions in 52 years, directed the missionization of California (Chartkoff and Chartkoff 1984). Two of those missions were in Los Angeles: Misión del Santo Arcángel San Gabriel de los Temblores (San Gabriel Mission) now known as Mission Vieja established on September 8, 1771, by the Padres Angel Somera and Pedro Bonito Cambon, and San Fernando Rey de España Mission on September 8, 1797, by Padre Fermín Lasuén (Pitt and Pitt 1997). To support the Spanish settlements, missions attempted to convert the California Indians and used them to work on the farms and ranches on the mission grounds. Many of the Gabrieleño were gradually forced to move to the San Gabriel or San Fernando Missions to provide labor, and many of the Native Americans living on the coastal plains and inland valleys at the time were also transported to the missions, though small groups did escape this confinement (Bean and Smith 1978).

The interaction with the Spanish marked the beginning of the decline of the indigenous population, as a powerful force shaping the nature of the Los Angeles area. Their population was already declining, even before the arrival of a large number of Spanish, from diseases introduced by earlier explorers (Bean and Smith 1978). Mass conversions of the Gabrieleño people began in 1778 when certain village chiefs turned to Catholicism. These Gabrieleño assisted the Spanish, even though many other Gabrieleño resisted the colonization and started revolts. In 1796, the recruits used traditional Gabrieleño subsistence practices to feed the general population of the missions. By 1800, the original Gabrieleño villages were empty and the Gabrieleños and other Native Americans provided much of the labor for the European ranches, farms, and communities. The shift from hunting and gathering to a sort of feudal existence led to dietary deficiencies that eventually caused population reduction. The local population greatly suffered from the European epidemics as their population dwindled rapidly (Bean and Smith 1978). During this time, only fragmentary ethnographic information was recorded.

2.3.3 Mexican Period (1821 to 1846 CE)

Mexico gained its independence from Spain in 1821, and the transfer of the area from Spanish control accelerated the end of the already deteriorating mission system. Prompted by the precipitous decline in new conversions to Christianity, and the complaints of settlers in Alta California who were unable to find good land not already claimed by missions, the Mexican Congress passed a secularization degree in 1833 which transferred control of the missions' former lands to governors so they could be distributed to colonists (Starr 2005). The Spanish authorities had only made 20 land grants before Mexico's Independence in 1821. In stark contrast, Mexican governors awarded approximately 800 land grants just between 1821 and 1847. The dramatic increase in the accessibility of land grants led to a period of thriving ranchos within California. Rancho was a general term covering farms, ranches, and settlements. Many of the land grants were or became cattle ranches, a major economic activity at that time. The Native American tribes supplied most of the labor (Starr 2005).

Individuals such as Jedidiah Smith, Kit Carson, and Ewing Young entered the area in the late 1820s. Joseph Redford Walker passed through the northern Antelope Valley in the 1830s. It is documented that he explored the deserts and mountains of Kern County. The northernmost year-round pass in the High Sierra is named in his honor; Walker Pass (McKenna and Langenwalter 1993). During the Mexican Period, occupation of the Antelope Valley was virtually nonexistent. Occasionally, hunting parties concerned with the rounding up of runaway Indians ventured into the valley and the surrounding areas. At this time, it is estimated that very few indigenous people habituated the Antelope Valley on a regular basis.

2.3.4 American Period (1846 CE to Present)

At the beginning of the American period, little notice was paid to colonizing the Antelope Valley. In fact, most of the late 19th Century can be described as a time when people were mostly passing through to other destinations (Norwood 1992). Preceding the arrival of homesteaders, the Southern Pacific Railroad conducted a transcontinental survey and passed through the Antelope Valley in the late 1850s. However, sparsely dispersed ranches were established in the Antelope Valley in the 1860's (Norwood 1992).

Contributing to the settlement of the Antelope Valley was the Homestead Act of 1862 and the Desert Land Act of 1877. The Homestead Act of 1862 was enacted by President Lincoln shortly after the southern states seceded from the Union, thus initiating the Civil War. The Act opened

public land to citizens for settlement with few criteria; a person must be 21 years of age, live on the land, build a home upon the land, and improve upon the land for a period of five years. The fee to file for a homestead was $18.00, and within five years the homesteader had to present two witnesses who could support the claims of having "proved up" the homesteaded land. The Desert Land Act of 1877 was designed to "encourage and promote the economic development of arid and semi-arid public lands of the western United States. Through this Act, individuals may apply for a desert-land entry to reclaim, irrigate, and cultivate arid and semi-arid public lands" (BLM 2008). The Antelope Valley experienced an influx of agricultural oriented homesteaders in the 1880s: alfalfa, barley, wheat, fruits, and nuts. The Homestead Act of 1862 and Desert Land Act of 1877 with respect to the Antelope Valley were coincidentally aided by relative "wet years" in the 1880s (NPS 2021). Success was short-lived as serious drought during the following decade nearly broke the spirit of the homesteader. However, continued, and renewed interest in mining spawned by the California Gold Rush of 1849 and success in the southwest Antelope Valley between 1850 and 1870 (Soledad Canyon and Fremont's Pass), including the period of the Civil War, with extraction of gold, silver and copper ore continued the trickling in of settlers.

The early 1900s was a period of innovation; mechanical irrigation and electricity, and an avid pursuit of alfalfa cultivation, "which by 1920 was the Antelope Valley's major crop" Contributing to this period of agricultural pursuit was the Enlarged Homestead Act of 1909 whereby homesteaders were permitted to file for additional 320-acre plots (NPS 2021).

Land transportation in the 1800s from Los Angeles to the Antelope Valley was facilitated by stage and wagon routes as well as railroad and road networks. The Butterfield Stage Overland Mail route (1858), the Los Angeles & Independence Railroad, Southern Pacific Railroad (1876), Antelope Valley Line, Union Pacific Lone Pine Branch, the Santa Fe Railroad Branch, the Pacific Electric Railway, the Los Angeles-to-San Francisco telegraph line (1860), Sierra Highway, Angeles Crest Highway, Angeles Forest Highway, and the birth of modern freeways systems resulted in urbanization and development of the Antelope Valley and Los Angeles metropolitan area. The towns of Lancaster, Palmdale, and Rosamond were established along the Southern Pacific rail line. Three stations were present within the Antelope Valley, one in Lancaster, and two in the vicinity of present-day Palmdale; one named Harold and the other Alpine (McKenna and Langenwalter 1993). With the construction of the Southern Pacific Railroad through the Antelope Valley in 1876, farming became popular in the region. The towns of Lancaster and Rosamond sprang from the introduction of the Southern Pacific rail line in the Antelope Valley.

The Lancaster area started as a Scottish settlement organized in 1884 by M.L. Wicks, who may have named it for his hometown in Pennsylvania (though the origins of the city's name are somewhat in doubt). Both borax (still locally mined and economically significant) and gold were discovered in the foothills near the city in 1898. The Antelope Valley largely supported cattle ranching until the early 1900s, when water, pumped by gasoline engines, transformed it into an agricultural area (Encyclopedia Britannica n.d.). The City of Lancaster was eventually incorporated in 1977.

3. GEOLOGICAL SETTING

The landfill is located on what had once been covered by Lake Thompson, which was a Late Pleistocene/Early Holocene pluvial (mostly fed by rain) lake that may have also been fed by numerous creeks that surrounded it (Orme 2004, 2008: 264). In the Great Basin, levels of large pluvial lakes fluctuated in response to climatic cycles and glaciation. Rosamond Lake (approximately 2 miles north of the Project area, shown in Figure 4) and Rodgers Dry Lake (approximately 6 miles east of Rosamond Lake) – both located within Edwards Air Force Base – are modern manifestations/remnants of the desiccating Lake Thompson system. The area where the Piute Ponds complex is located, on Rosamond Lake's southwest margin, was also part of Lake Thompson. Piute Ponds are constructed wetlands made of a series of interconnected basins built in 1961 to evaporate the outflow from the Lancaster Water Reclamation Plant (Alderman 2009; Edwards Air Force Base 2008). The Ponds receive treated wastewater from the reclamation plant and water from occasional flooding of the Amargosa and Littlerock washes (Edwards Air Force Base 2008). They support a myriad flora and fauna and are identified as a Significant Ecological Area by the County of Los Angeles (Alderman 2009). Piute Ponds may replicate the characteristics of Lake Thompson and its vicinity during the Late Pleistocene/Early Holocene, although many species of plants and animals that inhabit or frequent Piute Ponds today may not have been present during the Late Pleistocene. Pluvial lakes of the Early Holocene, such as Lake Thompson, provided fundamental resources for the local Native Americans and often attracted permanent or semi-permanent settlement close to their changing shorelines.

The 1997 Draft Environmental Impact Report (EIR) (County of Los Angeles Department of Regional Planning 1997) states that Lake Thompson once covered about 200 square miles (518 square kilometers) of the Antelope Valley in the Late Pleistocene about 13,000 years ago. Later studies documented by Orme (2008) indicate that Lake Thompson covered up to 367 square miles (950 square kilometers) and rose to at least 710 meters above sea level. Accelerator mass spectrometry carbon 14 dating of organic sediment indicates the presence of a deep perennial lake from before 36,000 years ago to at least 34,000 years ago, "a shallow but variable perennial lake" from before 26,000 years ago to 21,000 years ago, and then a "partial exposure of the lake floor" (Orme 2008:261). "A shallow perennial lake returned during the terminal Pleistocene, from around 16.2 ka [16,200 years ago] to at least 12.6 ka, forming distinctive beach ridges beyond the margins of the present dry lakes, and it may have reappeared in the early Holocene" (Orme 2008:261). This appears to be the period to which the Draft EIR refers.

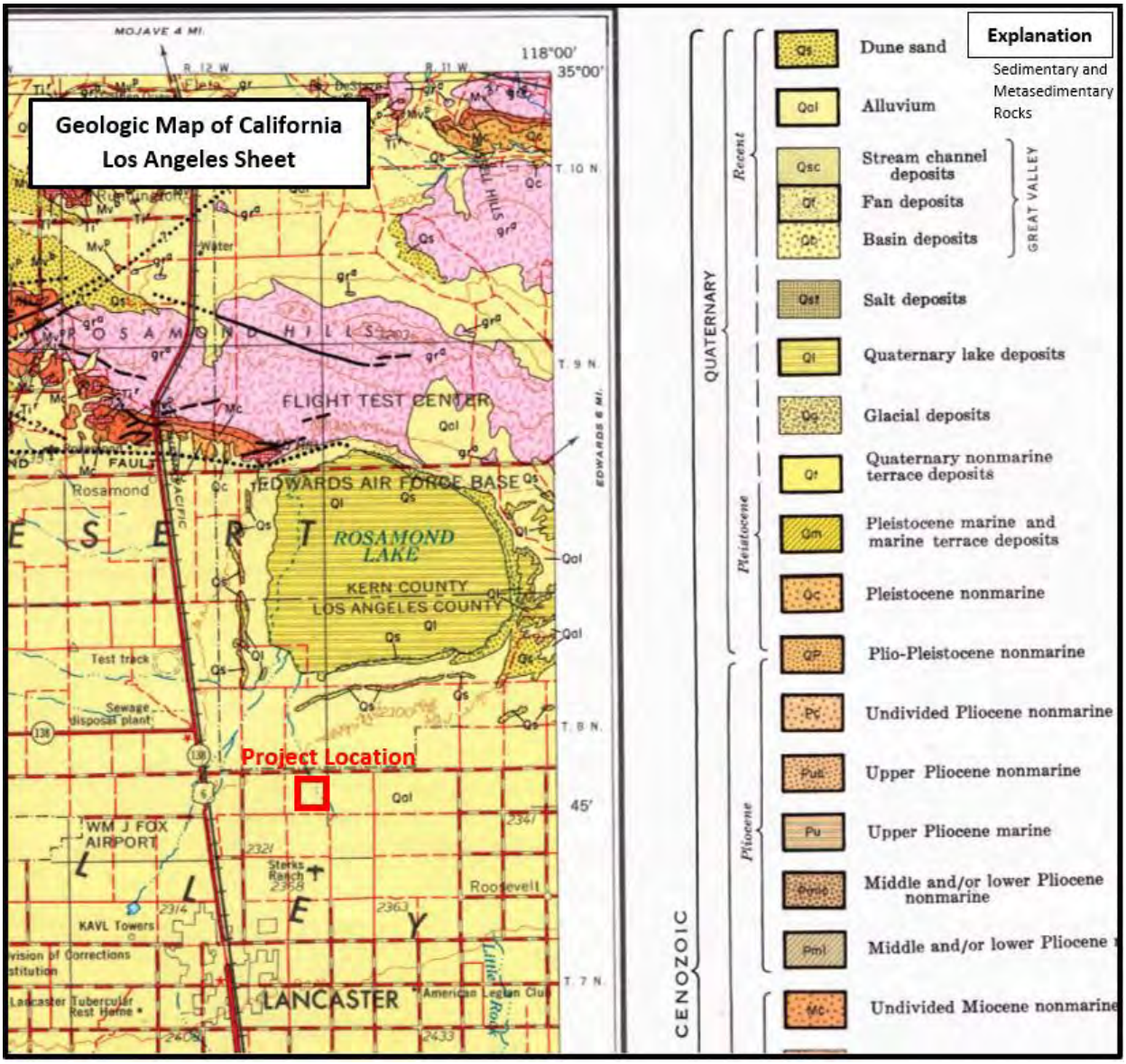


Figure 4. Project location in red within Geological Map of California, Olaf P. Jenkins Edition, Los Angeles Sheet, Lancaster area (Jennings and Strand 1969[1981])

The Project area has been mapped as underlain by Quaternary playa deposits (*Qpl*), described as "compact lacustrine silt and clay with minor loose well-sorted sand and fine gravel deposited in the shallow-water margins of the last pluvial lake [Lake Thompson] that filled the lowland parts of Antelope Valley up until about 12,000 years ago" (State of California Department of Conservation California Geological Survey 2005:7). Most recently, the area has been mapped as Quaternary-age old paralic deposits (*Qop)*, or older Holocene to late Pleistocene plays deposits, described as "moderate to well consolidated, clay, silt, and silty fine sand with occasional fine gravels. Soils generally light-grayish-brown to brown when moist (10YR 5/3), to 10Yr 6/4 – 6/6 when dry, with upper soil profile showing a faint pedogenic blocky structure with few clay films on the pedogenic faces. Lacustrine deposits associated with pluvial Lake Thompson that filled the lowland parts of Antelope Valley prior to desiccation occurred about 17,000 years ago.

Deposits are locally dissected by surface flow, deflated, and eroded by eolian, or may be covered with a veneer alluvial fan and eolian sediment composed of sand and silt." (Lancaster 2011). (Orme 2008:261) also shows the Project area as underlain by lacustrine facies. Geological borings in the region suggest that the stratigraphy present under the current surface or Rosamond Lake (close to the Project are): are Holocene playa deposits from the surface of the lakebed (approx. 2280 feet amsl) to approximately 2230 feet amsl, and Pleistocene Lake clays from approximately 2230 feet amsl to approximately 2050 feet amsl, with a concave lens of Pleistocene fluvial sand beneath these clays (Orme 2008:265). The State of California Department of Conservation California Geological Survey (2007), Orme (2008) , and Lancaster (2011) all interpret the surface footprint of the Project area to be underlain by Lake Thompson playa deposits.

Dibblee (2008), as cited in Lander (2011:1), has indicated that the Project area is underlain by "unconsolidated and undissected surficial alluvial sediments comprising clay and silt of mud flats that were covered with numerous small mounds of windblown sand (*Qsc*)." Jennings and Strand (1969 [1991]) indicate that surface sediments of the Project area are Quaternary recent (Holocene) alluvium (*Qal*) (Figure 4). The latter soil type often contains archaeological deposits, especially in a place like the Project area, which is locate along a receding shoreline of a pluvial lake that may have reappeared during the early Holocene and was likely an important resource-procurement/settlement area for people during prehistoric times (see Orme 2008; Sutton 1996; Sutton et al. 2007).

During the first phase of paleontological resources monitoring of the Project area, Lander (2011:2,13) in 2010 encountered light tan to gray clayey sandstone underlying playa dune deposits, from the surface of the footprint of the Project area to 5 feet below the surrounding surface grade. In a subsequent study in 2011, Lander (2012:4) concluded that the original surface of the Project area was "underlain by the late Quaternary younger alluvium (Dibblee 2008), which comprises up to about 3 feet of windblown dune or aeolian sand and at least 10 feet of fluvial and lacustrine strata that . . . underlie the dune sand . . . The dune sand extends from the surface downward to depths around 1.5 to 3.0 feet, whereas fluvial and lacustrine strata extend from about 1.5 to at least 11.5 feet below the surface." To summarize, Lander (2012:7) identifies unconsolidated wind-blown Holocene dune sand (stabilized by vegetation) from the surface of the footprint of the Project area to approx. 1.5 feet below the surrounding surface grade. He describes the deposits from approx. 1.5 feet to 11.5 feet below the original surface of the Project area as Late Pleistocene Lake Thompson Beds that are grayish-tan, tan, and mottled red and dark grayish brown, poorly consolidated, calichified, silty sandstone to silty claystone of lacustrine origin with northwest-to-west-northwest-trending channels containing unconsolidated, gray, fine-to-coarse-grained sand." (Lander 2012:7)

The State of California Department of Conservation California Geological Survey's (2005:7) and Lancaster's (2011) soil identification, as well as Orme's (2004, 2008) studies have indicated that the landfill's location is highly sensitive for Pleistocene fossil deposits. Recent paleontological studies (Lander 2011, 2012) have confirmed the presence of these deposits.

4. MONITORING REGULATORY REQUIREMENTS

State Laws

The California Environmental Quality Act (CEQA) requires mitigation when significant archaeological resources or paleontological resources cannot be avoided by a project that may cause adverse impacts to those resources.

Chapter 1, Section 21002 of CEQA states that:

> Public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects or proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA Guidelines (Article 1, Section 15002(a)(3)) state that CEQA is intended to "Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible." Under CEQA, mitigation may include data recovery through archaeological-resource monitoring.

Paleontological resources are protected by Appendix G (Part V) of CEQA, which indicated that the destruction of unique, non-renewable paleontological resources is a significant impact on the environment that requires mitigation of the impact. It specifically asks whether a project would "directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." Construction excavation in paleontologically sensitive deposits that underlie a project area is a significant impact that can be mitigated via data collection through paleontological-resource monitoring.

California Public Resources Code, Section 30244 requires the mitigation of adverse environmental impacts that affect palaeontologic resources.

County Policy

The County of Los Angeles current General Plan Update (County of Los Angeles 2012: 157 Policy C/NR 14.1) notes that County policy is to "mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible" and to "ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources." Because the Project is located within an unincorporated section of Los Angeles County, city laws are not applicable to this setting.

Project Policy Requirements per Conditional Use Permit (CUP) 03-170-(5)

Part VII – Archaeological/Paleontological Monitoring. The permittee shall implement the monitoring program described in this part VII to conserve archaeological and paleontological resources as required by condition No. 75 of this grant.

A. Before commencing grading activities in previously undisturbed areas, the permittee shall nominate to the director of the department, both a certified archaeologist and a qualified paleontologist from the Society of Professional Archaeologists which the permittee intends to retain not perform the monitoring and conservation work required by this part VII and condition No. 75 of this grant. If approved by the director of the department, the archaeologist and paleontologist shall both submit a letter to the director stating that he/she has been retained to perform or supervise the work described herein, and that he/she agrees to report any failure of compliance with this grant or this part VII to the director.
B. The archaeologist and paleontologist shall each submit a written report to the permittee to be included in the permittee's annual monitoring report required by part X of this IMP for as long as on-site excavation activity continues at the facility, or upon the respective expert's termination of employment, in which case the report shall be submitted to the director of the department.
C. If either the archaeologist or the paleontologist terminates employment before completion of the excavation work associated with the facility, a replacement expert shall be selected, approved, retained and certified as described in this part VII.

Condition #81: The Permittee shall develop and implement a program to identify and conserve all significant archaeological and paleontological materials found at the facility pursuant to Part VII of the IMP. If the permittee finds any evidence of aboriginal habitation or fossils during earthmoving activities, landfill operations shall immediately cease in that immediate area, and the evidence and area shall be preserved until a qualified archaeologist or paleontologist, as appropriate, makes a determination as to the significance of the evidence. The department will review and approve this program, if the determination indicates that the archaeological or paleontological resources are significant, the resources shall be recovered to the extent practicable prior to resuming landfill operations in that immediate area of the landfill.

Society of Vertebrate Paleontology (SVP) guidelines

The Society of Vertebrate Paleontology (SVP), an international scientific organization of professional paleontologists, has issued guidelines and policy statements entitled: *Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources – standard guidelines (SVP 1995), Conditions of receivership for paleontologic salvage collections (SVP 1996), Guidelines from the ethics education committee for collecting, documenting and curating fossils (SVP 2009a), and Article 12: Member bylaw on ethics statement (SVP 2009b).* These statements outline acceptable professional practices in paleontologic resource assessments and surveys; monitoring and mitigation; data and fossil recovery; sampling procedures; specimen preparation, identification. analysis; and curation.

According to SVP guidelines (2009a: Article 12.1-4) and SVP (2009b), vertebrate paleontologists must ensure that vertebrate fossils are collected in a professional manner, "which includes the detailed recording of pertinent contextual data, such as geographic, stratigraphic, sedimentologic and taphonomic information" (SVP, 2009a: Article 12.1). The ethics bylaw also states that fossil "vertebrate specimens should be prepared by, or under the supervision of, trained personnel" (SVP,

2009a: Article 12.3) and that "significant fossil vertebrate specimens, along with ancillary data, should be curated and accessioned in the collections of repositories charged in perpetuity with conserving fossil vertebrates for scientific study and education (e.g., accredited museums, universities, colleges and other educational institutions)." (SVP, 2009a: Article 12.4; see also SVP, 2006).

The SVP (1995) standard guidelines state that vertebrate fossils are significant, nonrenewable paleontologic resources and that "protection of paleontological resources includes: (a) assessment of the potential property to contain significant nonrenewable paleontological resources which might be directly or indirectly impacted, damaged or destroyed by development, and (b) formulation and implementation of measures to mitigate adverse impacts, including permanent preservation of the site and/or permanent preservation of salvaged materials in established institutions (SVP, 1995; Lines 1-5).

5. ARCHAEOLOGICAL SENSITIVITY AND MITIGATION MEASURES

The Project area is considered highly sensitive for the presence of archaeological deposits. The Draft Environmental Impact Report (DEIR) for the expansion of the Lancaster Landfill and Recycling Facility, as the LLRC was called at the time, summarized the 1994 cultural resources archival records search at the South-Central Coastal Information Center [SCCIC] and a corresponding cultural resources surface survey (County of Los Angeles Department of Regional Planning 1997:5.8-1 – 5.8-7; Tartaglia 1994) stating the high sensitivity for the presence of archaeological finds. The SCCIC is the State Office of Preservation's California Historical Resources Information System repository that holds cultural resources records and reports for Los Angeles County.

A more recent document, the supplemental EIR (County of Los Angeles Department of Regional Planning 2006:5-3, Appendix E:9), did not reflect a new cultural resources study but briefly summarized the results of the 1997 EIR. The cultural resources study and the Draft EIR noted that archaeological deposits could be buried under parts of the landfill that had not been excavated at that time, and that any archaeological deposits that may be encountered within the landfill boundaries thus would be impacted by excavation.

No known archaeological or built-environment resources were identified within landfill boundaries or within a half mile of the landfill during the records search conducted by the SCCIC. The 1994 study (summarized in the 1997 EIR) did not encounter archaeological or built-environment resources within landfill boundaries during the cultural resources survey. The 1994 study encountered one historical archaeological site, located within one mile of the landfill, during the records search for that survey.

The 1994 study and the Draft EIR (County of Los Angeles Department of Regional Planning 1997:5.8-1 – 5.8-7) stressed that encountering buried archaeological remains within landfill boundaries is possible and that impacts to archaeological resources must be mitigated.

> Due to the nature of this type of surface survey, it is impossible to assess any buried cultural remains and/or resources; it must be stressed that . . . unknown archaeological and/or historical materials could be buried beneath the present land surface (County of Los Angeles Department of Regional Planning 1997:5.8-1 – 5.8-7).

The area is highly subject to aeolian and alluvial forces that may have buried archaeological resources (see Geological setting). The Draft EIR included the following impact-mitigation measures (County of Los Angeles Department of Regional Planning 1997:5.8-1 – 5.8-7):

> In the event that cultural resources are encountered during any phase of construction, construction will cease in these areas until the cultural resources are properly assessed and subsequent recommendations are determined by a qualified archaeologist.
>
> If at any time during development Indian burials (any aboriginal human remains-bones) are encountered, then a Native American advisor for the local Native American Indian tribe as well as the County Coroner must be contacted immediately and construction in that restricted area must be stopped until the human remains are legally and ethically dealt with by the appropriate parties.

In currently accepted protocols, the second mitigation measure mentioned above is replaced by a more detailed, yet similar, procedure: if human remains are discovered during Project construction, compliance with State of California Health and Safety Code Section 7050.5 is required. "There shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered" has examined the remains and determined the origin of the remains and the cause of death (State of California 2011). If the human remains are determined to be those of a Native American(s), the coroner will notify the Native American Heritage Commission (under Section 7050.5 of the Health and Safety Code and Sections 5097.94, 5097.98, and 5097.99 of the Public Resources Code). The NAHC will determine and notify a Most Likely Descendant (MLD), and the MLD shall complete the inspection of the site within 48 hours of notification. The MLD may determine that the burial(s) shall remain in place or may recommend another treatment plan. In the case that burials are to be removed, the MLD will determine the protocols of the removal, storage, analysis, and eventual reburial of any and all Native American remains and associated artifacts.

Lander (2011, 2012) conducted paleontological resources monitoring of soil levels above the levels monitored for the Project in 2010 and 2011. Data collected from the 2010 monitoring is interpreted to be contemporaneous with human occupation of the region of the project area. Lander's 2011 study from the 2010 monitoring revealed faunal deposits from 1,710 years ago, which were found within Holocene dune deposits. The modern faunal locality was given the Natural History Museum of Los Angeles County [LACM] fossil site number: LACM7853. Lander proposed that fish vertebrae collected during paleontological resource monitoring of those dune deposits may have been "transported by Native Americans to the Antelope Valley from the California Coast no farther south than Long Beach" (see also Gobalet 2011).

6. PALEONTOLOGICAL SENSITIVITY AND MITIGATION MEASURES

The Project area is highly sensitive for paleontological resources, as revealed in the Draft EIR for the LLRC (County of Los Angeles Department of Regional Planning 1997). This high sensitivity has been confirmed by paleontological resources monitoring (Lander 2011, 2012) for the years of 2010 and 2011, and during mechanical excavation of levels to a depth of 11.5 feet below original surface grade of the current Project footprint.

According to the 1997 Draft EIR, in order to predict impacts to paleontological resources, one must expect that there is "the potential for the discovery of fossils. Potential for discovery is a measure of the likelihood that fossils will be discovered during excavations into a given rock unit. This potential is based on the past discovery of fossils from that rock unit" (County of Los Angeles Department of Regional Planning 1997:5.8-8).

> During the last ice age, several lakes, like Lake Thompson, were present in the Mojave Desert. These lakes supported a large and diverse assemblage of animals. At the end of the last ice age, as these lakes shrank, the fauna surrounding them disappeared. This mass extinction of large animals is one of major question in science today. Many ideas ranging from unfavorable climate to the appearance of man in North America have been proposed as the cause of these extinctions. Fossils from these deposits may hold some of the clues needed to explain those events.
>
> The alluvial deposits have a high potential for the discovery of fossils during grading operations, based on the proximity of fossil localities in similar deposits and the possible presence of lake deposits in the study area. A high potential indicates that grading operations are likely to expose fossils during development. These activities will destroy the fossils. The destruction of these fossils would be a potentially significant adverse impact on the region's paleontological resources (County of Los Angeles Department of Regional Planning 1997:5.8-8).

The Draft EIR (County of Los Angeles Department of Regional Planning 1997:5.8-9 – 5.8-10) presented the following mitigation measures for impacts to paleontological resources:

1. A qualified paleontologist shall be retained to perform periodic inspections of excavations and, it necessary, salvage exposed fossils. The frequency of inspections will depend on the rate of excavation, the materials being excavated, and the abundance of fossils. Monitoring will initially need to be on a full-time basis during grading.
2. The paleontologist shall be allowed to divert or direct grading in the area of an exposed fossil to facilitate evaluation and, if necessary, salvage.
3. Because some of the fossils within the alluvial deposits are small, it will be necessary to collect samples of promising horizons for processing through fine mesh screens.
4. Fossils shall be prepared to the point of identification and catalogued before they are donated to their final repository.
5. All fossils collected should be donated to a public, non-profit institution with a research interest in the materials, such as the San Bernardino County Museum.
6. A report detailing the results of these efforts, listing the fossils collected, and naming the repository shall be submitted to the lead agency at the completion of the project.

Implementation of these mitigation resources would reduce potential impacts to paleontologic resources to a less than significant level.

The Supplemental EIR (County of Los Angeles Department of Regional Planning 2006:5-3, Appendix E:10) did not reflect a new paleontological resources study and briefly summarized the results of the 1997 EIR.

Many significant fossil localities are known within the region and near the Project area in particular. One fossil locality was identified in the Lander 2011 study that documented finds in the original top 5 feet of sediments near the Project footprint, and six separate fossil localities were identified in the Lander 2012 study that documents finds from 5 feet below the original surface to 11.5 feet below the surface, near the Project footprint. In addition, at least 775 fossilized nonhuman vertebrate and plant remains have been observed on Edwards Air Force Base, which is located 1.5 km north of the Project area; the number of localities within the Base is likely greater (Edwards Air Force Base 2008). In 2006, approx. 13 km north-northwest of the Project area, paleontological resources data recovery during construction excavation collected specimens of Pleistocene Epoch and Rancholabrean North American Land Mammal age *Mammuthus columbi* (Columbian mammoth), *Paramylodon* (Harlon ground sloth), *Equus* (horse), *Bison Antiquus* (bison), and *Camelops* (camel) (Wilkerson et al. 2006). The discoveries were found 5 miles west of Rosamond Lake, within the western portion of the footprint of Lake Thompson.

As documented in Lander's 2011 monitoring report, excavation reached depths of 5 feet below the existing ground surface and encountered Holocene dune sand, which yielded the remains of extant, later-Holocene, continental vertebrate species. The remains collected were recovered by processing a 1,500-pound sediment sample from 3 feet below the previous surface grade. The remains included the vertebrae of a marine fish species and bones and teeth that represented 16 species of small continental vertebrates, including lizards, snakes, rodents, and rabbits. All terrestrial species recovered still live within the WEA vicinity today. Carbon-14 radiometric dating of bone indicated that the fossil remains are approx. 1,710 years in age (from the later Holocene), not normally considered fossils remains. While the original definition of fossils is considered to be anything that is buried, it is generally accepted that fossils ae bone, plant, and organic materials that are over ten thousand years old.

In Gobalet (2011), he interpreted the fish species as the *Spirinchus starksi* (night smelt). However, he noted that the fish may have represented *Hypomesus pretoisus* (Pacific surf smelt), since they are the species closest in geographic distance to the Antelope Valley. Lander (2011) proposed that the Pacific surf smelt had been "transported by Native Americans to the Antelope Valley from the California Coast no farther south than Long Beach" (See also Gobalet 2011).

Lander (2012) also documented the results of the paleontological resource impact mitigation program for the 2011 mechanical excavation in the WEA. Landfill-operations-related mechanical excavation for the second phase (Lander 2012) was conducted within the same area as the first phase that was documented in Lander's 2011 monitoring study (except in a smaller footprint, as the walls of the excavation were now sloped inward). Mechanical excavation removed sediments from 5 feet below the previous ground surface to 11.5 feet below the previous ground surface and encountered Late Pleistocene Lake Thompson beds. Land mammal bone fragments

(unidentifiable) were recovered from a channel deposit at a depth about 7.5 feet below the previous ground surface. Lander (2012) describes Fossils Localities 1 (Natural History Museum of Los Angeles County [LACM] fossil site number 7853), 2 (LACM 7853), 4 (no LACM number), and 5 (LACM 7853) – all from the Lake Thompson Beds formation – similarly: as grayish-brown sandy silty sandstone; and light grayish-tan, fine- to medium-grained, silty sandstone. Fossil Locality 1 yielded a partial distal metacarpal of the Pliocene/Pleistocene camel *Camelops*; Fossil Locality 2 yielded an *Elgaria* (alligator lizard) scute (external plate), a *Microtinae* (subfamily of the family Muridae of the order Rodentia) lower cheek tooth fragment, and a Rodentia (rodent order) tooth. Fossil Locality 4 yielded a *Plestiodon* (skink) palatine fragment, *Perognathinae* (pocket mouse) upper incisor, *Thomomys bottae* (pocket gopher) distal calcaneum, and unidentified large-mammal bone. Fossil Locality 5 yielded a Rodentia upper left incisor fragment and a *Camelops* left acetabulum and proximal ilium.

Lander states that at Locality 3 (no LACM number), also from the Lake Thompson Beds Formation, it contained deposits of brick-red and dark grayish brown to brownish gray mottled clayey-to-sandy siltstone and yielded a *Lacertilia* (lizard suborder) skull fragment, a Microtinae lower cheek tooth, and a Rodentia upper incisor. Lander's 2012 fossil site records identify Fossil Localities 1, 2, and 5 as part of LACM7853. Fossil Localities 3 and 4 are not labeled with "LACM 7853" or any other museum fossil site designation, but Lander's 2012 study includes their data in his interpretation.

Parts of the pelvic and forefoot bones of the Pliocene/Pleistocene camel *Camelops* were recovered from lacustrine strata at depths approximately 11.0 to 11.25 feet below the original surface grade. The pelvic bones from Locality 5 were encountered approximately 100 meters north/20 meters east of the forefoot bones that were found in Locality 1; it was not stated whether they were interpreted to be part of the same animal. Additional mammals were identified at similar depths:

> The bones, teeth, and scales of the alligator lizard *Elgaria* and the skink *Plestiodon* were recovered from the lacustrine strata approximately 8.25 to 11.5 feet below the previous ground surface as a result of processing sediment samples, as were the bones and teeth of the pocket gopher *Thomomys bottae* and pocket mice and voles.

Thomomys bottae and the vole *Microtus* had been recorded in another study in the area of Piute Ponds, approximately 1 mile north of the Project area (lander 2012). The occurrence of *Camelops* suggested that the continental vertebrate assemblage is no younger than Pleistocene and Rancholabrean, i.e., is at least 9,500 years old (Lander 2012). The Piute Ponds fauna that had been recorded prior to the Lander (2012) study had also been considered late Pleistocene in age. Therefore, Lander (2012) interpreted the assemblage from Phase 2 to be late Pleistocene, Rancholabrean, and at least 9,500 years in age.

The environmental preferences of lizards and the microtine rodent/vole allowed Lander (2012:1) to reconstruct what the environment of the landfill and its vicinity was like during the late Pleistocene Epoch and Rancholabrean North American Land Mammal Age (NALMA).

> The two lizards, *Plestiodon* and *Elgaria*, are strongly associated with coastal sage scrub, chaparral, and oak savannah habitats found throughout southern California. Such habitats are

not found in the Mojave Desert today. Voles prefer relatively lush, grass-covered habitats, which also do not occur in the Mojave Desert today. Modern records of these taxa are found at higher elevations in the San Gabriel and San Bernardino Mountains and on the southern California coastal plain. These modern occurrences and the presence of the same taxa in the Phase 2 vertebrate assemblage indicate that the EEA and vicinity during the late Pleistocene Epoch was cooler and moister that today, the region probably once supporting a relatively dry, scrub or chaparral habitat, with woodlands possibly occurring along nearby riparian corridors.

Lander's interpretation suggests that during the Late Pleistocene Epoch (and perhaps the Early Holocene), the environment of the Project area was akin to that of the constructed wetlands of Piute Ponds, home to a range of marshland flora and fauna. APRMI agrees with this interpretation.

Lander's (2011, 2012) studies show that previous paleontological resources monitoring of the Project area yielded new geological and paleontological information about the region that would not have been discovered had mechanical excavation not been monitored. The paleontological resources retrieved during Lander's studies are significant fossil remains that have added to geological and paleontologic data and have aided in reconstructing past environments of the region.

7. MONITORING METHODS

Prior to the first day of excavation monitoring, APRMI conducted a site Survey of the project area for any visible archaeological and paleontological surface resources on March 26, 2024. Monitoring for archaeological and paleontological resources for this Project started on various dates between March 27, 2024, and April 26, 2024, then continued the next year between April 6, 2025, and June 2, 2025 (Table 1). On the first day of excavation, Robin Turner, APRMI Principal Investigator, provided the Sharma contractor crew members with a Workers' Environmental Awareness Program (W.E.A.P.) training class on March 27, 2024. This was one of the mitigation measures for the Project. The WEAP explained what types of archaeological and paleontological resources might be discovered during monitoring, and the protocol for each member of the excavation crew to adhere to if they find archaeological and/or fossil materials. Since the same Sharma contractor crew members returned to complete the excavation in 2025, no additional WEAP training was necessary. Table 1 below states the days that APRMI was on site to monitor the Project.

Table 1. Dates of Monitoring Services

Month and Year	Days
March 2024	27, 28, 29
April 2024	9,10,11,12,16,17,18,19,22,23,24,25,26
May 2025	6,7,8,9,12,13,14,15,16,19,20,21,22,23,26,27,28,29,30
June 2025	2

Sharma used one excavator and two rock trucks to dig and remove native soil from the Project area, which was transported to a stockpile location toward the center of the landfill to be used to

cap the active landfill. Other equipment present included a water truck to spray the excavation areas and access roads for dust control.

APRMI construction monitors Jack Flynn, Veronica Garcia, Donald Ricketts, and Trevor Valle strictly adhered to OSHA safety protocols and standards and attended all contractor safety meetings that were held on site. OSHA-compliant personal protective equipment (PPE) was worn at all times within construction areas. PPE for the Project included a high-visibility reflective vest, a hard hat, steel-toed boots, dust mask, eye and ear protection. The monitors were cognizant of mechanical equipment locations and maintained a safe distance from active equipment. They communicated with equipment operators with predetermined standard arm signals and eye contact.

During site area excavation, the weather was hot and sunny with light to moderate winds most afternoons. The wind agitated a large amount of dust and demonstrated the Aeolian forces present within the Project area. The monitors followed OSHA protocols to avoid heat exhaustion and avoided slip-and-fall injuries by avoiding newly watered areas.

The monitors observed the LLRC site-area mechanical excavation from the edges of the excavation and from inside the excavation area, following all OSHA protocols for entry into excavated areas. Earth-moving activities and soil types revealed were noted and photographed. The stratigraphy revealed was drawn as a profile, described in narrative form, and photographed. Widths, lengths, and depths of excavations were measured. The monitors examined the excavated areas and spoils piles for archaeological and paleontological resources, documented the field observation with field summary forms, notes, maps, trench profiles, trench plans, a Global Positioning System (GPS) receiver/recorder, and photographs. Field notes and photographs are stored at APRMI offices.

Archaeological and Paleontological resources were collected, recorded, and retained by the Project monitors pending disposition in the APRMI Laboratory.

8. MONITORING RESULTS

8.1 Soils and Stratigraphy

The borrow pit area (BPA) to be dug was estimated at approximately 6 acres, of which only 1/2 of the area had been dug as of last day of monitoring on April 26, 2024. At that time, the maximum depth being dug by the excavator was approximately 6 feet (Figure 5). Approximately 1-2 feet of the BPA surface grade consisted of contaminated topsoil containing old road grade base rock and trash mixed within the existing old native soil, with previously undisturbed native soil resting below. The previously undisturbed native soil consisted of bedded alluvial deposits of small to fine grained gray sands and clay containing small water worn rocks 1-2 cm in size. (Figure 6). Minute flecks of gold-colored mica were also observed in many of the deposits. This alluvial deposit remained present as the excavation resumed digging an additional 5 feet lower to the project's completion this year on June 2, 2025. The stratigraphy was otherwise uniform with no discernible vertical strata throughout the excavation area.

These observations are consistent with the alluvial and lacustrine deposits located here within the East Antelope Basin and may represent the Pleistocene Lake clays described by Orme (2008:265). The lower deposits observed could also be interpreted as representing the deeper depths of the channel that had been noted earlier by Lander (2012).



Figure 5. Project area south side, view to south; native alluvial soil deposit - photograph #240422-3.



Figure 6. Project area south side, view straight down; rocks in native soil on the site floor - photograph #240423-2.

9. ARCHAEOLOGICAL RESOURCE RECOVERED

An archaeological resource isolate was recovered and documented as Field Identification #JH20240326 #1 (Figure 7). A potential Hammer Stone was recovered from the surface of the project at an elevation of approximately 2322 feet, with a GPS location of 34 Degrees 44' 43" N, 118 Degrees 06' 45" W. This resource is listed as #1 on the Map of Recovered Archeological and Paleontological Resources (Figure 11). While not deemed significant in and of itself, this isolate is an indication that the probability of locating additional significant archaeological resources in the surrounding native soil area during future excavations is highly likely. This finding also supports the existence of Native Americans that would have been present at the time these native soil layers had surface exposure.



Figure 7. Potential Hammer Stone used by Native Americans (JH20240326 #1) from the Project area.

10. FOSSIL RESOURCES SALVAGED

The fossil resources salvaged were recovered and documented from two locations within the BPA. The resource salvaged at the first location documented per GPS at 34 Degrees 44' 41" N, 118 Degrees 06' 40" W was an unidentified species of Rodent's partial lower left jaw with five grinding teeth that measured 2.5cm X 1cm. It was located towards the east side of the BPA at an elevation of approximately 2312 feet and recorded as Filed Identification #DFR20240423 #1 (Figure 8). This resource is listed as #2 on the Map of Recovered Archeological and Paleontological Resources (Figure 11).

The resources salvaged at the second location documented per GPS at 34 Degrees 44' 41" N, 118 Degrees 06' 43" W included a femur isolate belonging to a Desert Mouse (*Chaetodipus penicillatus*) that was found while salvaging a few scattered remains of an unidentified species of Bison, which included a single hoof with metatarsal recorded as Field Identification #VG20250527-2 #1 and VG20250527-3 #1 (Figure 9) that measured 12cm X 6.5cm; along with 258 associated lower jawbone fragments. 86 of these fragments were later used in the reconstruction of a partial lower jawbone recorded as Field Identification #DFR20250611 #1L (Figure 10) that measured approximately 44cm X 28cm X 5cm. These resources were located towards the west side of the BPA at an elevation of approximately 2307 feet. These resources are listed as #3 on the Map of Recovered Archeological and Paleontological Resources (Figure 11).

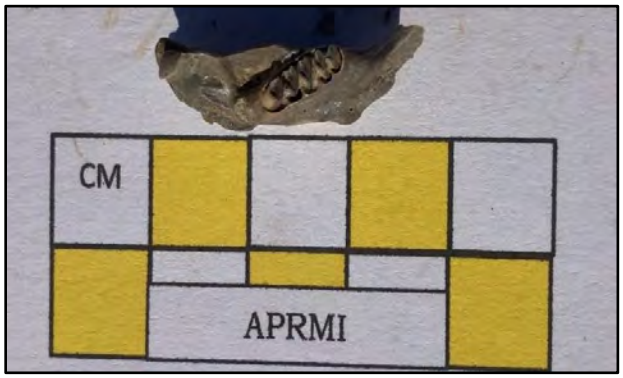


Figure 8. Unidentified species of Rodent, partial lower left jaw (DFR20240424 #1).



Figure 9. Bison Hoof with Metatarsal (VG20250527-2 #1, VG20250527-3 #1).



Figure 10. Reconstructed Lower Jaw - Bison (DFR20250611 #L1).

RECOVERED RESOURCES AND THEIR ASSOCIATED LOCATIONS

The recovered Archaeological resource isolate and Paleontological resources along with their associated locations were noted on a map photo taken from Google Maps (Figure 11) A chart detailing a Stratigraphic Column of the Project area with recovered resource locations has also been included in this report (Figure 12). The complete inventory of each recovered resource was attached to this report in Appendix "A".

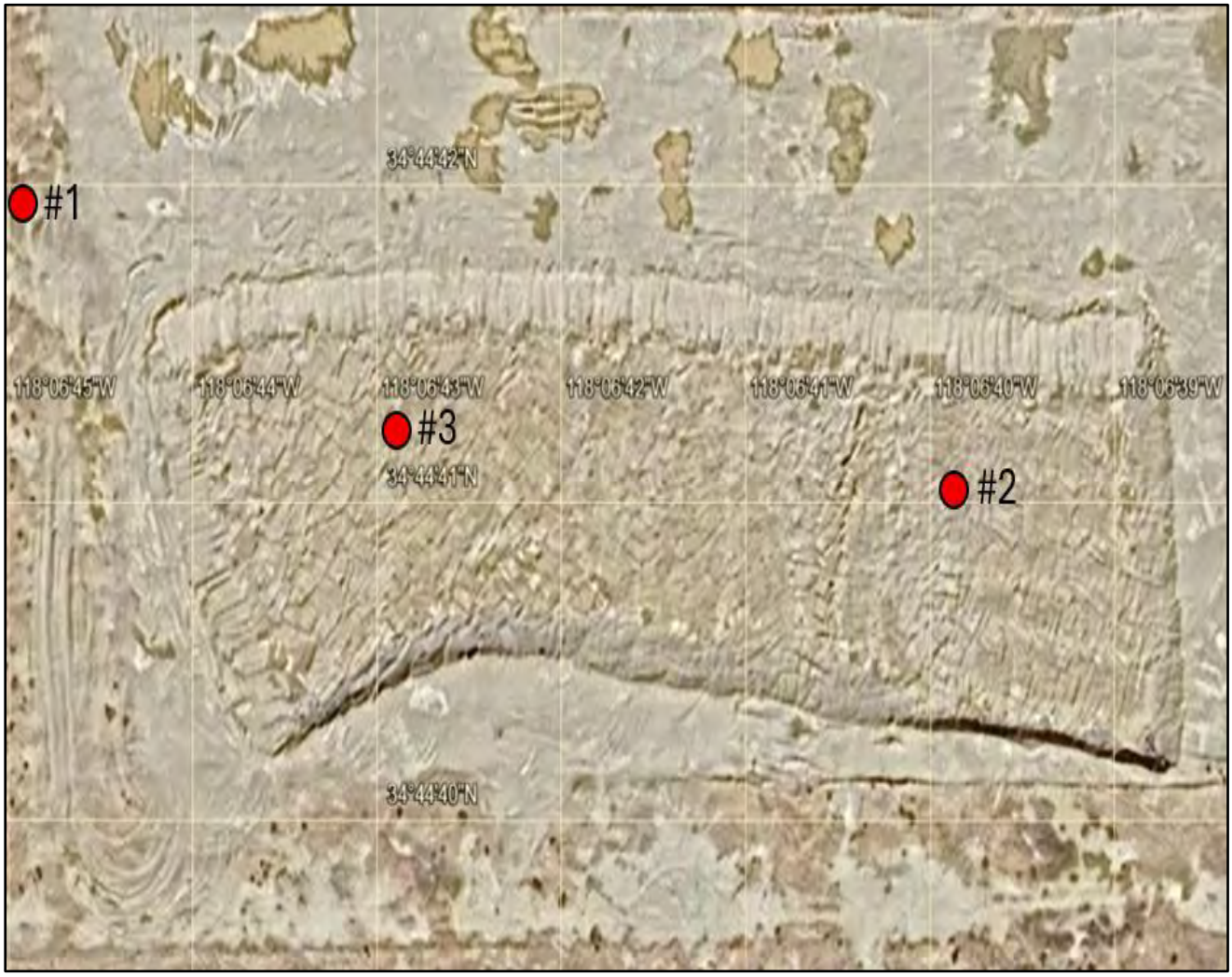


Figure 11. Map of Recovered Archaeological/Paleontological Resources with their associated locations - Google Maps.

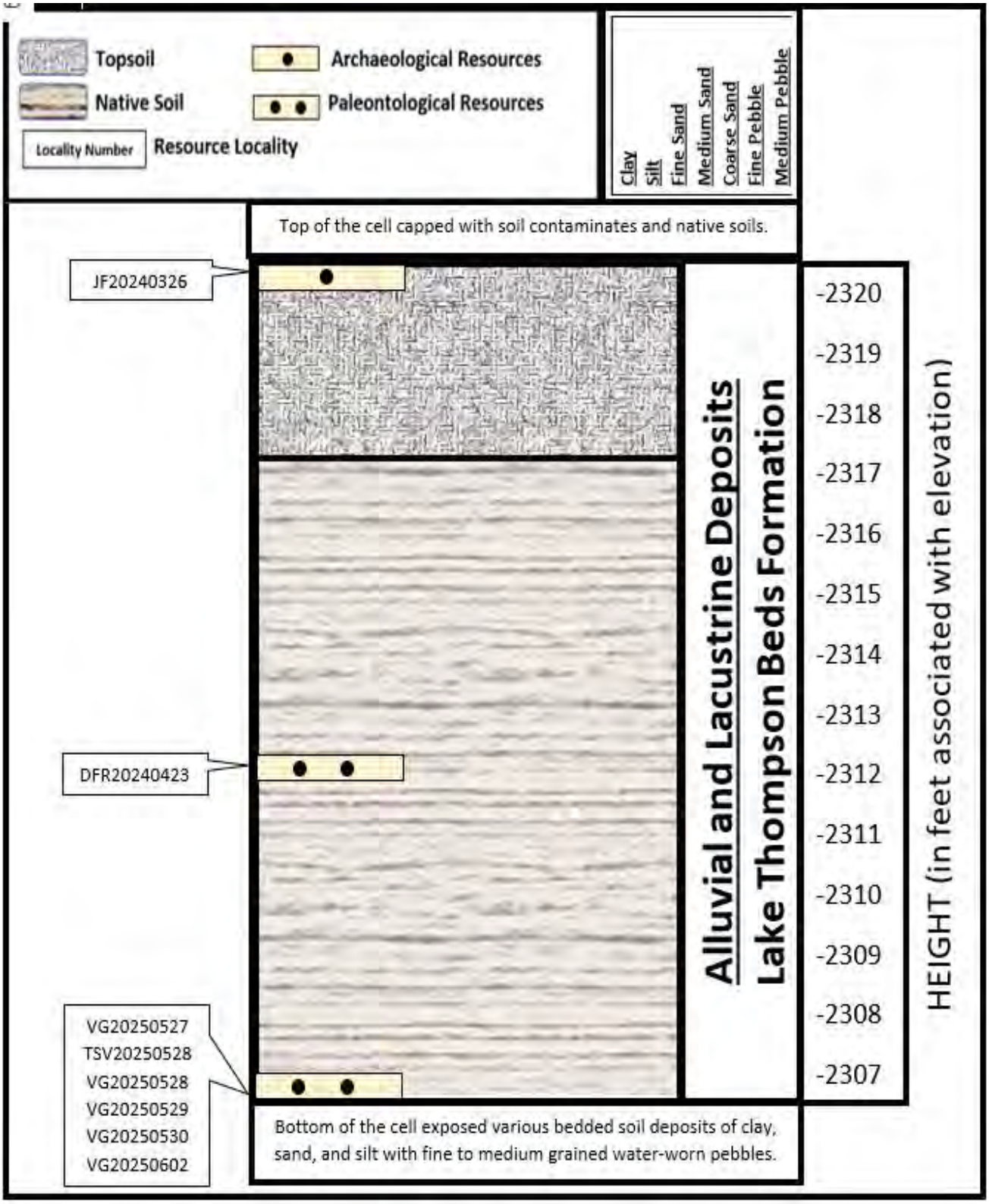


Figure 12. Stratigraphic Column with the Resources Recovered in the Borrow Pit Area.

CONCLUSIONS

During the Project (Borrow Pit) implementation, the archaeological and paleontological recourses monitors observed excavations that ranged from the surrounding grade level and reached approximately 11 feet below the current surrounding graded level across the entire 6 acres of the Project (Borrow Pit). These observations were based solely on the exposed topsoil and previously undisturbed native soils actually dug during the Project.

The Archaeological resource recovered was not deemed significant and the paleontological resources recovered were also not deemed significant in and of themselves. However, the archaeological and paleontological resources recovered are an indication that the probability of locating significant archaeological and/or paleontological resources in the surrounding native soil area during future excavations is likely.

Excavation of the Project (Borrow Pit) which was verified by LLRC is subject of the present report requires paleontological resources monitoring, as its location is near a fossil locality that has provided significant data that has contributed to our understanding of past environments (Lander 2011, 2012).

Archaeological resources and paleontological resources monitoring services for the mechanical excavation of the Project (Borrow Pit), provided from March 27, 2024, through April 26, 2024, then continued between May 6, 2025, through June 2, 2025; satisfy the archaeological resources and paleontological resource impact-mitigation requirements for the Project (Borrow Pit).

The LLRC occupies an area that is highly likely to contain archaeological and paleontological resources. Therefore, any continued excavation in this and other areas of the LLRC will require archaeological resources and paleontological resources monitoring.

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APPENDIX A

RECOVERED NATIVE AMERICAN and FOSSIL RESOURCES

WASTE MANAGEMENT – LANCASTER LANDFILL EEA

LAKE THOMPSON, LATE PLEISTOCENE – APRMI PROJECT #2024-03

(Data Compiled From – Monitoring and Lab Notes)

Waste Management - Lancaster Landfill EEA
Recovered Native American andFossil Resources
Data Compiled From - APRMI Project #2024-03 Monitoring and Lab Notes

Native American Resource - Holocene	
Resource Discription	**Qty.**
Hammer Stone	1
Total Resources	1

Fossil Resources - Holocene/Late Pleistocene	
Resource Discription	**Qty.**
Femur - Desert Mouse "*Chaetodipus penicillatus*"	1
Lower Jaw with 5 Grinding Teeth - Rodent	1
Hoof "*ungula*" - Bison	1
Foot Bone "*metatarsal*" - Bison	1
Various Fossil Fragments - Bison	247
Tooth/Partial Tooth Fragments - Bison	9
Lower Jawbone - Bison (Partial Reconstruction using 86 Fragments)	1
Total Resources	261

Catalog Control Numbers	Fossil Resource Identification		Quantity	Resource Size			Location Recovered			Preservation
Cat. # Field Number	Common Name	Portion	Count	Length (cm)	Width (cm)	Thickness (cm)	GPS Lat.	GPS Long.	Elevation	Storage - Location
JF20240326										
1 JF20240326 #1	Hammer Stone	Complete	1	*	*	*	34. 44' 43"N	118. 6' 45"W	2320 ft.	A.P.R.M.I. Repository
DFR20240423										
2 DFR20240423 #1	Partial Lower Jaw with Five Grinding Teeth - Rodent	Partial Fragment	1	2.5	1	1	34. 44' 41"N	118. 6' 40"W	2312 ft.	A.P.R.M.I. Repository
VG20250527-1										
3 VG20250527-1 #1a	Front Tooth - Bison	Complete	1	3.1	1.2	1	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
4 VG20250527-1 #1b	Front Tooth - Bison	Partial	1	2.4	1.3	1.2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
5 VG20250527-1 #2	Front Dental Bone for Lower Jaw - Bison	Partial Fragment	1	4	4.2	3.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
6 VG20250527-1 #3a	1 Tooth (Molar) - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
7 VG20250527-1 #3b	1 Tooth (Molar) - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
8 VG20250527-1 #4a	Jawbone Fragment - Bison	Partial Fragment	1	2.8	2.7	2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
9 VG20250527-1 #4b	Jawbone Fragment - Bison	Partial Fragment	1	2.1	1.8	1.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
10 VG20250527-1 #4c	Jawbone Fragment - Bison	Partial Fragment	1	2	2	1.2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
11 VG20250527-1 #4d	Jawbone Fragment - Bison	Partial Fragment	1	1.3	1.1	1	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
12 VG20250527-1 #4e	Jawbone Fragment - Bison	Partial Fragment	1	1.4	1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
13 VG20250527-1 #4f	Jawbone Fragment - Bison	Partial Fragment	1	1.3	1.2	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
14 VG20250527-1 #4g	Jawbone Fragment - Bison	Partial Fragment	5	7.7	2.1	1	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
15 VG20250527-1 #4h	Jawbone Fragment - Bison	Partial Fragment	3	5.7	1.5	1	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
16 VG20250527-1 #4i	Jawbone Fragment - Bison	Partial Fragment	2	4.5	1.5	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
17 VG20250527-1 #4j	Jawbone Fragment - Bison	Partial Fragment	2	3.7	1.4	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
18 VG20250527-1 #4k	Jawbone Fragment - Bison	Partial Fragment	1	6	1	0.8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
19 VG20250527-1 #4l	Jawbone Fragment - Bison	Partial Fragment	1	2.1	0.9	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
20 VG20250527-1 #4m	Jawbone Fragment - Bison	Partial Fragment	1	2	1.1	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
21 VG20250527-1 #4n	Jawbone Fragment - Bison	Partial Fragment	1	3.1	1.9	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
22 VG20250527-1 #4o	Jawbone Fragment - Bison	Partial Fragment	1	3.3	1.4	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
23 VG20250527-1 #4p	Jawbone Fragment - Bison	Partial Fragment	1	1.8	0.9	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
24 VG20250527-1 #4q	Jawbone Fragment - Bison	Partial Fragment	1	2.9	1.4	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
25 VG20250527-1 #4r	Jawbone Fragment - Bison	Partial Fragment	1	2.1	2	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
26 VG20250527-1 #4s	Jawbone Fragment - Bison	Partial Fragment	1	3.9	3.7	0.8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
27 VG20250527-1 #4t	Jawbone Fragment - Bison	Partial Fragment	1	5.6	3.5	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
28 VG20250527-1 #4u	Jawbone Fragment - Bison	Partial Fragment	1	2.5	2.1	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
29 VG20250527-1 #4v	Jawbone Fragment - Bison	Partial Fragment	1	2.2	0.8	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
VG20250527-2										
30 VG20250527-2 #1	Hoof "*ungula*"- Bison	Complete	1	9.2	4.5	3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
VG20250527-3										
31 VG20250527-3 #1	Foot Bone "*metatarsal*" - Bison	Complete	1	5.3	4.5	3.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
TSV20250528										
32 TSV20250528 #1a	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
33 TSV20250528 #1b	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
34 TSV20250528 #1c	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
35 TSV20250528 #2a	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
36 TSV20250528 #2b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
37 TSV20250528 #2c	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
38 TSV20250528 #2d	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
39 TSV20250528 #2e	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
40 TSV20250528 #2f	Jawbone Fragment - Bison	Partial Fragment	1	2.4	1.1	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
41 TSV20250528 #2g	Jawbone Fragment - Bison	Partial Fragment	1	2.1	0.8	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
42 TSV20250528 #2h	Jawbone Fragment - Bison	Partial Fragment	1	2.6	2.2	1.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
43 TSV20250528 #2i	Jawbone Fragment - Bison	Partial Fragment	1	1.6	0.6	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
44 TSV20250528 #2j	Jawbone Fragment - Bison	Partial Fragment	1	1.3	1	0.7	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository

Catalog Control Numbers		Fossil Resource Identification		Quantity	Resource Size			Location Recovered			Preservation
Cat. #	Field Number	Common Name	Portion	Count	Length (cm)	Width (cm)	Thickness (cm)	GPS Lat.	GPS Long.	Elevation	Storage - Location
	VG20250528										
45	VG20250528 #1a	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
46	VG20250528 #1b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
47	VG20250528 #1c	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
48	VG20250528 #1d	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
49	VG20250528 #1e	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
50	VG20250528 #1f	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250529-1										
51	VG20250529-1 #1a	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
52	VG20250529-1 #1b	Jawbone Fragment - Bison	Partial Fragment	1	2.3	0.7	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
53	VG20250529-1 #1c	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
54	VG20250529-1 #1d	Jawbone Fragment - Bison	Partial Fragment	1	2.2	0.9	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
55	VG20250529-1 #1e	Jawbone Fragment - Bison	Partial Fragment	1	2	0.7	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
56	VG20250529-1 #1f	Jawbone Fragment - Bison	Partial Fragment	1	1.9	0.7	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
57	VG20250529-1 #1g	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
58	VG20250529-1 #1h	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
59	VG20250529-1 #1i	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
60	VG20250529-1 #1j	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
61	VG20250529-1 #1k	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
62	VG20250529-1 #1l	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
63	VG20250529-1 #1m	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
64	VG20250529-1 #1n	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
65	VG20250529-1 #1o	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
66	VG20250529-1 #1p	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
67	VG20250529-1 #1q	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
68	VG20250529-1 #1r	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
69	VG20250529-1 #1s	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
70	VG20250529-1 #1t	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
71	VG20250529-1 #1u	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
72	VG20250529-1 #1v	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
73	VG20250529-1 #1w	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
74	VG20250529-1 #1x	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
75	VG20250529-1 #1y	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250529-2										
76	VG20250529-2 #1a	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
77	VG20250529-2 #1b	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
78	VG20250529-2 #1c	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
79	VG20250529-2 #1d	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
80	VG20250529-2 #2a	Jawbone Fragment - Bison	Partial Fragment	1	2.1	0.8	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
81	VG20250529-2 #2b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
82	VG20250529-2 #2c	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
83	VG20250529-2 #2d	Jawbone Fragment - Bison	Partial Fragment	1	1.2	0.8	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
84	VG20250529-2 #2e	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
85	VG20250529-2 #2f	Jawbone Fragment - Bison	Partial Fragment	1	3.1	0.6	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
86	VG20250529-2 #2g	Jawbone Fragment - Bison	Partial Fragment	1	2.4	1.1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
87	VG20250529-2 #2h	Jawbone Fragment - Bison	Partial Fragment	1	1.3	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
88	VG20250529-2 #2i	Jawbone Fragment - Bison	Partial Fragment	1	3	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
89	VG20250529-2 #2j	Jawbone Fragment - Bison	Partial Fragment	1	2.1	0.7	0.7	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
90	VG20250529-2 #2k	Jawbone Fragment - Bison	Partial Fragment	1	1.5	0.7	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
91	VG20250529-2 #2l	Jawbone Fragment - Bison	Partial Fragment	1	1.2	0.8	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
92	VG20250529-2 #2m	Jawbone Fragment - Bison	Partial Fragment	1	0.8	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
93	VG20250529-2 #2n	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
94	VG20250529-2 #2o	Jawbone Fragment - Bison	Partial Fragment	1	1.8	1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
95	VG20250529-2 #2p	Jawbone Fragment - Bison	Partial Fragment	1	2.4	0.8	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250529-3										
96	VG20250529-3 #1a	1 Tooth (Molar) - Used in Bison Jaw Reconstruction	Partial Fragment	2	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
97	VG20250529-3 #1b	1 Tooth (Molar) - Used in Bison Jaw Reconstruction	Partial Fragment	2	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
98	VG20250529-3 #2a	Jawbone Fragment - Bison	Partial Fragment	1	1.2	1.1	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
99	VG20250529-3 #2b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
100	VG20250529-3 #2c	Jawbone Fragment - Bison	Partial Fragment	1	3.9	0.9	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
101	VG20250529-3 #2d	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
102	VG20250529-3 #2e	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
103	VG20250529-3 #2f	Jawbone Fragment - Bison	Partial Fragment	1	2.5	2.2	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
104	VG20250529-3 #2g	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
105	VG20250529-3 #2h	Jawbone Fragment - Bison	Partial Fragment	1	4.1	1.3	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
106	VG20250529-3 #2i	Jawbone Fragment - Bison	Partial Fragment	1	1.7	0.9	0.7	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
107	VG20250529-3 #2j	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
108	VG20250529-3 #2k	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
109	VG20250529-3 #2l	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
110	VG20250529-3 #2m	Jawbone Fragment - Bison	Partial Fragment	1	1	0.7	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
111	VG20250529-3 #2n	Jawbone Fragment - Bison	Partial Fragment	1	0.9	0.4	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
112	VG20250529-3 #2o	Jawbone Fragment - Bison	Partial Fragment	1	3.5	1.2	0.8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository

Catalog Control Numbers		Fossil Resource Identification	Quantity		Resource Size			Location Recovered			Preservation
Cat. #	Field Number	Common Name	Portion	Count	Length (cm)	Width (cm)	Thickness (cm)	GPS Lat.	GPS Long.	Elevation	Storage - Location
	VG20250529-4										
113	VG20250529-4 #1	1 Tooth (Molar) - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
114	VG20250529-4 #2a	Jawbone Fragment - Bison	Partial Fragment	1	2.9	1.7	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
115	VG20250529-4 #2b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
116	VG20250529-4 #2c	Jawbone Fragment - Bison	Partial Fragment	1	3.4	2	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
117	VG20250529-4 #2d	Jawbone Fragment - Bison	Partial Fragment	1	1.6	1.1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
118	VG20250529-4 #2e	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
119	VG20250529-4 #2f	Jawbone Fragment - Bison	Partial Fragment	1	1.2	1.1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
120	VG20250529-4 #2g	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
121	VG20250529-4 #2h	Jawbone Fragment - Bison	Partial Fragment	1	1.2	0.8	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
122	VG20250529-4 #2i	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
123	VG20250529-4 #2j	Jawbone Fragment - Bison	Partial Fragment	1	1.6	0.7	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
124	VG20250529-4 #2k	Jawbone Fragment - Bison	Partial Fragment	1	1.6	0.4	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
125	VG20250529-4 #2l	Jawbone Fragment - Bison	Partial Fragment	1	1.3	1.2	0.7	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
126	VG20250529-4 #2m	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.5	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
127	VG20250529-4 #2n	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
128	VG20250529-4 #2o	Jawbone Fragment - Bison	Partial Fragment	1	1.8	0.5	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
129	VG20250529-4 #2p	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250529-5										
130	VG20250529-5 #1a	Tooth Fragment - Bison	Partial Fragment	1	0.7	0.7	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
131	VG20250529-5 #1b	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
132	VG20250529-5 #2a	Jawbone Fragment - Bison	Partial Fragment	1	1.5	1.1	0.8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
133	VG20250529-5 #2b	Jawbone Fragment - Bison	Partial Fragment	1	1	0.8	0.8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
134	VG20250529-5 #2c	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
135	VG20250529-5 #2d	Jawbone Fragment - Bison	Partial Fragment	1	1.6	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
136	VG20250529-5 #2e	Jawbone Fragment - Bison	Partial Fragment	1	2.5	0.8	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
137	VG20250529-5 #2f	Jawbone Fragment - Bison	Partial Fragment	1	2.9	0.9	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
138	VG20250529-5 #2g	Jawbone Fragment - Bison	Partial Fragment	1	2.4	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
139	VG20250529-5 #2h	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.8	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
140	VG20250529-5 #2i	Jawbone Fragment - Bison	Partial Fragment	1	2	1.1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
141	VG20250529-5 #2j	Jawbone Fragment - Bison	Partial Fragment	1	2	1.2	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
142	VG20250529-5 #2k	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
143	VG20250529-5 #2l	Jawbone Fragment - Bison	Partial Fragment	1	3.4	1.2	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250530-1										
144	VG20250530-1 #1	Femur - Desert Mouse (*Chaetodipus penicillatus*)	Complete	1	2.2	0.5	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
145	VG20250530-1 #2a	Jawbone Fragment - Bison	Partial Fragment	1	3.3	1.1	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
146	VG20250530-1 #2b	Jawbone Fragment - Bison	Partial Fragment	1	2.2	1.1	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
147	VG20250530-1 #2c	Jawbone Fragment - Bison	Partial Fragment	1	2.6	1.3	0.9	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
148	VG20250530-1 #2d	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
149	VG20250530-1 #2e	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
150	VG20250530-1 #2f	Jawbone Fragment - Bison	Partial Fragment	1	2.1	0.6	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
151	VG20250530-1 #2g	Jawbone Fragment - Bison	Partial Fragment	1	1.3	0.8	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
152	VG20250530-1 #2h	Jawbone Fragment - Bison	Partial Fragment	1	1.6	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
153	VG20250530-1 #2i	Jawbone Fragment - Bison	Partial Fragment	1	1	0.9	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
154	VG20250530-1 #2j	Jawbone Fragment - Bison	Partial Fragment	1	1.5	1.5	0.8	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
155	VG20250530-1 #2k	Jawbone Fragment - Bison	Partial Fragment	1	1.4	1.1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
156	VG20250530-1 #2l	Jawbone Fragment - Bison	Partial Fragment	1	1.7	1.2	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250530-2										
157	VG20250530-2 #1a	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
158	VG20250530-2 #1b	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
159	VG20250530-2 #1c	Tooth Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
160	VG20250530-2 #2a	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
161	VG20250530-2 #2b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
162	VG20250530-2 #2c	Jawbone Fragment - Bison	Partial Fragment	1	1.2	0.8	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
163	VG20250530-2 #2d	Jawbone Fragment - Bison	Partial Fragment	1	1.7	1.2	0.2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
164	VG20250530-2 #2e	Jawbone Fragment - Bison	Partial Fragment	1	1.3	0.7	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
165	VG20250530-2 #2f	Jawbone Fragment - Bison	Partial Fragment	1	1.5	0.7	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
166	VG20250530-2 #2g	Jawbone Fragment - Bison	Partial Fragment	1	1	0.6	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
167	VG20250530-2 #2h	Jawbone Fragment - Bison	Partial Fragment	1	1.1	1	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
168	VG20250530-2 #2i	Jawbone Fragment - Bison	Partial Fragment	1	0.9	0.4	0.2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
169	VG20250530-2 #2j	Jawbone Fragment - Bison	Partial Fragment	1	1	0.7	0.2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
170	VG20250530-2 #2k	Jawbone Fragment - Bison	Partial Fragment	1	1.1	0.6	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
171	VG20250530-2 #2l	Jawbone Fragment - Bison	Partial Fragment	1	1	0.6	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
172	VG20250530-2 #2m	Jawbone Fragment - Bison	Partial Fragment	1	0.9	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
173	VG20250530-2 #2n	Jawbone Fragment - Bison	Partial Fragment	1	0.8	0.5	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
174	VG20250530-2 #2o	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.3	0.2	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
175	VG20250530-2 #2p	Jawbone Fragment - Bison	Partial Fragment	1	1.7	0.7	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
176	VG20250530-2 #3a-kk	Jawbone Fragment - Bison	Partial Fragments	37	(Small Pieces in a Small Jar)			34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository

Catalog Control Numbers		Fossil Resource Identification	Quantity		Resource Size			Location Recovered			Preservation
Cat. #	Field Number	Common Name	Portion	Count	Length (cm)	Width (cm)	Thickness (cm)	GPS Lat.	GPS Long.	Elevation	Storage - Location
	VG20250530-3										
177	VG20250530-3 #1a	Jawbone Fragment - Bison	Partial Fragment	1	1.6	1.1	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
178	VG20250530-3 #1b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
179	VG20250530-3 #1c	Jawbone Fragment - Bison	Partial Fragment	1	1	0.9	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
180	VG20250530-3 #1d	Jawbone Fragment - Bison	Partial Fragment	1	1.5	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
181	VG20250530-3 #1e	Jawbone Fragment - Bison	Partial Fragment	1	2.4	0.5	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
182	VG20250530-3 #1f	Jawbone Fragment - Bison	Partial Fragment	1	1.5	1	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
183	VG20250530-3 #1g	Jawbone Fragment - Bison	Partial Fragment	1	1.3	0.6	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
184	VG20250530-3 #1h	Jawbone Fragment - Bison	Partial Fragment	1	1.5	0.6	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
185	VG20250530-3 #1i	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
186	VG20250530-3 #1j	Jawbone Fragment - Bison	Partial Fragment	1	1.7	0.8	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
187	VG20250530-3 #1k	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.5	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250602-1										
188	VG20250602-1 #1a	Jawbone Fragment - Bison	Partial Fragment	1	2.8	1.9	0.7	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
189	VG20250602-1 #1b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
190	VG20250602-1 #1c	Jawbone Fragment - Bison	Partial Fragment	1	1.8	0.8	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
191	VG20250602-1 #1d	Jawbone Fragment - Bison	Partial Fragment	1	1.9	1.4	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
192	VG20250602-1 #1e	Jawbone Fragment - Bison	Partial Fragment	1	2.1	1.1	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
193	VG20250602-1 #1f	Jawbone Fragment - Bison	Partial Fragment	1	1.9	0.7	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
194	VG20250602-1 #1g	Jawbone Fragment - Bison	Partial Fragment	1	3.5	1.4	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
195	VG20250602-1 #1h	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
196	VG20250602-1 #1i	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
197	VG20250602-1 #1j	Jawbone Fragment - Bison	Partial Fragment	1	1	0.4	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
198	VG20250602-1 #1k	Jawbone Fragment - Bison	Partial Fragment	1	1	1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
199	VG20250602-1 #1l	Jawbone Fragment - Bison	Partial Fragment	1	1.5	0.5	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	VG20250602-2										
200	VG20250602-2 #1a	Jawbone Fragment - Bison	Partial Fragment	1	1.5	1	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
201	VG20250602-2 #1b	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
202	VG20250602-2 #1c	Jawbone Fragment - Bison	Partial Fragment	1	1.2	1	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
203	VG20250602-2 #1d	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
204	VG20250602-2 #1e	Jawbone Fragment - Bison	Partial Fragment	1	2	1.1	0.6	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
205	VG20250602-2 #1f	Jawbone Fragment - Bison	Partial Fragment	1	1.7	0.8	0.5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
206	VG20250602-2 #1g	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
207	VG20250602-2 #1h	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
208	VG20250602-2 #1i	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
209	VG20250602-2 #1j	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
210	VG20250602-2 #1k	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.5	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
211	VG20250602-2 #1l	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.6	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
212	VG20250602-2 #1m	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
213	VG20250602-2 #1n	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
214	VG20250602-2 #1o	Jawbone Fragment - Bison	Partial Fragment	1	1.1	0.4	0.3	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
215	VG20250602-2 #1p	Jawbone Fragment - Bison	Partial Fragment	1	1.4	0.4	0.4	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
216	VG20250602-2 #1q	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
217	VG20250602-2 #1r	Bone Fragment - Used in Bison Jaw Reconstruction	Partial Fragment	1	*	*	*	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository
	DFR20250611										
218	DFR20250611 #1L	Lower Jaw Reconstructed from Fragments - Bison	Reconstruction	1	44	28	5	34. 44' 41"N	118. 6' 43"W	2307 ft.	A.P.R.M.I. Repository

ATTACHMENT F

Lancaster Landfill Demonstration Project

Objectives

Using Kore's non-combustion thermal conversion technology to economically process select Waste Management (WM) waste streams in compliance with the requirements identified in SB1383. To research the potential of the technology to produce renewable energy (e.g., RNG or Hydrogen) from diverted organics. To scale up the demonstration unit to process one ton per hour of selected organics while determining the feasibility of expanding system volumes.

Research & Development

Scope of work

The principal objective of this research is to demonstrate the capability of the Kore technology to process organic wastes efficiently and economically. The successful implementation of non-combustion thermal technology provides many potential benefits for WM including:

- Compliance with regulatory waste diversion mandates
- Reduction in greenhouse gas emissions
- Compliance with Conditional Use Permit 03-170
- New source of renewable energy

Functionality

Once commissioned, the Kore demonstration unit will operate 24/7 for approximately three weeks at a time. During downtimes, maintenance and unit performance will be evaluated. Our research operations should last approximately eighteen months. Each waste stream will have its own test campaign that includes the following activities:

- Sampling plan tailored to the generation source to characterize the waste. • Preparing heterogeneous waste feedstock for testing to optimize particle size and flowability through Kore's dual knife gate airlock.
- Acclimating Kore's pyrolyzer for the feedstock starting at low loading and increasing until a 1 ton/hour design rate is achieved.
- Measuring pyro gas yield of condensable gasses (bio-oil) and non-condensable gasses (biogas) and characteristics of each fraction (e.g., energy value, chemical constituents.)
- Measuring biocarbon yield and characteristics (e.g., carbon content, energy value, C:H and C:O content).
- Determining if additional processing is needed at the facility.

Ideal Waste Streams

WM will provide the following waste streams for processing and research:

- Post processed compost overs from South Valley (Tulare).
- Post processed green waste from the Sun Valley MRF.

Permitting Requirements

The Kore Demonstration Unit will seek review and approvals from the following agencies:

- Los Angeles County Department of Regional Planning
- Los Angeles County Public Works
- Los Angeles County Department of Health Services
- Antelope Valley Air Quality Management District

Kore Technology and Specifications

Kore uses a non-combustible thermal technology to convert waste into carbon-negative energy. The process indirectly heats the waste feedstock to 1000°F without oxygen, causing volatile organics to devolatilize (convert into gas) leaving behind only a solid made of fixed carbon and ash. The gas can be upgraded into commercial energy products and the solid carbon can be sequestered to prevent the carbon from returning to the atmosphere.

Kore Technology History

The Kore technology was developed through pilot-scale testing using wastewater biosolids as feedstock at the Los Angeles County Sanitation District Joint Water Pollution Control Plant. This pilot plant was operated at 200 pounds per hour for over three years to prove the concept. The operating data was then used to design a demonstration system with 10X the capacity (1 ton/hour.)

SoCalGas Los Angeles Project

After several equipment refinements and improvements, Kore established and operated a demonstration-scale system in downtown Los Angeles with a major natural gas utility, SoCalGas. The demonstration unit operated for a year and a half and successfully processed wood pellets. This demonstration period provided Kore with the operational knowledge necessary to expand our feedstocks to more traditional

forms of solid waste and, on a larger scale, begin the commercialization of our technology. This project was fully permitted by the South Coast Air Quality Management District (SCAQMD) and local LA permitting authorities.

Standard Site Specifications

System feedstock capacity: 1 ton/hr (expandable to any size)

Hydrogen production capacity: 500-1,000 kg/day

Biocarbon production capacity: 4-6 tons/day

System footprint: <10,000 ft^2

System design: Standard design, factory assembled, skid mounted

Time to build and ship: 6 months

Feedstocks: Post processed green waste, agricultural residuals, green waste, forest thinnings.

Process heat: Recovered tail gas after hydrogen separation (no external heat required) *Expected carbon intensity*: -160 to -260 gCO_{2e}/MJ

Environmental Credits Earned: LCFS, IRA, voluntary carbon offsets



ATTACHMENT G

Flare Source Test

Source Test Report

Waste Management of California, Inc.
Lancaster Landfill & Recycling Center
600 East Avenue F
Lancaster, CA 93535

Facility ID: 2129

Source Tested: Enclosed Flare 2
Test Date: March 21, 2025
Report Submittal Date: May 20, 2025

Project No. AST-2025-1080

Prepared By
Alliance Technical Group, LLC
10602 Walker Street
Cypress CA 90630

Regulatory Information

Permit No.	C012559
Regulatory Citation	SCAQMD Rule 1150.1

Source Information

Source Name	*Target Parameters*
Enclosed Flare 2	TNMNEOC VOC (as C1 and Hexane), HV, TRS, H_2S, TO-15, PM, NOx, CO, O_2 and CO_2

Contact Information

Test Location
Waste Management of California, Inc.
600 East Avenue F
Lancaster, CA 93535

Lancaster Landfill & Recycling Center

Facility ID: 2129

Facility Contact
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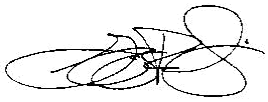
AtmAA Inc.
5107 Douglas Fir Rd.
Calabasas, CA 91302
info@atmaa.com
(818) 223-3277

Regulatory Agency
Antelope Valley Air Quality Management District
2551 W Avenue H
Lancaster, CA 93536
avreporting@avaqmd.ca.gov

Alliance Technical Group, LLC (Alliance) has completed the source testing as described in this report. Results apply only to the source(s) and operating condition(s) that were tested during the specific test date(s) and time(s) identified within this report. All results are intended to be considered in their entirety, and Alliance is not responsible for use of less than the complete test report without written consent. This report shall not be reproduced in full or in part without written approval from the customer.

To the best of my knowledge and abilities, all information, facts and test data are correct. The data presented in this report has been checked for completeness and is accurate, error-free and legible. Onsite testing was conducted in accordance with approved internal Standard Operating Procedures. Any deviations or problems are detailed in the relevant sections of this test report.

This report is only considered valid once an authorized representative of Alliance has signed in the space provided below; any other version is considered draft. This document was prepared in portable document format (.pdf) and contains pages as identified in the bottom footer of this document.



Greg Rubin
Operations Manager
Alliance Technical Group, LLC

May 20, 2025
Date

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:	2129 date(s) tested: March 21, 2025
Facility Name:	Waste Management of California, Inc. Lancaster Landfill & Recycling Center
Equipment Address:	600 East Avenue F
	Lancaster, CA 93535
Equipment Tested:	Enclosed Flare 2
Device ID, A/N, P/N:	C012559
Report ID or Job No:	AST-2025-1080

By the source testing firm of:

Source Test Firm:	Alliance Technical Group, LLC
Business Address:	10602 Walker Street
	Cypress, CA 90630

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:

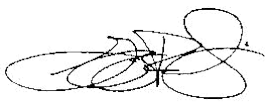
(1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company or any subsidiary thereof;

(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.



Greg Rubin
Operations Manager
Alliance Technical Group, LLC

May 20, 2025
Date

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APPENDICES

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Appendix D Laboratory Data
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Appendix F Process Operating/Control System Data
Appendix G SSTP and Associated Documentation
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Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by Waste Management of California, Inc. (WM) to conduct compliance testing at the Lancaster, California facility. Portions of the facility are subject to provisions of the Antelope Valley Air Quality Management District (AVAQMD) Permit to Operate C012559. Testing was conducted as outlined in Table 1-1 below.

Table 1-1: Test Matrix

Emission Source	Parameters
Enclosed Flare 2 (Inlet)	Sample Point Determination
	Volumetric Flow Rate
	Oxygen / Carbon Dioxide
	Total Non-Methane Organic Compunds / Methane
	Moisture Content
	Reduced Sulfur Compounds, including Hydrogen Sulfide
	Speciated Organic Compounds
Enclosed Flare 2 (Outlet)	Sample Point Determination
	Volumetric Flow Rate
	Oxygen / Carbon Dioxide
	Moisture Content
	Particulate Matter
	Nitrogen Oxides
	Carbon Monoxide
	Total Non-Methane Organic Compunds / Methane
	Speciated Organic Compounds

1.1 Source Description

The enclosed landfill gas flare ís a LFG Specialties, Model EF945I10 rated at 60.72 Million British Thermal Units per hour (MMBtu/hr). The flare consists of an insulated steel cylinder 45 feet high and 109 inches inside diameter. It is equipped with multiple burners, a landfill gas flow meter and recorder, a propane gas pilot, and an electric igniter. The flare is also equipped with a UV flame scanner, thermocouple with temperature indicator with recorder, an automatic shutdown alarm system, a flame arrestor, moisture separator and a condensate injection pump with flow indicating and recording device.

1.2 Project Team

Personnel involved in this project are identified in the following table.

Table 1-2: Project Team

WM Personnel	Kyle Evans
Regulatory Agency	AVAQMD
Alliance Personnel	Nick Pham Ryan Chang Catarino Ocegueda

1.3 Site Specific Test Plan & Notification

Testing was conducted in accordance with the Site-Specific Test Plan (SSTP) submitted to AVAQMD on February 19, 2025. A copy may be found in Appendix G.

1.4 Test Program Notes

An M25.3 O_2 leakage was found in the duplicate sample. Because the non-leaking sample has a low VOC concentration, this anomaly will not affect the VOC compliance status.

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the WM facility in Lancaster, California on March 21, 2025. Testing consisted of determining the emission rates of TNMHC, TRS, H_2S, O_2 and CO_2 at the inlet of Enclosed Flare 2 and TNMHC VOC, TO-15, PM, NOx, CO, O_2 and CO_2 at the outlet of Enclosed Flare 2. WM collected a follow-up H_2S sample on May 1, 2025.

Tables 2-1 and 2-2 provide summaries of the emission testing results with comparisons to the applicable AVAQMD permit limits. Table 2-1 also provides a summary of the process operating and control system data collected during testing. Any difference between the summary results listed in the following tables and the detailed results contained in appendices is due to rounding for presentation.

Table 2-1: Summary of Results - Gases

Run Number	Run 1	Permit Limit
Date	**3/21/25**	**--**
Start Time	**10:30**	**--**
Stop Time	**12:11**	**--**
O_2 Concentration, % dry	11.48	--
CO_2 Concentration, % dry	8.62	--
Volumetric Flow Rate (M1-4), dscfm	17,581	--
Carbon Monoxide		
Concentration, ppmvd	<20.0	--
Concentration, ppmvd @ 3 % O_2	<38.0	--
Emission Rate, lb/hr	<1.56	--
Emission Factor, lb/MMBtu (O2d)	<0.0325	0.200 (PTO, Cond. 11)
Nitrogen Oxides		
Concentration, ppmvd	16.59	--
Concentration, ppmvd @ 3 % O_2	31.54	--
Emission Rate, lb/hr	2.12	--
Emission Factor, lb/MMBtu (O2d)	0.0433	0.060 (PTO, Cond. 11)
Total Fuel Gas Sulfur Data		
Concentration as H_2S, ppm	443.8*	250.0 (PTO, Cond. 13)
Emission Factor (as SO_2), lb/MMBtu	0.1835	0.062 (PTO, Cond. 11)
Process Operating / Control System Data		
Flare Temperature, °F	1,577	> 1,400
Landfill Gas Flowrate,	1,476	--
Condensate Flowrate,	1.2	--

*Follow-up lab sample on May 1, 2025, had a result of 2.84 ppm H_2S

Table 2-2: Summary of Results – TNMNEOC & PM

Run Number	Run 1	Permit Limit
Date	**3/21/25**	**--**
Start Time	**10:30**	**--**
Stop Time	**12:12**	**--**
Inlet		
TNMNEOC		
Concentration (as C1), ppmvd	1,352.50	--
Emission Rate (as Methane), lb/hr	23.0	
Outlet		
Volumetric Flow Rate (M19), dscfm	17,581	--
O_2 Concentration, % dry	13.8	--
TNMNEOC		
Concentration (as C1), ppmvd	3.21	--
Concentration (as Hexane), ppmvd @ 3 % O_2	1.35	20 (PTO, Cond. 18)
Emission Rate (as Hexane), lb/hr	0.13	--
Emission Factor (as Hexane), lb/MMBtu (O2d)	0.0035	0.05 (PTO, Cond 11)
Emission Rate (as Methane), lb/hr	0.14	
Removal Efficiency (as Methane), %	99.4	98 (PTO, Cond. 18)
Total Particulate Matter Data		
Concentration, grain/dscf	0.0020	--
Emission Factor, lb/hr	0.31	--
Emission Factor, lb/MMscf	3.45	17 (PTO, Cond 11)
Solid Particulate Matter Data		
Concentration, grain/dscf	0.0019	--
Emission Factor, lb/hr	0.28	--
Emission Factor, lb/MMscf	3.15	--

Table 2-3: Summary of Results – TO-15

Run Number	Inlet - Run 1	Outlet - Run 1	Outlet - Run 2	Outlet - Run 3
Volumetric Flow Rate, dscfm	17,581	17,581	17,581	17,581
Emissions Calculations - Inlet				
Benzene				
Concentration, ppmvd	1.3E+00	1.8E-03	4.5E-03	1.9E-03
Concentration, ug/dscf	1.2E+02	1.7E-01	4.2E-01	1.7E-01
Emission Rate, lb/hr	2.8E-01	3.9E-04	9.7E-04	4.0E-04
Benzyl Chloride (a-Chlorotoluene)				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	7.6E+00	2.7E-01	2.7E-01	2.7E-01
Emission Rate, lb/hr	1.8E-02	6.3E-04	6.3E-04	6.3E-04
Chlorobenzene				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	6.8E+00	2.4E-01	2.4E-01	2.4E-01
Emission Rate, lb/hr	1.6E-02	5.6E-04	5.6E-04	5.6E-04
1,2-Dibromoethane				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	1.1E+01	4.0E-01	4.0E-01	4.0E-01
Emission Rate, lb/hr	2.6E-02	9.4E-04	9.4E-04	9.4E-04
1,3-Dichlorobenzene				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	8.9E+00	3.2E-01	3.2E-01	3.2E-01
Emission Rate, lb/hr	2.1E-02	7.4E-04	7.4E-04	7.4E-04
1,4-Dichlorobenzene				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	2.8E-03
Concentration, ug/dscf	8.9E+00	3.2E-01	3.2E-01	4.9E-01
Emission Rate, lb/hr	2.1E-02	7.4E-04	7.4E-04	1.1E-03
1,2-Dichlorobenzene				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	8.9E+00	3.2E-01	3.2E-01	3.2E-01
Emission Rate, lb/hr	2.1E-02	7.4E-04	7.4E-04	7.4E-04

Table 2-3: Summary of Results – TO-15 (Cont.)

Run Number	Inlet - Run 1	Outlet - Run 1	Outlet - Run 2	Outlet - Run 3
1,1-Dichloroethane				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	6.0E+00	2.1E-01	2.1E-01	2.1E-01
Emission Rate, lb/hr	1.4E-02	5.0E-04	5.0E-04	5.0E-04
1,2-Dichloroethane				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	6.0E+00	2.1E-01	2.1E-01	2.1E-01
Emission Rate, lb/hr	1.4E-02	5.0E-04	5.0E-04	5.0E-04
1,1-Dichloroethene				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	5.8E+00	2.1E-01	2.1E-01	2.1E-01
Emission Rate, lb/hr	1.4E-02	4.9E-04	4.9E-04	4.9E-04
Methylene Chloride (DCM)				
Concentration, ppmvd	1.0E-01	8.0E-03	5.4E-03	3.7E-03
Concentration, ug/dscf	1.0E+01	8.0E-01	5.4E-01	3.7E-01
Emission Rate, lb/hr	2.4E-02	1.8E-03	1.3E-03	8.5E-04
Hydrogen Sulfide				
Concentration, ppmvd	4.4E-04	--	--	--
Concentration, ug/dscf	1.8E-02	--	--	--
Emission Rate, lb/hr	4.1E-05	--	--	--
Tetrachloroethene (PCE)				
Concentration, ppmvd	3.7E-01	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	7.2E+01	3.6E-01	3.6E-01	3.6E-01
Emission Rate, lb/hr	1.7E-01	8.3E-04	8.3E-04	8.3E-04
Carbon Tetrachloride				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	9.3E+00	3.3E-01	3.3E-01	3.3E-01
Emission Rate, lb/hr	2.2E-02	7.7E-04	7.7E-04	7.7E-04
Toluene				
Concentration, ppmvd	7.5E+00	4.1E-03	1.8E-03	1.4E-02
Concentration, ug/dscf	8.2E+02	4.5E-01	2.0E-01	1.5E+00
Emission Rate, lb/hr	1.9E+00	1.0E-03	4.6E-04	3.6E-03

Table 2-3: Summary of Results – TO-15 (Cont.)

Run Number	Inlet - Run 1	Outlet - Run 1	Outlet - Run 2	Outlet - Run 3
1,1,1-Trichloroethane				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	8.0E+00	2.9E-01	2.9E-01	2.9E-01
Emission Rate, lb/hr	1.9E-02	6.7E-04	6.7E-04	6.7E-04
Trichloroethene (TCE)				
Concentration, ppmvd	2.6E-01	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	4.1E+01	2.8E-01	2.8E-01	2.8E-01
Emission Rate, lb/hr	9.5E-02	6.6E-04	6.6E-04	6.6E-04
Chloroform				
Concentration, ppmvd	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Concentration, ug/dscf	7.2E+00	2.6E-01	2.6E-01	2.6E-01
Emission Rate, lb/hr	1.7E-02	6.0E-04	6.0E-04	6.0E-04
Vinyl Chloride				
Concentration, ppmvd	3.7E-01	4.0E-03	2.7E-03	1.8E-03
Concentration, ug/dscf	2.7E+01	2.9E-01	2.0E-01	1.3E-01
Emission Rate, lb/hr	6.3E-02	6.8E-04	4.6E-04	3.1E-04
m & p-Xylene				
Concentration, ppmvd	2.5E+00	8.0E-03	5.4E-03	1.9E-02
Concentration, ug/dscf	3.2E+02	9.9E-01	6.7E-01	2.4E+00
Emission Rate, lb/hr	7.4E-01	2.3E-03	1.6E-03	5.5E-03
o-Xylene				
Concentration, ppmvd	7.0E-01	1.8E-03	1.8E-03	7.3E-03
Concentration, ug/dscf	8.7E+01	2.3E-01	2.3E-01	9.1E-01
Emission Rate, lb/hr	2.0E-01	5.3E-04	5.3E-04	2.1E-03

Testing Methodology

3.0 Testing Methodology

The emission testing program was conducted in accordance with the test methods that are listed in Table 3-1. Method descriptions are provided below, and quality assurance/quality control data is provided in Appendix E.

Table 3-1: Source Testing Methodology

Parameter	Reference Test Methods	Notes/Remarks
Sample Point Determination	SCAQMD 1.1	--
Volumetric Flow Rate	SCAQMD 2.1	Full Velocity Traverses
Moisture Content (Outlet)	SCAQMD 4.1	Gravimetric Analysis
Particulate Matter as PM-10	SCAQMD 5.1	Isokinetic Testing
Oxygen / Carbon Dioxide (Outlet), Nitrogen Oxides, Carbon Monoxide	SCAQMD 100.1	Instrumental Analysis
Reduced Sulfur Compounds, including Hydrogen Sulfide	SCAQMD 307-91	Integrated Sample
Speciated Organic Compounds	EPA TO-15	Constant Rate Canister Sampling
TNMNEOC as C1 (Inlet)	SCAQMD 25.1	Constant Rate Sampling
TNMNEOC as C1 and Hexane (Outlet)	SCAQMD 25.3	Constant Rate Sampling

3.1 SCAQMD Method 1.1 - Sampling and Velocity Traverse Points

The number and location of traverse points were determined according to SCAQMD Method 1 based on the physical dimensions of the sampling location and process parameters. In principle, the stack cross-section is divided into equal areas, each of which was represented by a "traverse point". Generally, the number of traverse points diminished as the flow profile at the sampling location became uniform. In most cases, the maximum number of sampling points is 24 for particulate testing and 16 for velocity traverses. Fewer traverse points were permitted as described in the method. A 24-point cyclonic flow check was conducted during the velocity measurements and was determined to be 3 degrees.

Table 3-1: Sampling Location Configuration

Sampling Location Configuration for Reference Method CEMS Probe:	
Upstream	55.2 in. (0.5 duct diameter)
Downstream	390 in. (3.8 duct diameter)
Number of Sampling Ports	2 (located at 90º intervals)
Stack Diameter	102 in. (internal diameter)

3.2 SCAQMD Method 2.1 - Stack Gas Velocity and Flow Rate

The velocity and volumetric flow rate of the stack gas was determined according to SCAQMD Method 2. In this method, the velocity head (differential pressure) and temperature are measured at the required traverse points. The stack gas differential pressure head was determined using an "S" type pitot tube in combination with inclined liquid manometer. The temperature was measured using a type "K" thermocouple (TC) and digital temperature readout.

Prior to testing, the measurement system was set-up and leak checked. Then the velocity head and temperature were recorded at predetermined traverse points. After the last traverse was completed, the system was again leak-checked. After completion of the traverse, the static pressure in the stack was determined in the centroid of the stack. The stack gas velocity was calculated using the velocity head, and stack gas temperature, pressure and molecular weight.

QA/QC for the method included field performance checks, and periodic calibrations of test equipment including the pitot tube, differential pressure gauge, TC, and TC-readout.

3.3 SCAQMD Method 4.1 – Moisture Content

The stack gas moisture content was determined according to SCAQMD Method 4.1. In this method, water vapor is collected in a condenser while the dry stack gas volume is measured using a dry gas meter. The volume of water vapor was calculated from the amount of water condensed and the total gas volume was the sum of water vapor plus dry stack gas. The moisture content was determined as a fraction of the total wet stack gas volume. The following calculations were used.

$$B_{WS} = \frac{V_{W,Std}}{V_{M,Std} + V_{W,Std}}$$

$$V_{W,Std} = K_1 \times V_{H2O}$$

$$V_{M,Std} = T_{Std}/P_{Std} \times Y_M \times V_M \times P_M/T_M$$

Where:

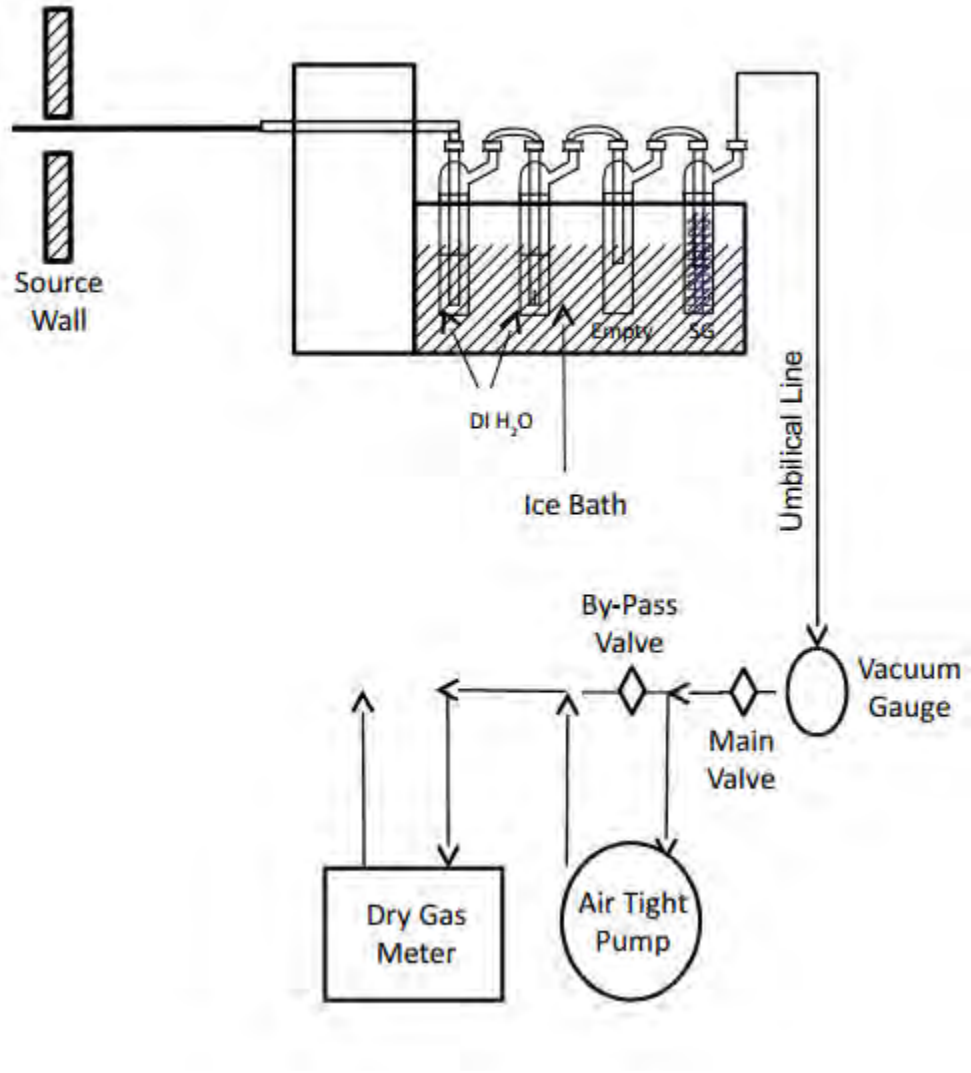
B_{WS}	=	Fraction of water vapor in stack gas
$V_{W,Std}$	=	Volume of water vapor (scf)
$V_{M,Std}$	=	Volume of stack gas sampled (dscf)
K_1	=	Unit volume of water vapor (0.04707 scf @68°F or 0.0464 scf @60°F)
T_{Std}	=	Standard Temperature (528°R or 520°R)
P_{Std}	=	Standard Pressure, 29.92 in. Hg
Y_M	=	Dry gas meter calibration factor
V_M	=	Measured volume of stack gas sampled
P_M	=	Dry gas meter pressure (in. Hg)
T_M	=	Dry gas meter temperature (°R)

Sampling for moisture content was performed as follows:

Moisture was collected in a sampling train consisting of a probe, TFE line, four impingers in an ice bath, a leak-free pump, a vacuum gauge and a dry gas meter. Figure 3-1 is a schematic of a typical moisture train. Initially, impingers #1 and #2 contain 100 ml of water, impinger #3 was empty, and impinger #4 contains a known amount (approximately 300 g) of desiccant (e.g. Silica Gel). Prior to sampling, a leak check of the sampling train was performed. Then, the sampling probe was inserted into the centroid of the stack, the initial meter readings (volume, temperatures, etc.) were recorded, the sample pump was started and the sampling rate was adjusted to the desired

sampling rate (typically 0.75 dry cfm). Sampling was conducted until at least 22 dry cubic feet were collected. After sampling, the final meter readings were recorded and the impinger train was recovered. The change in volume and/or weight of the impinger train components was used to determine the amount of moisture condensed. The volume of water vapor and the corrected volume of dry gas sampled were used to calculate the moisture fraction as described above.

Figure 3-1: Moisture Train



3.4 SCAQMD Method 5.1 – Total Particulate Matter

Measurements to determine total particulate matter were performed according to SCAQMD Method 5.1. In this method, a stack gas sample was isokinetically extracted from the stack through a stainless steel nozzle and probe and transported to an impinger train in an ice bath. Entrained particulate were collected in the impingers and on a back-up filter placed between the 3rd and 4th impingers. Figure 3-2 is a schematic of the sampling apparatus.

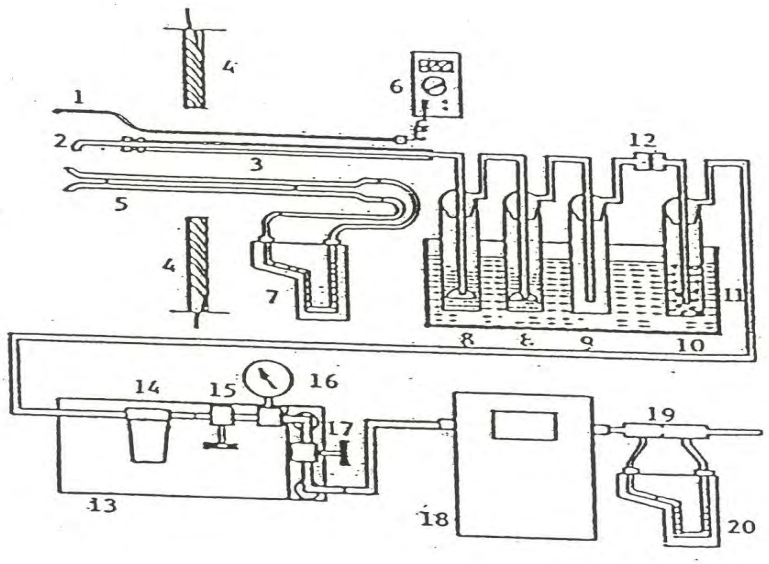
Prior to testing, a series of measurements were made to determine location and number of traverse points, gas velocity, MW, and moisture content. The results of these measurements were used to determine the appropriate nozzle size for isokinetic sampling. The sampling rate was adjusted to maintain isokinetic conditions based on pitot and TC measurements.

The sampling train was prepared by charging impingers # 1 and # 2 with 100 ml of D.I. water and impinger # 4 with approximately 200 g of silica gel. Impinger # 3 was left empty. Finally, the sampling train was the sealed, transported to the sampling location, and leak-checked. Sampling was performed at each traverse point. After completing the test, the Method 5.1 sample was taken to a secured area (ie. Mobile test van or Alliance laboratory) and recovered.

The recovered samples were entered into Alliance Sample Custody Program and delivered to the laboratory for analysis. At the laboratory, samples were analyzed by gravimetric procedures to determine gross PM weight gain. If necessary, the samples are further analyzed by wet chemistry to determine acids and sulfates content.

Field and laboratory data are used to calculate sample volume corrected to standard conditions, stack gas flow rate, and other parameters. Emissions were reported in gr/dscf and lbs/hr.

Figure 3-2: Sampling Apparatus for Particulate Matter



1. Temperature Sensor
2. Nozzle
3. Glass Lined Stainless Steel Probe
4. S-type Pitot Tube
5. Stack Wall
6. Temperature Sensor Meter
7. Pitot Tube Inclined Manometer
8. Impinger with 100 ml H_2O
9. Empty Bubbler
10. Bubbler with Silica Gel
11. Ice Bath
12. Filter
13. Sealed Pump (Leak Free)
14. Filter for Pump
15. Metering Valve
16. Vacuum Gauge
17. By-pass Valve
18. Temperature Compensated Dry Gas Meter
19. Orifice
20. Orifice Inclined Manometer

3.5 SCAQMD Method 100.1 - Continuous Monitoring of Gaseous Emissions, CEMS

In this method, gaseous components of the stack gas (e.g. NOx, SO_2, O_2, CO_2, CO) are measured continuously according to SCAQMD Method 100.1 using Alliance's mobile continuous emissions monitoring system (CEMS). Figure 3-3 is a schematic of Alliance's CEMS.

The CEMS extracts and conditions a representative stack gas sample and analyzes the gas using one or more analytical instruments. The extraction and conditioning system consists of a stainless steel heated probe, a short heated TFE sample line, a conditioning system, a TFE-diaphragm pump and a TFE transport (sample) line. The sample conditioning system, consisting of water knockout impingers and/or a thermoelectric condenser, removes moisture before the gas is delivered to the analyzers. Sample flow and delivery are controlled using a flow control panel that includes valves, pressure gauges, and flow meters (rotameters). The flow control panel allows the user to deliver sample gas to any and all instruments. Instrument readings were recorded using a real-time stripchart and an electronic data acquisition system (DAS). Other pertinent data such as calibration gas cylinder numbers and concentrations, test location, dates, times, and operator identification are also recorded on the strip chart and on the field data form.

Sampling included pretest and post-test calibration and bias checks for each sampling run. Raw concentration data were corrected for sampling system bias according to Method 100.1 using the following equation:

$$C_{CORR} = C_{MA} \times \frac{(C_i - BIAS_{ZERO})}{(BIAS_{SPAN} - BIAS_{ZERO})}$$

Where:

C_{CORR}	=	Concentration, corrected for drift and bias
C_i	=	Average measured concentration (raw value)
$BIAS_{ZERO}$	=	Average instrument response during zero bias check
C_{MA}	=	Certified concentration of applicable span gas
$BIAS_{SPAN}$	=	Average instrument response during span bias check

The following QA/QC activities were performed during testing.

- Prior to testing, each individual analyzer was calibrated (adjusted) by introducing zero, hi-span and mid-span gases directly into each analyzer and by making corresponding adjustments.

- Prior to testing, calibration error, linearity and system bias checks were performed on each analyzer. Calibration error and linearity checks are performed by injecting known calibration gases directly to each instrument. System bias checks are performed by injecting calibration gases at the sampling-probe/junction or at the sampling probe tip.

- The system response time for each parameter was determined at the moment when the calibration gas for the bias check reaches 95% of its expected concentration value.

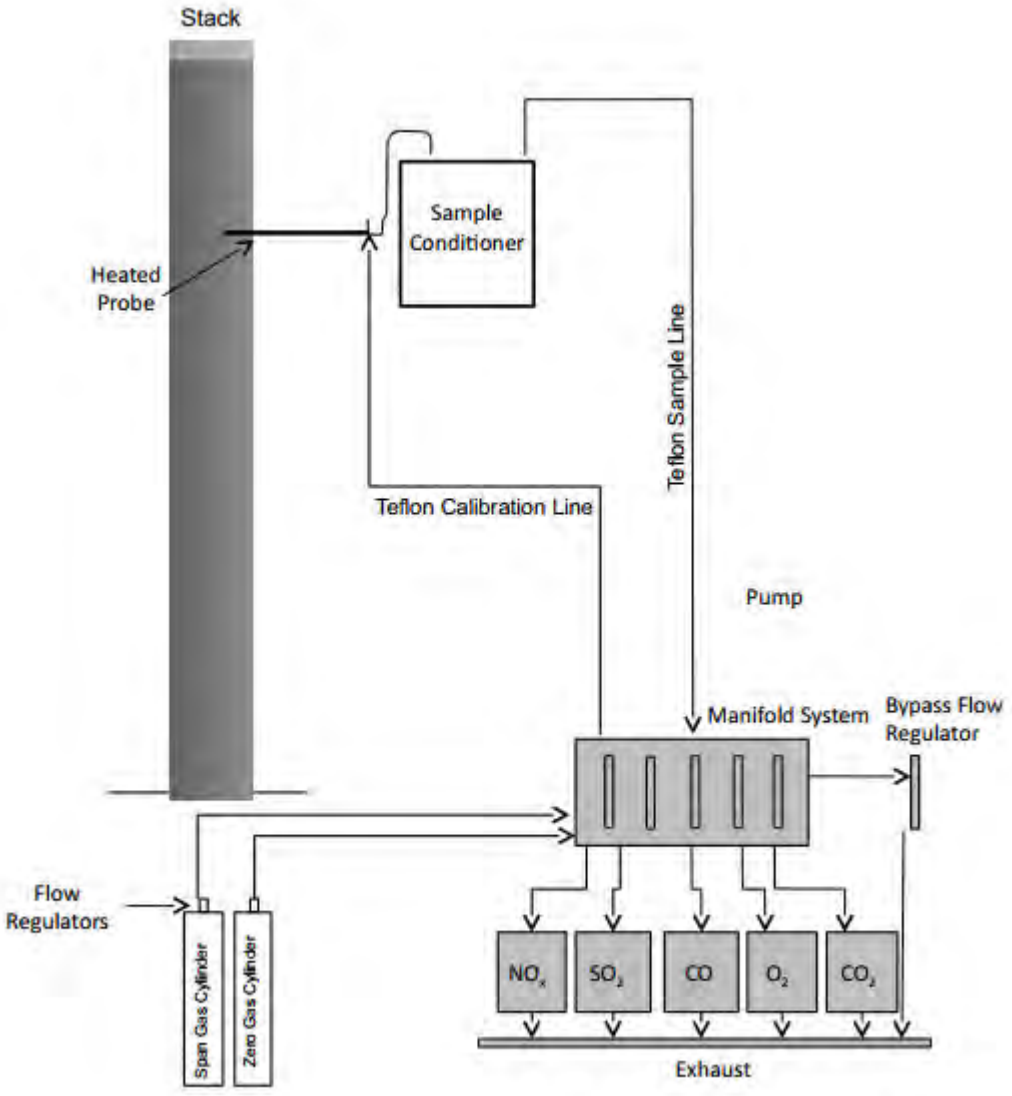
- A leak check was conducted before sampling and periodically thereafter to ensure that no leakage occurs in the entire sampling apparatus. The leak check was performed on the vacuum side by sealing the probe tip and increasing vacuum to above 20 inches of mercury. After the vacuum stabilizes, it should hold constantly at

about 20 in. Hg. On the pressure side, the pressure gauge indicator should drop to zero and flow to each individual rotameter also should drop to zero to indicate a successful leak check.

- Calibration gases used to span instrumentation conform to EPA Protocol-1. Certificates of analysis for calibration gases are included in the report.

- NO_2-to-NO conversion efficiency (CE) check was performed according to the procedure in Method 100.1. The result of the Conversion Efficiency check is included in the report.

Figure 3-3: Continuous Emissions Monitoring System



3.6 SCAQMD Method 307-91 – Total Sulfur Compounds

Total sulfur compounds of the fuel content was measured according to SCAQMD Method 307-91. Field samples were collected from the sampling location into Tedlar bags and analyzed by gas chromatography using a sulfur chemiluminescent detector (GC/SCD). Field sampling and analytical procedures are described below.

Field sampling was performed by trained personnel as follows. Prior to sample collection, a sample interface (tubing, valve, etc.) was connected to the facility's sampling tap. All "wetted" surfaces that may contact the sample gas were constructed of inert materials such as TFE, glass, or polypropylene. The sample interface was allowed to bleed slightly between sample collections events in order to maintain conditioning of the sampling equipment.
Only new Tedlar bags were used. Each Tedlar bag was conditioned with sample gas prior to sample collection in three steps. First, the new bag was filled with sample gas, allowed to set for at least five minutes, and then emptied. Then the bag was filled with sample gas and immediately emptied. Finally, the sample was collected.

After a sample is collected, it was immediately labelled and entered in a Chain of Custody. Within four hours after collection, samples were delivered to the Laboratory for analysis.

Samples were analyzed by GC/SCD within 24 hours after collection when collected in a Tedlar bag. Sulfur compounds and SO_2 are separated by fuel. These compounds were then combusted in a hydrogen-rich flame to yield sulfur monoxide and other products. The sulfur monoxide reacts with ozone to yield sulfur dioxide, oxygen and light. The light is detected with a photomultiplier and the response is calibrated against previously run standards.

Analytical QC includes: pre-test and continuing calibration of equipment, analysis of reference standards, and blanks, and replicate analysis of the sample.

3.7 U.S. EPA Reference Test Method TO-15 – Volatile Organic Compounds

The volatile organic compounds testing was conducted in accordance with EPA Method Toxic Organics-15 (TO-15). The gas stream was withdrawn at a constant rate through a unheated Teflon sample line, and into an evacuated stainless steel canister. The sample rate was regulated with a flow controller over the duration of the test run.

Following the completion of each test run, the canister valve was closed and the sample was labeled for transport to the identified laboratory for analysis. The samples were analyzed by high resolution gas chromatography (GC) coupled to a mass spectrometer (MS) according to the analytical guidelines in EPA TO-15.

3.8 SCAQMD Method 25.1 – Volatile Organic Compounds (VOC), TNMNEOC as C1

This method applies to the measurement of Volatile Organic Compounds (VOC) or total non-methane organic compounds (TNMNEOC) as carbon in source emissions. In this Method, gaseous samples were withdrawn from the gas stream at a constant rate through duplicate chilled condensate traps and collected in evacuated sample tanks. Each sampling train consisted of an in-stack filter (optional), sample probe, condensate trap, a flow control system, and an evacuated sample tank. The flow controller incorporated a combination vacuum/pressure gauge, which was connected directly to the canister. The TNMNEOC was determined by combining the analytical results obtained from independent analyses of the condensate traps (condensable fraction) and the sample tanks (gaseous fraction). The sampling system is depicted in Figure 3-4.

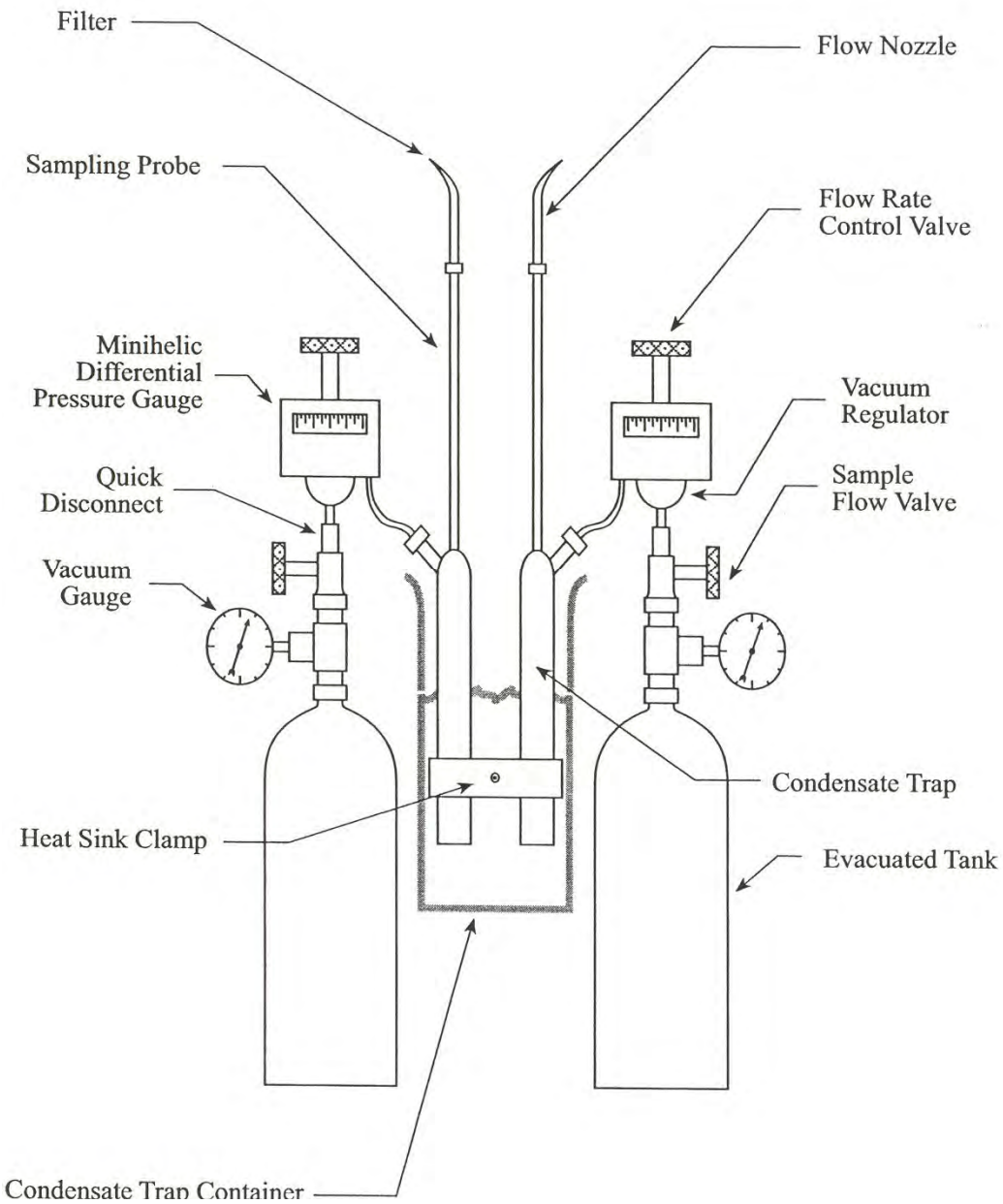
Prior to testing, the sampling system was pre-cleaned and evacuated in preparation for sample collection. On-site, the sampling system was leak-checked and crushed dry ice was placed around each condensate trap. Then the

sample probe was placed in the stack, facing downstream to prevent collection of particulate matter. Pretest data was recorded and the sample valve was opened. The flow controller was based on a critical orifice that was preset to flow at a rate of 80-cc/min +/- 15%. Periodically, sampling train readings (i.e. tank vacuum) were recorded on the field data sheet. Sampling was stopped when one hour had elapsed. Then, the sampling train was removed from the stack and a leak check was performed. Samples were logged in and delivered to the laboratory for analysis.

The analytical system consisted of two major sub-systems: an oxidation system for the recovery and the conditioning of the condensate trap contents, and a non-methane organics (NMO) analyzer. The NMO analyzer was a gas chromatograph (GC) with backflush capability for NMO analysis and was equipped with an oxidation catalyst, reduction catalyst, and flame ionization detector (FID). The system for the recovery and conditioning of the organics captured in the condensate trap consisted of a heat source, oxidation catalyst, non-dispersive infrared (NDIR) CO2 analyzer and an intermediate collection vessel (ICV).

The organic content of each condensate trap was oxidized to carbon dioxide (CO_2), which is quantitatively collected in an evacuated vessel (the ICV); then a portion of the CO_2 was reduced to methane (CH_4) and measured by GC/NDIR or GC/FID. The organic content of the sample fraction collected in the sampling tank was measured by injecting a gas sample into the GC to separate the NMO from CO, CO_2 and CH4. The NMO were oxidized to CO_2, reduced to CH_4, and measured by the FID. In this manner, the variable response of the FID (associated with different type of organic compounds) was eliminated. The samples were analyzed by AAC Laboratory in Ventura, California which is a SCAQMD-approved laboratory.

Figure 3-4: Sampling Apparatus for NMNEOC per SCAQMD Method 25.1



3.9 SCAQMD Method 25.3 – Volatile Organic Compounds (VOC) as TNMNEOC (C1 and Hexane)

This method applies to the measurement of low-concentration (</= 50 ppmv) volatile organic compounds (VOC) or total non-methane organics (TNMNEOC) as carbon in source emissions. In this Method, gaseous samples are withdrawn from the gas stream at a constant rate through duplicate chilled condensate traps and collected in evacuated sample tanks. The sampling system is depicted in Figure 3-5. Each sampling train (there are two) consisted of an in-stack filter (optional), sample probe, water-chilled mini-impinger, a flow control system, and an evacuated sample tank. The flow controller incorporated a combination vacuum/pressure gauge, which was connected directly to the canister. The TNMNEOC was determined by combining the analytical results obtained from independent analyses of the condensate traps (condensable fraction) and the sample tanks (gaseous fraction).

Prior to testing, the sampling system was pre-cleaned and evacuated in preparation for sample collection. On-site, the sampling system was leak-checked and the impingers were placed in an ice-slurry (the impingers are chilled for at least 10 minutes prior to sampling). Then the sample probe was placed in the stack, facing downstream to prevent collection of particulate matter. Pretest data was recorded, and the sample valve was opened. The flow controller was based on a critical orifice that was preset to flow at a rate of 80-cc/min +/- 15%. Periodically, sampling train readings (i.e. tank vacuum) were recorded on the field data sheet. Sampling was stopped when one hour had elapsed and/or and tank vacuum reached 2 inches as indicated by the vacuum gauge. Then, the sampling train was removed from the stack and a leak check was performed. Samples were logged in and delivered to the laboratory for analysis.

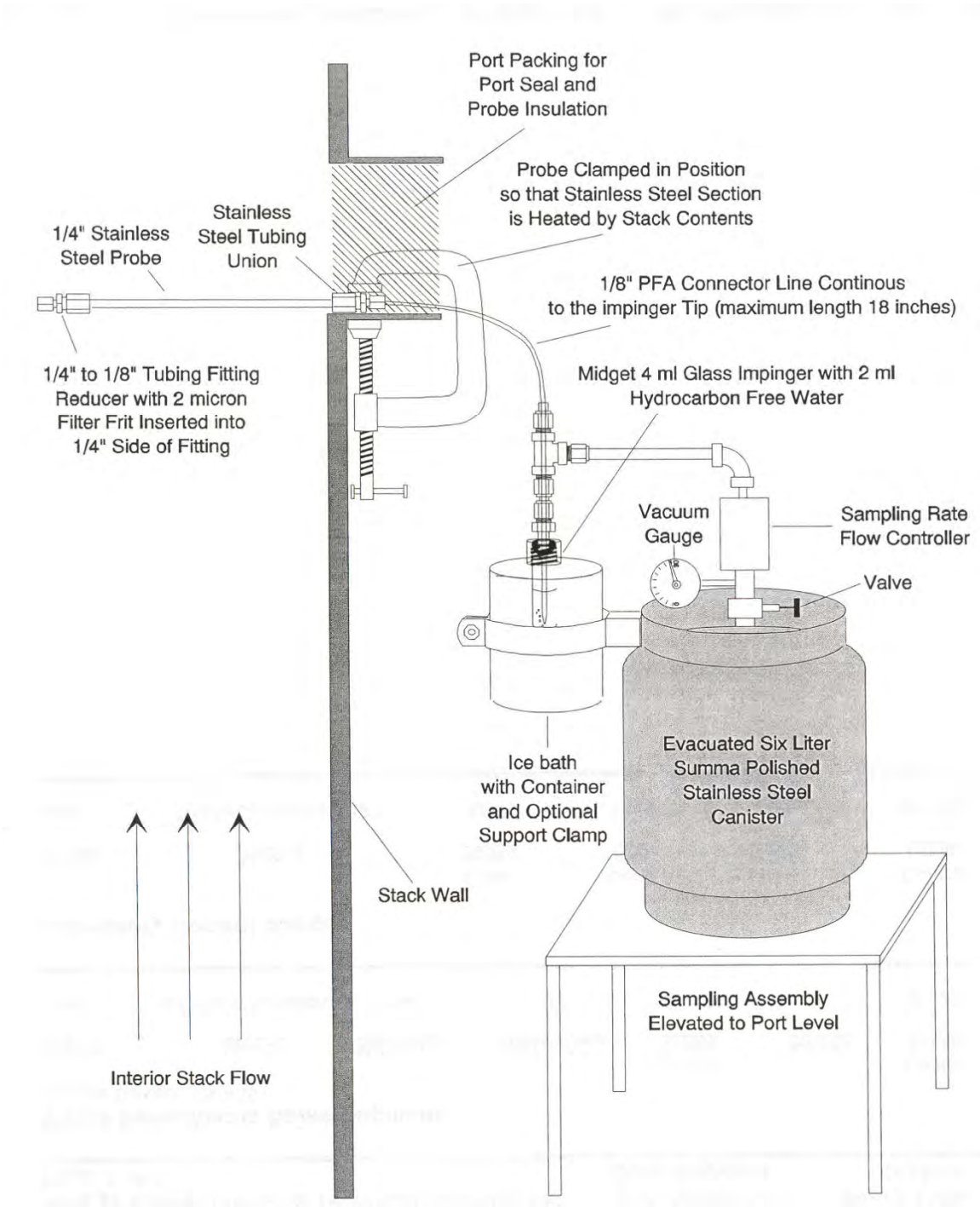
The analytical system consisted of two major sub-systems: a total organic carbon (TOC) analyzer capable of differentiating between total carbon (TC) and inorganic carbon (IC) and a non-methane organics (NMO) analyzer. The NMO analyzer was a gas chromatograph (GC) with back flush capability for NMO analysis and was equipped with an oxidation catalyst, reduction catalyst, and flame ionization detector (FID). The system for the recovery and conditioning of the organics captured in the condensate trap consisted of a heat source, oxidation catalyst, non-dispersive infrared (NDIR) CO_2 analyzer and an intermediate collection vessel (ICV). Analyses were performed as follows.

NMO collected in the water impinger were analyzed in the TOC analyzer. The TOC analyzer determined both TC and IC. And the TOC was calculated as the difference between TC and IC.

The organic content of the sample fraction collected in the sampling tank was measured by injecting a gas sample into the GC to separate the NMO from carbon monoxide (CO), CO_2 and CH_4. The NMO were oxidized to CO_2, reduced to CH_4, and measured by the FID. In this manner, the variable response of the FID (associated with different type of organic compounds) was eliminated. The samples were analyzed by AAC Laboratory in Ventura, California which is a SCAQMD-approved laboratory.

Figure 3-5: Sampling Apparatus for TGNMNEOC per SCAQMD Method 25.3

(Figure shows one train – actual method was run in duplicate simultaneously)



Appendix A

Location:	Waste Management of California, Inc. - Lancaster, CA
Source:	Enclosed Flare 2
Project No.:	AST-2025-1080
Run No. /Method	Run 1 / SCAQMD 100.1

O_2 - Outlet Concentration (C_{O_2}), % dry

$$C_{O_2} = (C_{obs} - C_0) \times \left(\frac{C_{MA}}{(C_M - C_0)} \right)$$

where,

C_{obs}	11.4	= average analyzer value during test, % dry
C_o	0.1	= average of pretest & posttest zero responses, % dry
C_{MA}	12.1	= actual concentration of calibration gas, % dry
C_M	12.0	= average of pretest & posttest calibration responses, % dry
C_{O_2}	11.5	= O_2 Concentration, % dry

Location:	Waste Management of California, Inc. - Lancaster, CA
Source:	Enclosed Flare 2
Project No.:	AST-2025-1080
Run No. /Method	Run 1 / SCAQMD 100.1

CO_2 - Outlet Concentration (C_{CO_2}), % dry

$$C_{CO_2} = (C_{obs} - C_0) \times \left(\frac{C_{MA}}{(C_M - C_0)} \right)$$

where,

C_{obs}	8.5	= average analyzer value during test, % dry
C_o	0.1	= average of pretest & posttest zero responses, % dry
C_{MA}	4.3	= actual concentration of calibration gas, % dry
C_M	4.3	= average of pretest & posttest calibration responses, % dry
C_{CO_2}	8.6	= CO_2 Concentration, % dry

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080
Run No. /Method Run 1 / SCAQMD 100.1

CO - Outlet Concentration (C_{CO}), ppmvd

$$C_{CO} = (C_{obs} - C_0) \times \left(\frac{C_{MA}}{(C_M - C_0)} \right)$$

where,

C_{obs}	3.0	= average analyzer value during test, ppmvd
C_o	0.2	= average of pretest & posttest zero responses, ppmvd
C_{MA}	46.1	= actual concentration of calibration gas, ppmvd
C_M	46.7	= average of pretest & posttest calibration responses, ppmvd
C_{CO}	20.0	= CO Concentration, ppmvd

CO - Outlet Concentration (C_{COc3}), ppmvd @ 3% O_2

$$C_{COc3} = C_{CO} \times \left(\frac{20.9 - 3}{20.9 - O_2} \right)$$

where,

C_{CO}	20.0	= CO - Outlet Concentration, ppmvd
C_{O_2}	11.5	= oxygen concentration, %
C_{COc3}	38.0	= ppmvd @3% O_2

CO - Outlet Emission Rate (ER_{CO}), lb/hr

$$ER_{CO} = \frac{C_{CO} \times MW \times Qs \times 60 \frac{min}{hr} \times 28.32 \frac{L}{ft^3}}{23.68 \frac{L}{g-mole} \times 1.0E06 \times 453.592 \frac{g}{lb}}$$

where,

C_{CO}	20.0	= CO - Outlet Concentration, ppmvd
MW	28.01	= CO molecular weight, g/g-mole
Qs	17,581	= stack gas volumetric flow rate at standard conditions, dscfm
ER_{CO}	1.56	= lb/hr

CO - Outlet Emission Factor (EF_{COO_2d}), lb/MMBtu

$$EF_{COO_2d} = ER_{CO} \times K \times Fd \times \left(\frac{20.9}{20.9 - C_{O_2}} \right)$$

where,

C_{CO}	20.0	= CO - Outlet Concentration, ppmvd
K	7.38515E-08	= constant, lb/dscf · ppmvd
F_d	9,921	= fuel factor, dscf/MMBtu
C_{O_2}	11.48267789	= oxygen concentration, %
EF_{COO_2d}	0.033	= lb/MMBtu

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080
Run No. /Method Run 1 / SCAQMD 100.1

NOx - Outlet Concentration (C_{NOx}), ppmvd

$$C_{NOx} = (C_{obs} - C_0) \times \left(\frac{C_{MA}}{(C_M - C_0)} \right)$$

where,

C_{obs}	16.6	= average analyzer value during test, ppmvd
C_o	0.3	= average of pretest & posttest zero responses, ppmvd
C_{MA}	13.0	= actual concentration of calibration gas, ppmvd
C_M	13.1	= average of pretest & posttest calibration responses, ppmvd
C_{NOx}	16.6	= NOx Concentration, ppmvd

NOx - Outlet Concentration (C_{NOxc3}), ppmvd @ 3% O_2

$$C_{NOxc3} = C_{NOx} \times \left(\frac{20.9 - 3}{20.9 - O_2} \right)$$

where,

C_{NOx}	16.6	= NOx - Outlet Concentration, ppmvd
C_{O_2}	11.5	= oxygen concentration, %
C_{NOxc3}	31.5	= ppmvd @3% O_2

NOx - Outlet Emission Rate (ER_{NOx}), lb/hr

$$ER_{NOx} = \frac{C_{NOx} \times MW \times Qs \times 60 \frac{min}{hr} \times 28.32 \frac{L}{ft^3}}{23.68 \frac{L}{g-mole} \times 1.0E06 \times 453.592 \frac{g}{lb}}$$

where,

C_{NOx}	16.6	= NOx - Outlet Concentration, ppmvd
MW	46.0055	= NOx molecular weight, g/g-mole
Qs	17,581	= stack gas volumetric flow rate at standard conditions, dscfm
ER_{NOx}	2.12	= lb/hr

NOx - Outlet Emission Factor (EF_{NOxO_2d}), lb/MMBtu

$$EF_{NOxO_2d} = C_{NOx} \times K \times Fd \times \left(\frac{20.9}{20.9 - C_{O_2}} \right)$$

where,

C_{NOx}	16.6	= NOx - Outlet Concentration, ppmvd
K	1.21299E-07	= constant, lb/dscf · ppmvd
F_d	9,921	= fuel factor, dscf/MMBtu
C_{O_2}	11.48267789	= oxygen concentration, %
EF_{NOxO_2d}	0.044	= lb/MMBtu

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080
Run No. /Method Run 1 / Method 25A
Run No. 1
Target 17

TNMNEOC Inlet (as C1) Concentration, ppmvd

CTNMNEOC Inlet (as C1) = Average (sample A, Sample B)

where,

$C_{sample\ A}$	1703.0	= Sample A lab results, ppmvd as C1
$C_{Sample\ B}$	1002.0	= Sample B lab results, ppmvd as C2
CTNMNEOC Inlet (as C1)	1352.5	TNMNEOC Inlet (as C1) Concentration, ppmvd

TNMNEOC Outlet (as C1) Concentration, ppmvd

CTNMNEOC Outlet (as C1) = Average (sample A, Sample B)

where,

$C_{sample\ A}$	2.1	= Sample A lab results, ppmvd as C1
$C_{Sample\ B}$	3.2	= Sample B lab results, ppmvd as C2
CTNMNEOC Outlet (as C1)	3.2	TNMNEOC Outlet (as C1) Concentration, ppmvd

TNMNEOC Outlet (as Hexane) Concentration, ppmvd @ 3 % O_2

$$\text{CTNMNEOC Outlet (as Hexane)c3} = \text{CTNMNEOC Outlet (as Hexane)c3x} \frac{20.9 - 15}{20.9 - C_{O_2}}$$

where,

CTNMNEOC Outlet (as C1)	3.2	= TNMNEOC Outlet (as C1) Concentration, ppmvd
C_{O_2}	13.8	= oxygen concentration, %
CTNMNEOC Outlet (as C1)c15	1.3	= ppmvd @% O_2

TNMNEOC Outlet (as Hexane) Emission Rate, lb/hr

$$\text{CERTNMNEOC Outlet (as Hexane)} = \frac{\text{CTNMNEOC Outlet (as C1) x MW x Qs x 60}}{\text{379.5 x 10\^6 x (460 + 60) / 520}}$$

where,

CTNMNEOC Outlet (as C1)	3.2	= TNMNEOC Outlet (as C1) Concentration, ppmvd
MW	14.36	= Equivalent Formula Weight, MW/#C of Hexane, lb/lb-molC:
Qs	17,581	= stack gas volumetric flow rate at standard conditions, dscfm
CERTNMNEOC Outlet (as Hexane)	0.13	= lb/hr

TNMNEOC Outlet (as Hexane) Emission Factor, lb/MMBtu (O2d)

$$\text{CEFTNMNEOC Outlet (as Hexane) (O2d)} = \text{CTNMNEOC Outlet (as C1) x (MW / 385.3) x 528/(460 + 60) x Fd x} \frac{20.9}{20.9 - C_{O_2}}$$

where,

CTNMNEOC Outlet (as C1)	3.2	= TNMNEOC Outlet (as C1) Concentration, ppmvd
MW	14.36	= Equivalent Formula Weight, MW/#C of Hexane, lb/lb-molC:
F_d	9,921	= fuel factor, dscf/MMBtu
C_{O_2}	14	= oxygen concentration, %
CEFTNMNEOC Outlet (as Hexane) (O2d)	0.004	= lb/MMBtu

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2 - Outlet
Project No.: AST-2025-1080
Run No.: 1
Parameter: PM

Absolute Stack Gas Pressure (Ps), in. Hg

$$Ps = Pb + \frac{Pg}{13.6}$$

where,

Pb	27.70	= barometric pressure, in. Hg
Pg	-0.05	= static pressure, in. H_2O
Ps	27.70	= in. Hg

Standard Meter Volume (Vmstd), dscf

$$Vmstd = \frac{17.636 \times Y \times Vm \times Pm}{Tm}$$

where,

Y	1.0204	= meter correction factor
Vm	45.407	= meter volume, cf
Pm	27.85	= absolute meter pressure, in. Hg
Tm	524.4	= absolute meter temperature, ^{o}R
Vmstd	43.397	= dscf

Standard Wet Volume (Vwstd), scf

$$Vwstd = 0.04716 \times Vlc$$

where,

Vlc	118	= weight of H_2O collected, g
Vwstd	5.565	= scf

Moisture Fraction (BWSsat), dimensionless (theoretical at saturated conditions)

$$BWSsat = \frac{10^{(6.37-2827/(Ts+365))}}{Ps}$$

where,

Ts	919.8	= stack temperature, °F
Ps	27.70	= absolute stack gas pressure, in. Hg
BWSsat	1.000	= dimensionless

Moisture Fraction (BWS), dimensionless (measured)

$$BWS = \frac{Vwstd}{(Vwstd + Vmstd)}$$

where,

Vwstd	5.565	= standard wet volume, scf
Vmstd	43.397	= standard meter volume, dscf
BWS	0.114	= dimensionless

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2 - Outlet
Project No.: AST-2025-1080
Run No.: 1
Parameter: PM

Molecular Weight (DRY) (Md), lb/lb-mole

$$Md = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times [100 - \%CO_2 - \%O_2])$$

where,

CO_2	8.6	= carbon dioxide concentration, %
O_2	11.5	= oxygen concentration, %
Md	29.84	= lb/lb mol

Molecular Weight (WET) (Ms), lb/lb-mole

$$Ms = (Md \times [1 - BWS]) + (18.015 \times BWS)$$

where,

Md	29.84	= molecular weight (DRY), lb/lb mol
BWS	0.114	= moisture fraction, dimensionless
Ms	28.49	= lb/lb mol

Average Velocity (Vs), ft/sec

$$Vs = 85.49 \times Cp \times (\Delta P^{1/2})_{avg} \times \sqrt{\frac{Ts}{Ps \times Ms}}$$

where,

Cp	0.840	= pitot tube coefficient
$\Delta P^{1/2}$	0.173	= velocity head of stack gas, $(in. H_2O)^{1/2}$
Ts	1379.5	= absolute stack temperature, °R
Ps	27.70	= absolute stack gas pressure, in. Hg
Ms	28.49	= molecular weight of stack gas, lb/lb mol
Vs	16.5	= ft/sec

Average Stack Gas Flow at Stack Conditions (Qa), acfm

$$Qa = 60 \times Vs \times As$$

where,

Vs	16.5	= stack gas velocity, ft/sec
As	56.75	= cross-sectional area of stack, ft^2
Qa	56,018	= acfm

Average Stack Gas Flow at Standard Conditions (Qs), dscfm

$$Qs = \frac{17.636 \times Qa \times (1 - BWS) \times Ps}{Ts}$$

where,

Qa	56,018	= average stack gas flow at stack conditions, acfm
BWS	0.114	= moisture fraction, dimensionless
Ps	27.70	= absolute stack gas pressure, in. Hg
Ts	1379.5	= absolute stack temperature, °R
Qs	17,581	= dscfm

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2 - Outlet
Project No.: AST-2025-1080
Run No.: 1
Parameter: PM

Dry Gas Meter Calibration Check (Yqa), dimensionless

$$Yqa = \frac{Y - \left(\frac{\Theta}{Vm} \sqrt{\frac{K \times Tm \times 29}{\Delta H@ \times \left(Pb + \frac{\Delta Havg.}{13.6} \right) \times Md}} \sqrt{\Delta H}\ avg. \right)}{Y} \times 100$$

where,

Y	1.0204	= meter correction factor, dimensionless
Θ	60	= run time, min.
Vm	45.407	= total meter volume, dcf
K	0.0319	= K-factor, (in. Hg/°R) * cfm^2
Tm	524.4	= absolute meter temperature, °R
ΔH@	1.804	= orifice meter calibration coefficient, in. H_2O
Pb	27.70	= barometric pressure, in. Hg
ΔH avg	2.058	= average pressure differential of orifice, in H_2O
Md	29.84	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	1.355	= average squareroot pressure differential of orifice, $(in. H2O)^{1/2}$
Yqa	0.2	= percent

Volume of Nozzle (Vn), ft^3

$$Vn = \frac{Ts \times \left(0.002669 \times Vlc + \frac{Vm \times Pm \times Y}{Tm} \right)}{Ps}$$

where,

Ts	1379.5	= absolute stack temperature, °R
Ps	27.70	= absolute stack gas pressure, in. Hg
Vlc	118.0	= volume of H_2O collected, ml
Vm	45.407	= meter volume, cf
Pm	27.85	= absolute meter pressure, in. Hg
Y	1.020	= meter correction factor, unitless
Tm	524.4	= absolute meter temperature, °R
Vn	138.246	= volume of nozzle, ft^3

Isokinetic Sampling Rate (I), %

$$I = \left(\frac{Vn}{\theta \times 60 \times An \times Vs} \right) \times 100$$

where,

Vn	138.246	= nozzle volume, ft3
θ	60.0	= run time, minutes
An	0.00217	= area of nozzle, ft^2
Vs	16.5	= average velocity, ft/sec
I	107.5	= %

Total PM Concentration (C_{TPM}), grain/dscf

$$C_{TPM} = \frac{M_n \times 0.0154}{Vmstd}$$

where,

Mn	5.7	= filterable PM mass, mg
Vmstd	43.4	= standard meter volume, dscf
C_{TPM}	0.0020	= grain/dscf

Location:	**Waste Management of California, Inc. - Lancaster, CA**
Source:	**Enclosed Flare 2 - Outlet**
Project No.:	**AST-2025-1080**
Run No.:	**1**
Parameter:	**PM**

Total PM Emission Rate (ER_{TPM}), lb/hr

$$ER_{TPM} = \frac{C_{TPM} \times Qs \times 60}{7.0E+03}$$

where,

C_{TPM}	0.0020	= filterable PM concentration, grain/dscf
Qs	17,581	= average stack gas flow at standard conditions, dscfm
ER_{TPM}	0.31	= lb/hr

Total PM Emission Factor (EF_{TPM}), lb/MMcf

$$EF_{TPM} = \frac{C_{TPM}}{FR}$$

where,

C_{TPM}	0.0020	= grain/dscf
FR	0.0886	= average stack gas flow at standard conditions, dscfm
PMR	3.45	= lb/hr

Condensable PM Concentration (C_{SPM}), grain/dscf

$$C_{SPM} = \frac{M_{CPM} \times 0.0154}{Vmstd}$$

where,

M_{CPM}	5.2	= condensable PM mass, mg
Vmstd	43.397	= standard meter volume, dscf
C_{SPM}	0.0019	= grain/dscf

Condensable PM Emission Rate (ER_{SPM}), lb/hr

$$ER_{SPM} = \frac{C_{SPM} \times Qs \times 60\frac{min}{hr}}{7.0E+03}$$

where,

C_{SPM}	0.0019	= condensable PM concentration, grain/dscf
Qs	17,581	= average stack gas flow at standard conditions, dscfm
ER_{SPM}	0.28	= lb/hr

Total PM Emission Factor (EF_{SPM}), lb/MMcf

$$EF_{SPM} = \frac{C_{SPM}}{FR}$$

where,

C_{SPM}	0.0019	= grain/dscf
FR	0.0886	= average stack gas flow at standard conditions, dscfm
EF_{SPM}	3.15	= lb/hr

Location	**Waste Management of California, Inc. - Lancaster, CA**
Source	**Enclosed Flare 2 - Outlet**
Project No.	**AST-2025-1080**
Run No.	**1**
Parameter(s)	**TO-15**

Benzene Concentration, ppmvd

$$C_{C_6H_6} = \frac{C_6H_6}{1{,}000}$$

where,

C_6H_6	1,330.00	= Benzene Concentration, ppbvd
$C<C_6H_6>$	1.3300	= ppmvd

Benzene Emission Rate, lb/hr

$$ER_{C_6H_6} = \frac{C_{C_6H_6} \times Qs \times MW \times 60 \times 28.32}{24.04 \times 459.67 \times 1{,}000{,}000}$$

where,

$C_{C_6H_6}$	1.3300	= Benzene Concentration, ppmvd
Qs	17,581	= average stack gas flow at standard conditions, dscfm
MW	78.110	= molecular weight, g/mol
$ER_{C_6H_6}$	2.85E-01	= lb/hr

Appendix B

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2
Project No. AST-2025-1080

Run Number		Run 1
Date		3/21/25
Start Time		10:30
Stop Time		12:11
Source Data		
Flare Temperature, °F		1,577
Fuel Heating Value, Btu/scf	F_{HV}	401
Fuel Factor (O2 dry), dscf/MMBtu	Fd	9,921
Input Data - Outlet		
Volumetric Flow Rate (M5.1), dscfm	Qs	17,581
Calculated Data - Outlet		
O_2 Concentration, % dry	C_{O_2}	11.48
CO_2 Concentration, % dry	C_{CO_2}	8.62
CO Concentration, ppmvd	C_{CO}	20.00
CO Concentration, ppmvd @ 3 % O_2	C_{COc3}	38.02
CO Emission Rate, lb/hr	ER_{CO}	1.56
CO Emission Factor, lb/MMBtu (O2d)	$EF_{CO\ O2d}$	0.0325
NOx Concentration, ppmvd	C_{NOx}	16.59
NOx Concentration, ppmvd @ 3 % O_2	C_{NOxc3}	31.54
NOx Emission Rate, lb/hr	ER_{NOx}	2.12
NOx Emission Factor, lb/MMBtu (O2d)	$EF_{NOx\ O2d}$	0.0443

Fuel Analysis		
Fuel Gas Sulfur H_2S Concentration, ppm	C_{ppm}	443.8
Fuel Gas Sulfur Concentration, gr/scf	$C_{gr/scf}$	0.26
Fuel Gas Sulfur Concentration, gr/100 scf	$C_{gr/100\ scf}$	25.85
Fuel Gas Sulfur Emission Factor (as SO_2), lb/MMBtu	EF	0.1835

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080
Date: 3/21/25

Time Unit Status	O_2 - Outlet % dry Valid	CO_2 - Outlet % dry Valid	CO - Outlet ppmvd Valid	NOx - Outlet ppmvd Valid
Uncorrected Run Average (C_{obs})	11.41	8.52	2.99	16.58
Cal Gas Concentration (C_{MA})	12.11	4.25	46.11	13.02
Pretest System Zero Response	0.14	0.07	0.16	0.16
Posttest System Zero Response	0.15	0.12	0.23	0.42
Average Zero Response (Co)	0.15	0.10	0.20	0.29
Pretest System Cal Response	12.05	4.27	46.77	12.90
Posttest System Cal Response	12.01	4.23	46.55	13.24
Average Cal Response (C_M)	12.03	4.25	46.66	13.07
Corrected Run Average (Corr)	11.48	8.62	20.00	16.59
10:30	10.95	8.79	4.01	14.82
10:31	10.9	8.91	3.07	14.11
10:32	10.91	8.94	2.94	13.65
10:33	10.62	9.22	3.01	14.27
10:34	10.8	9.06	2.64	14.76
10:35	10.97	8.91	2.73	14.3
10:36	10.77	9.11	2.71	14.55
10:37	10.9	9.01	2.56	14.44
10:38	11.35	8.59	2.21	13.98
10:39	11.09	8.83	1.94	13.83
10:40	11.08	8.83	1.59	13.86
10:41	11.13	8.79	1.46	13.91
10:42	11.15	8.8	1.02	13.96
10:43	10.89	9.01	1.46	14.45
10:44	11.04	8.87	1.66	14.44
10:45	10.72	9.21	1.59	14.82
10:46	11.05	8.86	1.44	14.16
10:47	10.98	8.97	1.48	13.87
10:48	11.15	8.77	1.49	13.72
10:49	11.12	8.82	1.22	13.95
10:50	11.05	8.86	0.92	14.4
10:51	11.39	8.57	1.27	13.72
10:52	11.07	8.87	1.06	14.19
10:53	11.14	8.8	0.95	13.38
10:54	10.89	9.04	0.87	13.75
10:55	11.32	8.62	0.6	13.57
10:56	11.05	8.84	0.53	14.11
10:57	10.86	9.1	0.28	13.85
10:58	10.97	8.96	0.44	14.44
10:59	10.95	8.97	0.5	14.17
11:42	11.68	8.23	5.27	19.65
11:43	11.76	8.16	5.06	19.49
11:44	11.92	8.04	5.49	19.05
11:45	11.74	8.18	4.54	19.8
11:46	11.71	8.22	4.45	20.21
11:47	11.73	8.22	4.03	20.26
11:48	11.78	8.16	4.45	19.78
11:49	11.71	8.25	3.41	19.79
11:50	11.8	8.14	3.09	18.53
11:51	11.96	8	3.69	18.29
11:52	11.98	8	3.28	18.3
11:53	11.99	7.97	3.27	18.64
11:54	11.76	8.19	2.82	19.1
11:55	11.7	8.25	2.8	19.75
11:56	11.93	8.03	3.81	18.16
11:57	11.53	8.41	2.07	19.49
11:58	11.74	8.21	2.75	19.08
11:59	11.77	8.19	2.27	19.06
12:00	11.93	8.04	3.71	18.62
12:01	11.79	8.17	2.38	18.72
12:02	11.85	8.12	2.66	18.67
12:03	11.85	8.11	2.76	19.35
12:04	11.79	8.18	28.76	18.72
12:05	11.81	8.17	7.47	18.69
12:06	11.86	8.1	2.15	18.02
12:07	11.81	8.16	2.11	18.74
12:08	11.86	8.11	2.64	18.92
12:09	12.13	7.87	3.02	18.1
12:10	11.87	8.11	2.61	19.24
12:11	11.86	8.11	2.7	19.04

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2
Project No. AST-2025-1080

Run Number			Run 1
Date			03/21/25
Start Time			10:30
Stop Time			12:12
Source Data			
Fuel Heating Value, Btu/scf	F_{HV}		401
Fuel Factor (O2 dry), dscf/MMBtu	Fd		9,921
Fuel Rate, scfh	F_R		88,620
Input Data - Outlet			
Corrected Volumetric Flow Rate (Iso), dscfm	Qs	@60 F	17,581
O2 from Outlet	C_{O_2}		13.8
Equivalent Formula Weight, MW/#C of Hexane, lb/lb-molC:	**14.36**		
VOC Calculated Data - Inlet			
TNMNEOC Inlet (as C1) Concentration, ppmvd	$C_{TNMNEOC\ Inlet\ (as\ C1)}$		1,353
TNMNEOC Inlet (as Hexane) Emission Rate, lb/hr	$C_{ERTNMNEOC\ Inlet\ (as\ Methane)}$		20.6
VOC Calculated Data - Outlet			
TNMNEOC Outlet (as C1) Concentration, ppmvd	$C_{TNMNEOC\ Outlet\ (as\ C1)}$		3.21
TNMNEOC Outlet (as Hexane) Concentration, ppmvd @ 3 % O_2	$C_{TNMNEOC\ Outlet\ (as\ Hexane)c3}$		1.35
TNMNEOC Outlet (as Hexane) Emission Rate, lb/hr	$C_{ERTNMNEOC\ Outlet\ (as\ Hexane)}$		0.13
TNMNEOC Outlet (as Hexane) Emission Factor, lb/MMBtu (O2d)	$C_{EFTNMNEOC\ Outlet\ (as\ Hexane)\ (O2d)}$		0.0035
Reduction Efficiency Data			
TNMNEOC (as Hexane), %	$C_{EFTNMNEOC\ (as\ Methane)}$		99.38

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2
Project No. AST-2025-1080

Run Number			Run 1
Date			03/21/25
Start Time			10:30
Stop Time			12:12
Source Data			
Fuel Heating Value, Btu/scf	F_{HV}		401
Fuel Factor (O2 dry), dscf/MMBtu	Fd		9,921
Fuel Rate, scfh	F_R		88,620
Input Data - Outlet			
Corrected Volumetric Flow Rate (Iso), dscfm	Qs	@60 F	17,581
O2 from Outlet	C_{O_2}		13.8
Equivalent Formula Weight, MW/#C of Methane, lb/lb-molC:	**16.04**		
VOC Calculated Data - Inlet			
TNMNEOC Inlet (as C1) Concentration, ppmvd	$C_{TNMNEOC\ Inlet\ (as\ C1)}$		1,353
TNMNEOC Inlet (as Methane) Emission Rate, lb/hr	$C_{ERTNMNEOC\ Inlet\ (as\ Methane)}$		23.0
VOC Calculated Data - Outlet			
TNMNEOC Outlet (as C1) Concentration, ppmvd	$C_{TNMNEOC\ Outlet\ (as\ C1)}$		3.21
TNMNEOC Outlet (as Methane) Emission Rate, lb/hr	$C_{ERTNMNEOC\ Outlet\ (as\ Hexane)}$		0.14
Reduction Efficiency Data			
TNMNEOC (as Methane), %	$C_{EFTNMNEOC\ (as\ Methane)}$		99.38

Facility: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Job No.: AST-2025-1080
Date: 3/21/2025

	Inlet	Outlet	
Sample ID			
Run Number	I-M25.1-1	S-M25.3-1	
Sample A, ppmC	1,703	2.11	
Sample B, ppmC	1,002	3.21	
Precision Criteria (20% deviation from average of samples A & B)		20.68%	(1)
Average	1352.5	3.21	
Corrected Concentration (Analytical Data Ave. * 1.086), ppmvd		3.21	

NOTE: All hydrocarbon values are in terms of ppm, v/v, as methane.

(1) Since samples A and B deviate more than 20% from the average, the lower value was discarded as worst case scenario.

Plant Fuel Usage and Firing Rate Calculation

Facility: Waste Management of California, Inc.
Location: Lancaster, CA
Unit: Enclosed Flare 2

Parameter	Units	Test Results
		Run 1
TEST INFORMATION		
Test Date:	mm/dd/yy	03/21/25
Start Time:	hh:mm	10:30
End Time:	hh:mm	12:12
Corrected Fuel Flow Rate, Qf,corr	**scfm**	**1,477.0**
FUEL GAS CHARACTERISTICS		
Dry oxygen-based F-Factor, Fd	dscf/MMBtu	9,921
Heating Value, HV	Btu/scf	401
CALCULATED DATA		
Firing Rate (Heat Input), FR	**MMBtu/hr**	**35.537**

Comments: Qf,corr = 520 / 14.7 * (14.7+Pf) / (460+Tf) * Vnet / t
FR = Qf, corr*60*HV/1000000

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter PM

Run Number		Run 1
Date		3/21/25
Start Time		10:30
Stop Time		12:12
Run Time, min	(θ)	60.0
INPUT DATA		
Fuel Rate, MMscf/hr	(FR)	0.0886
Barometric Pressure, in. Hg	(Pb)	27.70
Meter Correction Factor	(Y)	1.0204
Orifice Calibration Value	(ΔH @)	1.804
Meter Volume, ft^3	(Vm)	45.407
Meter Temperature, °F	(Tm)	64.8
Meter Temperature, °R	(Tm)	524.4
Meter Orifice Pressure, in. WC	(ΔH)	2.058
Volume H_2O Collected, mL	(Vlc)	118.0
Nozzle Diameter, in	(Dn)	0.631
Area of Nozzle, ft^2	(An)	0.0022
M5.1/M5.2 Lab Analysis		
Filter Catch, mg	A	1.20
(1) Filter Acid, mg	B(1)	0.00
(2) Filter Total sulfate, mg	B(2)	1.24
Impinger Catch, mg (Insoluble + Soluble)	E	36.45
(1) Impinger Acid, mg	F(1)	32.44
(2) Impinger Total Sulfate, mg	F(2)	34.96
Organic Extract, mg	G	0.50
Particulate Train Corrected Gas Volume Metered, dscf	I	43.397
Filter Temperature Less Than 200 °F		
Total Particulate (A+E-F*+G), mg	P	5.71
Solid Particulate (P-B*-G), mg	Q	5.21
ISOKINETIC DATA		
Standard Meter Volume, ft^3	(Vmstd)	43.397
Standard Water Volume, ft^3	(Vwstd)	5.565
Moisture Fraction Measured	(BWSmsd)	0.114
Moisture Fraction @ Saturation	(BWSsat)	1.000
Moisture Fraction	(BWS)	0.114
Meter Pressure, in Hg	(Pm)	27.85
Volume at Nozzle, ft^3	(Vn)	138.246
Isokinetic Sampling Rate, (%)	(I)	107.5
DGM Calibration Check Value, (+/- 5%)	(Y_{qa})	0.2
EMISSION CALCULATIONS		
Total PM Concentration, grain/dscf	(C_{TPM})	0.0020
Total PM Emission Rate, lb/hr	(ER_{TPM})	0.31
Total PM Emission Factor, lb/MMscf	(EF_{TPM})	3.45
Solid PM Concentration, grain/dscf	(C_{SPM})	0.0019
Solid PM Emission Rate, lb/hr	(ER_{SPM})	0.28
Solid PM Emission Factor, lb/MMscf	(EF_{SPM})	3.15

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter PM

Run Number		Run 1
Date		3/21/25
Start Time		10:30
Stop Time		12:12
Run Time, min		60.0
VELOCITY HEAD, in. WC		
Point 1		0.01
Point 2		0.01
Point 3		0.01
Point 4		0.02
Point 5		0.02
Point 6		0.03
Point 7		0.03
Point 8		0.05
Point 9		0.05
Point 10		0.04
Point 11		0.06
Point 12		0.05
Point 13		0.01
Point 14		0.01
Point 15		0.01
Point 16		0.02
Point 17		0.03
Point 18		0.03
Point 19		0.03
Point 20		0.05
Point 21		0.05
Point 22		0.04
Point 23		0.05
Point 24		0.05
CALCULATED DATA		
Square Root of ΔP, (in. WC)$^{1/2}$	(ΔP)	0.173
Pitot Tube Coefficient	(Cp)	0.840
Barometric Pressure, in. Hg	(Pb)	27.70
Static Pressure, in. WC	(Pg)	-0.05
Stack Pressure, in. Hg	(Ps)	27.70
Stack Cross-sectional Area, ft^2	(As)	56.75
Stack Temperature, °F	(Ts)	919.8
Stack Temperature, °R	(Ts)	1379.5
Moisture Fraction Measured	(BWSmsd)	0.114
Moisture Fraction @ Saturation	(BWSsat)	1.000
Moisture Fraction	(BWS)	0.114
O_2 Concentration, %	(O_2)	11.48
CO_2 Concentration, %	(CO_2)	8.62
N_2 Concentration, %	(N_2)	79.9
Molecular Weight, lb/lb-mole (dry)	(Md)	29.84
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.49
Velocity, ft/sec	(Vs)	16.5
VOLUMETRIC FLOW RATE		
At Stack Conditions, acfm	(Qa)	56,018
At Standard Conditions, scfm	(Qsw)	19,835
At Standard Conditions, dscfm	(Qs)	17,581

Alliance TECHNICAL GROUP

Isokinetic Field Data

Location:	Waste Management of California, Inc. - Lancaster, CA		**Start Time:**	10:30	**Source:**	Enclosed Flare 2 - Outlet	
Date:	3/21/25	Run 1 VALID	**End Time:**	12:12	**Project No.:**	AST-2025-1080	**Parameter:** PM

STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)		MOIST. DATA
Moisture:	9.5	% est.	Meter Box ID:	MB-4		Est. Tm:	61	°F		Pb:	27.70 in. Hg	Vlc (ml)
Barometric:	27.75	in. Hg	Y:	1.0204		Est. Ts:	919	°F		Pg:	-0.05 in. WC	118.0
Static Press:	-0.0492	in. WC	ΔH @ (in.WC):	1.804		Est. ΔP:	0.03	in. WC		O_2:	11.48 %	K-FACTOR
Stack Press:	27.75	in. Hg	Probe ID:	INCP-8-1		Est. Dn:	0.633	in.		CO_2:	8.62 %	54.659
CO_2:	8.0	%	Liner Material:	stainless steel		Target Rate:	0.75	scfm			Check Pt. Initial Final Corr.	
O_2:	12.0	%	Pitot ID:	INCTC-8-1		LEAK CHECKS	Pre	Mid 1	Mid 2 Mid 3	Post	Mid 1 (cf)	--
N_2/CO:	80.0	%	Pitot Cp/Type:	0.840	S-type	Leak Rate (cfm):	0.003	--	-- --	0.001	Mid 2 (cf)	--
Md:	29.76	lb/lb-mole	Nozzle ID:	INC-2-4	--	Vacuum (in Hg):	15	--	-- --	20	Mid 3 (cf)	--
Ms:	28.64	lb/lb-mole	Nozzle Dn (in.):	0.631		Pitot Tube:	Pass	--	-- --	Pass	Mid-Point Leak Check Vol (cf):	--

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack				Probe	Filter	Imp Exit	NA		
	Begin	End			Amb.	Amb.	Ideal	Actual		Amb.	Amb.	Amb.	Amb.		
A12	0.00	2.50	641.571	0.0123	62	1359	0.51	0.50	14			43	-	101.2	12.05
11	2.50	5.00	642.580	0.0124	62	1308	0.53	0.50	14			43	-	99.5	11.93
10	5.00	7.50	643.590	0.0148	62	1266	0.65	0.70	18			43	-	102.5	12.87
9	7.50	10.00	644.740	0.0199	62	1257	0.88	0.90	18			43	-	102.8	14.89
8	10.00	12.50	646.080	0.0245	62	1142	1.16	1.20	18			44	-	101.6	15.96
7	12.50	15.00	647.600	0.0261	63	1108	1.26	1.30	18			44	-	101.0	16.29
6	15.00	17.50	649.180	0.0329	63	682	2.18	2.20	18			44	-	100.4	15.61
5	17.50	20.00	651.240	0.0458	63	654	3.10	3.10	18			45	-	101.0	18.19
4	20.00	22.50	653.710	0.0452	63	570	3.31	3.30	18			45	-	99.4	17.38
3	22.50	25.00	656.220	0.0447	64	571	3.27	3.30	18			45	-	100.2	17.29
2	25.00	27.50	658.740	0.0551	64	559	4.07	4.10	18			45	-	100.9	19.08
1	27.50	30.00	661.570	0.0473	64	556	3.51	3.50	18			46	-	100.1	17.66
B12	30.00	32.50	664.178	0.0125	66	1353	0.53	0.50	14			46	-	101.7	12.13
11	32.50	35.00	665.210	0.0127	66	1307	0.55	0.60	14			46	-	102.4	12.07
10	35.00	37.50	666.270	0.0149	66	1268	0.66	0.70	18			47	-	101.4	12.92
9	37.50	40.00	667.420	0.0201	66	1259	0.89	0.90	18			47	-	100.8	14.97
8	40.00	42.50	668.750	0.0262	67	1143	1.25	1.30	18			47	-	101.2	16.51
7	42.50	45.00	670.330	0.0264	67	1109	1.28	1.30	18			48	-	99.1	16.39
6	45.00	47.50	671.900	0.0330	67	688	2.19	2.20	18			48	-	101.2	15.68
5	47.50	50.00	673.990	0.0455	67	656	3.10	3.10	18			48	-	98.6	18.15
4	50.00	52.50	676.410	0.0453	67	572	3.33	3.30	18			49	-	100.6	17.41
3	52.50	55.00	678.970	0.0449	67	572	3.30	3.30	18			49	-	100.2	17.34
2	55.00	57.50	681.510	0.0549	67	561	4.07	4.10	18			49	-	100.3	19.07
1	57.50	60.00	684.330	0.0474	67	555	3.54	3.50	18			50	-	100.9	17.67
	Final DGM:		686.978												

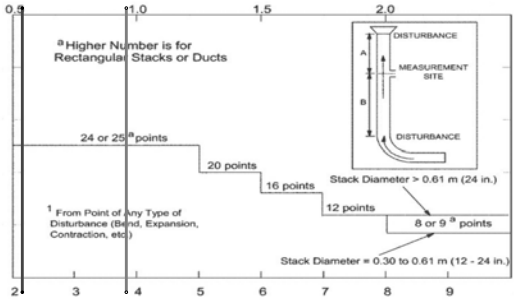
RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y_{qa}
	60.0 min	45.407 ft^3	0.03 in. WC	64.8 °F	919.8 °F	18	2.058 in. WC	107.5	0.114	0.2

Method 1 Data

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Date: 03/20/25

Stack Parameters

Duct Orientation:	Vertical	
Duct Design:	Circular	
Distance from Far Wall to Outside of Port:	109.00	in
Nipple Length:	7.00	in
Depth of Duct:	102.00	in
Cross Sectional Area of Duct:	56.75	ft^2
No. of Test Ports:	2	
Distance A:	4.6	ft
Distance A Duct Diameters:	0.5	**(must be ≥ 0.5)**
Distance B:	32.5	ft
Distance B Duct Diameters:	3.8	**(must be ≥ 2)**
Minimum Number of Traverse Points:	24	
Actual Number of Traverse Points:	24	
Number of Readings per Point:	1	
Measurer (Initial and Date):	NNP	
Reviewer (Initial and Date):	JQM	



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

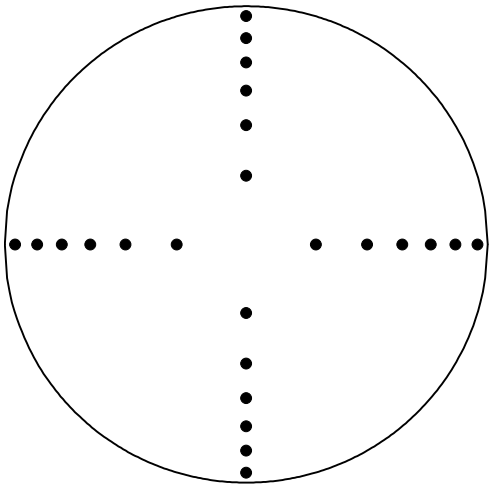
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

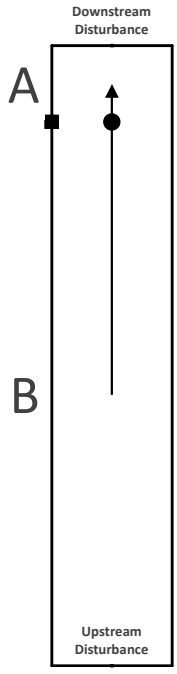
**Percent of stack diameter from inside wall to traverse point.*

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	2.14	9 1/8
2	6.7	6.83	13 13/16
3	11.8	12.04	19 1/16
4	17.7	18.05	25 1/16
5	25.0	25.50	32 1/2
6	35.6	36.31	43 5/16
7	64.4	65.69	72 11/16
8	75.0	76.50	83 1/2
9	82.3	83.95	90 15/16
10	88.2	89.96	96 15/16
11	93.3	95.17	102 3/16
12	97.9	99.86	106 7/8

Stack Diagram
A = 4.58 ft.
B = 32.5 ft.
Depth of Duct = 102 in.

Cross Sectional Area





Method 2 Prelim Data

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Date 3/21/25

Saturation Moisture Content Check		
Stack Temperature (Ts):	918.6	°F
Moisture Fraction @ Sat.:	529.087	

Stack Parameters		
Pitot Tube ID#:	INCTC-8-1	
Pitot Tube Coefficient (Cp):	0.840	
Barometric Pressure (Pb):	27.75	in. Hg
Static Pressure(Pg):	-0.0492	in. WC
Stack Pressure (Ps):	27.75	in. Hg

Calculations	
Square Root of ΔP, (in. W.C.) $^{1/2}$	0.173
Average ΔP, (in. W.C.)	0.03
Average Temperature (Ts), °F	918.6
Average Temperature (Ts), °R	1378.3
Moisture (BWS), % (enter as percent)	9.5
O_2 Concentration, %	12.0
CO_2 Concentration, %	8.0
Molecular Weight (Md), lb/lb-mole (dry)	29.76
Molecular Weight (Ms), lb/lb-mole (wet)	28.64
Velocity (Vs), ft/sec	16.3
VFR at stack conditions (Qa), acfm	55,662
VFR at standard conditions (Qs), dscfm	17,884

Traverse Point	Δ P (in. WC)	Ts (°F)
A12	0.0122	1354
11	0.0125	1307
10	0.0149	1265
9	0.0200	1258
8	0.0244	1140
7	0.0260	1109
6	0.0328	682
5	0.0456	653
4	0.0451	571
3	0.0445	570
2	0.0550	557
1	0.0470	556
B12	0.0124	1352
11	0.0126	1308
10	0.0148	1262
9	0.0201	1256
8	0.0248	1144
7	0.0261	1109
6	0.0327	684
5	0.0456	655
4	0.0452	570
3	0.0447	572
2	0.0551	558
1	0.0472	555

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter PM
Analysis Gravimetric

Run 1	Date:	3/21/25			
Impinger No.	**1**	**2**	**3**	**4**	**Total**
Contents	H2O	H2O	Empty	Silica	--
Initial Mass, g	735.8	743.2	647.7	856.0	2982.7
Final Mass, g	831.2	752.2	649.7	867.6	3100.7
Gain	95.4	9.0	2.0	11.6	118.0

Alliance SOURCE TESTING

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter(s): TO-15

Run Number		Inlet - Run 1		
Input Data				
Vinyl Chloride, ppbvd	C_2H_3Cl	367	51.2	367.0
1,1-Dichloroethene, ppbvd	$C_2H_2C_2$	<SRL	51.2	51.2
Methylene Chloride (DCM), ppbvd	CH_2Cl_2	<SRL	102	102
1,1-Dichloroethane, ppbvd	$C_2H_4Cl_2$	<SRL	51.2	51.2
Chloroform, ppbvd	$CHCl_3$	<SRL	51.2	51.2
1,2-Dichloroethane, ppbvd	$C_2H_4Cl_2$	<SRL	51.2	51.2
1,1,1-Trichloroethane, ppbvd	$C_2H_3Cl_3$	<SRL	51.2	51.2
Benzene, ppbvd	C_6H_6	1330	51.2	1,330
Carbon Tetrachloride, ppbvd	CCl_2	<SRL	51.2	51.2
Trichloroethene (TCE), ppbvd	C_2HCl_3	264	51.2	264
Toluene, ppbvd	C_7H_8	7510	51.2	7,510
1,2-Dibromoethane, ppbvd	$C_2H_4Br_2$	<SRL	51.2	51.2
Tetrachloroethene (PCE), ppbvd	C_2Cl_4	371	51.2	371
Chlorobenzene, ppbvd	C_6H_5Cl	<SRL	51.2	51.2
m & p-Xylene, ppbvd	C_8H_{10}	2540	102	2,540
o-Xylene, ppbvd	C_8H_{10}	697	51.2	697
Benzyl Chloride (a-Chlorotoluene), ppbvd	C_7H_7Cl	<SRL	51.2	51.2
1,3-Dichlorobenzene, ppbvd	$C_6H_4Cl_2$	<SRL	51.2	51.2
1,4-Dichlorobenzene, ppbvd	$C_6H_4Cl_2$	<SRL	51.2	51.2
1,2-Dichlorobenzene, ppbvd	$C_6H_4Cl_2$	<SRL	51.2	51.2
Hydrogen Sulfide, ppbvd	H_2S	0.443	--	0.4

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter(s): TO-15

Run Number		Outlet - Run 1			Outlet - Run 2			Outlet - Run 3		
Input Data										
Vinyl Chloride, ppbvd	C_2H_3Cl	<SRL	3.98	3.98	<SRL	2.69	2.69	<SRL	1.83	1.83
1,1-Dichloroethene, ppbvd	$C_2H_2C_2$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Methylene Chloride (DCM), ppbvd	CH_2Cl_2	<SRL	7.95	7.95	<SRL	5.39	5.39	<SRL	3.65	3.65
1,1-Dichloroethane, ppbvd	$C_2H_4Cl_2$	<SRL	1.83	1.83	<SRL	1.8300	1.83	<SRL	1.83	1.83
Chloroform, ppbvd	$CHCl_3$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
1,2-Dichloroethane, ppbvd	$C_2H_4Cl_2$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
1,1,1-Trichloroethane, ppbvd	$C_2H_3Cl_3$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Benzene, ppbvd	C_6H_6	<SRL	1.83	1.83	4.53	1.83	4.53	1.86	1.83	1.86
Carbon Tetrachloride, ppbvd	CCl_2	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Trichloroethene (TCE), ppbvd	C_2HCl_3	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Toluene, ppbvd	C_7H_8	4.13	1.83	4.13	<SRL	1.83	1.83	14.2	1.83	14.20
1,2-Dibromoethane, ppbvd	$C_2H_4Br_2$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Tetrachloroethene (PCE), ppbvd	C_2Cl_4	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Chlorobenzene, ppbvd	C_6H_5Cl	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
m & p-Xylene, ppbvd	C_8H_{10}	<SRL	7.95	7.95	<SRL	5.39	5.39	18.9	3.65	18.90
o-Xylene, ppbvd	C_8H_{10}	<SRL	1.83	1.83	<SRL	1.83	1.83	7.3	1.83	7.30
Benzyl Chloride (a-Chlorotoluene), ppbvd	C_7H_7Cl	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
1,3-Dichlorobenzene, ppbvd	$C_6H_4Cl_2$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
1,4-Dichlorobenzene, ppbvd	$C_6H_4Cl_2$	<SRL	1.83	1.83	<SRL	1.83	1.83	2.81	1.83	2.81
1,2-Dichlorobenzene, ppbvd	$C_6H_4Cl_2$	<SRL	1.83	1.83	<SRL	1.83	1.83	<SRL	1.83	1.83
Hydrogen Sulfide, ppbvd	H_2S	--	--	--	--	--	--	--	--	--

Alliance SOURCE TESTING

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter(s): TO-15

Run Number		Inlet - Run 1	Outlet - Run 1	Outlet - Run 2	Outlet - Run 3
Volumetric Flow Rate, dscfm	(Qs)	17,581	17,581	17,581	17,581
Emissions Calculations - Inlet					
Benzene Concentration, ppmvd	$C_{C_6H_6}$	1.3E+00	1.8E-03	4.5E-03	1.9E-03
Benzene Concentration, ug/dscf	$C_{C_6H_6}$	1.2E+02	1.7E-01	4.2E-01	1.7E-01
Benzene Emission Rate, lb/hr	$ER_{C_6H_6}$	2.8E-01	3.9E-04	9.7E-04	4.0E-04
Benzyl Chloride (a-Chlorotoluene) Concentration, ppmvd	$C_{C_7H_7Cl}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Benzyl Chloride (a-Chlorotoluene) Concentration, ug/dscf	$C_{C_7H_7Cl}$	7.6E+00	2.7E-01	2.7E-01	2.7E-01
Benzyl Chloride (a-Chlorotoluene) Emission Rate, lb/hr	$ER_{C_7H_7Cl}$	1.8E-02	6.3E-04	6.3E-04	6.3E-04
Chlorobenzene Concentration, ppmvd	$C_{C_6H_5Cl}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Chlorobenzene Concentration, ug/dscf	$C_{C_6H_5Cl}$	6.8E+00	2.4E-01	2.4E-01	2.4E-01
Chlorobenzene Emission Rate, lb/hr	$ER_{C_6H_5Cl}$	1.6E-02	5.6E-04	5.6E-04	5.6E-04
1,2-Dibromoethane Concentration, ppmvd	$C_{C_2H_4Br_2}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,2-Dibromoethane Concentration, ug/dscf	$C_{C_2H_4Br_2}$	1.1E+01	4.0E-01	4.0E-01	4.0E-01
1,2-Dibromoethane Emission Rate, lb/hr	$ER_{C_2H_4Br_2}$	2.6E-02	9.4E-04	9.4E-04	9.4E-04
1,3-Dichlorobenzene Concentration, ppmvd	$C_{C_6H_4Cl_2}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,3-Dichlorobenzene Concentration, ug/dscf	$C_{C_6H_4Cl_2}$	8.9E+00	3.2E-01	3.2E-01	3.2E-01
1,3-Dichlorobenzene Emission Rate, lb/hr	$ER_{C_6H_4Cl_2}$	2.1E-02	7.4E-04	7.4E-04	7.4E-04
1,4-Dichlorobenzene Concentration, ppmvd	$C_{C_6H_4Cl_2}$	5.1E-02	1.8E-03	1.8E-03	2.8E-03
1,4-Dichlorobenzene Concentration, ug/dscf	$C_{C_6H_4Cl_2}$	8.9E+00	3.2E-01	3.2E-01	4.9E-01
1,4-Dichlorobenzene Emission Rate, lb/hr	$ER_{C_6H_4Cl_2}$	2.1E-02	7.4E-04	7.4E-04	1.1E-03
1,2-Dichlorobenzene Concentration, ppmvd	$C_{C_6H_4Cl_2}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,2-Dichlorobenzene Concentration, ug/dscf	$C_{C_6H_4Cl_2}$	8.9E+00	3.2E-01	3.2E-01	3.2E-01
1,2-Dichlorobenzene Emission Rate, lb/hr	$ER_{C_6H_4Cl_2}$	2.1E-02	7.4E-04	7.4E-04	7.4E-04
1,1-Dichloroethane Concentration, ppmvd	$C_{C_2H_4Cl_2}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,1-Dichloroethane Concentration, ug/dscf	$C_{C_2H_4Cl_2}$	6.0E+00	2.1E-01	2.1E-01	2.1E-01
1,1-Dichloroethane Emission Rate, lb/hr	$ER_{C_2H_4Cl_2}$	1.4E-02	5.0E-04	5.0E-04	5.0E-04
1,2-Dichloroethane Concentration, ppmvd	$C_{C_2H_4Cl_2}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,2-Dichloroethane Concentration, ug/dscf	$C_{C_2H_4Cl_2}$	6.0E+00	2.1E-01	2.1E-01	2.1E-01
1,2-Dichloroethane Emission Rate, lb/hr	$ER_{C_2H_4Cl_2}$	1.4E-02	5.0E-04	5.0E-04	5.0E-04
1,1-Dichloroethene Concentration, ppmvd	$C_{C_2H_2Cl_2}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,1-Dichloroethene Concentration, ug/dscf	$C_{C_2H_2Cl_2}$	5.8E+00	2.1E-01	2.1E-01	2.1E-01
1,1-Dichloroethene Emission Rate, lb/hr	$ER_{C_2H_2Cl_2}$	1.4E-02	4.9E-04	4.9E-04	4.9E-04
Methylene Chloride (DCM) Concentration, ppmvd	$C_{CH_2Cl_2}$	1.0E-01	8.0E-03	5.4E-03	3.7E-03
Methylene Chloride (DCM) Concentration, ug/dscf	$C_{CH_2Cl_2}$	1.0E+01	8.0E-01	5.4E-01	3.7E-01
Methylene Chloride (DCM) Emission Rate, lb/hr	$ER_{CH_2Cl_2}$	2.4E-02	1.8E-03	1.3E-03	8.5E-04
Hydrogen Sulfide Concentration, ppmvd	C_{H_2S}	4.4E-04	--	--	--
Hydrogen Sulfide Concentration, ug/dscf	C_{H_2S}	1.8E-02	--	--	--
Hydrogen Sulfide Emission Rate, lb/hr	ER_{H_2S}	4.1E-05	--	--	--
Tetrachloroethene (PCE) Concentration, ppmvd	$C_{C_2Cl_4}$	3.7E-01	1.8E-03	1.8E-03	1.8E-03
Tetrachloroethene (PCE) Concentration, ug/dscf	$C_{C_2Cl_4}$	7.2E+01	3.6E-01	3.6E-01	3.6E-01
Tetrachloroethene (PCE) Emission Rate, lb/hr	$ER_{C_2Cl_4}$	1.7E-01	8.3E-04	8.3E-04	8.3E-04
Carbon Tetrachloride Concentration, ppmvd	C_{CCl_4}	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Carbon Tetrachloride Concentration, ug/dscf	C_{CCl_4}	9.3E+00	3.3E-01	3.3E-01	3.3E-01
Carbon Tetrachloride Emission Rate, lb/hr	ER_{CCl_4}	2.2E-02	7.7E-04	7.7E-04	7.7E-04
Toluene Concentration, ppmvd	$C_{C_7H_8}$	7.5E+00	4.1E-03	1.8E-03	1.4E-02
Toluene Concentration, ug/dscf	$C_{C_7H_8}$	8.2E+02	4.5E-01	2.0E-01	1.5E+00
Toluene Emission Rate, lb/hr	$ER_{C_7H_8}$	1.9E+00	1.0E-03	4.6E-04	3.6E-03
1,1,1-Trichloroethane Concentration, ppmvd	$C_{C_2H_3Cl_3}$	5.1E-02	1.8E-03	1.8E-03	1.8E-03
1,1,1-Trichloroethane Concentration, ug/dscf	$C_{C_2H_3Cl_3}$	8.0E+00	2.9E-01	2.9E-01	2.9E-01
1,1,1-Trichloroethane Emission Rate, lb/hr	$ER_{C_2H_3Cl_3}$	1.9E-02	6.7E-04	6.7E-04	6.7E-04
Trichloroethene (TCE) Concentration, ppmvd	$C_{C_2HCl_3}$	2.6E-01	1.8E-03	1.8E-03	1.8E-03
Trichloroethene (TCE) Concentration, ug/dscf	$C_{C_2HCl_3}$	4.1E+01	2.8E-01	2.8E-01	2.8E-01
Trichloroethene (TCE) Emission Rate, lb/hr	$ER_{C_2HCl_3}$	9.5E-02	6.6E-04	6.6E-04	6.6E-04
Chloroform Concentration, ppmvd	C_{CHCl_3}	5.1E-02	1.8E-03	1.8E-03	1.8E-03
Chloroform Concentration, ug/dscf	C_{CHCl_3}	7.2E+00	2.6E-01	2.6E-01	2.6E-01
Chloroform Emission Rate, lb/hr	ER_{CHCl_3}	1.7E-02	6.0E-04	6.0E-04	6.0E-04

Alliance SOURCE TESTING

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter(s): TO-15

Run Number		Inlet - Run 1	Outlet - Run 1	Outlet - Run 2	Outlet - Run 3
Vinyl Chloride Concentration, ppmvd	$C_{C_2H_3Cl}$	3.7E-01	4.0E-03	2.7E-03	1.8E-03
Vinyl Chloride Concentration, ug/dscf	$C_{C_2H_3Cl}$	2.7E+01	2.9E-01	2.0E-01	1.3E-01
Vinyl Chloride Emission Rate, lb/hr	$ER_{C_2H_3Cl}$	6.3E-02	6.8E-04	4.6E-04	3.1E-04
m & p-Xylene Concentration, ppmvd	$C_{C_8H_{10}}$	2.5E+00	8.0E-03	5.4E-03	1.9E-02
m & p-Xylene Concentration, ug/dscf	$C_{C_8H_{10}}$	3.2E+02	9.9E-01	6.7E-01	2.4E+00
m & p-Xylene Emission Rate, lb/hr	$ER_{C_8H_{10}}$	7.4E-01	2.3E-03	1.6E-03	5.5E-03
o-Xylene Concentration, ppmvd	$C_{C_8H_{10}}$	7.0E-01	1.8E-03	1.8E-03	7.3E-03
o-Xylene Concentration, ug/dscf	$C_{C_8H_{10}}$	8.7E+01	2.3E-01	2.3E-01	9.1E-01
o-Xylene Emission Rate, lb/hr	$ER_{C_8H_{10}}$	2.0E-01	5.3E-04	5.3E-04	2.1E-03

Cyclonic Flow Check

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Date 03/21/25

Sample Point	Angle (ΔP=0)
1	2
2	3
3	1
4	2
5	3
6	4
7	5
8	-5
9	-4
10	3
11	2
12	-3
13	1
14	2
15	2
16	2
17	3
18	3
19	-1
20	-2
21	-3
22	3
23	4
24	3
Average	3

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx
3/21/2025	7:01:01	20.73	0.1	-8	0.13
3/21/2025	7:02:01	20.74	0.1	-8	0.13
3/21/2025	7:03:01	10.07	0.06	-12	0.08
3/21/2025	7:04:01	0.04	0.01	-15	0
3/21/2025	7:05:01	0.03	0.01	-15	0
3/21/2025	7:06:01	0.03	0.01	-16	0
3/21/2025	7:07:01	0.02	0.01	-15	-0.01
3/21/2025	7:08:01	0.02	0.01	-16	0
3/21/2025	7:09:01	0.02	0.01	-7	-0.01
3/21/2025	7:10:01	0.02	0.01	0	-0.01
3/21/2025	7:11:01	0.02	0.01	0	-0.01
3/21/2025	7:12:01	0.02	0.01	0	-0.01
3/21/2025	7:13:01	13.93	4.37	3	0.2
3/21/2025	7:14:01	21.89	8.72	-1	0
3/21/2025	7:15:01	21.9	8.73	-1	0
3/21/2025	7:16:01	21.9	8.73	-1	0
3/21/2025	7:17:01	21.9	8.76	-1	0
3/21/2025	7:18:01	21.9	8.76	-1	0
3/21/2025	7:19:01	20	8.08	-1	0.02
3/21/2025	7:20:01	12.25	4.35	-1	0
3/21/2025	7:21:01	12.14	4.3	-1	0
3/21/2025	7:22:01	12.13	4.29	-1	0
3/21/2025	7:23:01	12.13	4.29	0	0
3/21/2025	7:24:01	12.13	4.29	0	0
3/21/2025	7:25:01	12.13	4.29	0	0
3/21/2025	7:26:01	12.12	4.29	0	0
3/21/2025	7:27:01	1.05	0.68	0	21.53
3/21/2025	7:28:01	0.05	0.04	0	22.9
3/21/2025	7:29:01	0.03	0.03	0	22.94
3/21/2025	7:30:01	0.03	0.02	0	22.96
3/21/2025	7:31:01	0.03	0.02	1	23.03
3/21/2025	7:32:01	0.03	0.02	1	23.16
3/21/2025	7:33:01	0.03	0.02	1	23.18
3/21/2025	7:34:01	0.02	0.01	1	23.15
3/21/2025	7:35:01	0.02	0.01	1	23.14
3/21/2025	7:36:01	0.02	0.01	1	23.14
3/21/2025	7:37:01	0.02	0.01	1	23.14
3/21/2025	7:38:01	0.05	0.02	1	18.54
3/21/2025	7:39:01	0.02	0.01	1	13.26
3/21/2025	7:40:01	0.02	0.01	1	13.21
3/21/2025	7:41:01	0.02	0.01	2	13.18
3/21/2025	7:42:01	0.02	0.01	3	13.17
3/21/2025	7:43:01	0.42	0.23	421	0.96
3/21/2025	7:44:01	0.21	0.17	456	0.05
3/21/2025	7:45:01	0.02	0.02	460	0.03
3/21/2025	7:46:01	0.02	0.01	454	0.03
3/21/2025	7:47:01	0.02	0.01	453	0.02
3/21/2025	7:48:01	0.02	0.01	453	0.02
3/21/2025	7:49:01	0.04	0.02	267	0.02
3/21/2025	7:50:01	0.02	0.01	232	0.01
3/21/2025	7:51:01	0.02	0.01	233	0.01
3/21/2025	7:52:01	0.02	0.01	233	0.01
3/21/2025	7:53:01	0.21	0.01	86	0.72
3/21/2025	7:54:01	0.02	0.01	10	0.01
3/21/2025	7:55:01	0.02	0.01	14	0.01
3/21/2025	7:56:01	0.02	0.01	44	0.01

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx	
3/21/2025	7:57:01	0.03	0.02	455	0.03	
3/21/2025	7:58:01	0.02	0.01	378	0.03	
3/21/2025	7:59:01	0.02	0.01	17	0	
3/21/2025	8:00:01	0.01	0.01	14	0	
3/21/2025	8:01:01	0.02	0.01	13	0	
3/21/2025	8:02:01	0.02	0.01	14	0	
3/21/2025	8:03:01	0.02	0.01	14	0	
3/21/2025	8:04:01	5.46	0.18	7	2.08	
3/21/2025	8:05:01	4.25	1.24	2	0.81	
3/21/2025	8:06:01	0.34	0.05	2	0.18	
3/21/2025	8:07:01	0.25	0.03	2	0.12	
3/21/2025	8:08:01	0.21	0.02	2	0.1	
3/21/2025	8:09:01	0.19	0.02	3	1.91	
3/21/2025	8:10:01	0.19	0.03	2	12.47	
3/21/2025	8:02:01	0.02	0.01	14	0	
3/21/2025	8:03:01	0.02	0.01	14	0	
3/21/2025	8:04:01	5.46	0.18	7	2.08	
3/21/2025	8:05:01	4.25	1.24	2	0.81	
3/21/2025	8:06:01	0.34	0.05	2	0.18	
3/21/2025	8:07:01	0.25	0.03	2	0.12	
3/21/2025	8:08:01	0.21	0.02	2	0.1	
3/21/2025	8:09:01	0.19	0.02	3	1.91	
3/21/2025	8:10:01	0.19	0.03	2	12.47	
3/21/2025	8:11:01	0.15	0.01	2	12.77	
3/21/2025	8:12:01	0.34	0.04	2	11.59	
3/21/2025	8:13:01	10.59	3.57	2	0.48	
3/21/2025	8:14:01	11.94	4.18	1	0.16	
3/21/2025	8:28:24	0.02	0.01	454	0.01	**INITIAL SYS BIAS**
3/21/2025	8:29:24	5.22	3.95	233	6.2	
3/21/2025	8:30:24	0.87	0.78	162	1.26	
3/21/2025	8:31:24	0.17	0.15	6	0.16	
3/21/2025	8:32:24	0.14	0.1	5	0.11	
3/21/2025	8:33:24	0.13	0.07	2	0.1	
3/21/2025	8:34:24	0.12	0.05	0	0.09	
3/21/2025	8:35:24	1.15	0.59	36	0.86	
3/21/2025	8:36:24	11.27	3.93	11	0.09	
3/21/2025	8:37:24	11.95	4.21	0	0.07	
3/21/2025	8:38:24	11.99	4.22	0	0.07	
3/21/2025	8:39:24	11.34	4.06	0	2.29	
3/21/2025	8:40:24	0.93	0.45	0	12.47	
3/21/2025	8:41:24	0.21	0.11	0	12.74	
3/21/2025	8:42:24	0.16	0.07	0	12.79	
3/21/2025	8:43:24	0.14	0.06	0	12.8	
3/21/2025	8:44:24	0.15	0.06	21	8.3	
3/21/2025	8:45:24	0.27	0.14	208	0.31	
3/21/2025	8:46:24	0.15	0.06	222	0.18	
3/21/2025	8:47:24	0.11	0.03	224	0.13	
3/21/2025	8:48:24	0.11	0.02	224	0.11	
3/21/2025	8:49:24	0.11	0.02	225	0.1	
3/21/2025	8:50:24	15.99	0.02	39	0.08	
3/21/2025	8:51:24	20.65	0.02	3	0.07	
3/21/2025	8:52:24	17.14	0.52	54	4.02	
3/21/2025	8:53:24	2.32	1.69	15	0.78	
3/21/2025	8:54:24	0.24	0.05	1	0.1	
3/21/2025	8:55:24	0.17	0.03	1	0.08	
3/21/2025	8:56:24	3.85	2.86	5	7.75	

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx	
3/21/2025	8:57:24	10.64	8.9	9	14.06	
3/21/2025	8:58:24	10.55	9.15	8	14.75	
3/21/2025	8:59:24	10.65	9.1	7	14.45	
3/21/2025	9:00:24	10.52	9.28	8	14.86	
3/21/2025	9:01:24	10.24	9.49	9	15.61	
3/21/2025	9:02:24	10.48	9.28	9	16.13	
3/21/2025	9:03:24	10.47	9.33	9	15.71	
3/21/2025	9:04:24	10.65	9.17	9	14.88	
3/21/2025	9:05:24	10.74	9.07	9	14.81	
3/21/2025	9:06:24	11.19	8.68	10	13.3	
3/21/2025	9:07:24	10.5	9.35	8	14.31	
3/21/2025	9:08:24	10.34	9.46	7	15.23	
3/21/2025	9:09:24	10.59	9.19	8	14.89	
3/21/2025	9:10:24	10.84	9.02	7	13.61	
3/21/2025	9:11:24	10.86	9	7	13.87	
3/21/2025	9:12:24	10.81	9.02	7	14.15	
3/21/2025	9:13:24	10.94	8.92	6	13.68	
3/21/2025	9:14:24	10.65	9.2	6	14.34	
3/21/2025	9:15:24	11.56	8.4	10	12.32	
3/21/2025	9:16:24	10.66	9.23	6	13.83	
3/21/2025	9:17:24	11.09	8.8	5	13.12	
3/21/2025	9:18:24	11.01	8.88	5	13.64	
3/21/2025	9:19:24	10.97	8.93	5	13.96	
3/21/2025	9:20:24	10.96	8.91	5	13.78	
3/21/2025	9:21:24	10.78	9.12	5	14.14	
3/21/2025	9:22:24	10.72	9.15	5	14.38	
3/21/2025	9:26:13	6.78	5.76	3.96	9.1	**RECAL CO AT 100 PPM RANGE**
3/21/2025	9:27:13	0.02	0.03	0.51	0.04	**CO ZERO**
3/21/2025	9:28:13	0.02	0.02	0.58	0.02	
3/21/2025	9:29:13	0.02	0.02	0.58	0.01	
3/21/2025	9:30:13	0.28	0.04	4.75	0.07	
3/21/2025	9:31:13	0.11	0.08	88.17	0.03	
3/21/2025	9:32:13	0.02	0.02	89.27	0.01	
3/21/2025	9:33:13	0.02	0.01	90.45	0.01	
3/21/2025	9:34:13	0.02	0.02	91.02	0.01	
3/21/2025	9:35:13	0.02	0.01	90.24	0	
3/21/2025	9:36:13	0.02	0.01	90.52	0	**CO HIGH**
3/21/2025	9:37:13	0.02	0.01	90.45	0	
3/21/2025	9:38:13	0.02	0.01	51.5	0	
3/21/2025	9:39:13	0.02	0.01	46.92	0	
3/21/2025	9:40:13	0.02	0.01	45.57	0	**CO MID**
3/21/2025	9:41:13	0.02	0.01	45.65	0	
3/21/2025	9:42:13	0.02	0.01	45.51	0	
3/21/2025	9:43:13	3.96	2.74	15.6	6.24	
3/21/2025	9:44:13	1.83	1.69	-0.96	0.66	
3/21/2025	9:45:13	0.22	0.23	-1.28	0.26	
3/21/2025	9:46:13	0.18	0.16	28.06	0.2	
3/21/2025	9:47:13	0.15	0.12	5.92	0.17	
3/21/2025	9:48:13	0.13	0.09	0.69	0.16	**INITIAL SYS BIAS CO**
3/21/2025	9:49:13	0.12	0.08	0.47	0.14	
3/21/2025	9:50:13	0.12	0.06	0.27	0.12	
3/21/2025	9:51:13	0.11	0.05	0.16	0.11	**ZERO**
3/21/2025	9:52:13	0.11	0.05	0.3	0.11	
3/21/2025	9:53:13	0.46	0.39	12.43	0.68	
3/21/2025	9:54:13	0.12	0.06	45.85	0.11	
3/21/2025	9:55:13	0.11	0.04	46.58	0.1	

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx		
3/21/2025	9:56:13	0.1	0.04	46.77	0.1	**CO BIAS**	
3/21/2025	9:57:13	0.1	0.03	47.43	0.1		
3/21/2025	9:58:13	0.1	0.03	46.52	0.09		
3/21/2025	9:59:13	0.11	0.03	46.79	0.3		
3/21/2025	10:00:13	8.56	6.68	15.52	13.88		
3/21/2025	10:01:13	10.66	8.98	5.8	14.6		
3/21/2025	10:02:13	10.88	8.87	6.11	13.8		
3/21/2025	10:03:13	11	8.79	-27.56	14.23		
3/21/2025	10:04:13	10.82	9.01	5.58	14.22		
3/21/2025	10:05:13	10.81	9.01	5.04	14.19		
3/21/2025	10:06:13	11.24	8.63	4.98	13.41		
3/21/2025	10:07:13	10.86	9	4.43	14.51		
3/21/2025	10:08:13	10.92	8.97	4.12	14.12		
3/21/2025	10:09:13	10.97	8.92	-62.24	14.23		
3/21/2025	10:10:13	10.87	9	35.58	14.35		
3/21/2025	10:11:13	10.77	9.12	3.49	14.44		
3/21/2025	10:12:13	11.13	8.78	3.19	13.75		
3/21/2025	10:13:13	11.14	8.78	2.88	13.74		
3/21/2025	10:14:13	10.91	9.01	2.83	14.14		
3/21/2025	10:15:13	10.99	8.92	2.38	14.09		
3/21/2025	10:16:13	9.66	4.88	13.78	2.06		
3/21/2025	10:17:13	12	4.3	-0.85	0.26		
3/21/2025	10:18:13	12.04	4.28	-1.04	0.2		
3/21/2025	10:19:13	12.05	4.27	-0.79	0.17	**O2/CO2 BIAS**	
3/21/2025	10:20:13	12.05	4.27	-1.38	0.16	**NOX ZERO**	
3/21/2025	10:21:13	12.05	4.26	-0.97	0.29		
3/21/2025	10:22:13	2.82	1.19	-0.53	11.99		
3/21/2025	10:23:13	0.25	0.17	-0.22	12.8		
3/21/2025	10:24:13	0.18	0.12	0.47	12.87		
3/21/2025	10:25:13	0.15	0.09	0.47	12.9	**NOX BIAS**	
3/21/2025	10:26:13	0.14	0.07	0.51	12.92	**ZERO**	
3/21/2025	10:27:13	0.12	0.06	0.36	12.93		
3/21/2025	10:28:13	3.4	2.18	2.42	13.51		
3/21/2025	10:29:13	10.75	8.77	4.09	14.96		
3/21/2025	10:30:13	10.95	8.79	4.01	14.82	**R1-6**	
3/21/2025	10:31:13	10.9	8.91	3.07	14.11		
3/21/2025	10:32:13	10.91	8.94	2.94	13.65		
3/21/2025	10:33:13	10.62	9.22	3.01	14.27		
3/21/2025	10:34:13	10.8	9.06	2.64	14.76		
3/21/2025	10:35:13	10.97	8.91	2.73	14.3		**5**
3/21/2025	10:36:13	10.77	9.11	2.71	14.55		
3/21/2025	10:37:13	10.9	9.01	2.56	14.44		
3/21/2025	10:38:13	11.35	8.59	2.21	13.98		
3/21/2025	10:39:13	11.09	8.83	1.94	13.83		
3/21/2025	10:40:13	11.08	8.83	1.59	13.86		**4**
3/21/2025	10:41:13	11.13	8.79	1.46	13.91		
3/21/2025	10:42:13	11.15	8.8	1.02	13.96		
3/21/2025	10:43:13	10.89	9.01	1.46	14.45		
3/21/2025	10:44:13	11.04	8.87	1.66	14.44		
3/21/2025	10:45:13	10.72	9.21	1.59	14.82		**3**
3/21/2025	10:46:13	11.05	8.86	1.44	14.16		
3/21/2025	10:47:13	10.98	8.97	1.48	13.87		
3/21/2025	10:48:13	11.15	8.77	1.49	13.72		
3/21/2025	10:49:13	11.12	8.82	1.22	13.95		
3/21/2025	10:50:13	11.05	8.86	0.92	14.4		**2**
3/21/2025	10:51:13	11.39	8.57	1.27	13.72		

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx		
3/21/2025	10:52:13	11.07	8.87	1.06	14.19		
3/21/2025	10:53:13	11.14	8.8	0.95	13.38		
3/21/2025	10:54:13	10.89	9.04	0.87	13.75		
3/21/2025	10:55:13	11.32	8.62	0.6	13.57		**1**
3/21/2025	10:56:13	11.05	8.84	0.53	14.11		
3/21/2025	10:57:13	10.86	9.1	0.28	13.85		
3/21/2025	10:58:13	10.97	8.96	0.44	14.44		
3/21/2025	10:59:13	10.95	8.97	0.5	14.17	**1-END**	
3/21/2025	11:00:13	10.82	9.09	0.41	13.97		
3/21/2025	11:01:13	10.88	9.05	0.14	13.72		
3/21/2025	11:02:13	10.76	9.15	0.25	14.35		
3/21/2025	11:03:13	10.99	8.96	0.21	14.81		
3/21/2025	11:04:13	11.05	8.89	0.68	15.13		
3/21/2025	11:05:13	10.96	8.96	-0.11	14.32		
3/21/2025	11:06:13	11.15	8.81	0.12	14.2		
3/21/2025	11:07:13	11.03	8.9	-0.12	13.85		
3/21/2025	11:08:13	10.88	9.05	-0.09	14.59		
3/21/2025	11:09:13	11.15	8.78	-0.31	14.63		
3/21/2025	11:10:13	10.99	8.96	0.15	14.46		
3/21/2025	11:11:13	11.03	8.89	-0.09	13.91		
3/21/2025	11:12:13	11.12	8.83	-0.03	14.05		
3/21/2025	11:13:13	10.88	9.05	0.11	13.97		
3/21/2025	11:14:13	10.84	9.07	0.28	14.36		
3/21/2025	11:15:13	10.77	9.16	1.94	14.36		
3/21/2025	11:16:13	10.95	8.97	-0.31	15.27		
3/21/2025	11:17:13	11.77	8.28	3.53	16.26		
3/21/2025	11:18:13	16.69	3.92	3.87	3.53		
3/21/2025	11:19:13	20.58	0.34	-0.39	0.48		
3/21/2025	11:20:13	20.66	0.25	-0.17	0.4		
3/21/2025	11:21:13	20.69	0.21	-0.14	0.36		
3/21/2025	11:22:13	20.7	0.19	-0.02	0.33		
3/21/2025	11:23:13	20.71	0.17	0.42	0.32		
3/21/2025	11:24:13	20.72	0.16	0.14	0.3		
3/21/2025	11:25:13	20.72	0.15	0.24	0.29		
3/21/2025	11:26:13	20.72	0.14	0.18	0.28		
3/21/2025	11:27:13	20.73	0.14	0.02	0.28		
3/21/2025	11:28:13	20.73	0.13	-0.07	0.28		
3/21/2025	11:29:13	20.73	0.13	0.29	0.27		
3/21/2025	11:30:13	20.73	0.13	0.14	0.27		
3/21/2025	11:31:13	15.79	4.02	0.76	11.54		
3/21/2025	11:32:13	11.04	8.18	3.84	16.9		
3/21/2025	11:33:13	11.68	8.03	7.73	17.61		
3/21/2025	11:34:13	11.56	8.25	7.64	17.42		
3/21/2025	11:35:13	11.57	8.28	8.41	18		
3/21/2025	11:36:13	11.68	8.19	8.35	19.12		
3/21/2025	11:37:13	11.72	8.16	39.78	19.12		
3/21/2025	11:38:13	11.63	8.23	7.61	20.29		
3/21/2025	11:39:13	11.58	8.3	7.38	20.47		
3/21/2025	11:40:13	11.61	8.26	6.68	19.84		
3/21/2025	11:41:13	11.72	8.2	6.45	19.56		
3/21/2025	11:42:13	11.68	8.23	5.27	19.65	**B-R1-6**	
3/21/2025	11:43:13	11.76	8.16	5.06	19.49		
3/21/2025	11:44:13	11.92	8.04	5.49	19.05		
3/21/2025	11:45:13	11.74	8.18	4.54	19.8		
3/21/2025	11:46:13	11.71	8.22	4.45	20.21		
3/21/2025	11:47:13	11.73	8.22	4.03	20.26		**5**

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx	
3/21/2025	11:48:13	11.78	8.16	4.45	19.78	
3/21/2025	11:49:13	11.71	8.25	3.41	19.79	
3/21/2025	11:50:13	11.8	8.14	3.09	18.53	
3/21/2025	11:51:13	11.96	8	3.69	18.29	
3/21/2025	11:52:13	11.98	8	3.28	18.3	**4**
3/21/2025	11:53:13	11.99	7.97	3.27	18.64	
3/21/2025	11:54:13	11.76	8.19	2.82	19.1	
3/21/2025	11:55:13	11.7	8.25	2.8	19.75	
3/21/2025	11:56:13	11.93	8.03	3.81	18.16	
3/21/2025	11:57:13	11.53	8.41	2.07	19.49	**3**
3/21/2025	11:58:13	11.74	8.21	2.75	19.08	
3/21/2025	11:59:13	11.77	8.19	2.27	19.06	
3/21/2025	12:00:13	11.93	8.04	3.71	18.62	
3/21/2025	12:01:13	11.79	8.17	2.38	18.72	
3/21/2025	12:02:13	11.85	8.12	2.66	18.67	**2**
3/21/2025	12:03:13	11.85	8.11	2.76	19.35	
3/21/2025	12:04:13	11.79	8.18	28.76	18.72	
3/21/2025	12:05:13	11.81	8.17	7.47	18.69	
3/21/2025	12:06:13	11.86	8.1	2.15	18.02	
3/21/2025	12:07:13	11.81	8.16	2.11	18.74	**1**
3/21/2025	12:08:13	11.86	8.11	2.64	18.92	
3/21/2025	12:09:13	12.13	7.87	3.02	18.1	
3/21/2025	12:10:13	11.87	8.11	2.61	19.24	
3/21/2025	12:11:13	11.86	8.11	2.7	19.04	**1-END**
3/21/2025	12:12:13	11.97	8.01	2.1	17.92	
3/21/2025	12:13:13	11.92	8.06	2	18.7	
3/21/2025	12:14:13	11.73	8.22	2.35	19.54	
3/21/2025	12:15:13	11.77	8.2	1.97	19.18	
3/21/2025	12:16:13	12.12	7.86	3.05	18.45	
3/21/2025	12:17:13	11.82	8.15	1.77	18.76	**FINAL SYS BIAS TEST**
3/21/2025	12:18:13	11.84	8.12	1.26	18.32	
3/21/2025	12:19:13	10.59	7.44	1.43	16.95	
3/21/2025	12:20:13	0.68	0.5	-1.52	13.37	
3/21/2025	12:21:13	0.23	0.21	-0.71	13.24	**NOX BIAS**
3/21/2025	12:22:13	0.19	0.15	0.66	13.21	
3/21/2025	12:23:13	0.15	0.12	0.23	13.17	**ZERO**
3/21/2025	12:24:13	3.36	1.01	0.63	7.71	
3/21/2025	12:25:13	11.74	4.14	-0.53	0.64	
3/21/2025	12:26:13	11.96	4.21	-0.96	0.52	
3/21/2025	12:27:13	11.99	4.22	-0.64	0.47	
3/21/2025	12:28:13	12.01	4.23	-0.48	0.44	**O2/CO2 BIAS**
3/21/2025	12:29:13	12.02	4.23	-0.37	0.43	
3/21/2025	12:30:13	5.77	2.21	17.51	0.47	
3/21/2025	12:31:13	0.32	0.2	46.97	0.45	
3/21/2025	12:32:13	0.2	0.12	46.55	0.45	**CO BIAS**
3/21/2025	12:33:13	0.17	0.09	46.87	0.44	
3/21/2025	12:34:13	0.15	0.07	47.04	0.43	
3/21/2025	12:35:13	0.14	0.06	10.27	0.42	
3/21/2025	12:36:13	0.13	0.05	0.97	0.42	**ZERO**
3/21/2025	12:37:13	0.12	0.04	0.96	0.41	
3/21/2025	12:38:13	0.11	0.04	1.13	0.42	
3/21/2025	12:39:13	0.03	0.01	2.87	0.31	**FINAL CAL ERROR TEST**
3/21/2025	12:40:13	0.03	0.01	2.85	0.1	
3/21/2025	12:41:13	0.03	0.01	1.7	0.06	
3/21/2025	12:42:13	0.03	0.01	-0.1	0.05	**ZERO**
3/21/2025	12:43:13	0.19	0.02	5.68	0.04	

Client	**Waste Management of California, Inc.**
Location	**Lancaster, CA**
Unit	**Flare #2**
Date/Time	**3/21/2025 7:00**
Job Number	**AST-2025-1080**

Date	Time	O2%	CO2%	ppmCO	ppmNOx	
3/21/2025	12:44:13	20.92	7.41	2.21	0.06	
3/21/2025	12:45:13	21.91	8.77	-1.77	0.04	
3/21/2025	12:46:13	21.92	8.78	-2.02	0.03	**O2/CO2 HIGH**
3/21/2025	12:47:13	21.93	8.78	-2.29	0.03	
3/21/2025	12:48:13	21.93	8.78	-2.1	0.03	
3/21/2025	12:49:13	21.93	8.78	-2.22	0.03	
3/21/2025	12:50:13	14.57	5.71	-2.06	0.02	
3/21/2025	12:51:13	12.16	4.31	-2.27	0.02	
3/21/2025	12:52:13	12.15	4.3	-2.18	0.02	**O2/CO2 MID**
3/21/2025	12:53:13	12.15	4.3	-2.46	0.02	
3/21/2025	12:54:13	9.94	3.75	16.11	0.03	
3/21/2025	12:55:13	0.14	0.12	88.07	0.03	
3/21/2025	12:56:13	0.04	0.03	90.96	0.03	
3/21/2025	12:57:13	0.03	0.02	91.16	0.02	
3/21/2025	12:58:13	0.03	0.02	90.18	0.02	**CO HIGH**
3/21/2025	12:59:13	0.03	0.01	88.85	0.02	
3/21/2025	13:00:13	0.03	0.01	89.49	0.02	**NOX CONVERTER**
3/21/2025	13:01:13	0.04	0.02	62.26	0.02	
3/21/2025	13:02:13	0.03	0.01	46.85	0.02	**ZERO**
3/21/2025	13:03:13	0.03	0.01	46.7	0.02	
3/21/2025	13:04:13	0.03	0.01	46.43	0.01	**ZERO/CO MID**
3/21/2025	13:05:13	0.03	0.01	46.29	0.01	
3/21/2025	13:06:13	0.04	0.01	27.89	15.09	
3/21/2025	13:07:13	0.03	0.01	-1.24	22.97	
3/21/2025	13:08:13	0.03	0.01	-1.41	23.2	
3/21/2025	13:09:13	0.03	0.01	-1.46	23.17	**NOX SPAN**
3/21/2025	13:10:13	0.03	0.01	-1.53	23.14	
3/21/2025	13:11:13	0.03	0.01	6.57	23.13	
3/21/2025	13:12:13	0.03	0.01	-1.28	23.15	**NO SPAN**
3/21/2025	13:13:13	0.03	0.01	-1.32	20.52	
3/21/2025	13:14:13	0.03	0.01	-1.57	13.27	
3/21/2025	13:15:13	0.03	0.01	-1.52	13.19	
3/21/2025	13:16:13	0.03	0.01	-1.49	13.17	
3/21/2025	13:17:13	0.03	0.01	-1.61	13.15	**NOX MID**
3/21/2025	13:18:13	0.03	0.01	-1.63	13.15	
3/21/2025	13:19:13	0.03	0.01	-2.02	13.08	
3/21/2025	13:20:13	0.03	0.01	-1.7	13.01	**NO MID**
3/21/2025	13:21:13	0.03	0.01	-1.93	13.02	
3/21/2025	13:22:13	0.03	0.01	-2.2	13.01	
3/21/2025	13:23:13	0.49	0.14	1.7	14.24	
3/21/2025	13:24:13	0.15	0.01	-1.91	15.41	**PPM NO2**
3/21/2025	13:25:13	0.14	0.01	-2.18	15.38	
3/21/2025	13:26:13	0.14	0.01	-2.28	15.36	
3/21/2025	13:27:13	0.15	0.01	-2.42	13.99	
3/21/2025	13:28:13	0.03	0.01	-2.66	0.14	
3/21/2025	13:29:13	0.03	0.01	-2.42	0.07	
3/21/2025	13:30:13	0.03	0.01	-2.44	0.05	**PPM NO**

Alliance

Client: Waste Mgmt.
Unit: Flare #2

Calibrations

Job #: 25-1080
Date: 3/21/25

Gases	O2	Cylinder #	Exp. Date	CO2	Cylinder #	Exp. Date	CO	Cylinder #	Exp. Date
High									
Mid									

Gases	NOx	Cylinder #	Exp. Date	SO2	Cylinder #	Exp. Date
High						
Mid						

	NO Mode	NOX Mode
Zero		
Span		
Bias		

NO2 [ ] Cyl. # [ ] Exp. Date [ ]

Date 3/21/25 Time 0716

	O2	CO2	CO	NOx	NO Mode	SO2
Direct Zero	0.02	0.01	0.51	-0.01		
High	21.9	8.73	90.52	23.14		
Mid	12.13	4.29	45.57	13.18		

Bias Date 3/21/25 Time 1019 / 0951

	O2	CO2	CO	NOx	SO2
Bias Zero	0.14	0.07	0.16	0.16	
Bias mid	12.05	4.27	46.77	12.9	

R1

Sample Date 3/21/25 Time 1030

Bias Date 3/21/25 Time 1221

	O2	CO2	CO	NOx	SO2
Bias Zero	0.15	0.12	0.23	0.42	
Bias mid	12.01	4.23	46.55	13.24	

Sample Date _____ Time _____

Bias Date _____ Time _____

	O2	CO2	CO	NOx	SO2
Bias Zero					
Bias mid					

Sample Date _____ Time _____

Bias Date _____ Time _____

	O2	CO2	CO	NOx	SO2
Bias Zero					
Bias mid					

1242

	O2	CO2	CO	NOx	SO2
Direct Zero	0.03	0.01	-0.1	0.05	
High	21.92	8.78	90.18	23.17	
Mid	12.15	4.30	46.43	13.15	

1302
6.02
0.01
23.17
23.15
13.15
13.01
15.41
0.05

1142 / 29 / 12.1

(1142) Path B

TO 15 outlet
1) 1030-1
2) 1057-1
1142-(152
3) 1152

Alliance

FB

Isokinetic Field Data
Page ___ of ___

Client/Location: Waste Mgnt, Lancaster, CO.
Date: 3/21/23 Run Number: FB
Start Time: 0945
End Time:
Source: Flare #2.
Project No.: 23-1080 Parameter: PM M5.1

STACK DATA (EST)	EQUIPMENT	IMPINGER #	INITIAL	FINAL	NET
Moisture: 9.5 % est	Meter Box ID: MB-4	1	736.1		
Target Rate: 0.73 scfm	Y: 1.0204	2	744.0		
	ΔH @ (in. WC): 1.809	3	648.3		
STACK DATA (FINAL)	Probe ID: Inc. S-1	4	857.2		
Pb: 27.75 in. Hg	Liner Material: stainless steel	H2O Gain			
Ps: 27.64 in. WC	Pitot ID: Inc. TC8-1	LEAK CHECKS	Pre	Mid 1	Mid 2
O_2: 19 %	Pitot Cp/Type: 0.84	Leak Rate (cfm):	0.004		
CO_2: 8 %	Nozzle ID/Type: Inc. 3-4S-Type	Vacuum (in Hg):	15		
	Nozzle Dn (in.): 0.631	Pitot Tube:			

Mid 3	Post

Run Notes
Filter ID: 240508
Ambient Temp, °F:
Ambient Moisture, %:
Nomograph Index:

Check Pt.	Initial	Final	Corr.
Mid 1 (ci)			
Mid 2 (ci)			
Mid 3 (ci)			
Mid-Point Leak Check Vol (ci):			

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb.	Stack Amb.	Orifice Press. ΔH (in. WC) Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb.	Filter Amb.	Imp Exit Amb.	Aux Amb.
			620.000									
Average/Final												

DGM Operator:

AST Isokinetic Paper Sheet
210.001 v21.2 9/22/21

Alliance

Isokinetic Field Data
Page ____ of ____

Client/Location: Waste Management / Lancaster-CA | Start Time: 10:30 | Source: Flare #2
Date: 3/28/25 | Run Number: 1 | End Time: 12:12 | Project No.: 25-1080 | Parameter: PM

STACK DATA (EST)		EQUIPMENT		IMPINGER #	INITIAL	FINAL	NET	Run Notes
Moisture: 9.5 % est.		Meter Box ID: MB-4		1	735.8	831.2		Filter ID
Target Rate: .75 scfm		Y: 1.0204		2	743.2	752.7		Ambient Temp, °F
STACK DATA (FINAL)		ΔH @ (in.WC): 1.804		3	647.7	649.7		Ambient Moisture, %
Pb: 27.75 in. Hg		Probe ID: INCP-8-1		4	856.0	867.6		Nomograph Index
Pg: -.042 in. WC		Liner Material: Stainless Steel		H2O Gain				
O_2: 12 %		Pitot ID: INCTC-8-1		LEAK CHECKS	Pre	Mid 1	Mid 2	Mid 3 / Post / Check Pt. / Initial / Final / Corr.
CO_2: 8 %		Pitot Cp/Type: .84	S-type	Leak Rate (cfm):	.003			Post .001 Mid 1 (cf)
		Nozzle ID/Type: INC-2-4		Vacuum (in Hg):	15			Mid 2 (cf) 20
		Nozzle Dn (in.): .631		Pitot Tube:	Pass			Mid 3 (cf) Pass
								Mid-Point Leak Check Vol (cf):

Run Notes: Port change 11:00; Started back up at 11:42

Sample Pt.	Sample Time (minutes) Begin	End	Dry Gas Meter Reading (ft^3)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F) DGM Average Amb.	Stack Amb.	Orifice Press. ΔH (in. WC) Actual	Pump Vac (in. Hg)	Gas Temperatures (°F) Probe Amb.	Filter Amb.	Imp Exit Amb.	Aux Amb.
A12	0	2.5	641.571	.0123	62	1359	.50	14			43	
11	2.5	5	642.58	.0124	62	1308	.50	14			43	
10	5	7.5	643.59	.0148	62	1266	.70	18			43	
9	7.5	10	644.72	.0199	62	1257	.90	18			43	
8	10	12.5	646.08	.0245	62	1142	1.2	18			44	
7	12.5	15	647.60	.0261	63	1108	1.3	18			44	
6	15	17.5	649.18	.0329	63	682	2.2	18			44	
5	17.5	20	651.24	.0458	63	654	3.1	18			45	
4	20	22.5	653.71	.0452	63	570	3.3	18			45	
3	22.5	25	656.22	.0447	64	571	3.3	18			45	
2	25	27.5	658.74	.0551	64	559	4.1	18			45	
1	27.5	30	661.57	.0473	64	556	3.5	18			46	
B12	30	32.5	664.178	.0125	66	1353	.50	14			46	
11	32.5	35	665.21	.0127	66	1307	.60	14			46	
10	35	37.5	666.27	.0149	66	1268	.70	18			47	
9	37.5	40	667.42	.0201	66	1259	.90	18			47	
8	40	42.5	668.75	.0262	67	1143	1.3	18			47	
7	42.5	45	670.33	.0264	67	1109	1.3	18			48	
6	45	47.5	671.90	.0330	67	688	2.2	18			48	
5	47.5	50	673.99	.0455	67	656	3.1	18			48	
4	50	52.5	676.41	.0453	67	572	3.3	18			49	
3	52.5	55	678.97	.0449	67	572	3.3	18			49	
2	55	57.5	681.51	.0549	67	561	4.1	18			49	
1	57.5	60	684.33	.0474	67	555	3.5	18			50	
Average												RSC

Alliance

Init

FIELD DATA SHEET - SCAQMD METHOD 25. 1
Total Gaseous Non-Methane/Non-Ethane Organics Field Data Sheet

M 25.1

Company Name: Waste Mgmt
City/State: Lancaster, CA.
Test Location: Flare #2.
Bar. Pressure (in Hg): 27.75
Control Device:
Comments:

Project No.: 25-1080.
Date/Time: 3/21/25 1030
Run No: 1
Start Time: 1030
Stop Time: 1211
Operator: NMP.

000247 NO 3/21/25 000262

SAMPLE A	SAMPLE B	SAMPLE B
Tank #: ~~001817~~	Tank #: ~~000441~~	Tank #:
Trap #: 168	Trap #: 163	Trap #: 165 163
Leak Check Pre: ✓	Leak Check Pre: ✓	Leak Check Pre:
Leak Check Post: ✓	Leak Check Post: ✓	Leak Check Post:

N/A

TIME	VACUUM ("Hg)	FLOW READING (If Applicable)	VACUUM ("Hg)	FLOW READING (If Applicable)	VACUUM ("Hg)	FLOW READING (If Applicable)	Temp (°F)	ΔP ("H2O)	Temp (°F)
							Ref. Run #:		
							Ref. Pt #		
0	30	N/A	31	N/A.			0		
10	28		28				5		
20	26		26				10		
30	24		24				15		
40	20		20				20		
50	28		16				25		
60	18		10				30		
							35		
							40		
							45		
							50		
							55		
							60		

1030
1100/1142
1

Notes:

Method 25.1

1. Leak Check Requirement No Change in a minimum of 10 minutes
2. End the sampling when the sample time period has been reached or the minimum vacuum gauge reading on any tank is 5 in. Hg, whichever occurs first

Method 25.3

1. Leak Check Requirement The vacuum drop should cease at numerically above 10 in. Hg. At this point a cease in movement of the vacuum gauge for a period of ten minutes indicates an acceptable leak check on the sampling system.
2. If this intial vacuum is mumerically less than 28 in. Hg, then the sample is invalidated
3. Final Vacuum must be between 2"-15" Hg

Alliance

ENVIRONMENTAL

VOC FIELD DATA SHEET - METHOD TO 15

Inlet S

Date: 3/21/25
Client: Waste Mgmt -
Unit: Flare #2
Operator Name: NNP
Fuel: Landfill
Location:

Test No.: 1
Barometric Pressure (in. Hg):
Pretest Leak Check: ✓
A: ✓ B:
Post-test Leak check:
A: B:

		SAMPLE A		SAMPLE B	
		Tank # Trap # Control ID:		Tank # Trap # Control ID:	
Time 24 Hours	Start Time	Flow ml/min. N/A	Vacuum inch Hg	Flow ml/min.	Vacuum inch Hg
0	1030		24		
10			20		
20			18		
30 (1104/1142)			14		
40			10		
50	End Time		6		
60	1211		4		

Alliance

FIELD DATA SHEET - SCAQMD METHOD 25. 3
Total Gaseous Non-Methane/Non-Ethane Organics Field Data Sheet

Company Name: Waste Management
City/State: Lancaster, CA
Test Location: Furnace 2
Bar. Pressure (in Hg): 27.75
Control Device:
Comments:

Project No.: 25-1080
Date/Time: 2/2/25
Run No: 1
Start Time: 13:00
Stop Time: 17:51
Operator: CD

SAMPLE A	SAMPLE B	SAMPLE B
Tank #: 1517	Tank #: 441	Tank #:
Trap #: 0819 AD	Trap #: Xtra 2 0819	Trap #:
Leak Check Pre: ✓	Leak Check Pre: ✓	Leak Check Pre:
Leak Check Post: ✓	Leak Check Post: ✓	Leak Check Post:

TIME	VACUUM ("Hg)	FLOW READING (If Applicable)
0	30	
10	25	
20	20	
30	17	
40	15	
50	12	
60	10	

VACUUM ("Hg)	FLOW READING (If Applicable)
30	
25	
21	
16	
13	
9	
4	

VACUUM ("Hg)	FLOW READING (If Applicable)

Temp (°F)	ΔP ("H2O)	Temp (°F)
Ref. Run #:	AST-R1	
Ref. Pt #	RC	
0	.0266	1256
5	.0281	1256
10	.0283	1257
15	.0290	1256
20	.0296	1257
25	.0301	1256
30	.0298	1256
35		
40		
45		
50		
55		
60		

Notes:

Method 25.1

1. Leak Check Requirement – No Change in a minimum of 10 minutes
2. End the sampling when the sample time period has been reached or the minimum vacuum gauge reading on any tank is 5 in. Hg, whichever occurs first.

Method 25.3

1. Leak Check Requirement – The vacuum drop should cease at numerically above 10 in. Hg. At this point a cease in movement of the vacuum gauge for a period of ten minutes indicates an acceptable leak check on the sampling system.
2. If this inital vacuum is numerically less than 28 in. Hg, then the sample is invalidated.
3. Final Vacuum must be between 2"-15" Hg

Alliance

ENVIRONMENTAL

VOC FIELD DATA SHEET - TO-15 METHOD

Date: 3/21/25 Test No.: 1

Client: Waste Management Barometric Pressure (in. Hg): 27.75

Unit: Furnace #2 Pretest Leak Check:

Operator Name: CO A: v B:

Fuel: Post-test Leak check:

Location: Lancaster CA A: v B:

Orifice

SAMPLE A

Tank # 1446 Trap # ____
Control ID:

Time 24 Hours	Start Time	Flow ml/min.	Vacuum inch Hg
0	10 30		30
10			28
20			22
30			
40			
50	End Time		
60	CO 10:50		
	10:50		

Orifice leak checked prior to sampling

SAMPLE B

Tank # ____ Trap # ____
Control ID:

Flow ml/min.	Vacuum inch Hg

Alliance

ENVIRONMENTAL

VOC FIELD DATA SHEET - TO-15 METHOD

Date: 3/21/25 Test No.: 2

Client: Waste Management Barometric Pressure (in. Hg): 27.75

Unit: Furnace 2 Pretest Leak Check:

Operator Name: CO A: ✓ B: _____

Fuel: _____ Post-test Leak check:

Location: Lancaster CA A: ✓ B: _____

		SAMPLE A		SAMPLE B	
		Tank # 1270 Trap # ____ Control ID:		Tank # ____ Trap # ____ Control ID:	
Time 24 Hours	Start Time	Flow ml/min.	Vacuum inch Hg	Flow ml/min.	Vacuum inch Hg
0	10:50		29		
10	Start 11:00		22		
20			19		
30	Start 11:42				
40					
50	End Time				
60	11:52				

Alliance

ENVIRONMENTAL

VOC FIELD DATA SHEET - TO-15 METHOD

Outlet

Date: 5/2/25 Test No.: 3

Client: Waste Management Barometric Pressure (in. Hg): 27.15

Unit: CO EB Furnace 2 Pretest Leak Check:

Operator Name: CO A: ✓ B:

Fuel: Post-test Leak check:

Location: Lancaster CA. A: ✓ B:

SAMPLE A

Time 24 Hours	Start Time	Tank # 1290 Trap # Control ID: Flow ml/min.	Vacuum inch Hg
0	11:52		28
10			22
20			16
30			
40			
50	End Time		
60	12:12		

SAMPLE B

Tank # Trap # Control ID: Flow ml/min.	Vacuum inch Hg

Appendix C

ppmC3
O2%
INTVL 1

ppmC3 1.8PPMC3

MANUAL Mar.21.25 06:28
O2% 0.0302% CO2% 0.0102% ppmCO 0ppmCO ppmNOx 23.15ppmNOx
ppmC3 1.3PPMC3

MANUAL Mar.21.25 06:23
O2% 22.1302% CO2% 4.2902% ppmCO -1ppmCO ppmNOx 4.00ppmNOx
ppmC3 1.4PPMC3

MANUAL Mar.21.25 06:16
O2% 21.9002% CO2% 8.7702% ppmCO -1ppmCO ppmNOx 8.00ppmNOx
ppmC3 1.7PPMC3

MANUAL Mar.21.25 06:09
O2% 0.0202% CO2% 0.0102% ppmCO 0ppmCO ppmNOx 0.01ppmNOx
ppmC3 1.2PPMC3

MANUAL Mar.21.25 06:03
O2% 0.0302% CO2% 0.0102% ppmCO -16ppmCO ppmNOx 0.00ppmNOx
ppmC3 1.3PPMC3

2790cm

2805cm

GRAPHIC CONTROLS BUFFALO, NEW YORK PRINTED IN U.S.A.

CO2%

O2%

0.0 24.9 49.9 74.9 99.9 100.0
PPMC3

PPMC3

MANUAL Mar.21.25 07:13
O2% 12.62O2% CO2% 4.22CO2% ppmCO 1ppmCO ppmNOx 0.00ppmNOx
ppmC3 0.1PPMC3

ppmNOx

0.00 5.00 10.00 15.00 20.00 25.00
ppmNOx

ppmCO

MANUAL Mar.21.25 07:09
O2% 0.15O2% CO2% 0.01CO2% ppmCO 2ppmCO ppmNOx 12.81ppmNOx
ppmC3 0.1PPMC3

0.00 5.00 10.00 15.00 20.00 25.00
ppmNOx

CO2%

MANUAL Mar.21.25 07:05
O2% 0.19O2% CO2% 0.02CO2% ppmCO 2ppmCO ppmNOx 0.10ppmNOx
ppmC3 0.4PPMC3

O2%

ppmC3

ppmCO

240ppm
Mar.21 07:00

0 10 20 30 40 50 60 70 80 90 100

ppmCO

CO2%

MANUAL Mar.21.25 06:51
O2% 0.02O2% CO2% 0.01CO2% ppmCO 1ppmCO ppmNOx 3.01ppmNOx
ppmC3 1.8PPMC3

ppmCO
CO2%

MANUAL Mar.21.25 06:49
O2% 0.23O2% CO2% 0.01CO2% ppmCO 2ppmCO ppmNOx 3.91ppmNOx
ppmC3 1.5PPMC3

ppmCO

ppmC3

MANUAL Mar.21.25 06:45
O2% 0.02O2% CO2% 0.01CO2% ppmCO 454ppmCO ppmNOx 0.02ppmNOx
ppmC3 1.7PPMC3

ppmNOx

0.00 2.00 4.00 6.00 8.00 10.00
CO2%

ppmCO

MANUAL Mar.21.25 06:39
O2% 0.02O2% CO2% 0.01CO2% ppmCO 2ppmCO ppmNOx 13.16ppmNOx
ppmC3 1.5PPMC3

CO2%

2760cm
GRAPHIC CONTROLS BUFFALO, NEW YORK
PRINTED IN U.S.A.
2775cm

Read 60 ppm

240ppm/h
Mar.21 09:00

0.00 5.00 10.00 15.00 20.00 25.00
02%

0 10 20 30 40 50 60 70 80 90 100
MANUAL Mar.21.25 07:46
02% 0.11 02% 0.02 02% ppmCO 225ppmCO ppmNOx 0.11ppmNOx
ppmC3 9.6PPMC3

MANUAL Mar.21.25 07:45
02% 0.10 02% 0.03 02% ppmCO 224ppmCO ppmNOx 0.12ppmNOx
ppmC3 19.1PPMC3

MANUAL Mar.21.25 07:36
02% 12.92 02% 4.23 02% ppmCO 0ppmCO ppmNOx 8.07ppmNOx
ppmC3 0.2PPMC3

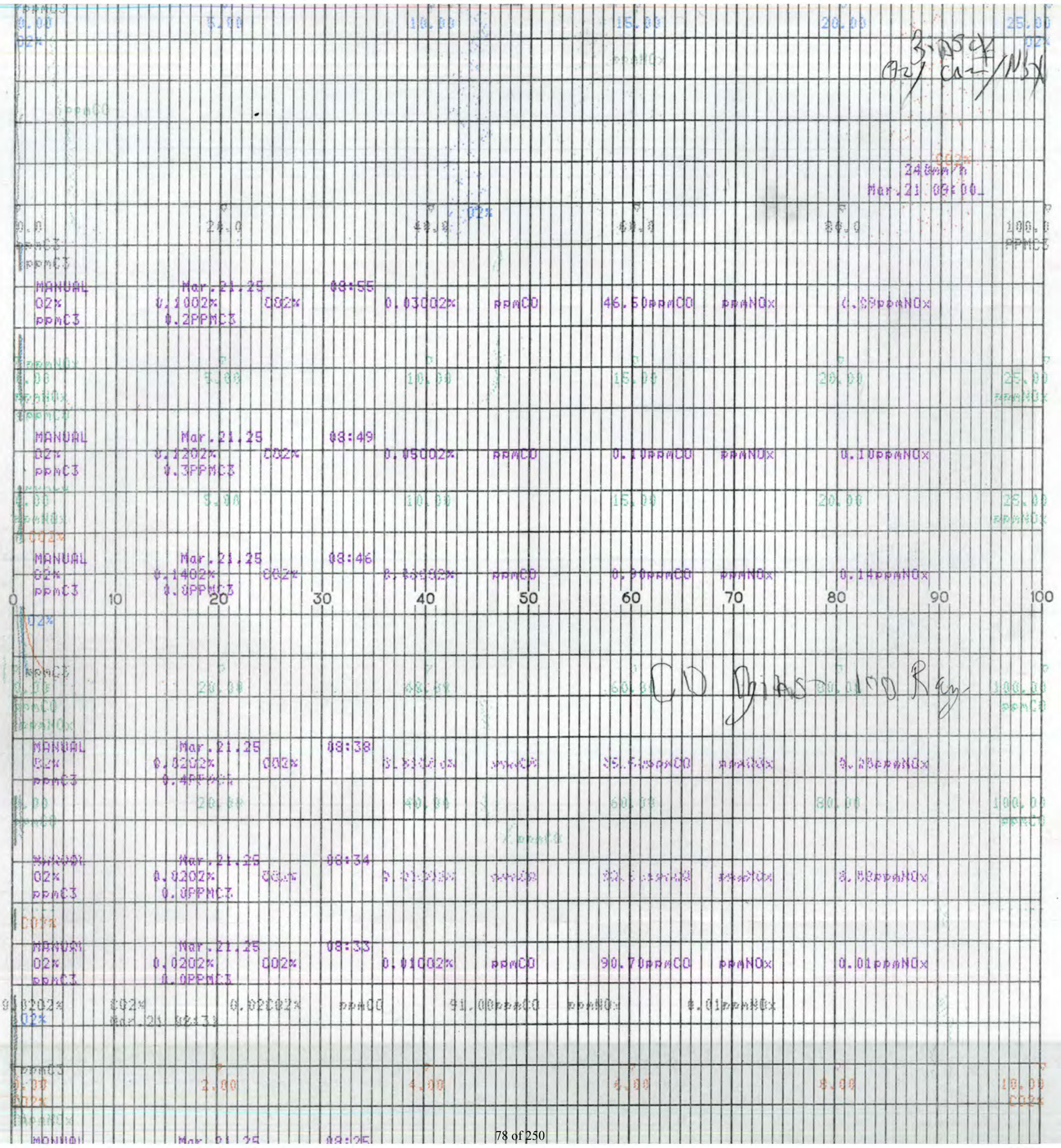
ppmC3
02%
INTVL 1

MANUAL Mar.21.25 07:30
02% 0.14 02% 0.07 02% ppmCO 1ppmCO ppmNOx 0.09ppmNOx
ppmC3 0.9PPMC3

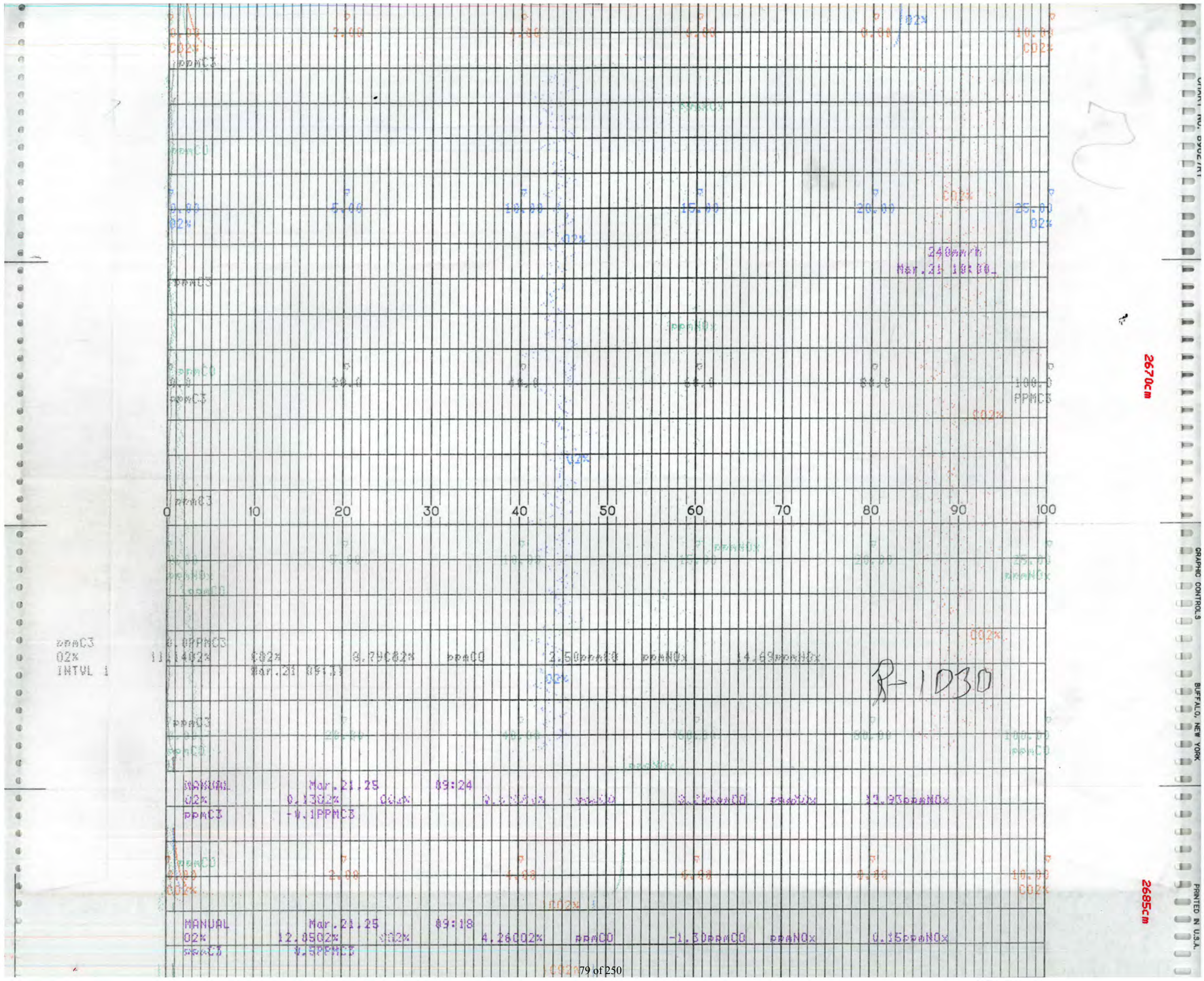
0.00 5.00 10.00 15.00 20.00 25.00
02%

2730cm
2745cm

GRAPHIC CONTROLS BUFFALO, NEW YORK PRINTED IN U.S.A.


MANUAL Mar.21.25 08:55
O2% 0.1002% CO2% 0.0302% ppmCO 46.50ppmCO ppmNOx 0.09ppmNOx
ppmC3 0.2PPMC3
MANUAL Mar.21.25 08:49
O2% 0.1202% CO2% 0.0502% ppmCO 0.10ppmCO ppmNOx 0.10ppmNOx
ppmC3 0.3PPMC3
MANUAL Mar.21.25 08:46
O2% 0.1402% CO2% 0.0502% ppmCO 0.90ppmCO ppmNOx 0.14ppmNOx
ppmC3 0.0PPMC3
0 10 20 30 40 50 60 70 80 90 100
O2%
ppmC3
ppmCO
ppmNOx
MANUAL Mar.21.25 08:38
O2% 0.0202% CO2% 0.0102% ppmCO 35.50ppmCO ppmNOx 0.20ppmNOx
ppmC3 0.4PPMC3
MANUAL Mar.21.25 08:34
O2% 0.0202% CO2% 0.0102% ppmCO 90.50ppmCO ppmNOx 0.50ppmNOx
ppmC3 0.0PPMC3
CO2%
MANUAL Mar.21.25 08:33
O2% 0.0202% CO2% 0.0102% ppmCO 90.70ppmCO ppmNOx 0.01ppmNOx
ppmC3 0.0PPMC3
O2% 0.0202% CO2% 0.0202% ppmCO 91.00ppmCO ppmNOx 0.01ppmNOx
INTVL 1 O2% Mar.21 08:33
ppmC3
CO2%
ppmNOx
MANUAL Mar.21.25 08:25

78 of 250


ppmC3
02%
INTVL 1
MANUAL
Mar.21.25 09:24
02% 0.1302% 002% 9.2902% ppmCO 2.50ppmCO ppmNOx 14.65ppmNOx
ppmC3 -0.1PPMC3
MANUAL
Mar.21.25 09:18
02% 12.0502% 002% 4.2602% ppmCO -1.30ppmCO ppmNOx 0.15ppmNOx
ppmC3 0.5PPMC3
240mm/h
Mar.21 10:00
R-1030
2670cm
2685cm
GRAPHIC CONTROLS
BUFFALO, NEW YORK
PRINTED IN U.S.A.

MANUAL Mar.21,25 11:26
O2% 12.31O2% CO2% 0.23CO2% ppmCO 0.00ppmCO ppmNOx 0.42ppmNOx
ppmC3 0.3PPMC3

0.00 2.00 4.00 6.00 8.00 10.00
CO2%
O2%

MANUAL Mar.21,33 11:33
O2% 0.17O2% CO2% 0.14CO2% ppmCO 0.00ppmCO ppmNOx 13.19ppmNOx
ppmC3 0.2PPMC3

0.00 2.00 4.00 6.00 8.00 10.00
CO2%
ppmC3

ppmCO

Final Sys Rpt

0.00 5.00 10.00 15.00 20.00 25.00
O2%

O2%

ppmC3

240mm/h
Mar.21 11:00

0 10 20 30 40 50 60 70 80 90 100

ppmC3
0.0 24.0 48.0 72.0 96.0 100.0
ppmC3

CO2%

O2%

ppmC3

0.00 5.00 10.00 15.00 20.00 25.00
ppmNOx
ppmCO

CO2%

O2%

ppmC3
O2% 11.77O2% CO2% 0.16CO2% ppmCO 1.70ppmCO ppmNOx 16.61ppmNOx
INTVL 1 Mar.21 10:33

ppmC3

0.00 20.00 40.00 60.00 80.00 100.0
ppmCO
ppmNOx

2640cm

2655cm

GRAPHIC CONTROLS BUFFALO, NEW YORK PRINTED IN U.S.A.

MANUAL Mar.21.25 12:16
O2% 0.0302% CO2% 0.01002% ppmCO -2.00ppmCO ppmNOx 13.15ppmNOx
ppmC3 1.3PPMC3

0.00 20.00 40.00 60.00 80.00 100.00
ppmCO ppmNOx ppmCO
ppmNOx

MANUAL Mar.21.25 12:10
O2% 0.0302% CO2% 0.01002% ppmCO -2.00ppmCO ppmNOx 10.15ppmNOx
ppmC3 1.3PPMC3

CO2%
O2%
ppmC3
0.00 2.00 4.00 6.00 8.00 10.00
CO2% 240ppm/h Mar.21 12:00 CO2%

MANUAL Mar.21.25 11:58
O2% 0.0302% CO2% 0.01002% ppmCO 89.70ppmCO ppmNOx 6.93ppmNOx
ppmC3 1.3PPMC3

0.00 5.00 10.00 15.00 20.00 25.00
O2% ppmCO O2%

0 10 20 30 40 50 60 70 80 90 100
CO2%

MANUAL Mar.21.25 11:51
O2% 12.1502% CO2% 4.3002% ppmCO -2.50ppmCO ppmNOx 9.82ppmNOx
ppmC3 1.3PPMC3

0.00 5.00 10.00 15.00 20.00 25.00
O2% O2%
ppmC3

MANUAL Mar.21.25 11:47
O2% 21.9302% CO2% 8.7802% ppmCO -2.40ppmCO ppmNOx 0.02ppmNOx
ppmC3 1.1PPMC3

ppmNOx
0.0 20.0 40.0 60.0 80.0 100.0
ppmC3 PPMC3
ppmCO

MANUAL Mar.21.25 11:48
O2% 8.0202% CO2% 3.21[illegible]% ppmCO [illegible]ppmCO ppmNOx 0.03ppmNOx
ppmC3 1.1PPMC3

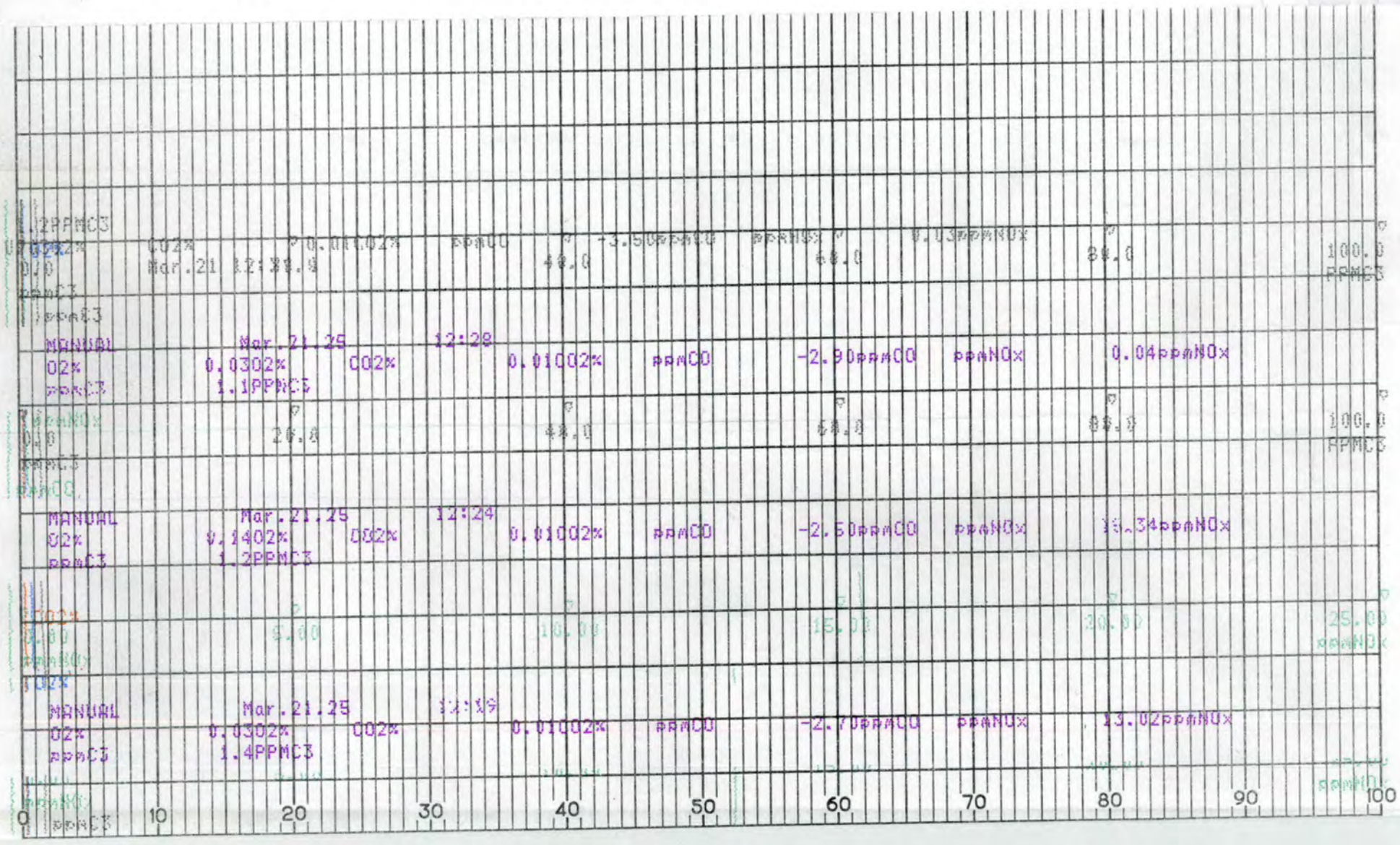
CO2%
0.00 5.00 10.00 15.00 20.00 25.00
ppmNOx ppmNOx
O2%

MANUAL Mar.21.25 11:35
O2% 0.1302% CO2% 0.0402% ppmCO 1.00ppmCO ppmNOx 0.41ppmNOx
ppmC3 0.0PPMC3

Final Cal ewd

ppmC3
O2% 0.[illegible]% CO2% 0.00CO2% ppmCO 47.30ppmCO ppmNOx 0.43ppmNOx

2610cm
2625cm
GRAPHIC CONTROLS
BUFFALO, NEW YORK
PRINTED IN U.S.A.



GRAPHIC CONTROLS BUFFALO, NEW YORK
PRINTED IN U.S.A.
2595cm

Appendix D

AtmAA Inc.
5107 Douglas Fir Rd., Calabasas, CA 91302 • (818) 223-3277
specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

Hydrogen Sulfide and Reduced Sulfur Compounds
Analysis in Tedlar Bag Sample by Method SCAQMD 307.91

Report Date: May 9, 2025
Client: Waste Management
Project Location: Lancaster Landfill
Date Received: May 1, 2025
Date Analyzed: May 1, 2025

ANALYSIS DESCRIPTION

Total sulfur analysis measured by gas chromatography with sulfur chemiluminescence detector (SCD), SCAQMD 307.91.

	AtmAA Lab No.:	21215-20
	Sample I.D.:	Flare
Components		*(Concentration in ppmv)*
Hydrogen sulfide		2.84
Carbonyl sulfide		<0.08
Methyl mercaptan		<0.08
Ethyl mercaptan		<0.08
Dimethyl sulfide		<0.08
Carbon disulfide		<0.08
i-Propyl mercaptan		<0.08
t-Butyl mercaptan		<0.08
n-Propyl mercaptan		<0.08
s-Butyl mercaptan		<0.08
i-Butyl mercaptan		<0.08
Dimethyl disulfide		<0.08
Tetrahydrothiophene		<0.08
Unidentified sulfurs		<0.08
		(Concentration in ppmv, as H_2S)
Total Sulfur		2.84

Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Lancaster Landfill
Date Received: May 1, 2025
Date Analyzed: May 1, 2025

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% RPD
		(Concentration in ppmv)			
Hydrogen sulfide	Flare	2.80	2.87	2.84	2.5
Carbonyl sulfide	Flare	<0.08	<0.08	---	---
Methyl mercaptan	Flare	<0.08	<0.08	---	---
Ethyl mercaptan	Flare	<0.08	<0.08	---	---
Dimethyl sulfide	Flare	<0.08	<0.08	---	---
Carbon disulfide	Flare	<0.08	<0.08	---	---
i-Propyl mercaptan	Flare	<0.08	<0.08	---	---
t-Butyl mercaptan	Flare	<0.08	<0.08	---	---
n-Propyl mercaptan	Flare	<0.08	<0.08	---	---
s-Butyl mercaptan	Flare	<0.08	<0.08	---	---
i-Butyl mercaptan	Flare	<0.08	<0.08	---	---
Dimethyl disulfide	Flare	<0.08	<0.08	---	---
Tetrahydrothiophene	Flare	<0.08	<0.08	---	---
Unidentified sulfurs	Flare	<0.08	<0.08	---	---

One Tedlar bag sample, laboratory number 21215-20, was analyzed for total sulfur compounds. Agreement between repeat analyses is a measure of precision and is shown above in the column "% RPD". The % RPD for 1 repeat measurement from one Tedlar bag sample is 2.5%.

CHAIN OF CUSTODY RECORD

Client/Project Name: Waste Management	**Project Location:** Lancaster Landfill
Project Number: Flare Sample	**Purchase Order Number:**
Sampler: *(Signature)* JH Hill	**Turnaround Times:** Standard 10 day **Expedited:** 24hr / 48hr / 72hr / (5 day)

ANALYSES REQUESTED

Client Sample Identification	Type of Sample Canister ID	AtmAA Lab Number	Sampling Date	Sampling Time	TO-15	TO-15	TO-15	TRS			Special Remarks
Flare	Raw Gas	21215-20	5/1/25	10:39	X	X	X	+			38% CH4

Relinquished by: *(Signature)* JH Hill	**Date** 5/1/25	**Time** 3:49pm	**Received by: *(Signature)***	**Date** / **Time**
Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date** / **Time**
Relinquished by: *(Signature)*	**Date**	**Time**	**Received for Laboratory by: *(Signature)***	**Date** 5-1-25 / **Time** 3:51

Company Info:	**Send Report to:**	**Analytical Laboratory**
Company: Same	**Company:** Waste Management	**AtmAA Inc.**
Street Address	**Street Address** 1200 w City Ranch RD	**5107 Douglas Fir Rd.**
City/State/Zip:	**City/State/Zip:** palmdale ca 93551	**Calabasas, CA 91302**
Telephone No.:	**Project Manager:** John Holland	**TEL: (818) 223-3277**
Email Address:	**Email Address:** Jhollan9@wm.com	**Email Address: info@atmaa.com**

Alliance Technical Group, LLC
Analytical Services
18828 Hwy 65
Bakersfield, CA 93312
(661) 391-0112
www.alliancetg.com

Analytical Laboratory Report

SCAQMD Method 5.1

Waste Management National Services
Lancaster, CA

Project No. AST-2025-1080_R1

Enclosed Flare 2 - March 21, 2025



Certification Statement

Alliance Technical Group (ATG) has completed the analysis as described in this report. Results apply only to the source(s) tested and operating condition(s) for the specific test date(s) and time(s) identified within this report. All results are intended to be considered in their entirety, and ATG is not responsible for use of less than the complete test report without written consent. This report shall not be reproduced in full or in part without written approval from the customer.

To the best of my knowledge and abilities, all information, facts and test data are correct. Data presented in this report has been checked for completeness and is accurate, error-free and legible. Any deviations or problems are detailed in the relevant sections on the test report.

This document was prepared in portable document format (.pdf) and contains pages as identified in the bottom footer of this document.

Validation Signature

The analytical data and all QC contained within this report was reviewed and validated by the following individual.



Jeremy Kincaid
2025.04.24 14:
05:26-07'00'

Project Narrative

Analytical Method(s):	SCAQMD Method 5.1 - Determination of Particulate Matter Emissions From Stationary Sources Using a Wet Impingement Train
MDL:	The Minimum Detection Level (MDL) is 0.5 mg per fraction. If the measured result for a fraction is less than the MDL, the MDL was used in ensuing calculations.
Blank Correction:	If blank correction is performed, only blank values returned higher than the MDL are used. If a blank returns a value less than the MDL, no correction is included.
Custody:	The samples were received by Jeremy Kincaid on March 26, 2025 in Bakersfield, CA. The samples were received in good condition with proper Chain-of-Custody documentation. No apparent container problems were noted upon receipt. Prior to analysis, the samples were kept secure with access limited to authorized personnel of AST.
Number of Samples:	5
Labeling:	Acceptable
Analyst:	Kerwin Ajtun-Orantes - Laboratory Analyst I
Lab Reagents:	Water, Lot: DI Facility DI System Methylene Chloride, Lot: 243038 Isopropyl Alcohol, Lot: 244149 Barium Chloride, Lot: BKR-2024-05-01 Sodium Hydroxide, Lot: Z14K504 Sulfuric Acid, Lot: 44120203
Equipment:	Mettler Toledo Balance XS205, SN 3031056087. This balance was used for analytical determinations. Ohaus Balance SPX2201, S/N C045455082. This scale was only used to measure the total mass of rinse collected. Sheldon Manufacturing, Inc. oven, 1305U, SN(s) 1002902 and 11024205.
QC Notes:	The samples met the minimum criteria established by the relevant method.
Reporting Notes:	Revision 1: Acid and sulfate analysis performed on filters and soluble residue.

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Filter			
Lab ID	B24026	B24024	
Field ID	F2 - M5.1 - C1 - FB	F2 - M5.1 - C1 - R1	
Filter ID	240508	240581	
Tare Weight, g	0.27470	0.27605	
Time in Dessicator	3/31/25 12:37	3/31/25 12:37	
Weight #1, g	0.2749	0.2772	
Time of Weighing #1	4/2/25 11:08	4/2/25 11:09	
Weight #2, g	0.2750	0.2773	
Time of Weighing #2	4/3/25 9:18	4/3/25 9:18	
PM Mass, mg*	**0.50**	**1.20**	
Acid Analysis	Yes	Yes	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
Titration Volume #1, mL	0.00	0.00	
Titration Volume #2, mL	0.00	0.00	
Sodium Hydroxide, N	0.100	0.100	
Filter Blank, as H_2SO_4*2 H_2O, mg	0.00	0.00	
Acid, as H_2SO_4*2 H_2O, mg	**0.00**	**0.00**	
Sulfate Analysis	Yes	Yes	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
Titration Volume #1, mL	0.07	0.35	
Titration Volume #2, mL	0.05	0.30	
Barium Chloride, N	0.009515	0.009515	
Filter Blank, as H_2SO_4*2 H_2O, mg	0.02	0.02	
IPA Blank, as H_2SO_4*2 H_2O, mL	0.06	0.06	
Sulfate, as H_2SO_4*2 H_2O, mg	**0.00**	**1.24**	

*The total results have been calculated based on MDL values for any sample fractions which were below the MDL.

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Organic Fraction			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Beaker ID	T5192	T5193	
Tare Weight, g	2.04325	2.06855	
Reagent Volume, mL	125	125	
Reagent Density, g/mL	1.33	1.33	
Reagent Mass, g	166.3	166.3	
Time in Dessicator	3/31/25 16:34	3/31/25 16:34	
Weight #1, g	2.0433	2.0689	
Time of Weighing #1	4/2/25 11:11	4/2/25 11:11	
Weight #2, g	2.0435	2.0690	
Time of Weighing #2	4/3/25 9:20	4/3/25 9:20	
Organic Mass, mg*	**0.50**	**0.50**	
Blank Corrected	Yes	Yes	
Blank Reagent	Methylene Chloride	Methylene Chloride	
Amount Subtracted for Blank, mg	0.00	0.00	
Corrected Organic Mass, mg[1]	**0.50**	**0.50**	

[1] PM mass corrected for reagent blank residue.

*The total results have been calculated based on MDL values for any sample fractions which were below the MDL.

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Insoluble Particulate			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Filter ID	240316	240317	
Tare Weight, g	0.11870	0.11790	
Time in Dessicator	3/31/25 12:37	3/31/25 12:37	
Weight #1, g	0.1186	0.1189	
Time of Weighing #1	4/2/25 11:08	4/2/25 11:09	
Weight #2, g	0.1186	0.1190	
Time of Weighing #2	4/3/25 9:17	4/3/25 9:18	
PM Mass, mg*	**-0.10**	**1.05**	

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Soluble Particulate			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Beaker ID	G2265	G2274	
Tare Weight, g	29.15095	28.86350	
Full Field Vessel, g	363.6	454.5	
Empty Field Vessel, g	45.6	46.1	
Sample Mass, g	318.0	408.4	
Time in Dessicator	4/2/25 11:15	4/2/25 11:15	
Weight #1, g	29.1503	28.8987	
Time of Weighing #1	4/3/25 14:23	4/3/25 14:24	
Weight #2, g	29.1507	28.8991	
Time of Weighing #2	4/4/25 8:34	4/4/25 8:35	
PM Mass, mg*	**0.50**	**35.40**	
Acid Analysis	Yes	Yes	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
Titration Volume #1, mL	0.00	0.65	
Titration Volume #2, mL	0.00	0.64	
Sodium Hydroxide, N	0.100	0.100	
Acid, as H_2SO_4*2 H_2O, mg	**0.00**	**32.44**	
Sulfate Analysis	Yes	Yes	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
Titration Volume #1, mL	0.05	7.34	
Titration Volume #2, mL	0.06	7.39	
Barium Chloride, N	0.009515	0.009515	
Sulfate, as H_2SO_4*2 H_2O, mg	**0.00**	**34.96**	
Blank Corrected	Yes	Yes	
Blank Reagent	Water	Water	
Amount Subtracted for Blank, mg	0.00	0.00	
Corrected Soluble PM Mass, mg[1]	**0.50**	**2.96**	

[1] PM mass corrected for Acid/Sulfate and reagent blank residue.

*The total results have been calculated based on MDL values for any sample fractions which were below the MDL.

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Filter Blank	
Lab ID	N/A
Field ID	N/A
Filter ID	N/A
Acid Analysis	Yes
Total Sample Volume, mL	150
Aliquot Volume, mL	20
Titration Volume #1, mL	0.00
Titration Volume #2, mL	0.00
Sodium Hydroxide, N	0.100
Acid, as H_2SO_4*2 H_2O, mg	**0.00**
Sulfate Analysis	Yes
Total Sample Volume, mL	150
Aliquot Volume, mL	20
Titration Volume #1, mL	0.06
Titration Volume #2, mL	0.07
Barium Chloride, N	0.009515
IPA Blank, as H_2SO_4*2 H_2O, mL	0.06
sured Sulfate, as H_2SO_4*2 H_2O, mg	0.02
Sulfate, as H_2SO_4*2 H_2O, mg	**0.02**

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Reagent Blank			
Reagent	**Water**	**Methylene Chloride**	**Isopropyl Alcohol**
Lab ID	B24028	N/A	N/A
Field ID	F2 - M5.1 - RB - DI	N/A	N/A
Beaker ID	G2259	T5194	N/A
Tare Weight, g	27.98720	2.05240	--
Full Field Vessel, g	552.9	--	--
Empty Field Vessel, g	43.9	--	--
Reagent Volume, mL	--	250	125
Reagent Density, g/mL	N/A	1.33	--
Reagent Mass, g	509.0	332.5	--
Time in Dessicator	4/2/25 11:15	4/1/25 8:28	--
Weight #1, g	27.9865	2.0525	--
Time of Weighing #1	4/3/25 14:22	4/2/25 11:12	--
Weight #2, g	27.9868	2.0525	--
Time of Weighing #2	4/4/25 8:33	4/3/25 9:20	--
Blank Mass, mg*	**0.50**	**0.50**	**--**
Blank, mg/g	**0.0010**	**0.0015**	**--**
Acid Analysis	No	No	No
Sulfate Analysis	No	No	Yes
Total Sample Volume, mL	--	--	100
Aliquot Volume, mL	--	--	100
Titration Volume #1, mL	--	--	0.06
Titration Volume #2, mL	--	--	0.06
Barium Chloride, N	--	--	0.009515
Sulfate, as H_2SO_4*2 H_2O, mg	**--**	**--**	**0.04**

*The total results have been calculated based on MDL values for any sample fractions which were below the MDL.

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Standardization	
Reagent	**Barium Chloride**
Aliquot Volume, mL	20
Titration Volume #1, mL	21.07
Titration Volume #2, mL	21.09
IPA Blank, as H_2SO_4*2 H_2O, mL	0.06
H_2SO_4, N	0.0100
Barium Chloride, N	**0.009515**

Alliance TECHNICAL GROUP

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

ID	Tare (g)	Weight #1			Weight #2			Media
		Initials	Mass (g)	Date / Time	Initials	Mass (g)	Date / Time	
240508	0.27470	KAO	0.2747	7/16/24 16:05	KAO	0.2747	7/17/24 9:12	Glass, 81mm - Whatman, GF/A
240581	0.27605	KAO	0.2760	7/25/24 14:36	KAO	0.2761	7/26/24 8:42	Glass, 81mm - Whatman, GF/A
T5192	2.04325	KMV	2.0433	3/17/25 9:24	KMV	2.0432	3/17/25 15:28	Aluminum Tin
T5193	2.06855	KMV	2.0686	3/17/25 9:24	KMV	2.0685	3/17/25 15:28	Aluminum Tin
240316	0.11870	KMV	0.1187	5/6/24 9:37	KMV	0.1187	5/6/24 16:12	Glass, 47mm - Whatman, 934-AH (Pre-Rinsed)
240317	0.11790	KMV	0.1178	5/6/24 9:37	KMV	0.1180	5/6/24 16:13	Glass, 47mm - Whatman, 934-AH (Pre-Rinsed)
G2265	29.15095	KAO	29.1508	3/20/25 9:38	KMV	29.1511	3/25/25 14:43	Evap Dish
G2274	28.86350	KAO	28.8636	3/19/25 16:08	KMV	28.8634	3/20/25 9:41	Evap Dish
G2259	27.98720	KAO	27.9873	3/20/25 9:36	KMV	27.9871	3/25/25 14:42	Evap Dish
T5194	2.05240	KMV	2.0523	3/17/25 9:24	KMV	2.0525	3/17/25 15:28	Aluminum Tin

Alliance TECHNICAL GROUP

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080
Method: SCAQMD Method 5.1

Filter			
Lab ID	B24026	B24024	
Field ID	F2 - M5.1 - C1 - FB	F2 - M5.1 - C1 - R1	
Filter ID	2M0508	2M0581	
Weight #1, g	0.2749	0.2772	
Weight #2, g	0.2750	0.2773	

Organic Fraction			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Beaker ID	T5192	T5193	
Reagent Volume, mL	125	125	
Weight #1, g	2.0433	2.0689	
Weight #2, g	2.0435	2.0690	

Insoluble Particulate			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Filter ID	2M0316	2M0317	
Weight #1, g	0.1186	0.1189	
Weight #2, g	0.1186	0.1190	

Soluble Particulate			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Beaker ID	G2265	G2274	
Full Field Vessel, g	363.6	545.5	
Empty Field Vessel, g	45.6	46.1	
Weight #1, g	29.1503	28.8987	
Weight #2, g	29.1507	28.8991	

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TECHNICAL GROUP

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080
Method: SCAQMD Method 5.1

Reagent Blank			
Reagent	**Water**	**Methylene Chloride**	
Lab ID	B24028	N/A	
Field ID	F2 - M5.1 - RB - DI	N/A	
Beaker ID	F2259	T594	
Full Field Vessel, g	552.9	--	
Empty Field Vessel, g	439	--	
Reagent Volume, mL	—	250	
Weight #1, g	27.9805	2.0525	
Weight #2, g	27.9808	2.0525	
Acid Analysis	No	No	
Sulfate Analysis	No	No	

Alliance TECHNICAL GROUP

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Filter			
Lab ID	B24026	B24024	
Field ID	F2 - M5.1 - C1 - FB	F2 - M5.1 - C1 - R1	
Filter ID	240508	240581	
Weight #1, g	0.2749	0.2772	
Weight #2, g	0.2750	0.2773	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
A Titration Volume #1, mL	0.00	0.00	
A Titration Volume #2, mL	0.00	0.00	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
S Titration Volume #1, mL	0.07	0.35	
S Titration Volume #2, mL	0.05	0.30	

Organic Fraction			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Beaker ID	T5192	T5193	
Reagent Volume, mL	125	125	
Weight #1, g	2.0433	2.0689	
Weight #2, g	2.0435	2.0690	

Alliance TECHNICAL GROUP

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Insoluble Particulate			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Filter ID	240316	240317	
Weight #1, g	0.1186	0.1189	
Weight #2, g	0.1186	0.1190	

Soluble Particulate			
Lab ID	B24027	B24025	
Field ID	F2 - M5.1 - C2 - FB	F2 - M5.1 - C2 - R1	
Beaker ID	G2265	G2274	
Full Field Vessel, g	363.6	454.5	
Empty Field Vessel, g	45.6	46.1	
Weight #1, g	29.1503	28.8987	
Weight #2, g	29.1507	28.8991	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
A Titration Volume #1, mL	0.00	0.05	
A Titration Volume #2, mL	0.00	0.04	
Total Sample Volume, mL	150	150	
Aliquot Volume, mL	20	20	
S Titration Volume #1, mL	0.05	7.34	
S Titration Volume #2, mL	0.04	7.39	

Alliance TECHNICAL GROUP

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Filter Blank	
Lab ID	N/A
Field ID	N/A
Filter ID	N/A
Acid Analysis	Yes
Total Sample Volume, mL	150
Aliquot Volume, mL	20
Titration Volume #1, mL	0.00
Titration Volume #2, mL	0.00
Sulfate Analysis	Yes
Total Sample Volume, mL	150
Aliquot Volume, mL	20
Titration Volume #1, mL	0.06
Titration Volume #2, mL	0.07

Reagent Blank			
Reagent	Water	Methylene Chloride	Isopropyl Alcohol
Lab ID	B24028	N/A	N/A
Field ID	F2 - M5.1 - RB - DI	N/A	N/A
Beaker ID	G2259	T5194	N/A
Full Field Vessel, g	552.9	--	—
Empty Field Vessel, g	43.9	--	—
Reagent Volume, mL	-	250	—
Weight #1, g	27.9865	2.0525	—
Weight #2, g	27.9868	2.0525	—
Acid Analysis	No	No	—
Sulfate Analysis	No	No	Yes
Aliquot Volume, mL	--	--	—
Titration Volume #1, mL	—	—	0.00
Titration Volume #2, mL	—	—	0.06
Barium Chloride, N	--	--	—
Sulfate, as H_2SO_4*2 H_2O, mg	--	--	—

Alliance
ANALYTICAL SERVICES

Client: Waste Management National Services
Location: Lancaster, CA
Project No.: AST-2025-1080_R1
Method: SCAQMD Method 5.1

Standardization	
Reagent	Barium Chloride
Aliquot Volume, mL	20
Titration Volume #1, mL	21.07
Titration Volume #2, mL	21.09

Alliance

CHAIN OF CUSTODY RECORDS

INVOICE TO: _____

ATTN:

REPORT TO:

ALLIANCE Source Testing
10602 Walker St.
Cypress, CA 90630
(714) 889-4000 Fax (714) 889-7030
Charles.Figueroa@stacktest.com
Contact: Charles Figueroa

PO # _____

AST Office:

Turnaround Time
Standard: ____ Other: ____
Rush:
Depends on # of Samples
5 - 10 days ~~X~~ JDX
3 - 7 days _____

Job # 25-1080 Unit # ~~Pre Heater~~ Flare 2 Client: Waste Mgmt. Location: Lancaster, PA

Samplers: (Signature) Nich Phom.
Project Manager:

Unit Information:
Exhaust ~~Stack~~ - Flare #2

ANALYSIS REQUESTED

Return or Dispose

Sample Date	Sample Time	Sample Identification	Lab Sample #	Type Of Sample: LIQUID	GAS	SOLID	No of Containers	4 ANIONS (MS.1)	Acid	Sulfide			REMARKS
3/21/25		251080-F2-MS.1-C1-R1				✓	1	✓	✓	✓			
3/21		251080-F2-MS1-C2-R1		✓			1	✓	✓	✓			
3/21		25-1080-F2-MS.1-C1-FB				✓	1	✓	✓	✓			
3/21		251080-F2-MS.1-C2-FB		✓			1	✓	✓	✓			
3/21/25	–	25080-F2-MS.1-RB-DI		✓			1	✓					

Relinquished by: Nich Phom Date: 3/24 Time 0800	Received by: Date: 2/25/25 Time:	Relinquished by: Date: 3/25/25 Time: 1030	Received by: Date: 03/25/25 Time 10:33
Relinquished by: Date: Time	Received by: Date: Time:	Relinquished by: Date: Time:	Received by: JDX Date: Time

Atmospheric Analysis & Consulting, Inc

CLIENT	: Alliance Technical Group
PROJECT NAME	: Waste Mgmt
PROJECT NO.	: 25-1080
AAC PROJECT NO.	: 250733 - Rev 1
REPORT DATE	: 04/11/2025

On March 24, 2025, Atmospheric Analysis & Consulting, Inc. received four (4) Six-Liter Summa Canisters for Volatile Organic Compounds analysis by EPA Method TO-15. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab ID	Return Pressure (mmHga)
251080-F2-O-TO15-R1	250733-73201	129.4
251080-F2-O-TO15-R2	250733-73202	189.5
251080-F2-O-TO15-R3	250733-73203	279.3
251080-F2-I-TO15-1	250733-73208	495.9

This analysis is accredited under the laboratory's ISO/IEC 17025:2017 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation AT-1908. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. One compound (1,2,4-Trichlorobenzene) had low recovery in the daily calibration check before the analysis of these samples. The compound was not observed in any samples. No other problems were encountered during receiving, preparation, and/or analysis of these samples.

The Technical Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D.
Technical Director

Report 250733 - Rev 1 supersedes report 250733. Per client request, the results were changed to adhere to the SCAQMD 1150.1 list on April 11, 2025.

This report consists of **11** pages.

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com • (805) 650-1642

Laboratory Analysis Report

CLIENT : Alliance Technical Group
PROJECT NO : 250733 - Rev 1
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 03/24/2025
DATE REPORTED : 04/11/2025
ANALYST : DL/CH

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	251080-F2-O-TO15-R1			Sample Reporting Limit (SRL) (MRLxDF's)	251080-F2-O-TO15-R2			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	250733-73201				250733-73202				
Date Sampled	03/21/2025				03/21/2025				
Date Analyzed	03/28/2025				03/28/2025				
Can Dilution Factor	7.95				5.39				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Vinyl Chloride	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
1,1-Dichloroethene	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Methylene Chloride (DCM)	<SRL	U	1	7.95	<SRL	U	1	5.39	1.00
1,1-Dichloroethane	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Chloroform	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
1,2-Dichloroethane	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
1,1,1-Trichloroethane	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Benzene	<SRL	U	1	3.98	4.53		1	2.69	0.50
Carbon Tetrachloride	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Trichloroethene (TCE)	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Toluene	4.13		1	3.98	<SRL	U	1	2.69	0.50
1,2-Dibromoethane	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Tetrachloroethene (PCE)	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Chlorobenzene	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
m & p-Xylene	<SRL	U	1	7.95	<SRL	U	1	5.39	1.00
o-Xylene	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
1,3-Dichlorobenzene	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
1,4-Dichlorobenzene	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
1,2-Dichlorobenzene	<SRL	U	1	3.98	<SRL	U	1	2.69	0.50
BFB-Surrogate Std. % Recovery		61%				54%			50-150%

U - Compound was not detected at or above the SRL.

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com • (805) 650-1642

Laboratory Analysis Report

CLIENT : Alliance Technical Group
PROJECT NO : 250733 - Rev 1
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 03/24/2025
DATE REPORTED : 04/11/2025
ANALYST : DL/CH

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	251080-F2-O-TO15-R3			Sample Reporting Limit (SRL) (MRLxDF's)	251080-F2-I-TO15-1			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	250733-73203				250733-73208				
Date Sampled	03/21/2025				03/21/2025				
Date Analyzed	03/28/2025				03/28/2025				
Can Dilution Factor	3.65				2.05				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Vinyl Chloride	<SRL	U	1	1.83	237		50	51.2	0.50
1,1-Dichloroethene	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
Methylene Chloride (DCM)	<SRL	U	1	3.65	<SRL	U	50	102	1.00
1,1-Dichloroethane	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
Chloroform	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
1,2-Dichloroethane	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
1,1,1-Trichloroethane	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
Benzene	1.86		1	1.83	1330		50	51.2	0.50
Carbon Tetrachloride	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
Trichloroethene (TCE)	<SRL	U	1	1.83	264		50	51.2	0.50
Toluene	14.2		1	1.83	7510		50	51.2	0.50
1,2-Dibromoethane	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
Tetrachloroethene (PCE)	<SRL	U	1	1.83	371		50	51.2	0.50
Chlorobenzene	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
m & p-Xylene	18.9		1	3.65	2540		50	102	1.00
o-Xylene	7.30		1	1.83	697		50	51.2	0.50
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
1,3-Dichlorobenzene	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
1,4-Dichlorobenzene	2.81		1	1.83	<SRL	U	50	51.2	0.50
1,2-Dichlorobenzene	<SRL	U	1	1.83	<SRL	U	50	51.2	0.50
BFB-Surrogate Std. % Recovery		87%				81%			50-150%

U - Compound was not detected at or above the SRL.

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CLIENT	: Alliance Technical Group
PROJECT NAME	: 25-1080
AAC PROJECT NO.	: 250733
REPORT DATE	: 03/28/2025

On March 24, 2025, Atmospheric Analysis & Consulting, Inc. received one (1) Tedlar Bag for BTU analysis by ASTM D-3588/SCAQMD 307.91, two (2) Six-Liter Summa Canisters and two (2) traps for TNMNEOC analysis by SCAQMD 25.1 and Fixed Gases analysis by EPA 3C, and two (2) Six-Liter Summa Canisters and two (2) Impinger vials for TNMNEOC analysis by SCAQMD 25.3 and Fixed Gases analysis by EPA 3C/SCAQMD 10.1. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab No.	Return Pressure (mmHg)
251080-F2-O-M25.3-1A	250733-73204	439.0
251080-F2-O-M25.3-1B	250733-73205	584.0
251080-F2-I-M25.1-1A	250733-73206	343.6
251080-F2-I-M25.1-1B	250733-73207	500.6
251080-F2-I-SCAQMD307.91-ASTM1945-D3588-1	250733-73209	-

This analysis is performed in accordance with AAC's Quality Manual. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Sample "251080-F2-I-SCAQMD307.91-ASTM1945-D3588-1" (AAC ID: 250733-73209) was received passed the AAC recommended hold time of 24-hours for Sulfur analysis of samples collected in a Tedlar Bag. No other problems were encountered during receiving, preparation, and/or analysis of these samples. The Technical Director or his/her designee, as verified by the following signature, has authorized release of the data.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D.
Technical Director

This report consists of **84** pages.

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Atmospheric Analysis & Consulting, Inc.

SAMPLE RECEIPT / LOG-IN REPORT

Client Name: ATG (Cypress)

Project Name: 25-1080 (Waste Mgmt)

AAC Project No.: 250733

Sampled By: Client
Received By: G. Ruelas

Turn Around Time: 5 Days
Lab Due Date: 03/31/2025
Final Due Date: 03/31/2025

Sample Receipt Date Time	Clients ID	Sampling Date/Time	Sample #	Matrix	Analysis Requested
03/24/2025 1029	251080-F2-O-TO15-R1	03/21/2025 1030	73201	Summa Canister	TO15
03/24/2025 1029	251080-F2-O-TO15-R2	03/21/2025 1050	73202	Summa Canister	TO15
03/24/2025 1029	251080-F2-O-TO15-R3	03/21/2025 1152	73203	Summa Canister	TO15
03/24/2025 1029	251080-F2-O-M25.3-1A	03/21/2025 1030	73204	Canister & Impinger	SCAQMD 25.3
03/24/2025 1029	251080-F2-O-M25.3-1B	03/21/2025 1030	73205	Canister & Impinger	SCAQMD 25.3
03/24/2025 1029	251080-F2-I-M25.1-1A	03/21/2025 1030	73206	Canister & Trap	SCAQMD 25.1
03/24/2025 1029	251080-F2-I-M25.1-1B	03/21/2025 1030	73207	Canister & Trap	SCAQMD 25.1
03/24/2025 1029	251080-F2-I-TO15-1	03/21/2025 1030	73208	Summa Canister	TO15
03/24/2025 1029	251080-F2-I-SCAQMD307.91-ASTM1945-D3588-1	03/21/2025 1000	73209	Tedlar Bag	SCAQMD 307.91 ASTM D-1945 ASTM D3588

CANISTER PRESSURE LOG

Client: ATG (Cypress)

Project No.: 250733

Date: 03/24/2025

Canister #	Sample #	Initial Pressure mmHg	Final Pressure mmHg
1446	73201	129.4	1028.9
1270	73202	189.5	1020.9
1290	73203	279.3	1019.5
1718	73204	439.0	909.5
441	73205	584.0	905.0
247	73206	343.6	906.0
262	73207	500.6	912.4
1408	73208	495.9	1016.2

1

SAMPLE RECEIPT / LOG-IN REPORT

Client Name: ATG (Cypress)

Project Name: 25-1080 (Waste Mgmt)

AAC Project No.: 250733

Sampled By: Client
Received By: G. Ruelas

Turn Around Time: 5 Days
Lab Due Date: 03/31/2025
Final Due Date: 03/31/2025

Sample Receipt Date Time	Clients ID	Sampling Date/Time	Sample #	Matrix	Analysis Requested

REMARKS:

Total Samples: 9

Client returned 3x 25.3 sets (1x set unused) + 2x 25.1 sets (1x set unused) + 6x cans (4x unused) + 3x 25.3 style FCs.

250733

Page _ of _

Alliance

CHAIN OF CUSTODY RECORDS

INVOICE TO:

REPORT TO:

ALLIANCE Source Testing
10602 Walker St.
Cypress, CA 90630
(714) 889-4000 Fax (714) 889-7030
Charles.Figueroa@stacktest.com
Contact: Charles Figueroa

PO # _____

AST Office:

ATTN:

Turnaround Time

Standard: ____ Other: ____

Rush:
Depends on # of Samples
5 - 10 days ___X___
3 - 7 days _____

Job # 25-1080 | Unit # Pre-Heater Flare 2 | Client: Waste Mgmt | Location: Lancaster, CA

Samplers: (Signature)

Project Manager: Nich Pham

Unit Information:
Exhaust ~~stc~~ outlet Flare #2

ANALYSIS REQUESTED

Return or Dispose

Sample Date	Sample Time	Sample Identification	Lab Sample #	Type Of Sample: LIQUID	GAS	SOLID	No of Containers	EPA TO15 Specific Org.	SCAQMD 25.3				REMARKS
3/24/25	1030	251080-F2-O-TO15-R1	73201		✓		1	✓					EPA TO-15 Comp Specified Organic
	1050	251080-F2-O-TO15-R2	73202		✓		1	✓					
	1152	251080-F2-O-TO15-R3	73203		✓		1	✓					
	1030	251080-F2-O-M25.3-TK000817-1A	73204		✓		1		✓				SCAQMD M25.3
	1030	251080-F2-O-M25.3-Vial-~~D3H~~ AD Ø	1A	✓			1		✓				↓
	1030	251080-F2-O-M25.3-TK000441-1B	73205		✓		1		✓				
↓	1050	251080-F2-O-M25.3-Vial xTRA	1-1B	✓			1		✓				↓

Relinquished by:	Received by:	Relinquished by:	Received by:
Nich Pham			
Date: 3/24/25 Time 0700 PM 1700	Date: 3.24.25 Time:	Date: 3.24.25 Time: 10:26	Date: 3/24/25 Time 1029
Relinquished by:	Received by:	Relinquished by:	Received by:
Date: Time	Date: Time:	Date: Time:	Date: Time

D/O - 3x 25.3 sets (1x set unused) + 5x cans (2x cans unused) + 3x 25.3 FCs

250733

Alliance

CHAIN OF CUSTODY RECORDS

INVOICE TO:

ATTN:

REPORT TO:

ALLIANCE Source Testing
10602 Walker St.
Cypress, CA 90630
(714) 889-4000 Fax (714) 889-7030
Charles.Figueroa@stacktest.com
Contact: Charles Figueroa

PO # _____

AST Office:

Turnaround Time
Standard: ____ Other: ____
Rush:
Depends on # of Samples
5 - 10 days ___X____
3 - 7 days _____

Job # 25-1081 | Unit # ~~Pre-Heater~~ Flare #2 | Client: Waste Mgmt | Location: Lancaster, CA.

Samplers: (Signature)

Project Manager: Nick Phom.

Unit Information:
Exhaust Flare #2.

ANALYSIS REQUESTED

Sample Date	Sample Time	Sample Identification	Lab Sample #	Type Of Sample: LIQUID	GAS	SOLID	No of Containers	SCAQMD 25.1 Oz/Carb	EPA 10-15	SCAQMD 307-91 ASTM-D1945 D3588		Return or Dispose REMARKS
3/21/25	1030	251080-F2-I-M25.1-1A	73206		✓		1	✓				SCAQMD M 25.1
	1030	251080-F2-I-M25.1-1B	73207		✓		1	✓				SCAQMD-M 25.1
	1030	251080-F2-I-TO15-1	73208		✓		1		✓			Specified Organics EPA TO-15 Comps
✓	1000	251080-F2-I-SCAQMD 307-91-ASTM 1945-D3588-1	73209		✓		1			✓		Bag Grab - Inlet Fuel - SCAQMD 307.91 - ASTM-1945 - D3588.

Relinquished by:	Received by:	Relinquished by:	Received by:
Nick Phom			1029
Date: 3/24/25 Time 0700	Date: 3/24/25 Time:	Date: 3/24/25 Time: 10:26	Date: Time 3/24/25
Relinquished by:	Received by:	Relinquished by:	Received by:
Date: Time	Date: Time:	Date: Time:	Date: Time

Dilo - 2, 25-1 sets (1 set unused) + 1x can

Equipment Prep Sheets & Trap Burning Logs

Atmospheric Analysis & Consulting, Inc

Equipment Preparation Data Sheet
SCAQMD 25.3

Analyst: SS Date: 03/19/2025

Client: Alliance Technical Group Project Name: 25-1080

Thermometer ID: #5 Gauge ID: Ashcroft

SAMPLE	1
Can #	1817
Can Cleaning Date	2/20/2025
Initial Pressure (mmHg)	3.0
Flow #	NA
Flow Cleaning Date	03/19/2025
Impinger #	NA
Impinger Cleaning Date	03/19/2025
Vial #	AD-14
HPLC Water Lot #	012725-06
Probes washed	Y
Probes Baked in Oven	Y
System Purged	Y
Leak Checked	Y
Gauge Checked	Y

Comments:

SAMPLE	2
Can #	441
Can Cleaning Date	3/13/2025
Initial Pressure (mmHg)	0.0
Flow #	NA
Flow Cleaning Date	03/19/2025
Impinger #	NA
Impinger Cleaning Date	03/19/2025
Vial #	Extra I
HPLC Water Lot #	012725-06
Probes washed	Y
Probes Baked in Oven	Y
System Purged	Y
Leak Checked	Y
Gauge Checked	Y

Comments:

Atmospheric Analysis & Consulting, Inc

Sample Receiving Data Sheet
SCAQMD 25.3

Analyst: SS Project # : 250733 Courier:

Sample Receiving Date and Time: 03/24/2025 10:29

Thermometer ID: #5 Gauge ID: Ashcroft

SAMPLE	1
Sample ID	73204
Can #	1817
Flow #	NA
Tank vol	6L
InitialPressure (mmHg)	3.0
Return Pressure (mmHg)	439.0
Vial #	AD-14
Imp #	NA
Return Volume (mL)	10
Temperature	8 C
Purged Date	03/25/2025
Purge Start Time	11:17 AM
Purge End Time	11:27 AM
Post Purge Pres (mmHg)	489.5
Final Pressure (mmHg)	909.5
Dilution Factor	2.07

Comments:

SAMPLE	2
Sample ID	73205
Can #	441
Flow #	NA
Tank vol	6L
InitialPressure (mmHg)	0.0
Return Pressure (mmHg)	584.0
Vial #	Extra I
Imp #	NA
Return Volume (mL)	9.9
Temperature	8 C
Purged Date	03/25/2025
Purge Start Time	11:34 AM
Purge End Time	11:44 AM
Post Purge Pres (mmHg)	635.0
Final Pressure (mmHg)	905.0
Dilution Factor	1.55

Comments:

Atmospheric Analysis & Consulting, Inc

Equipment Preparation Data Sheet
SCAQMD 25.1

Analyst: SS Date and Time: 03/19/2025 8:00

Client: Alliance Technical Group Project Name: 25-1080

Thermometer ID: #5 Gauge ID: Ashcroft

SAMPLE 01	
Can #	247
Can Cleaning Date	2/20/2025
Initial Pressure (mmHg)	0.0
Flow #	NA
Flow Cleaning Date	03/19/2025
Trap #	163
Trap Cleaning Date	03/19/2025
Probes washed	Y
Probes Baked in Oven	Y
System Purged	Y
Leak Checked	Y
Gauge Checked	Y

SAMPLE 02	
Can #	262
Can Cleaning Date	2/20/2025
Initial Pressure (mmHg)	0.0
Flow #	NA
Flow Cleaning Date	03/19/2025
Trap #	168
Trap Cleaning Date	03/19/2025
Probes washed	Y
Probes Baked in Oven	Y
System Purged	Y
Leak Checked	Y
Gauge Checked	Y

Comments:

Comments:

Atmospheric Analysis & Consulting, Inc.

Sample Receiving Data Sheet
SCAQMD 25.1

Analyst: SS Project # : 250733 Courier:

Sample Receiving Date and Time: 03/24/2025 10:29

Thermometer ID: #5 Gauge ID: Ashcroft

SAMPLE 01	
Sample ID	73206
Can #	247
Flow #	NA
Tank vol	6L
InitialPressure (mmHg)	0.0
Return Pressure (mmHg)	343.6
Trap #	163
Received on dry ice	Y
Purge Start Time	1:55 PM
Purge End Time	1:58 PM
Purged Date	03/25/2025
Final Pressure (mmHg)	906.0
Dilution Factor	2.64

SAMPLE 02	
Sample ID	73207
Can #	262
Flow #	NA
Tank vol	6L
InitialPressure (mmHg)	0.0
Return Pressure (mmHg)	500.6
Trap #	168
Received on dry ice	Y
Purge Start Time	1:15 PM
Purge End Time	1:18 PM
Purged Date	03/25/2025
Final Pressure (mmHg)	912.4
Dilution Factor	1.82

Comments:

Comments:

Atmospheric Analysis & Consulting, Inc

SCAQMD 25.1
Trap Burning Summary Sheet

Client : Alliance Technical Group
Project Number : 250733

Analyst: SS

SAMPLE	1
Sample ID	73206
Trap #	163
ICV#	1909
ICV Volume (L)	6L
Analysis Date	03/25/2025
Cold Purge Start Time	13:55
Cold Purge End Time	13:58
Initial Pressure (mmHg)	2.0
Trap Burning Start Time	13:58
Trap Burning End Time	14:28
Final Pressure (mmHg)	902.7
Analysis Pressure (mmHg)	902.7
Total Vol. Collected in ICV	7.11
Dilution Factor	1.00
Was Decoke Used?	N

Comments:

SAMPLE	2
Sample ID	73207
Trap #	168
ICV#	1890
ICV Volume (L)	6L
Analysis Date	03/25/2025
Cold Purge Start Time	13:15
Cold Purge End Time	13:18
Initial Pressure (mmHg)	2.0
Trap Burning Start Time	13:18
Trap Burning End Time	13:48
Final Pressure (mmHg)	901.5
Analysis Pressure (mmHg)	901.5
Total Vol. Collected in ICV	7.10
Dilution Factor	1.00
Was Decoke Used?	N

Comments:

Results

LABORATORY ANALYSIS REPORT

CLIENT : Alliance Technical Group
PROJECT NO. : 250733
MATRIX : Air
UNITS : ppmC

SAMPLING DATE : 03/21/2025
RECEIVING DATE : 03/24/2025
ANALYSIS DATE : 03/26-27/2025
REPORT DATE : 03/28/2025

ANALYSIS METHOD: SCAQMD 25.3

Client ID	Lab ID #	Tank Vol Liters (V_{Tank})	Initial Pressure mmHg (P_i)	Return Pressure mmHg (P_r)	Final Pressure mmHg (P_f)	Sample Vol. (L) (V_{Sample})	Tank Dil Factor (DF_{Tank})	NMNEOC Tank (C_{Tank})	NMNEOC Trap (C_{Trap})	TNMNEOC (Total VOC ppmC)
251080-F2-O-M25.3-1A	250733-73204	6.00	3.0	439.0	909.5	3.44	2.07	<1.71	1.94	2.11
251080-F2-O-M25.3-1B	250733-73205	6.00	0.0	584.0	905.0	4.61	1.55	<1.28	2.96	3.21

*** TNMNEOC Includes Bias Correction=1.086, as per method**

NMNEOC Tank PQL = 0.253 ppm x DF x 3, NMNEOC Trap RL = 0.1 ppmC

NMNEOC Purge Blank vial =0.1177, Purge Blank subtraction on NMNEOC Trap vial results.

EPA 3C/SCAQMD 10.1

Reporting Limit: 0.1 %		Analyte			
Client ID	Lab ID #	O_2	CO	CH_4	CO_2
251080-F2-O-M25.3-1A	250733-73204	11.7 %	137 ppm	<2.1 ppm	8.36 %
251080-F2-O-M25.3-1B	250733-73205	15.9 %	34.7 ppm	<1.5 ppm	5.11 %

Fixed Gases have been normalized to 100% on a wet basis

LABORATORY ANALYSIS REPORT

CLIENT : Alliance Technical Group
PROJECT NO. : 250733
MATRIX : Air
UNITS : ppmC

SAMPLING DATE : 03/21/2025
RECEIVING DATE : 03/24/2025
ANALYSIS DATE : 03/26/2025
REPORT DATE : 03/28/2025

ANALYSIS METHOD: SCAQMD 25.1

Client ID	Lab ID #	Tank Vol Liters (V_{Tank})	Initial Pressure mmHg (P_i)	Return Pressure mmHg (P_r)	Final Pressure mmHg (P_f)	Sample Vol. (L) (V_{Sample})	Tank Dil Factor (DF_{Tank})	NMNEOC Tank (C_{Tank})	NMNEOC Trap (C_{Trap})	TNMNEOC (Total VOC ppmC)
251080-F2-I-M25.1-1A	250733-73206	6.00	0.0	343.6	906.0	2.71	2.64	525	1178	1703
251080-F2-I-M25.1-1B	250733-73207	6.00	0.0	500.6	912.4	3.95	1.82	448	554	1002

NMNEOC Tank PQL = 0.253 ppm x DF x 3

EPA 3C

Reporting Limit: 0.1 %		Analyte			
Client ID	Lab ID #	O_2	CO	CH_4	CO_2
251080-F2-I-M25.1-1A	250733-73206	2.77 %	<0.3 %	37.5 %	33.2 %
251080-F2-I-M25.1-1B	250733-73207	2.33 %	<0.2 %	38.5 %	34.1 %

Fixed Gases have been normalized to 100% on a wet basis

Laboratory Analysis Report
ASTM-D3588 (BTU and F-Factor)

CLIENT : Alliance Technical Group
PROJECT NO. : 250733

SAMPLING DATE : 03/21/2025
ANALYSIS DATE : 03/24/2024

	Client ID:	251080-F2-I-SCAQMD307.91-ASTM1945-D3588-1			
	AAC ID:	250733-73209			
	Component	Mole %	Mole % SRL	Weight %	Weight % SRL
FIXED GASES	H_2	< 1.00	1.00	< 0.001	0.001
	O_2	1.55	0.100	1.72	0.001
	N_2	24.3	0.100	23.6	0.001
	CO	< 0.100	0.100	< 0.001	0.001
	CO_2	34.1	0.100	52.1	0.001
	CH_4	39.6	0.00005	22.1	0.003
	He	NM	NM	NM	NM
	Ar	NM	NM	NM	NM
HYDROCARBONS	C_2 (as Ethane)	0.00069	0.00005	0.0007	0.0000
	C_3 (as Propane)	0.00294	0.00005	0.0045	0.0001
	C_4 (as Butane)	0.00202	0.00005	0.0041	0.0001
	C_5 (as Pentane)	0.00280	0.00005	0.0070	0.0001
	C_6 (as Hexane)	0.00290	0.00005	0.0087	0.0001
	C_{6+} (as Hexane)	0.00838	0.00005	0.0250	0.0001
TRS	Total Reduced Sulfur	0.0433	0.0000010	0.0512	0.000001
H2O	Moisture content	NM	NM	NM	NM

All results have been normalized to 100% on a wet basis.

Fuel Gas Specifications			
Atomic Breakdown - (scf/lb) / %		*HHV Btu/lb*	5283
Carbon (C)	30.8	*LHV Btu/lb*	4756
Hydrogen (H)	5.55	*HHV Btu/dscf*	401
Oxygen (O)	39.6	*LHV Btu/dscf*	361
Nitrogen (N)	23.6	*F-Factor*	9921
Helium (He)	0.00	*Relative Density*	0.996
Argon (Ar)	NM	*C2-C6+ Weight %*	0.0500
Sulfur (S)	0.0481	*MW lb/lb-mole*	28.8
Motor Octane Number	84.4	*Methane Number*	18.0
		Wobbe Number	402

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LABORATORY ANALYSIS REPORT

CLIENT : Alliance Technical Group
PROJECT NO. : 250733
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 03/21/2025
ANALYSIS DATE : 03/26/2025

Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	251080-F2-I-SCAQMD307.91-ASTM1945-D3588-1
AAC ID	250733-73209
Hydrogen Sulfide	**431**
COS / SO2	**0.809**
Methyl Mercaptan	**3.31**
Ethyl Mercaptan	**0.161**
Dimethyl Sulfide	**2.56**
Carbon Disulfide	**0.061**
Isopropyl Mercaptan	**2.82**
tert-Butyl Mercaptan	**0.108**
n-Propyl Mercaptan	< 0.050
Methylethylsulfide	< 0.050
sec-Butyl Mercaptan / Thiophene	**1.82**
iso-Butyl Mercaptan	**0.296**
Diethyl Sulfide	< 0.050
n-Butyl Mercaptan	< 0.050
Dimethyl Disulfide	< 0.050
2-Methylthiophene	< 0.050
3-Methylthiophene	**0.458**
Tetrahydrothiophene	**0.107**
Bromothiophene	< 0.050
Thiophenol	< 0.050
Diethyl Disulfide	< 0.050
Total Unidentified Sulfur	**0.304**
Total Reduced Sulfurs	**443**

All unidentified compound's concentrations expressed in terms of H_2S (TRS does not include COS and SO_2)
Sample Reporting Limit (SRL) is equal to Reporting Limitx Analysis Dil. Fac.

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com (805) 650-1642

Method 25.3 Calculation Summary Sheet

TOC Calculations (Trap):

$$C_{Trap} = \frac{(C_{Toc} \times V_{Trap})}{(V_{Sample})} \times \frac{V_{id}}{MW_c}$$

Where:

C_{Trap} = Gaseous concentration of TOC in condensate trap water, ppmv (as Carbon)
C_{Toc} = TOC concentration in ug/ml of condensate trap water (*from Raw Data printout*)
V_{Trap} = Volume of condensate trap water in ml (*from Sample Receiving Data Sheet*)
V_{id} = Volume of ideal gas per mole at 25°C (24.4652 liters/mole)
MW_c = Atomic weight of carbon (12.01 g/mol)
V_{Sample} = Volume sampled in collection tank in Liters (V_{Tank} x ($P_r - P_i$)/ P_a)

Where:

VTank = Volume of the sampling tank in liters (*from Sample Receiving Data Sheet*)
Pr = Return canister pressure of the sampling tank (*from Sample Receiving Data Sheet*)
Pi = Initial canister pressure of the sampling tank (*from Sample Receiving Data Sheet*)
Pa = atmospheric pressure (760 mmHg)

TCA Calculations (Tank):

$$C_{Tank} = C_{TCA} \times DF_{Tank} \times 3.0$$

Where:

C_{Tank} = Gaseous concentration of tank, ppmv (as Carbon)
C_{TCA} = Average of analysis results from chromatograms, ppmv (as Propane)
DF_{Tank} = Dilution factor resulting from tank pressurization upon receipt (Pf/Pr)
3.0 = Conversion of result (as Propane) to (as Carbon)

Where:

Pf = Final canister pressure after pressurization for analysis (*from Sample Receiving Data Sheet*)
Pr = Return canister pressure upon sample receipt (*from Sample Receiving Data Sheet*)

Final Calculation (Tank and Trap):

$$\text{Total VOC (ppmC)} = (C_{Trap} + C_{Tank}) \times 1.086$$

Per method section 4.11, the final concentration includes a 1.086 bias correction factor.

Fixed Gases Calculations (Tank):

$$\text{FG (i.e. } O_2) = C_{fg} \times DF_{Tank} / NF$$

Where:

C_{fg} = Average of analysis results from chromatograms, %
DF_{Tank} = Dilution factor resulting from tank pressurization upon receipt (Pf/Pr)
NF = Normalization Factor = sum of averages of all Fixed Gases x DF_{Tank} / 100%

Method 25.1 Calculation Summary Sheet

TCA Calculations (Trap):

$$C_{Trap} = \frac{(C_{CO_2} \times DF_{Icv} \times V_{Icv})}{(V_{Sample})}$$

Where:

C_{Trap} = Gaseous concentration of TNMOC collected in the trap, ppmv (as Carbon)
C_{CO2} = CO_2 concentration of collection vessel, ppmv (*from Raw Data printout*)
DF_{Icv} = Dilution Factor resulting from the pressurization of the intermediate collection vessel for anlysis (P_p/P_f) (*from Trap Burning Data Sheet*)
V_{Icv} = Volume collected in the intermediate collection vessel during the trap burning process in Liters (V_c x ($P_f - P_i$)/ P_a) (*from Trap Burning Data Sheet*)
V_{Sample} = Volume sampled in collection tank in Liters (V_{Tank} x ($P_r - P_i$)/ P_a) (*from Sample Receiving Data Sheet*)

Where:

Vc = Volume of the Intermediate collection vessel in liters (*from Trap Burning Data Sheet*)
Pp = final pressure of the ICV after pressurization for analysis (*from Trap Burning Data Sheet*)
Pf = final pressure of the ICV after the trap burning process (*from Trap Burning Data Sheet*)
Pi = initial pressure of the ICV before the trap burning process (*from Trap Burning Data Sheet*)
Pa = atmospheric pressure (760 mmHg)

VTank = Volume of the sampling tank in liters (*from Sample Receiving Data Sheet*)
Pr = Return canister pressure of the sampling tank (*from Sample Receiving Data Sheet*)
Pi = Initial canister pressure of the sampling tank (*from Sample Receiving Data Sheet*)
Pa = atmospheric pressure (760 mmHg)

TCA Calculations (Tank):

$$C_{Tank} = C_{TCA} \times DF_{Tank} \times 3.0$$

Where:

C_{Tank} = Gaseous concentration of tank, ppmv (as Carbon)
C_{TCA} = Average of analysis results from chromatograms, ppmv (as Propane)
DF_{Tank} = Dilution factor resulting from tank pressurization upon receipt (Pf/Pi)
3.0 = Conversion of result (as Propane) to (as Carbon)

Where:

Pf = Final canister pressure after pressurization for analysis (*from Sample Receiving Data Sheet*)
Pr = Return canister pressure upon sample receipt (*from Sample Receiving Data Sheet*)

Final Calculation (Tank and Trap):

$$\text{Total VOC (ppmC)} = (C_{Trap} + C_{Tank})$$

Fixed Gases Calculations (Tank):

$$\text{FG (i.e. } O_2) = C_{fg} \times DF_{Tank} / NF$$

Where:

C_{fg} = Average of analysis results from chromatograms, %
DF_{Tank} = Dilution factor resulting from tank pressurization upon receipt (Pf/Pr)
NF = Normalization Factor = sum of averages of all Fixed Gases x DF_{Tank} / 100%

QA/QC Summary

Quality Control/Quality Assurance Report

Date Analyzed : 03/26/2025
Analyst : SS/RSF
Units : %

Instrument ID : GC-TCA #5
Calb Date : 10/21/24
Reporting Limit : 0.1%

I - Opening Continuing Calibration Verification - SCAQMD 25.1,25.3

AAC ID	Analyte	O_2	N_2	CH_4	CO	CO_2
CCV	Spike Conc	9.9	19.9	10.0	10.0	10.0
	Result	10.0	20.4	10.4	9.9	10.1
	% Rec *	100.6	102.6	104.7	99.4	101.3

II - Method Blank - SCAQMD 25.1,25.3

AAC ID	Analyte	O_2	N_2	CH_4	CO	CO_2
MB	Concentration	ND	ND	ND	ND	ND

III - Laboratory Control Spike & Duplicate - SCAQMD 25.1,25.3

AAC ID	Analyte	O_2	N_2	CH_4	CO	CO_2
Lab Control Standards	Sample Conc	0.0	0.0	0.0	0.0	0.0
	Spike Conc	9.9	19.9	10.0	10.0	10.0
	LCS Result	10.1	21.0	10.2	9.8	9.9
	LCSD Result	10.2	22.1	10.1	9.7	9.8
	LCS % Rec *	101.7	105.4	102.7	97.5	99.2
	LCSD % Rec *	102.4	111.0	101.8	96.6	98.6
	% RPD ***	0.6	5.2	0.9	0.9	0.6

IV -Sample & Sample Duplicate - SCAQMD 25.1,25.3

AAC ID	Analyte	O_2	N_2	CH_4	CO	CO_2
250733-73206B	Sample	30.6	70.3	0.0	0.0	0.0
	Sample Dup	31.1	71.4	0.0	0.0	0.0
	Mean	30.8	70.8	0.0	0.0	0.0
	% RPD ***	1.8	1.5	0.0	0.0	0.0

V - Matrix Spike & Duplicate- SCAQMD 25.1,25.3

AAC ID	Analyte	N_2	CH_4	CO	CO_2
250733-73206B	Sample Conc	35.4	0.0	0.0	0.0
	Spike Conc	10.1	10.0	10.0	10.0
	MS Result	44.8	10.2	9.8	10.1
	MSD Result	46.0	9.7	9.3	9.6
	MS % Rec **	93.6	102.8	97.6	101.1
	MSD % Rec **	104.9	97.6	92.6	96.6
	% RPD ***	11.4	5.2	5.2	4.5

VI - Closing Continuing Calibration Verification - SCAQMD 25.1,25.3

AAC ID	Analyte	O_2	N_2	CH_4	CO	CO_2
CCV	Spike Conc	9.9	19.9	10.0	10.0	10.0
	Result	10.0	20.6	10.0	9.5	10.0
	% Rec *	100.7	103.2	100.2	95.1	100.2

** Must be 85-115%*

*** Must be 75-125%*

**** Must be < 25%*

ND = Not Detected

<RL = less than Reporting Limit

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SCAQMD 25.1,3 Quality Control/Quality Assurance Report

Date Analyzed : 03/26/2025
Analyst : SS/RSF

Instrument ID : GCTCA#5-FID
Calb Date : 10/02/2024
Units : ppmV

I - Opening Calibration Verification Standard

AAC ID	Analyte	Concentration	Result	% Recovery *
O-CV	NMNEOC	50.95	55.1	108.1
O-CV dp	NMNEOC	50.95	51.3	100.6
O-CV tp	NMNEOC	50.95	49.9	97.9

II - Method Blank

AAC ID	Analyte	Result
MB	NMNEOC	ND

III - Matrix Spike & Duplicate

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec ***	MSD % Rec ***	% RPD****
250733-73206B	NMNEOC	6.2	51.0	47.41	49.64	80.9	85.3	5.3

IV - 1 ppm Backflush Standards

AAC ID	Analyte	Result	% Recovery **
Backflush 1	NMNEOC	1.035	101.6
Backflush 2	NMNEOC	1.061	104.1
Backflush 3	NMNEOC	1.097	107.7

V - Bracketed Closing Calibration Verification Standards

AAC ID	Analyte	Concentration	Result	% Recovery *
C-CV Low	NMNEOC	10.2	9.80	96.1
C-CV High	NMNEOC	51.0	49.37	96.9

** Must be 90-110%*
*** Must be 80-120%*
**** Must be 75-125%*
***** Must be < 25%*

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SCAQMD 25.1,3 Quality Control/Quality Assurance Report

Date Analyzed : **03/26/2025**
Analyst: : **SS/RSF**

Instrument ID : **GCTCA#5-FID**
Calb Date : **10/02/2024**
Units : **ppmV**

Sample Duplicate analysis RPD's

AAC ID	Result	Result Dup	%RPD
250733-73206B	12.3	12.4	0.9
250733-73204	<PQL	<PQL	NA
250733-73205	<PQL	<PQL	NA
250733-73206	64.8	68.0	4.9
250733-73207	82.6	81.3	1.7

Quality Assurance Criteria	
Conc. (ppmv)	%RPD
0.253-3	≤20
4-6	≤15
7-12	≤12
13-30	≤10
31-50	≤5

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SCAQMD 25.1,3 Quality Control/Quality Assurance Report

Date Analyzed : 03/26/2025
Analyst : SS/RSF

Instrument ID : GCTCA#5-FID
Calb Date : 10/02/2024
Units : ppmV

I - Opening Calibration Verification Standard

AAC ID	Analyte	Concentration	Result	% Recovery *
O-CV	CO2	53.00	55.09	103.9
O-CV dp	CO2	53.00	49.84	94.0
O-CV tp	CO2	53.00	49.74	93.8

II - Method Blank

AAC ID	Analyte	Result
MB	CO2	ND

III - Matrix Spike & Duplicate

AAC ID	Analyte	Sample Concentration	Spike Added	MS	MSD	MS % Rec ***	MSD % Rec ***	% RPD****
250733-73206B	CO2	41.24	53.0	84.47	86.79	81.6	85.9	5.2

IV - 1 ppm Backflush Standards

AAC ID	Analyte	Result	% Recovery **
Backflush 1	CO2	1.184	111.7
Backflush 2	CO2	1.250	117.9
Backflush 3	CO2	1.162	109.6

V - Bracketed Closing Calibration Verification Standards

AAC ID	Analyte	Concentration	Result	% Recovery *
C-CV Low	CO2	10.6	10.21	96.3
C-CV High	CO2	53.0	47.81	90.2

** Must be 90-110%*
*** Must be 80-120%*
**** Must be 75-125%*
***** Must be < 25%*

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SCAQMD 25.1,3 Quality Control/Quality Assurance Report

Date Analyzed : 03/26/2025
Analyst: : SS/RSF

Instrument ID : GCTCA#5-FID
Calb Date : 10/02/2024
Units : ppmV

Sample Duplicate analysis RPD's

AAC ID	Result	Result Dup	%RPD
250733-73206B	410.7	414.0	0.8
250733-73207B	302.3	314.3	3.9

Quality Assurance Criteria	
Conc. (ppmv)	%RPD
0.253-3	≤20
4-6	≤15
7-12	≤12
13-30	≤10
31-50	≤ 5

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Quality Control/Quality Assurance Report

Trap Combustion by SCAQMD EPA 25.1

Date Analyzed : 03/25/2025
Analyst : DG
PQL : 50 ppm

Instrument ID : System 25.1
Units : ppm

Method Blank

Analyte	Qualifying Result	Result
CO2	<50	3.09

Recovery Check Standard

Analyte	Result	%Recovery*
CO2	559.739	**N/A**

Combustion Efficiency Standard

Analyte	Result	%Recovery*
CH4 (as CO2)	550.164	**98**

MB must be < PQL

** Must be 95-105%*

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Quality Control/Quality Assurance Report

TOC Analysis by SCAQMD Method 25.3

Date Analyzed	: 03/27/2025	Instrument ID	: TOC-V
Analyst	: SS	Units	: µg/mL
PQL	: 0.1 µg/ml	Calibration Date	: 01/28/2025

I - Opening Calibration Verification Standard

Analyte	Std. Conc.	Result	%Recovery*	Qualifier
TOC	2.50	2.48	**99**	NA

II - Method Blank

AAC ID	Analyte	MB	Qualifier
Method Blank	TOC	<PQL	NA

III - Bracketed Quality Control Standards

Analyte	Std. Conc.	Result	%Recovery*	Qualifier
TOC (Low)	0.500	0.492	**98**	NA
TOC (High)	5.00	5.14	**103**	NA

IV - Second Source Confirmation

Analyte	Std. Conc.	Result	%Recovery**	Qualifier
TOC	2.50	2.67	**107**	NA

MB must be < PQL

**Must be 90-110%*

*** Must be 85-115%*

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Quality Control/Quality Assurance Report

Date Analyzed : 03/24/2025
Analyst : RSF/DG
Units : ppmv

Instrument ID : FID #3
Calb Date : 11/09/24
Reporting Limit : 0.5 ppmv

I- Opening Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
CCV	Spike Conc	99.7	98.2	100.0	99.6	99.9	100.1
	Result	96.3	95.8	98.6	99.7	102.1	109.2
	% Rec *	96.6	97.5	98.6	100.1	102.3	109.1

II - Method Blank - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
MB	Concentration	ND	ND	ND	ND	ND	ND

III - Laboratory Control Spike & Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
Lab Control Standards	Sample Conc	0.0	0.0	0.0	0.0	0.0	0.0
	Spike Conc	99.7	98.2	100.0	99.6	99.9	100.1
	LCS Result	97.0	96.3	99.4	98.4	100.2	103.1
	LCSD Result	92.0	91.1	93.9	95.3	92.8	100.1
	LCS % Rec *	97.3	98.1	99.4	98.8	100.4	103.0
	LCSD % Rec *	92.3	92.7	94.0	95.7	92.9	100.0
	% RPD ***	5.3	5.6	5.6	3.2	7.7	2.9

IV - Sample & Sample Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
242802-67209	Sample	2.3	0.0	0.0	0.0	0.0	0.0
	Sample Dup	2.5	0.0	0.0	0.0	0.0	0.0
	Mean	2.4	0.0	0.0	0.0	0.0	0.0
	% RPD ***	8.8	0.0	0.0	0.0	0.0	0.0

V - Matrix Spike & Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
242802-67209	Sample Conc	1.2	0.0	0.0	0.0	0.0	0.0
	Spike Conc	49.8	49.1	50.0	49.8	49.9	50.0
	MS Result	50.2	48.9	50.4	50.9	50.8	54.6
	MSD Result	45.9	43.5	45.0	44.9	45.7	47.8
	MS % Rec **	98.3	99.5	100.8	102.2	101.7	109.1
	MSD % Rec **	89.7	88.5	90.1	90.1	91.4	95.5
	% RPD ***	9.2	11.7	11.2	12.6	10.6	13.2

VI - Closing Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	Methane	Ethane	Propane	Butane	Pentane	Hexane
CCV	Spike Conc	99.7	98.2	100.0	99.6	99.9	100.1
	Result	87.4	87.6	89.2	90.8	91.4	99.0
	% Rec *	87.7	89.1	89.2	91.2	91.5	98.9

** Must be 85-115%*

*** Must be 75-125%*

**** Must be < 25%*

ND = Not Detected

<RL = less than Reporting Limit

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Quality Control/Quality Assurance Report

Date Analyzed : 03/24/2025
Analyst : RSF/DG
Units : %

Instrument ID : TCD #1
Calb Date : 01/06/2025
Reporting Limit : 0.1%

I - Opening Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	H_2	O_2	N_2	CH_4	CO	CO_2
CCV	Spike Conc	10.0	9.9	19.9	10.0	10.0	10.0
	Result	10.9	9.9	21.3	11.0	10.2	10.5
	% Rec *	108.2	99.8	107.0	110.5	102.3	105.5

II - Method Blank - BTU/ASTM D-1945

AAC ID	Analyte	H_2	O_2	N_2	CH_4	CO	CO_2
MB	Concentration	ND	ND	ND	ND	ND	ND

III - Laboratory Control Spike & Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	H_2	O_2	N_2	CH_4	CO	CO_2
Lab Control Standards	Sample Conc	0.0	0.0	0.0	0.0	0.0	0.0
	Spike Conc	10.0	9.9	19.9	10.0	10.0	10.0
	LCS Result	10.5	10.1	21.6	10.8	10.0	10.3
	LCSD Result	10.5	10.0	21.3	10.8	10.1	10.4
	LCS % Rec *	104.6	101.4	108.7	108.7	100.4	103.9
	LCSD % Rec *	104.6	101.1	107.2	108.8	100.8	104.1
	% RPD ***	0.0	0.3	1.4	0.1	0.3	0.2

IV -Sample & Sample Duplicate - BTU/ASTM D-1945

AAC ID	Analyte	H_2	O_2	N_2	CH_4	CO	CO_2
250601-72498	Sample	0.0	0.2	0.8	44.8	0.0	0.4
	Sample Dup	0.0	0.1	0.8	44.6	0.0	0.4
	Mean	0.0	0.1	0.8	44.7	0.0	0.4
	% RPD ***	0.0	10.2	5.4	0.3	0.0	5.6

V - Matrix Spike & Duplicate- BTU/ASTM D-1945

AAC ID	Analyte	H_2	N_2	CH_4	CO	CO_2
250601-72498	Sample Conc	0.0	0.4	22.3	0.0	0.2
	Spike Conc	10.0	10.0	10.0	10.0	10.0
	MS Result	10.5	11.3	33.0	10.1	10.6
	MSD Result	10.2	11.3	32.9	10.1	10.6
	MS % Rec **	104.6	109.9	107.1	101.4	104.9
	MSD % Rec **	102.0	109.5	105.8	100.8	104.5
	% RPD ***	2.5	0.4	1.2	0.5	0.4

VI - Closing Continuing Calibration Verification - BTU/ASTM D-1945

AAC ID	Analyte	H_2	O_2	N_2	CH_4	CO	CO_2
CCV	Spike Conc	10.0	9.9	19.9	10.0	10.0	10.0
	Result	10.3	10.5	22.7	10.2	9.4	9.8
	% Rec *	102.7	105.2	113.9	102.1	94.2	98.8

** Must be 85-115%*

*** Must be 75-125%*

**** Must be < 25%*

ND = Not Detected

<RL = less than Reporting Limit

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Quality Control/Quality Assurance Report
SCAQMD 307.91

Date Analyzed: 3/26/2025
Analyst: NR
Units: ppbV

Instrument ID : SCD#10
Calb. Date: : 02/10/2025

Opening Calibration Verification Standard

494.0 ppbV H2S (GC-091924-01)

H_2S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	23053	518	104.9	4.6
Duplicate	22077	496	100.4	0.2
Triplicate	20999	472	95.5	4.7

507.5 ppbV MeSH (GC-091924-01)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	20438	532	104.8	2.6
Duplicate	20120	524	103.2	1.0
Triplicate	19202	500	98.5	3.6

480.5 ppbV DMS (GC-091924-01)

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	22757	504	104.9	1.3
Duplicate	22630	501	104.3	0.7
Triplicate	22040	488	101.6	1.9

Method Blank

Analyte	Result
H_2S	<PQL
MeSH	<PQL
DMS	<PQL

Duplicate Analysis **Sample ID 250743-73263**

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H_2S	<PQL	<PQL	0.0	0.0
MeSH	<PQL	<PQL	0.0	0.0
DMS	<PQL	<PQL	0.0	0.0

Matrix Spike & Duplicate **Sample ID 250743-73263 x2**

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H_2S	<PQL	247.0	255.3	248.6	103.4	100.6	2.7
MeSH	<PQL	253.8	269.8	267.8	106.3	105.6	0.7
DMS	<PQL	240.3	263.6	263.8	109.7	109.8	0.1

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H_2S	494.0	539.1	109.1
MeSH	507.5	523.3	103.1
DMS	480.5	485.0	100.9

** Must be 95-105%, ** Must be 90-110%, *** Must be < 10%, **** Must be < 5% RPD from Mean result.*
PQL = 50.0 ppbV

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Raw Data

Data file : C:\CHEM32\1\DATA\032625\FIDTCD002.D
Sample Name : Humid Air Zero 1

Injection Date : Wed, 26. Mar. 2025 6:24:13 AM
Location : Vial 2
Seq Line : 2
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Fri, 28. Mar. 2025, 03:36:30 pm

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

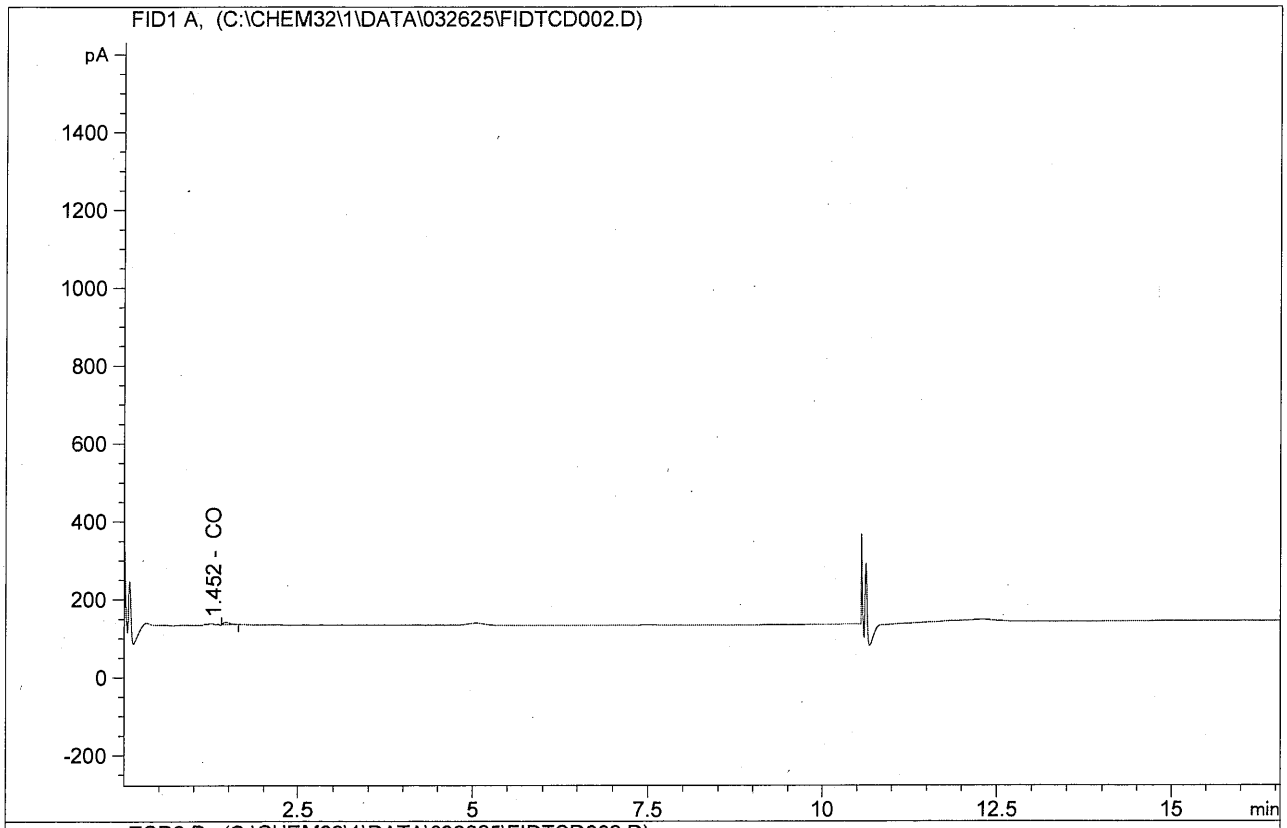
Peak #	RT [min]	Type	Area	Amount	Name
1	1.452	MM	40.406	1.591	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

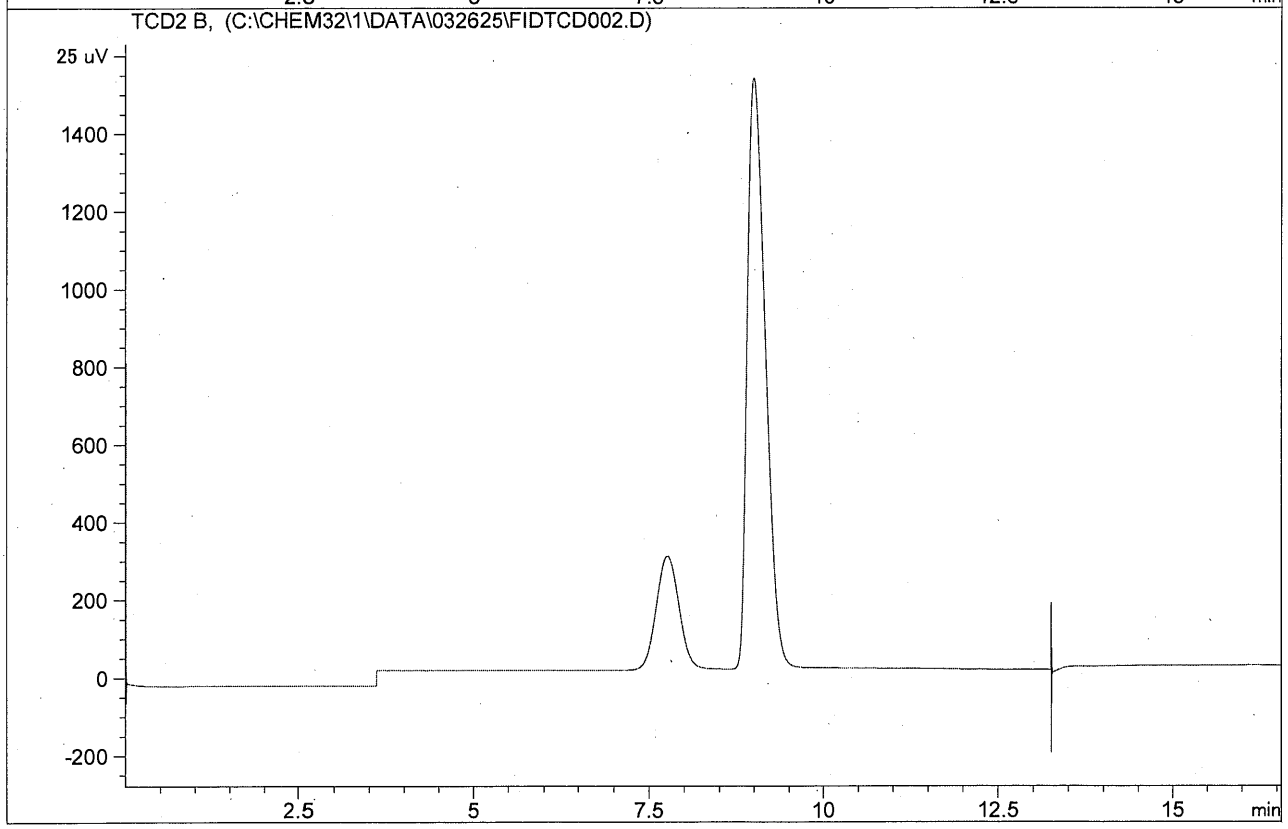
Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	0.000		0.000	0.000	Oxygen
3	0.000		0.000	0.000	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

KSF
3/28/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD002.D
Sample Name : Humid Air Zero 2





*** End of Report ***

RSF
2/18/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD018.D
Sample Name : 250733-73204 1

Injection Date : Wed, 26. Mar. 2025 12:31:30 PM
Location : Vial 18
Seq Line : 18
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 00:52:06 pm

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

Peak #	RT [min]	Type	Area	Amount	Name
1	1.492	MM	1674.513	65.951	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

-1.591 (Humid Air zero)

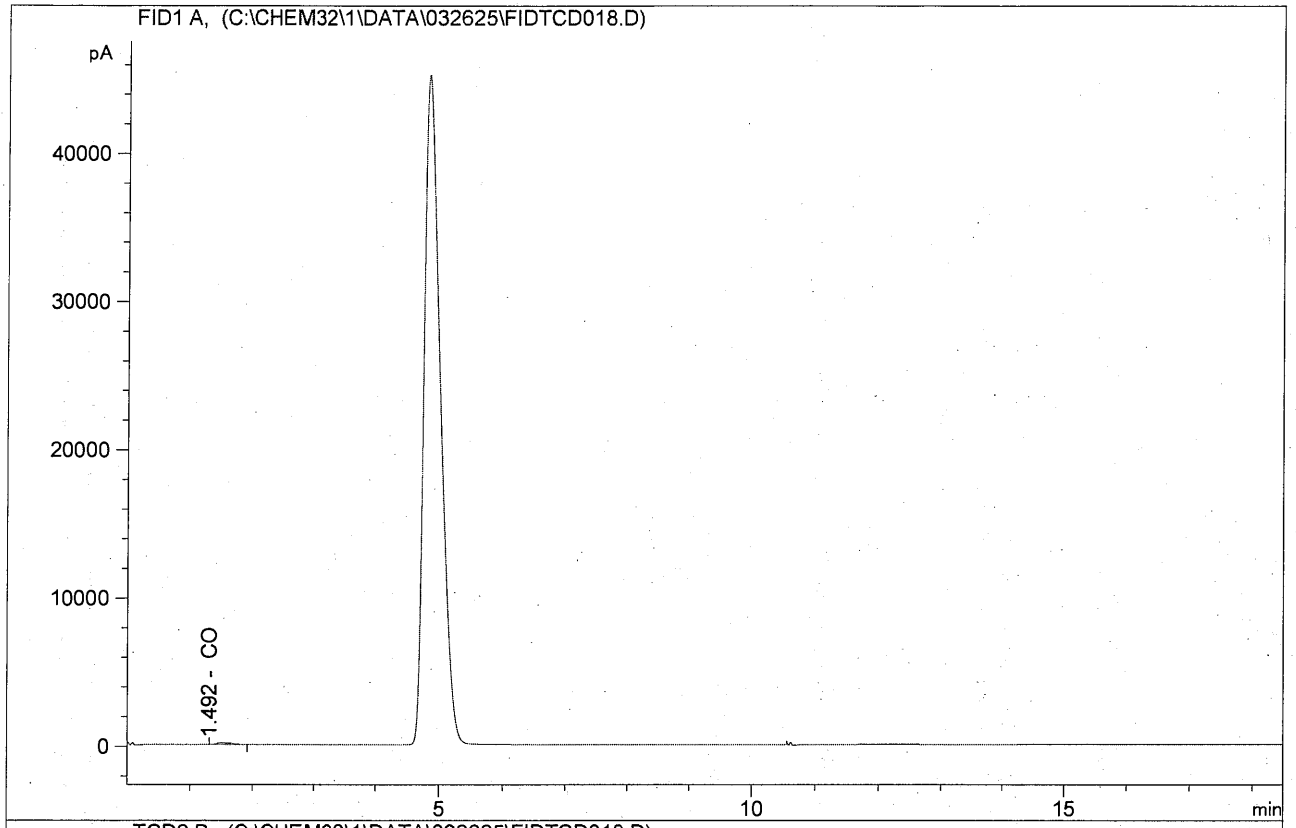
Signal 2:TCD2 B,

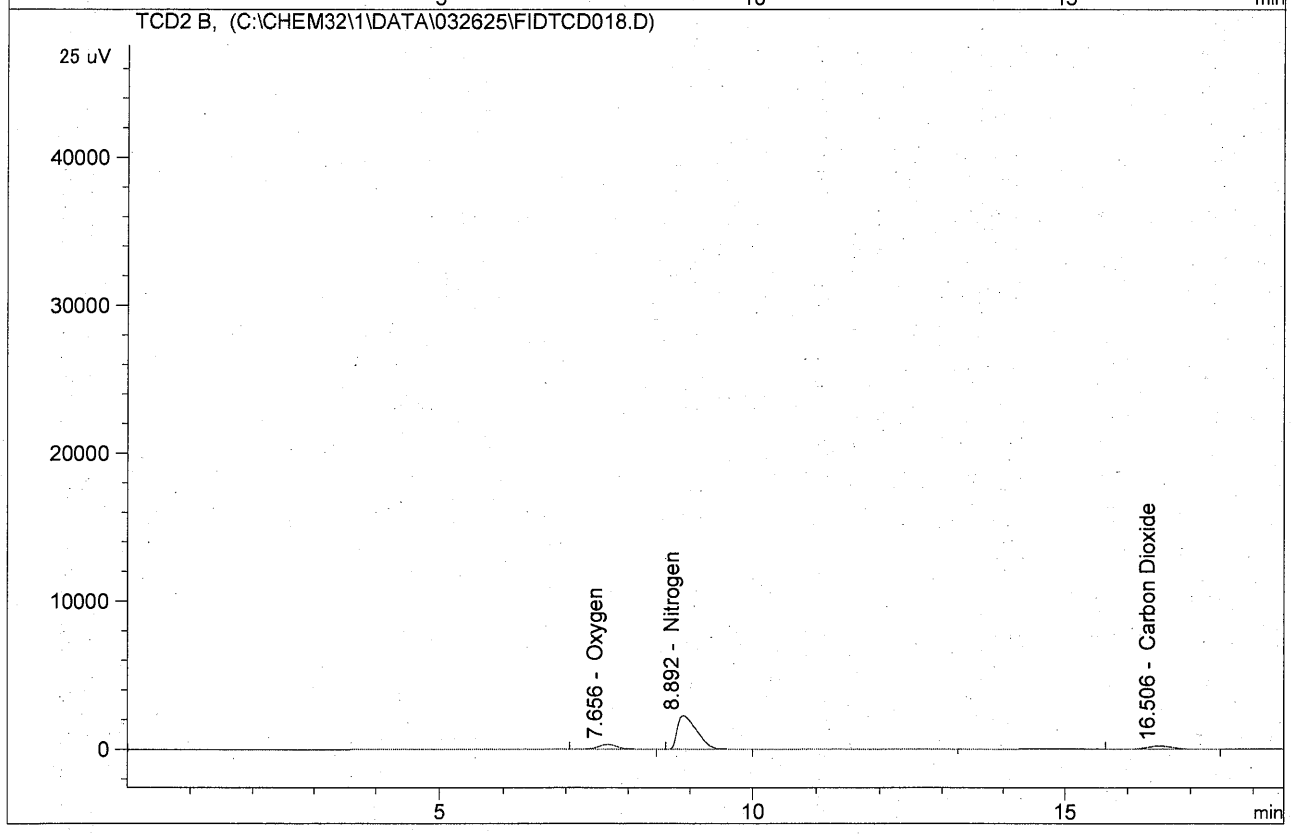
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.656	MM	6578.014	5.464	Oxygen
3	8.892	MM	47786.086	37.490	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	16.506	MM	5886.676	3.948	Carbon Dioxide

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NR 3-26-25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD018.D
Sample Name : 250733-73204 2





*** End of Report ***

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MR 3-26-25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD019.D
Sample Name : 250733-73204 dp 1

Injection Date : Wed, 26. Mar. 2025 12:58:00 PM
Location : Vial 19
Seq Line : 19
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 00:52:06 pm

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

Peak #	RT [min]	Type	Area	Amount	Name
1	1.492	MM	1668.920	65.731	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

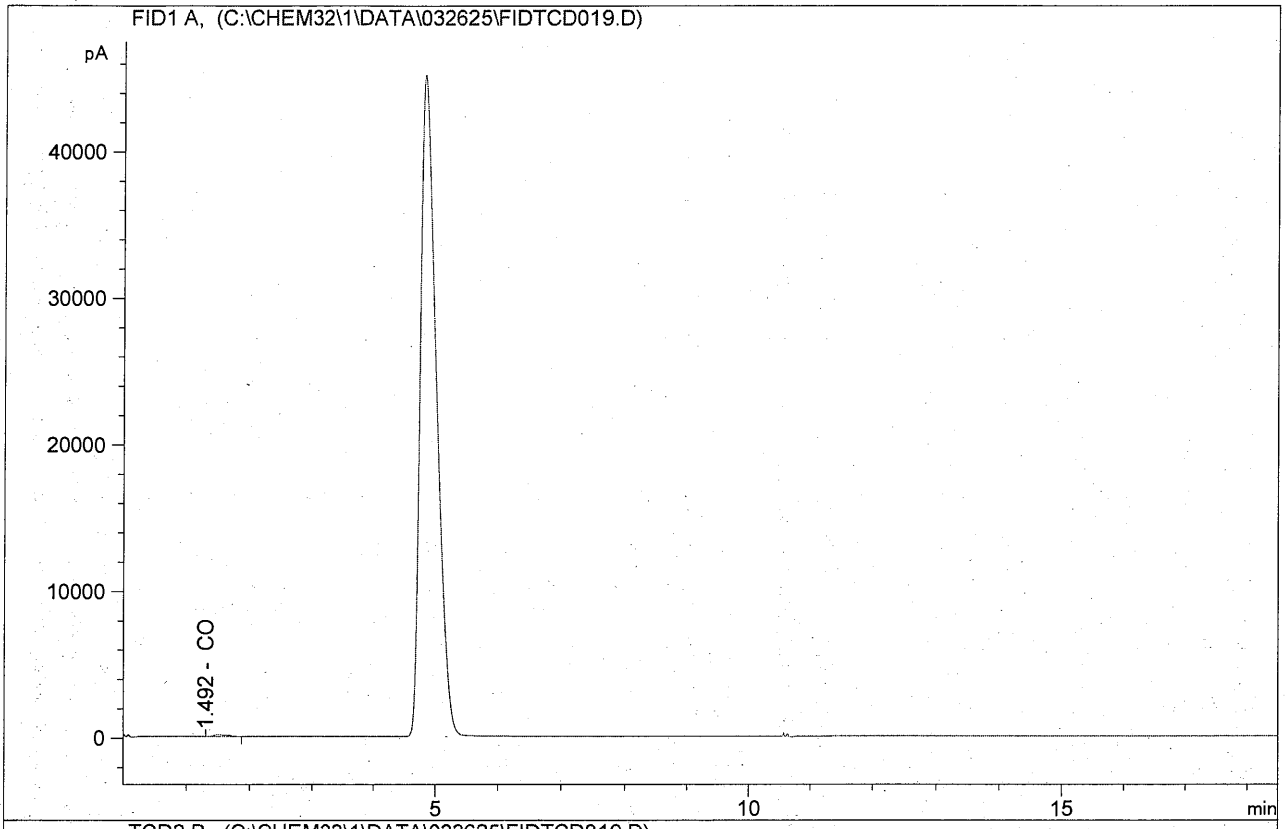
-1.591

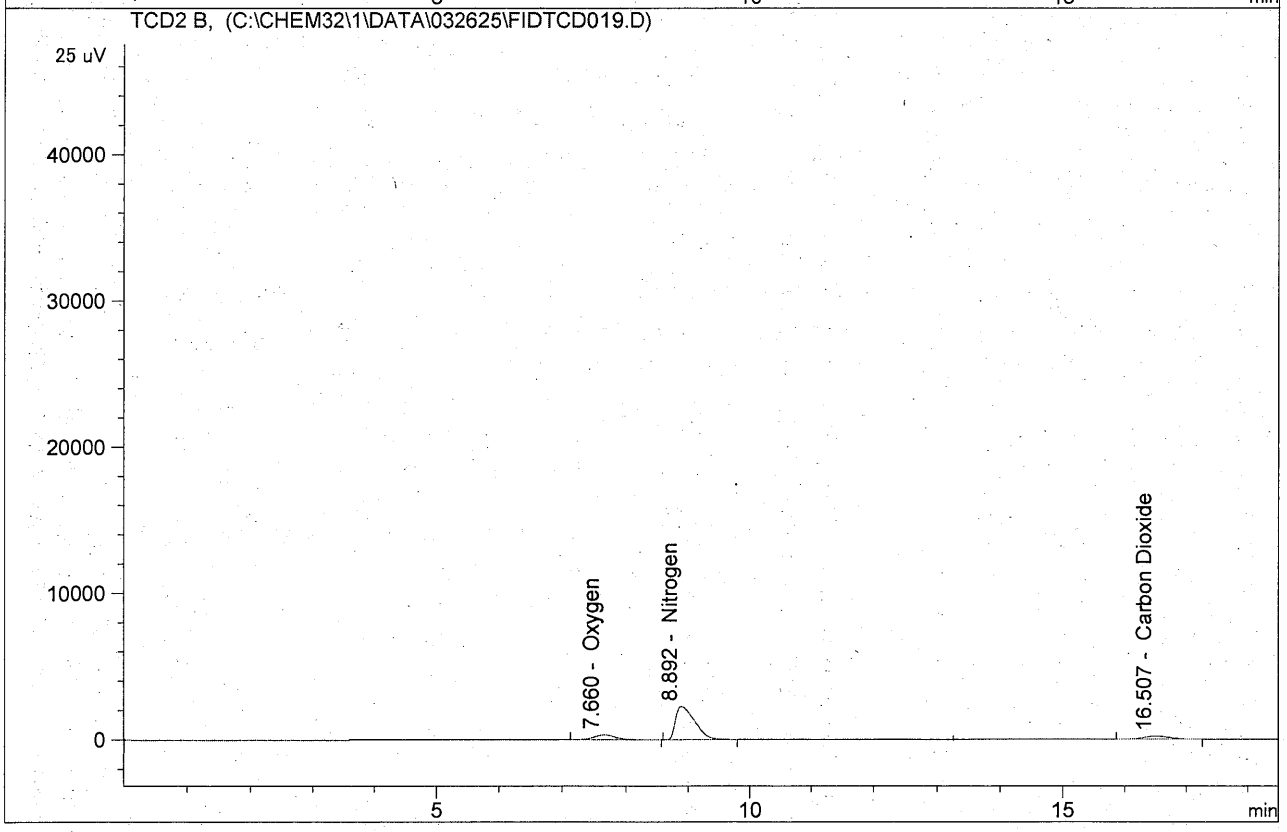
Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.660	MM	6545.245	5.437	Oxygen
3	8.892	MM	47512.648	37.275	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	16.507	MM	5770.335	3.870	Carbon Dioxide

RSF
5/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD019.D
Sample Name : 250733-73204 dp 2





*** End of Report ***

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RSF

3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD020.D
Sample Name : 250733-73205 1

Injection Date : Wed, 26. Mar. 2025 1:21:09 PM
Location : Vial 20
Seq Line : 20
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 01:41:52 pm

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

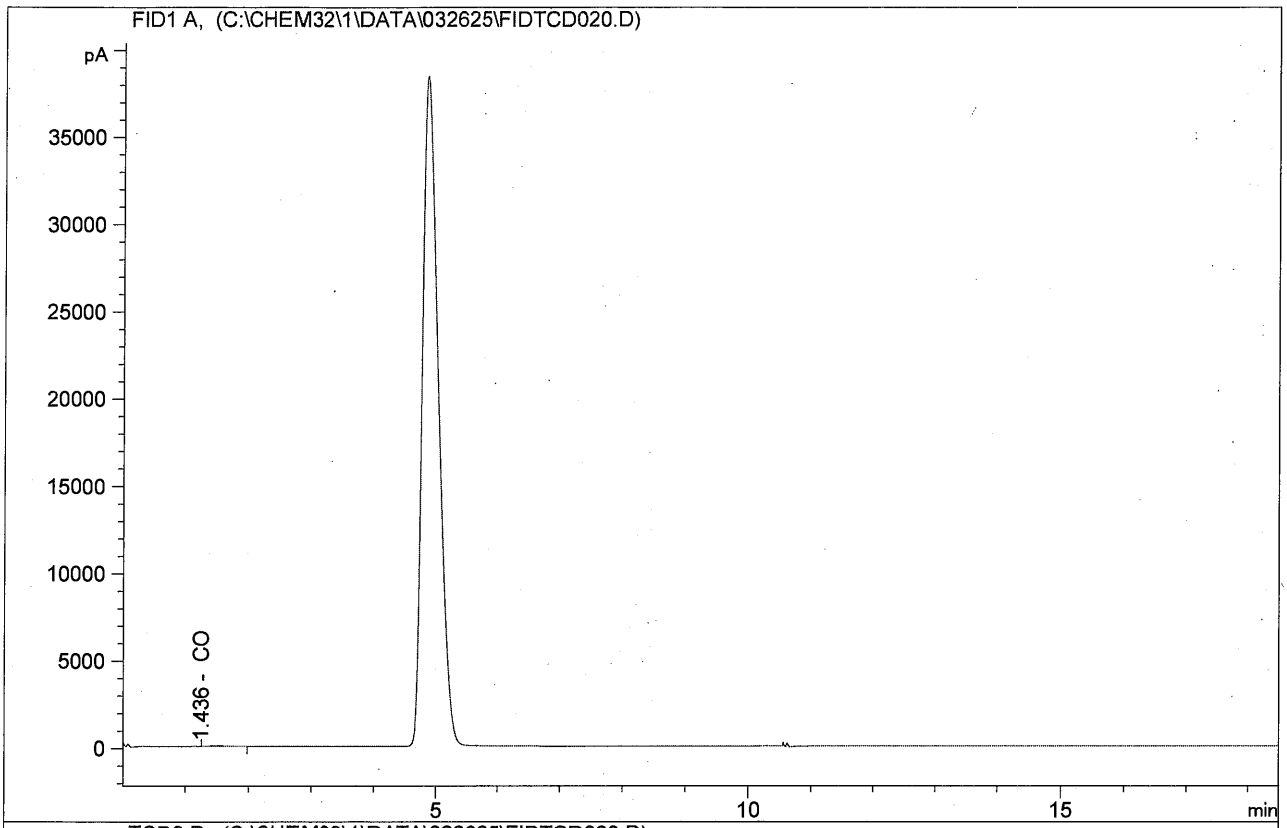
Peak #	RT [min]	Type	Area	Amount	Name
1	1.436	MM	613.477	24.162	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

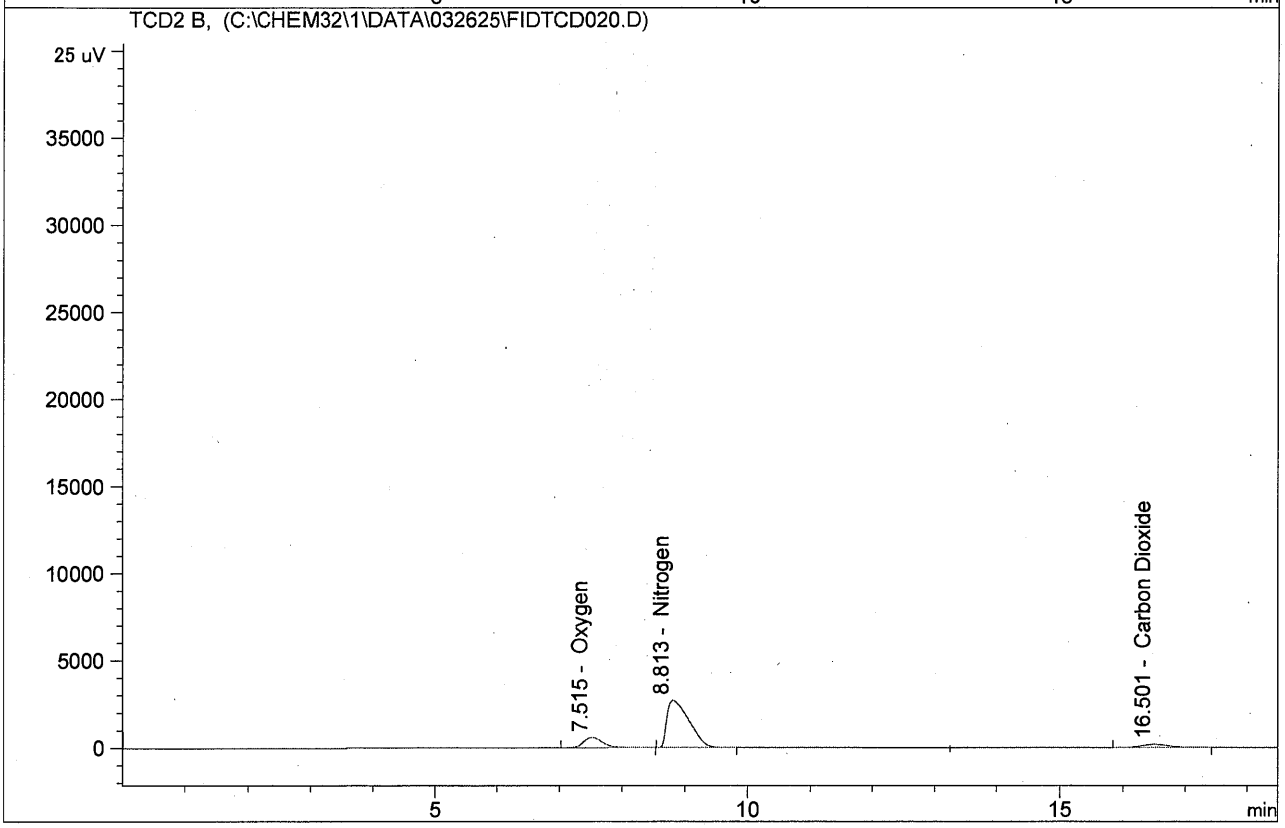
— 1.591

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.515	MM	12394.343	10.296	Oxygen
3	8.813	MM	65154.758	51.116	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	16.501	MM	4991.014	3.347	Carbon Dioxide

RSF
3/26/25





*** End of Report ***

KSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD021.D
Sample Name : 250733-73205 dp 1

Injection Date : Wed, 26. Mar. 2025 1:44:07 PM
Location : Vial 21
Seq Line : 21
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 01:41:52 pm

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

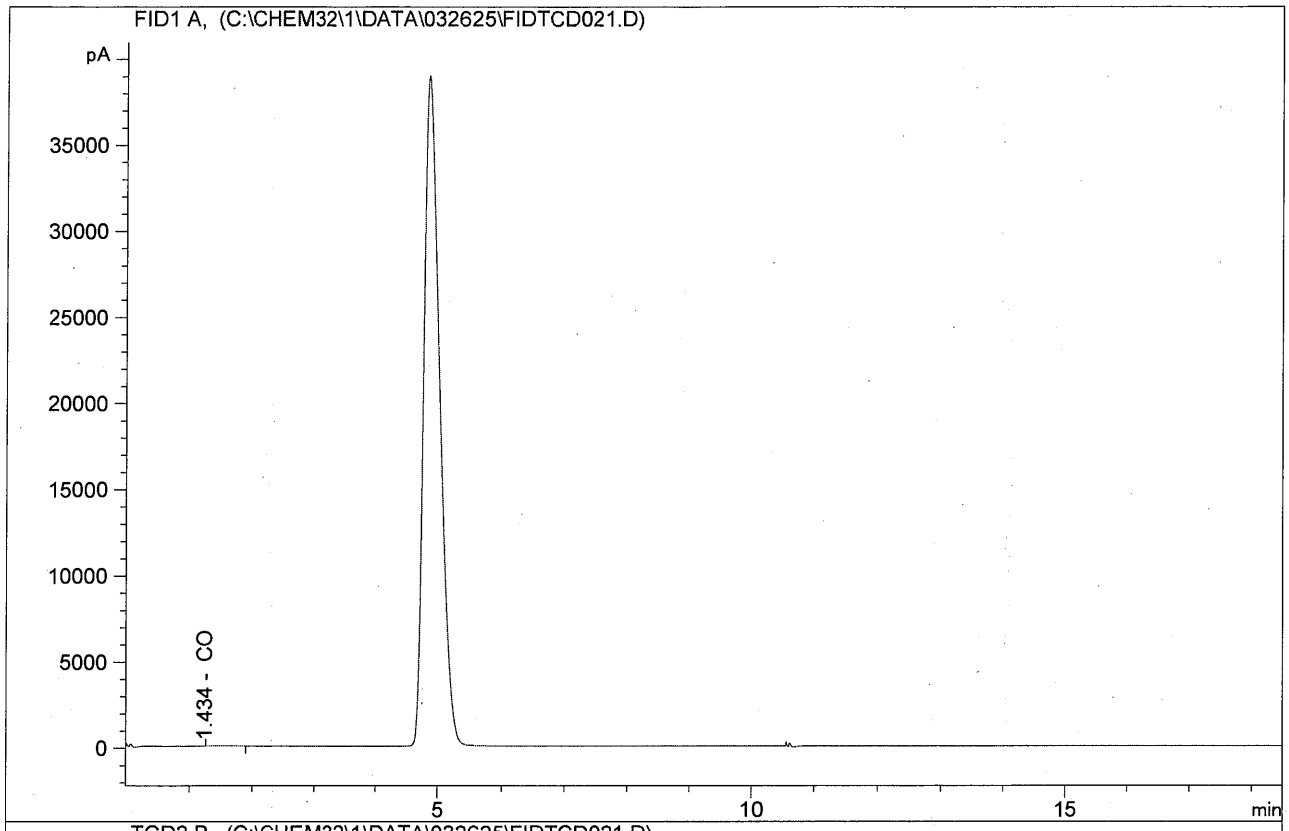
Peak #	RT [min]	Type	Area	Amount	Name
1	1.434	MM	612.599	24.127	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

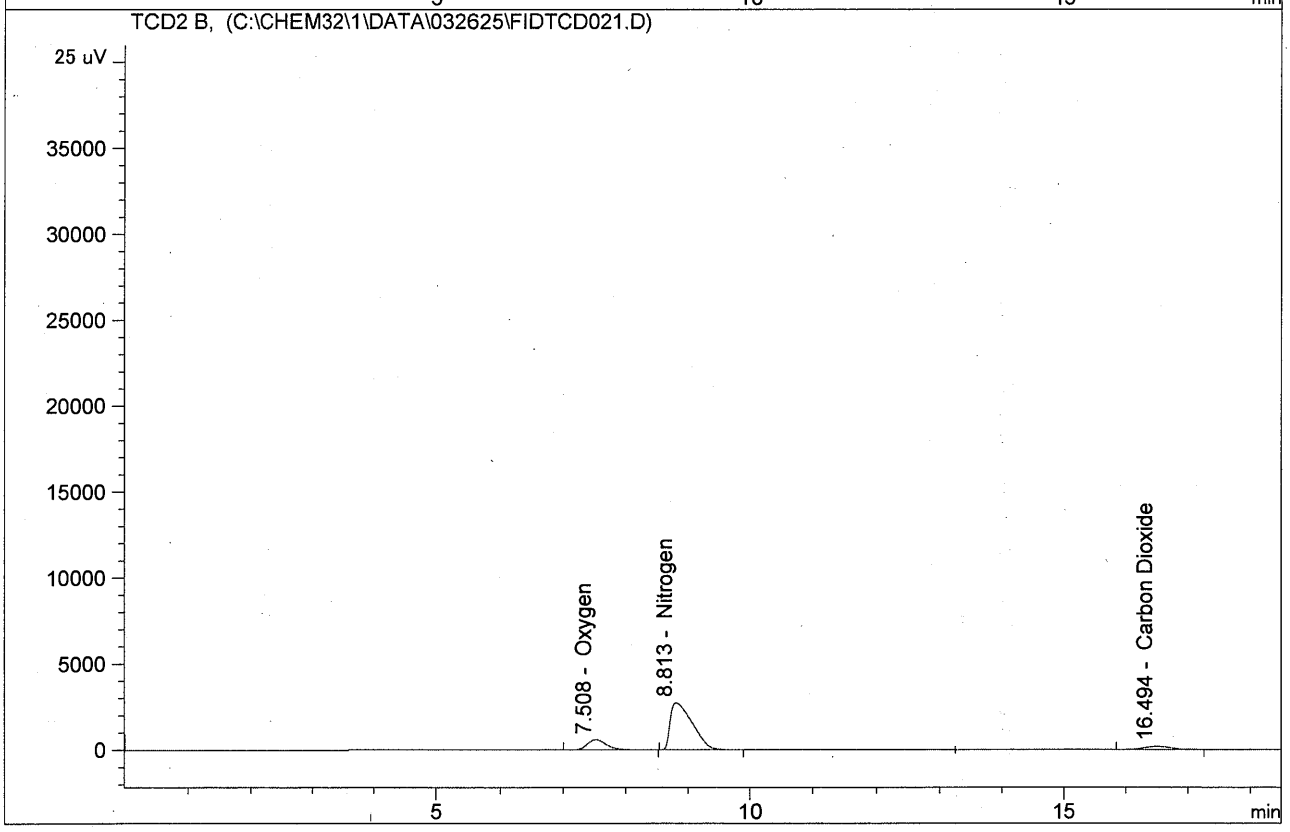
-1.591

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.508	MM	12501.070	10.385	Oxygen
3	8.813	MM	65805.789	51.627	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	16.494	MM	4927.412	3.305	Carbon Dioxide

KSF
3/26/25





*** End of Report ***

RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD022.D
Sample Name : 250733-73206 1

Injection Date : Wed, 26. Mar. 2025 2:07:50 PM
Location : Vial 22
Seq Line : 22
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 02:29:20 pm

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

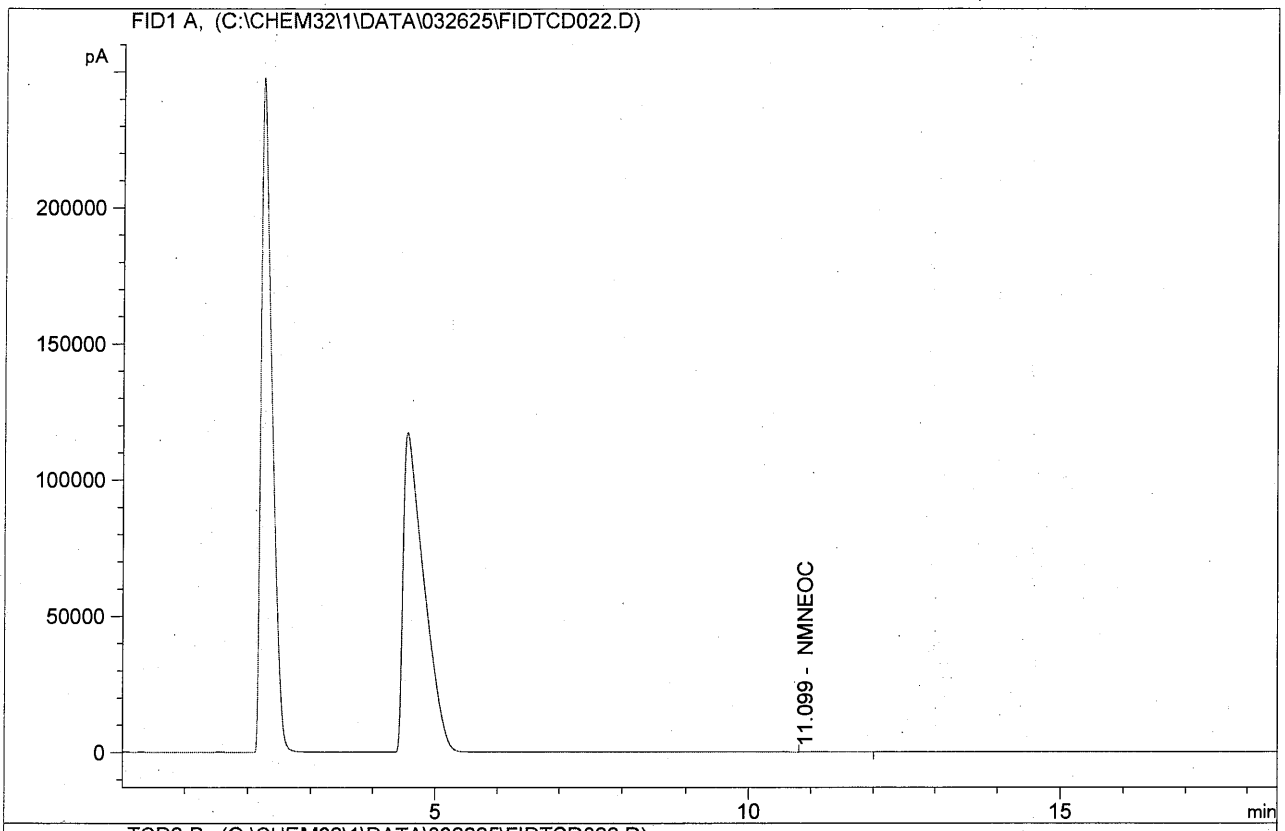
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.099	MM	4739.752	64.758	NMNEOC

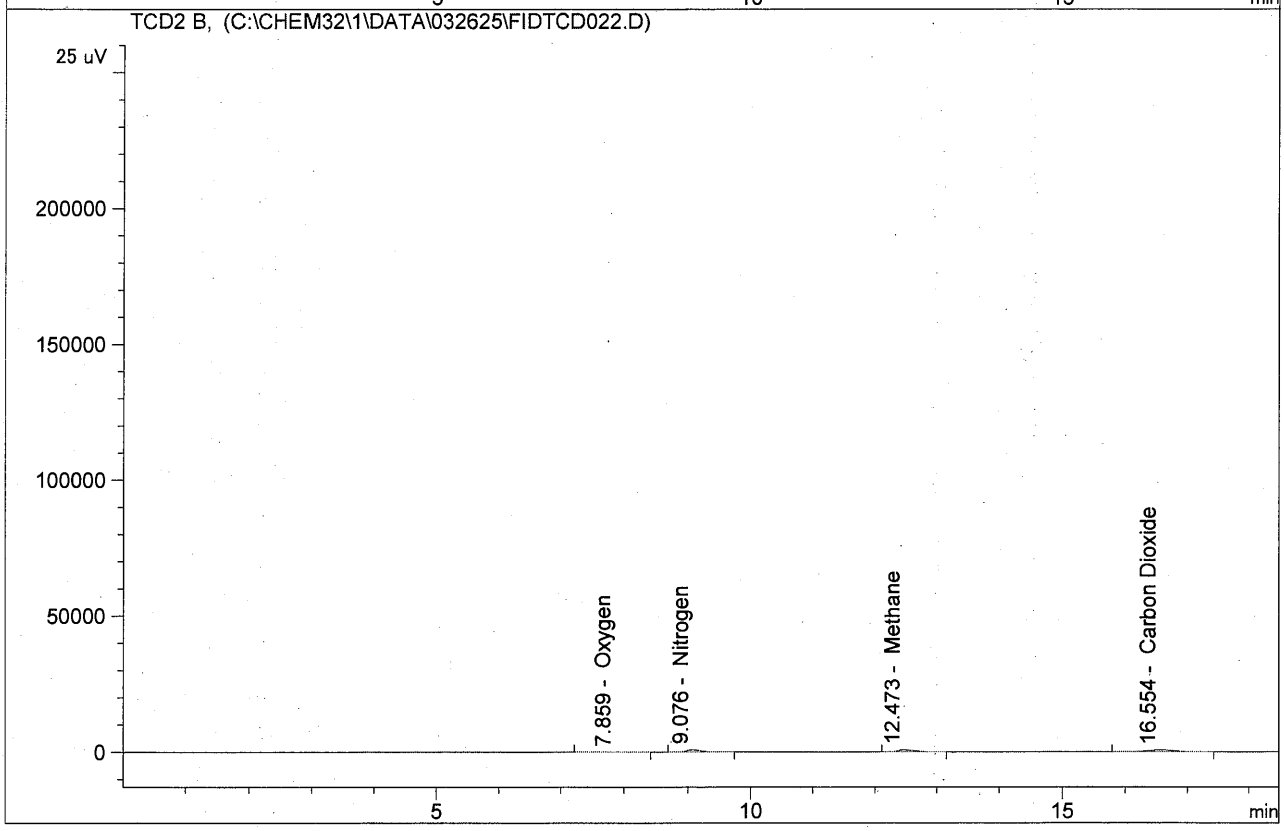
Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.859	MM	1301.594	1.081	Oxygen
3	9.076	MM	13101.446	10.279	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	12.473	MM	14103.588	14.551	Methane
6	0.000		0.000	0.000	Ethane
7	16.554	MM	19171.297	12.858	Carbon Dioxide

KSF 3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD022.D
Sample Name : 250733-73206 2





*** End of Report ***

RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD023.D
Sample Name : 250733-73206 dp 1

Injection Date : Wed, 26. Mar. 2025 2:31:06 PM
Location : Vial 23
Seq Line : 23
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 02:29:20 pm

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

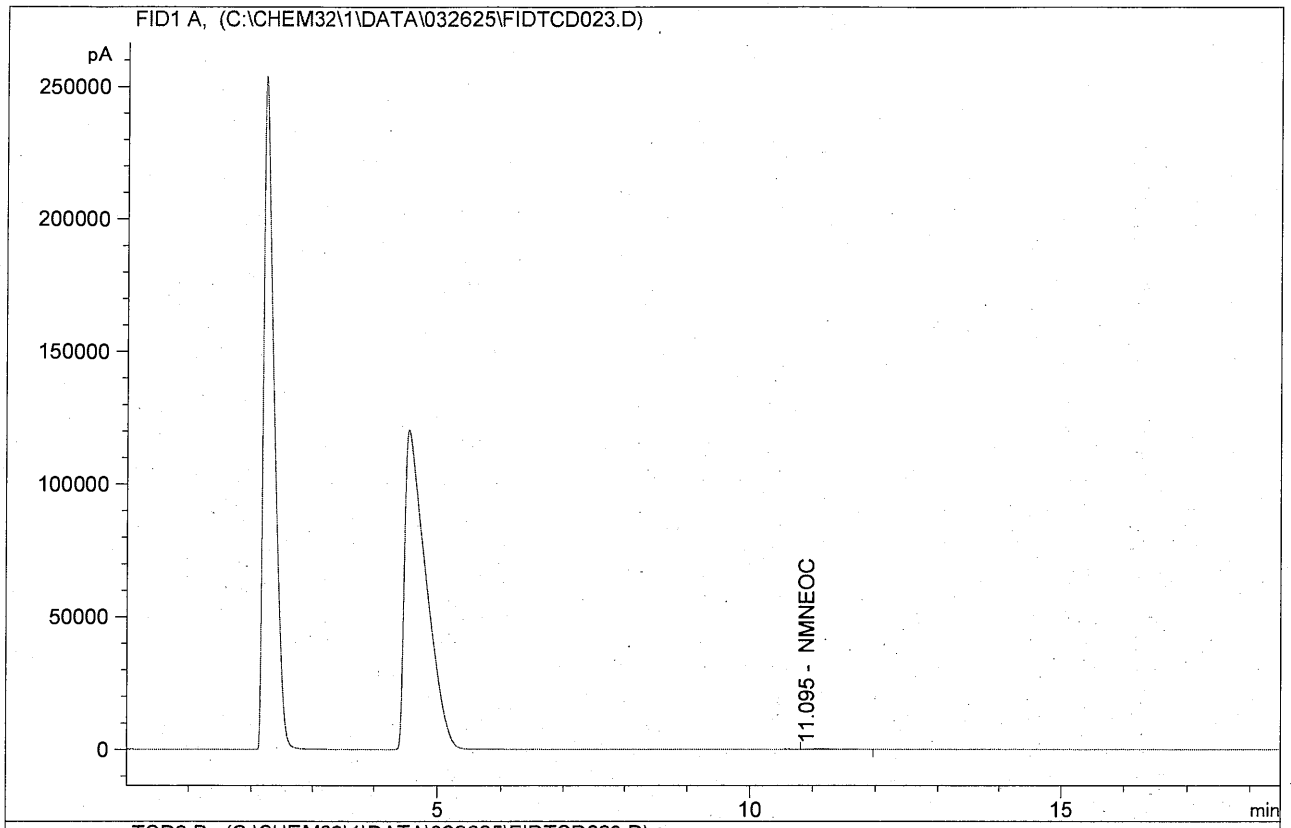
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.095	MM	4976.609	67.995	NMNEOC

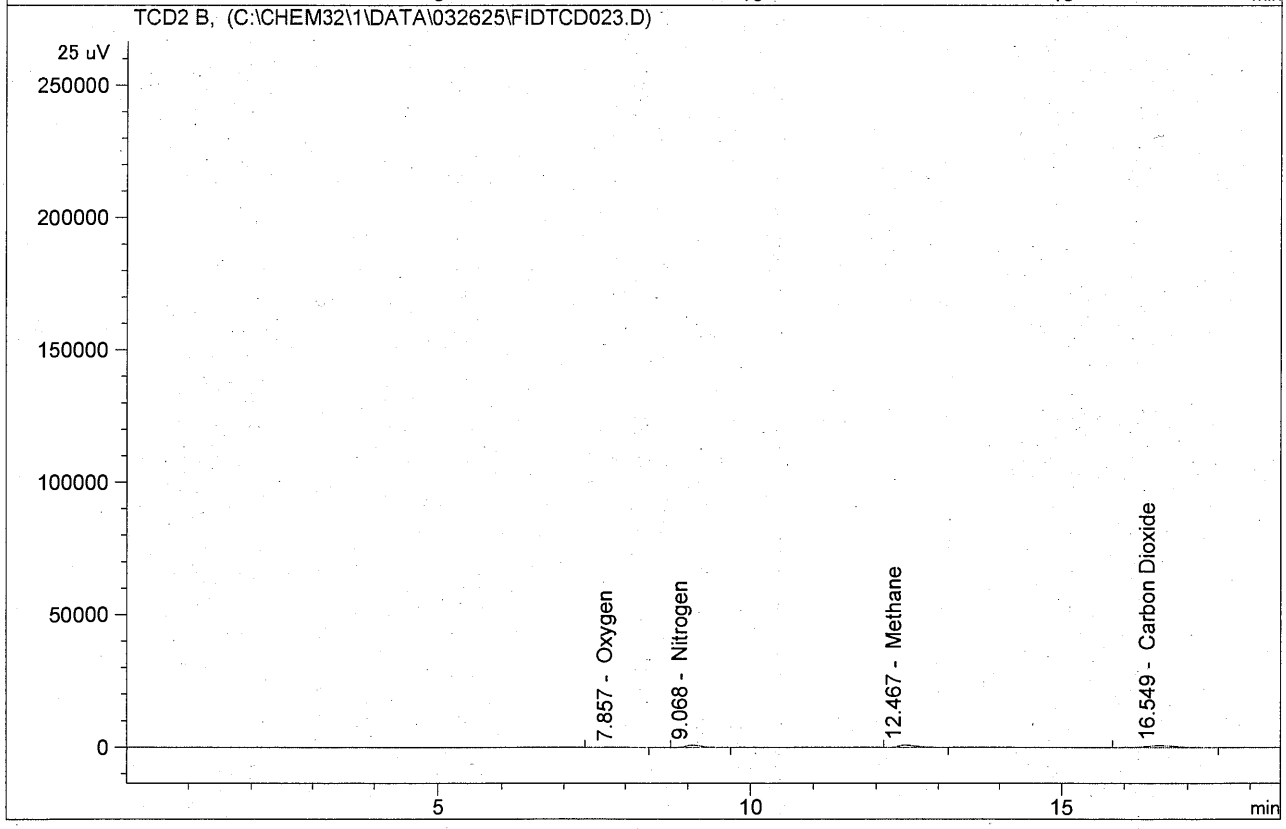
Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.857	MM	1317.707	1.095	Oxygen
3	9.068	MM	13419.719	10.528	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	12.467	MM	14435.696	14.894	Methane
6	0.000		0.000	0.000	Ethane
7	16.549	MM	19625.723	13.163	Carbon Dioxide

RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD023.D
Sample Name : 250733-73206 dp 2





*** End of Report ***

RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD024.D
Sample Name : 250733-73207 1

Injection Date : Wed, 26. Mar. 2025 2:55:02 PM
Location : Vial 24
Seq Line : 24
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 02:29:20 pm

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

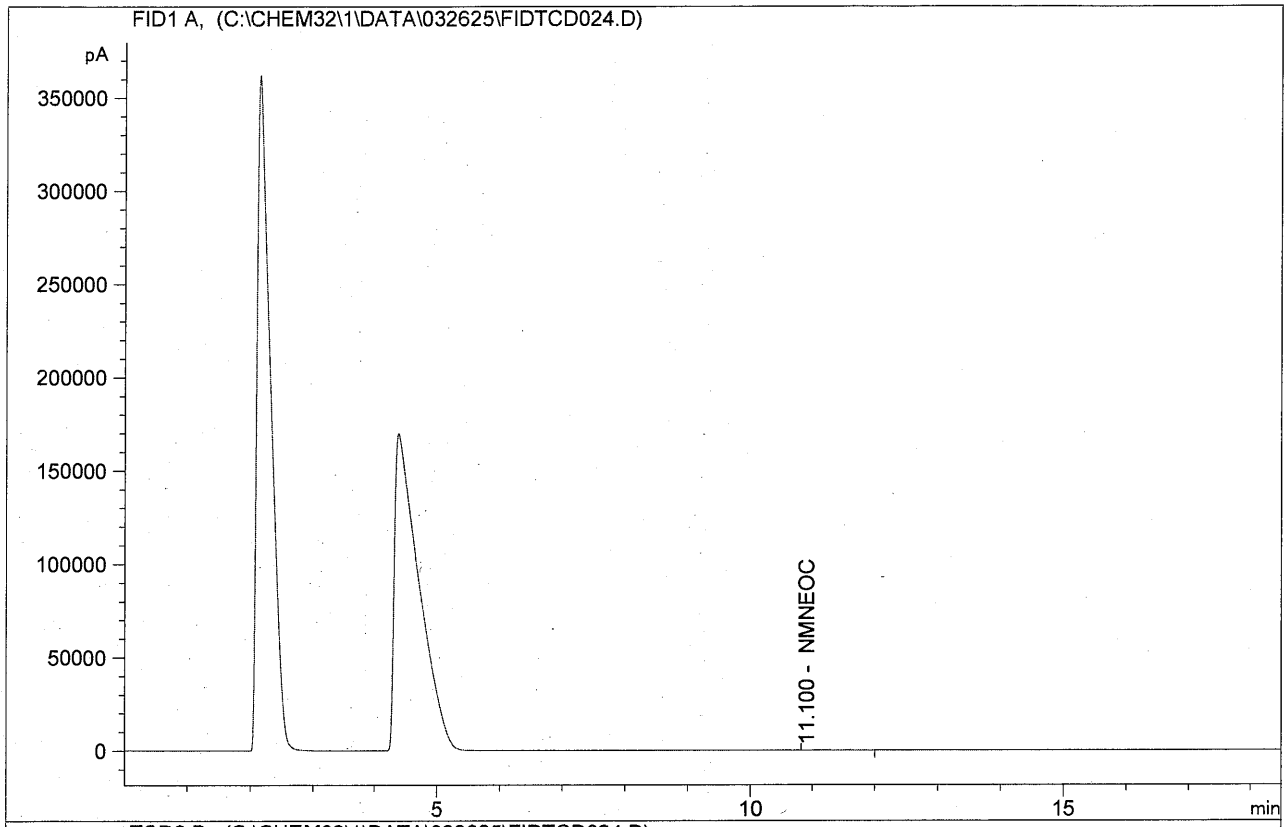
Signal 1:FID1 A,

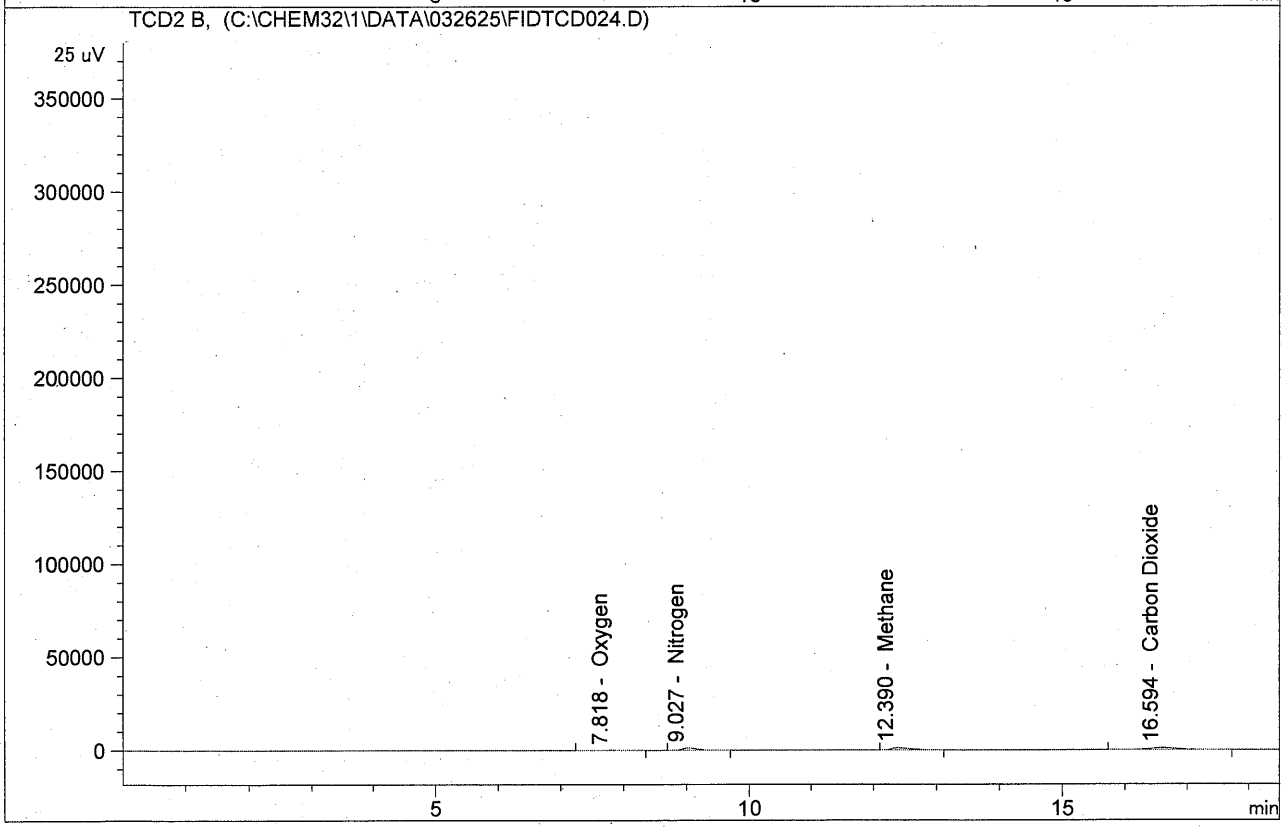
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.100	MM	6045.999	82.605	NMNEOC

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.818	MM	1684.464	1.399	Oxygen
3	9.027	MM	19184.680	15.051	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	12.390	MM	22303.447	23.012	Methane
6	0.000		0.000	0.000	Ethane
7	16.594	MM	30431.006	20.410	Carbon Dioxide

RSF
2/26/25





*** End of Report ***

RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD025.D
Sample Name : 250733-73207 dp 1

Injection Date : Wed, 26. Mar. 2025 3:18:15 PM
Location : Vial 25
Seq Line : 25
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 02:29:20 pm

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

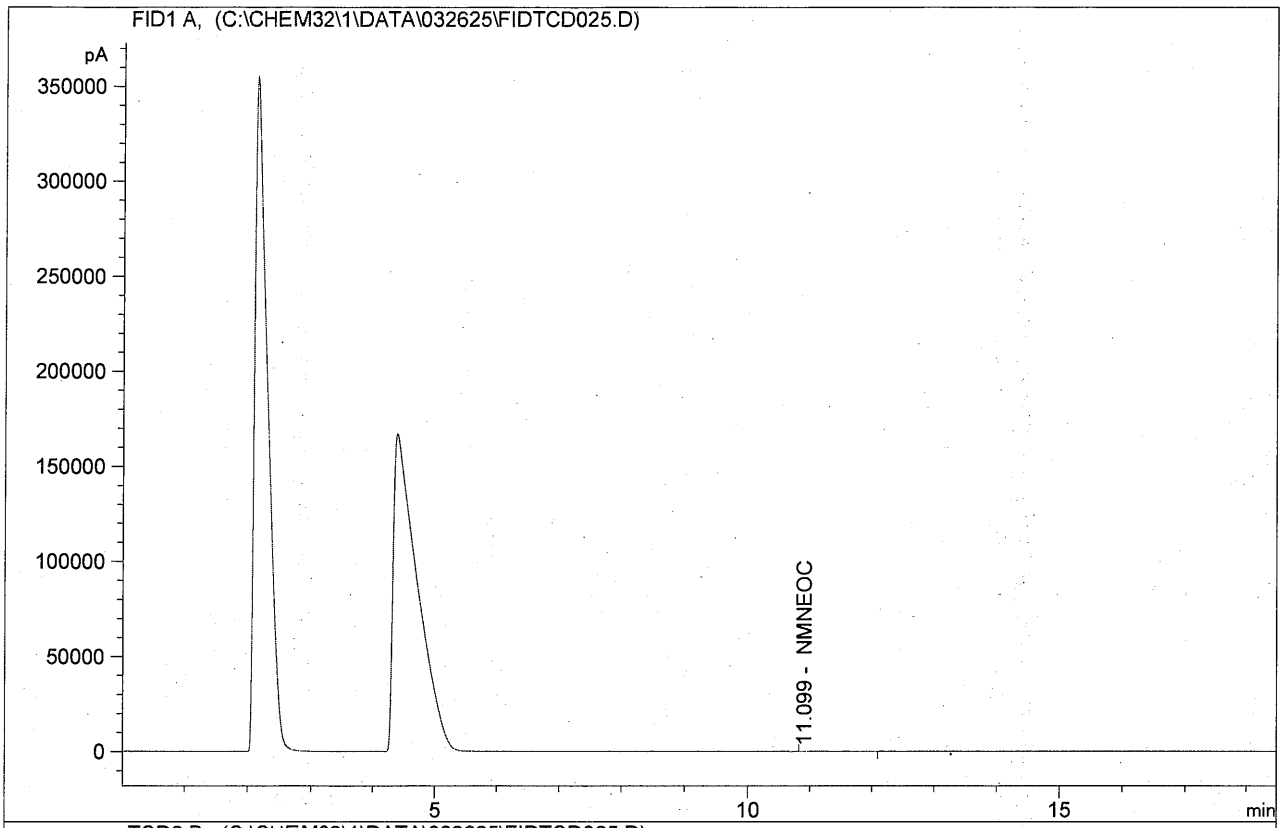
Signal 1:FID1 A,

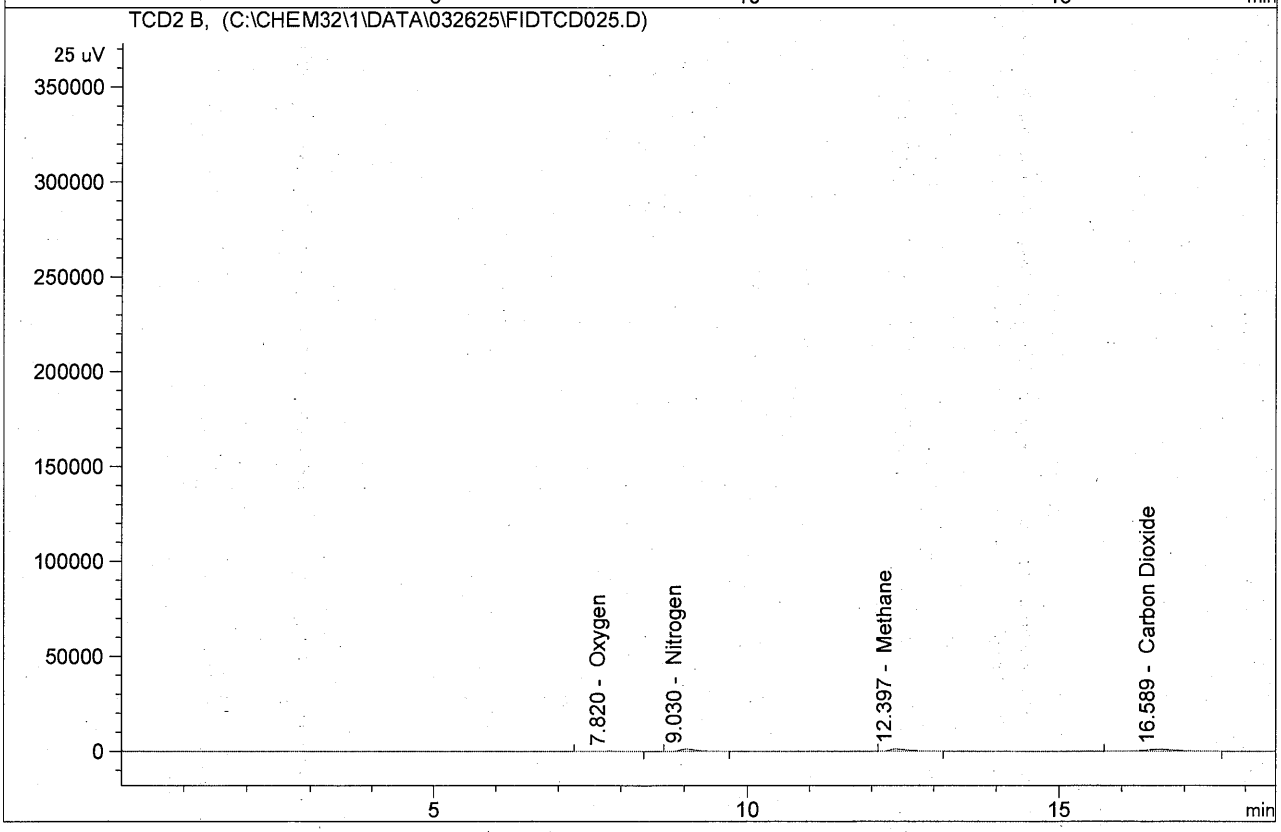
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	0.000		0.000	0.000	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.099	MM	5946.850	81.251	NMNEOC

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.820	MM	1658.281	1.378	Oxygen
3	9.030	MM	18922.809	14.846	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	12.397	MM	22022.873	22.722	Methane
6	0.000		0.000	0.000	Ethane
7	16.589	MM	30000.973	20.121	Carbon Dioxide

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*** End of Report ***

Data file : C:\CHEM32\1\DATA\032625\FIDTCD009.D
Sample Name : 250733-73206B 1

Injection Date : Wed, 26. Mar. 2025 9:01:17 AM
Location : Vial 9
Seq Line : 9
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 09:21:59 am

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

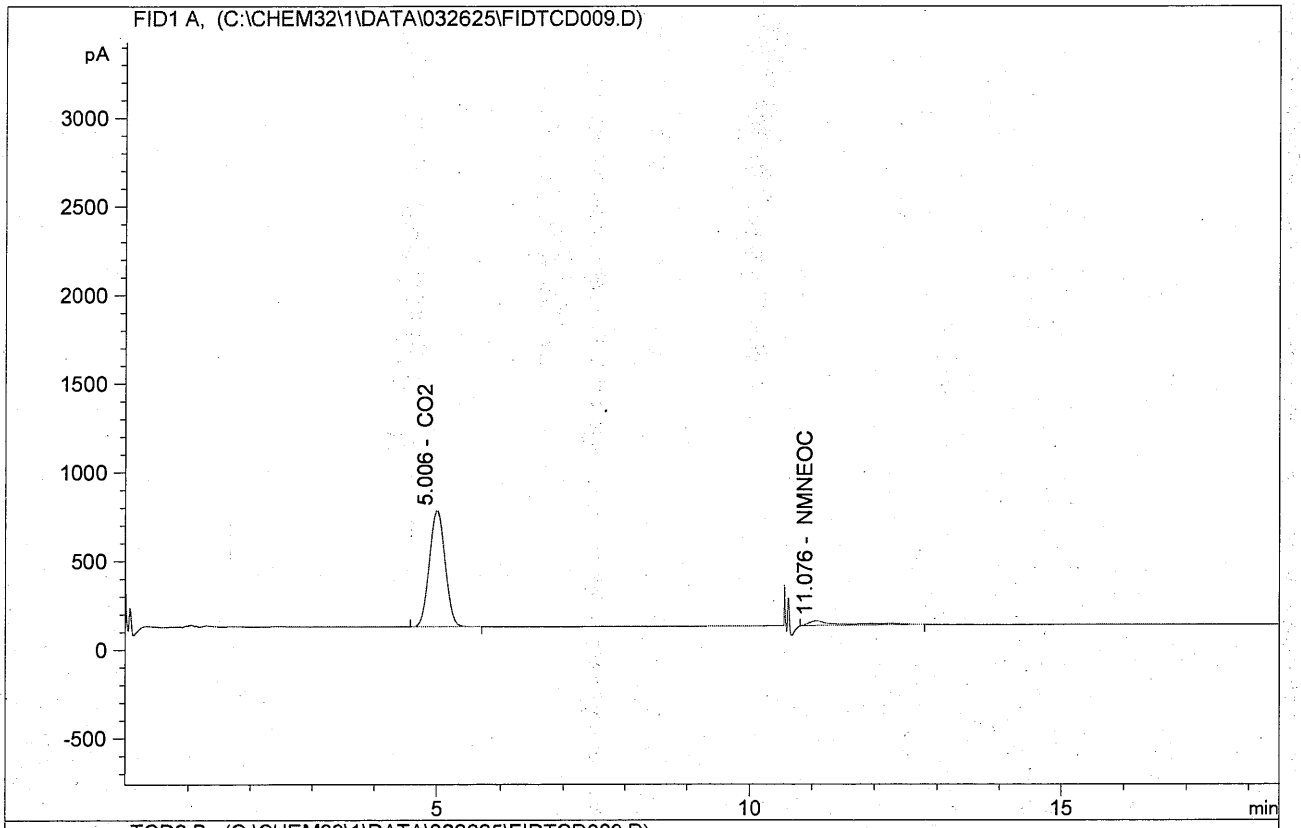
Signal 1:FID1 A,

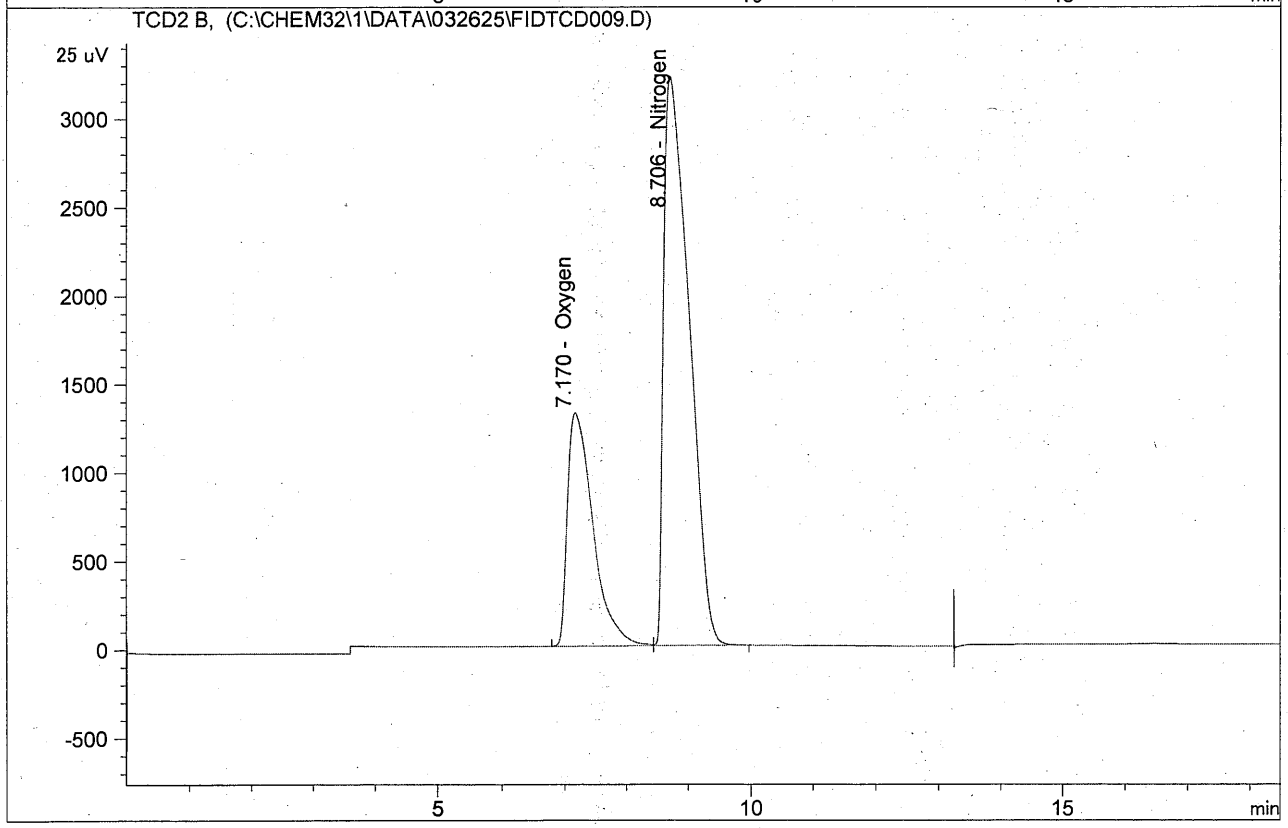
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	5.006	MM	11221.978	~~425.772~~	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.076	MM	950.165	12.982	NMNEOC

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.170	MF	37894.605	~~31.480~~	Oxygen
3	8.706	FM	91467.695	~~71.759~~	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

RSF
3/26/25





*** End of Report ***

KSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD010.D
Sample Name : 250733-73206B x2 1

Injection Date : Wed, 26. Mar. 2025 9:24:39 AM
Location : Vial 10
Seq Line : 10
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 09:47:01 am

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 2.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

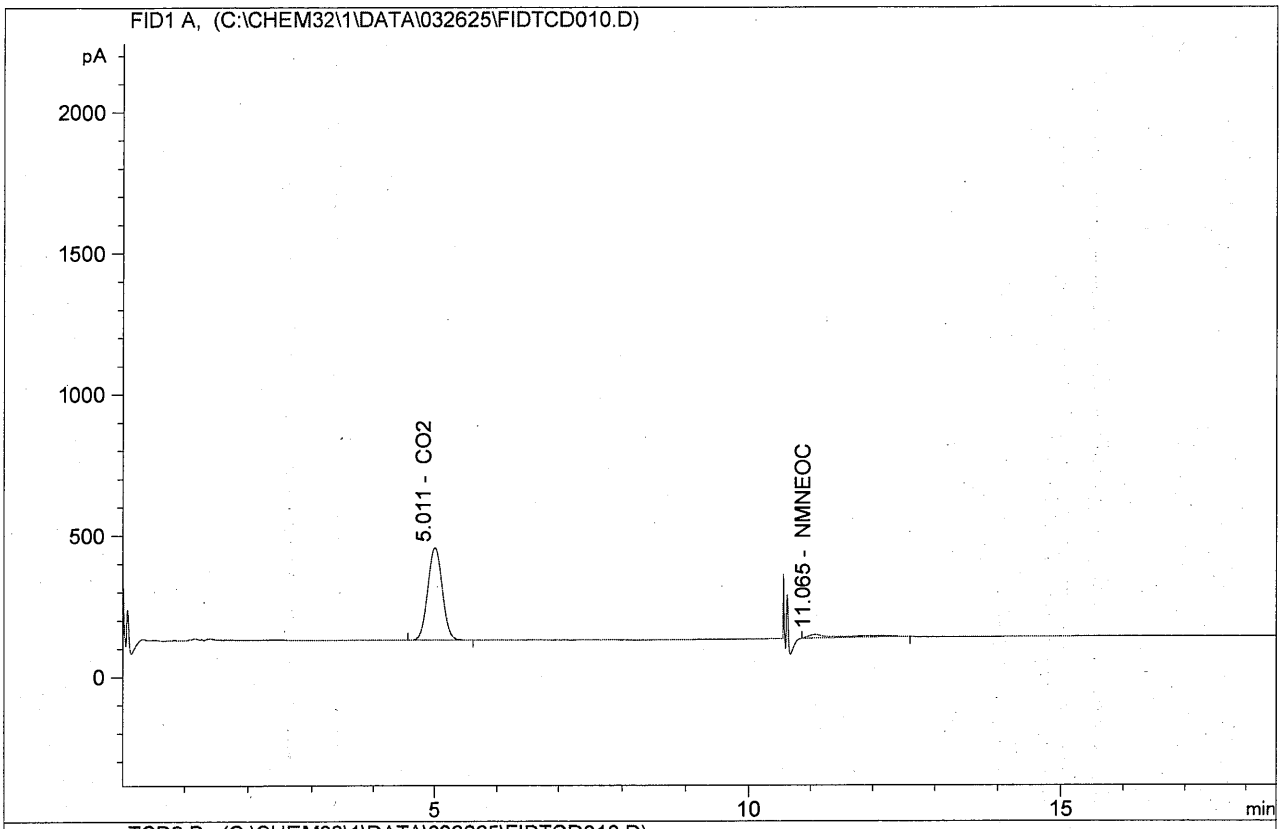
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	5.011	MM	5412.551	~~410.714~~	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.065	MM	450.282	12.304	NMNEOC

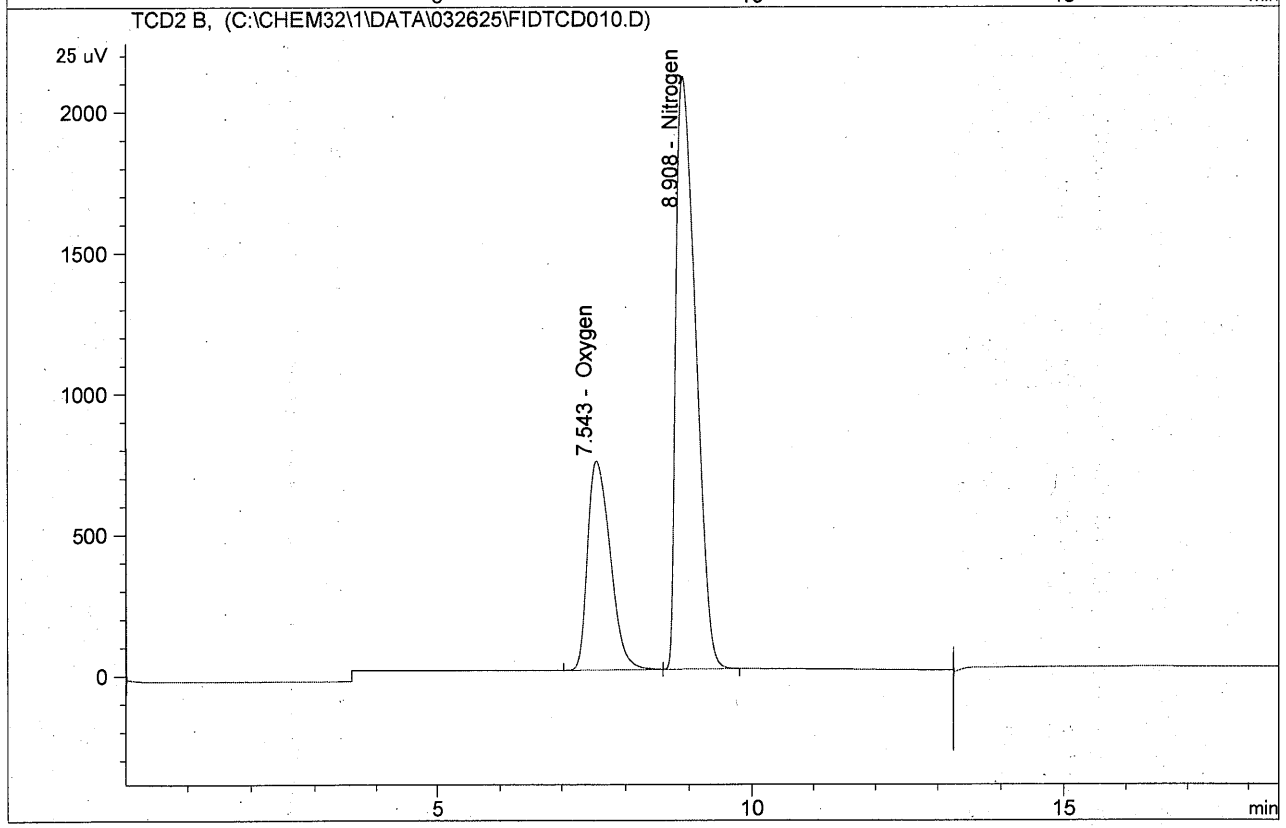
✓good

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.543	MM	18395.414	~~30.563~~	Oxygen
3	8.908	MM	44802.867	~~70.299~~	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

RSF
3/26/25





*** End of Report ***

RSF 3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD011.D
Sample Name : 250733-73206B x2 dp 1

Injection Date : Wed, 26. Mar. 2025 9:48:43 AM
Location : Vial 11
Seq Line : 11
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 09:47:01 am

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 2.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

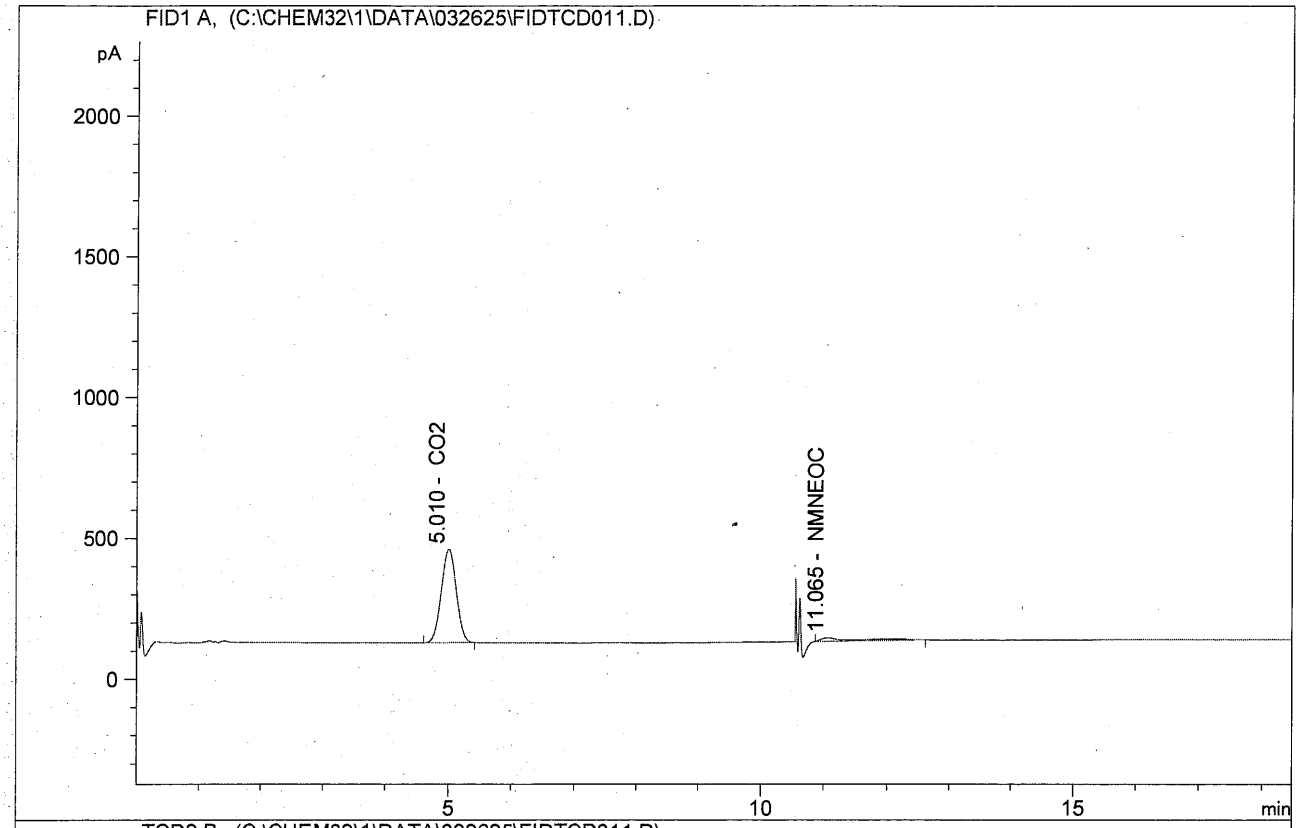
Signal 1:FID1 A,

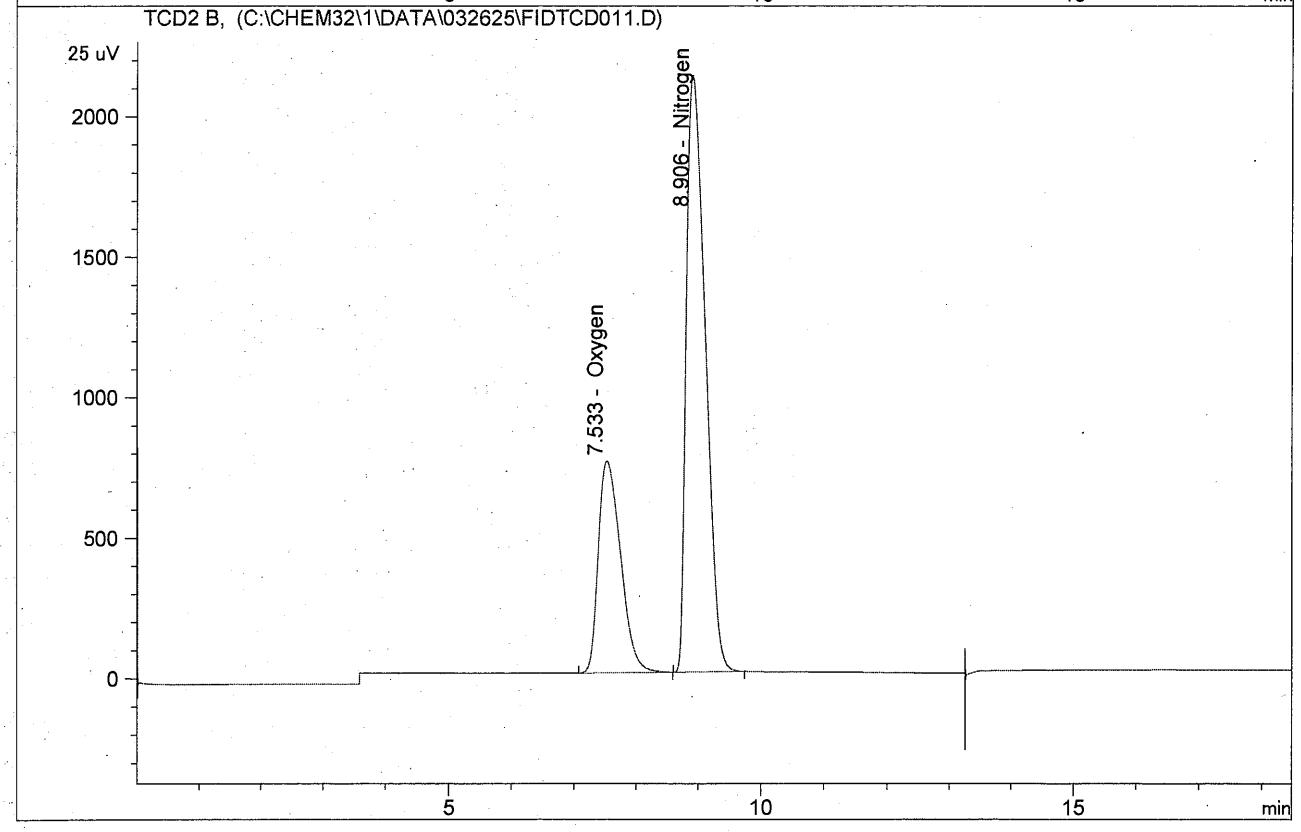
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	5.010	MM	5455.837	413.999	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	11.065	MM	454.216	12.412	NMNEOC

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	7.533	MM	18722.160	~~31.106~~	Oxygen
3	8.906	MM	45498.766	~~71.390~~	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

RSF
3/26/25





*** End of Report ***

RSF
3/26/15

Data file : C:\CHEM32\1\DATA\032625\FIDTCD015.D
Sample Name : 250733-73207B 1

Injection Date : Wed, 26. Mar. 2025 11:18:45 AM
Location : Vial 15
Seq Line : 15
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 10:31:08 am

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 1.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

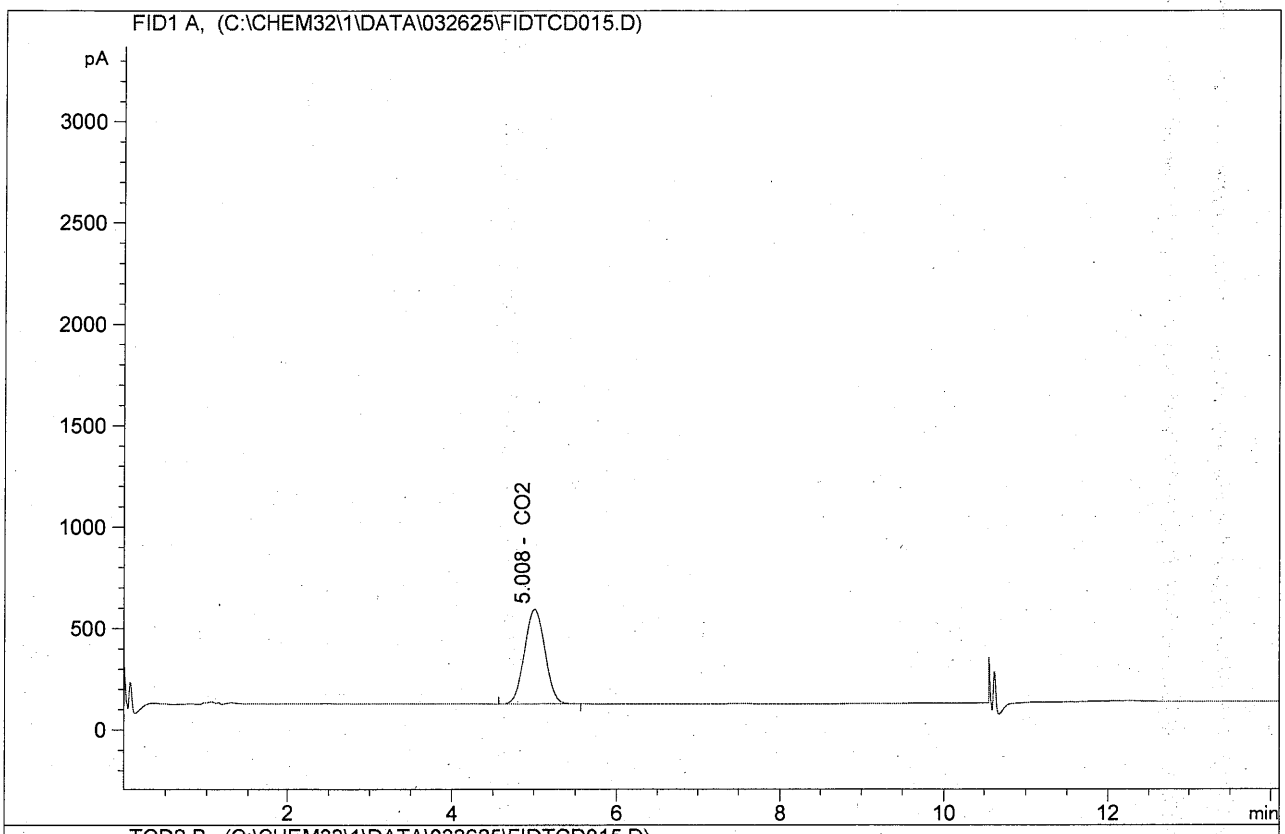
Signal 1:FID1 A,

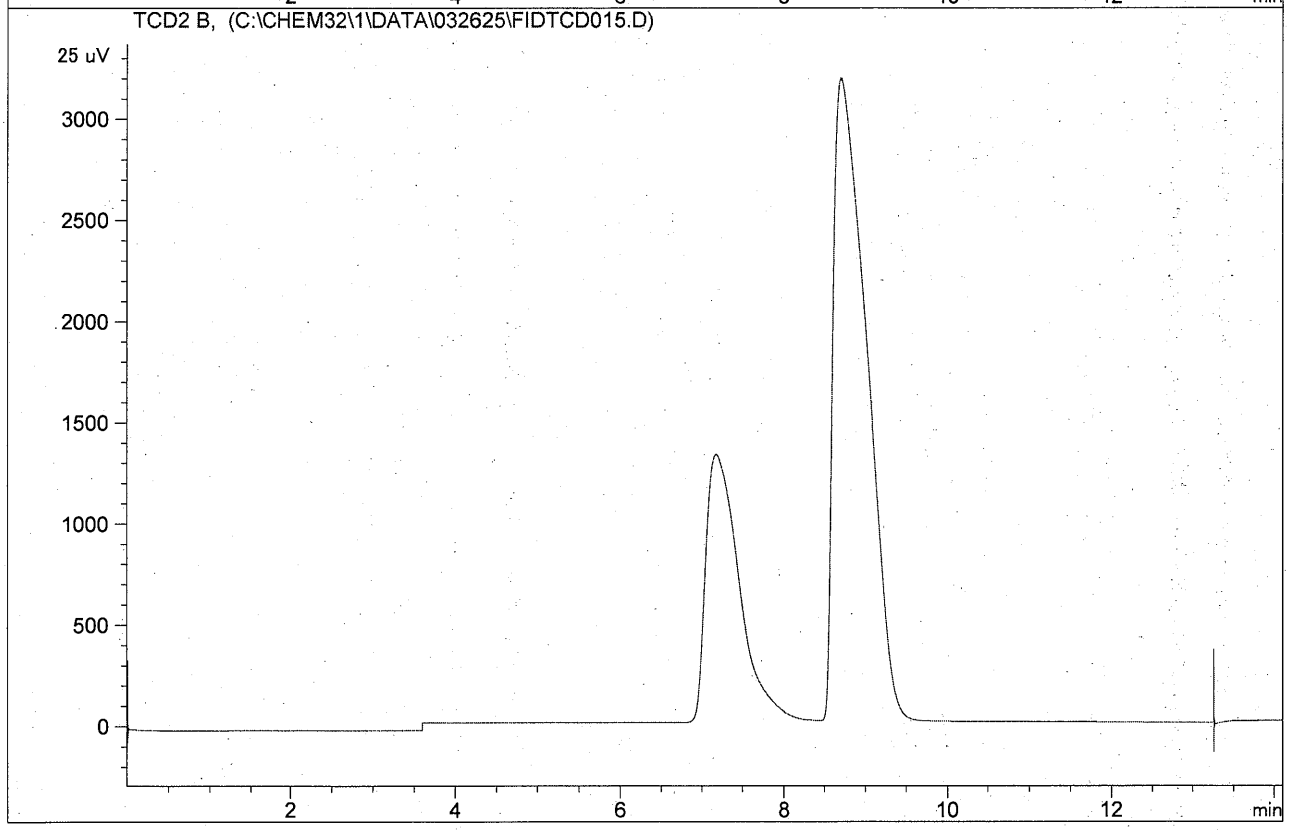
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	5.008	MM	7914.470	300.282	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	0.000		0.000	0.000	Oxygen
3	0.000		0.000	0.000	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

RJF 2/26/25





*** End of Report ***

KSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD016.D
Sample Name : 250733-73207B x2 1

Injection Date : Wed, 26. Mar. 2025 11:37:56 AM
Location : Vial 16
Seq Line : 16
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 10:31:08 am

Customized Report: 25C3C Report

Sorted By : Signal
Multiplier : 1.000000
Dilution : 2.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

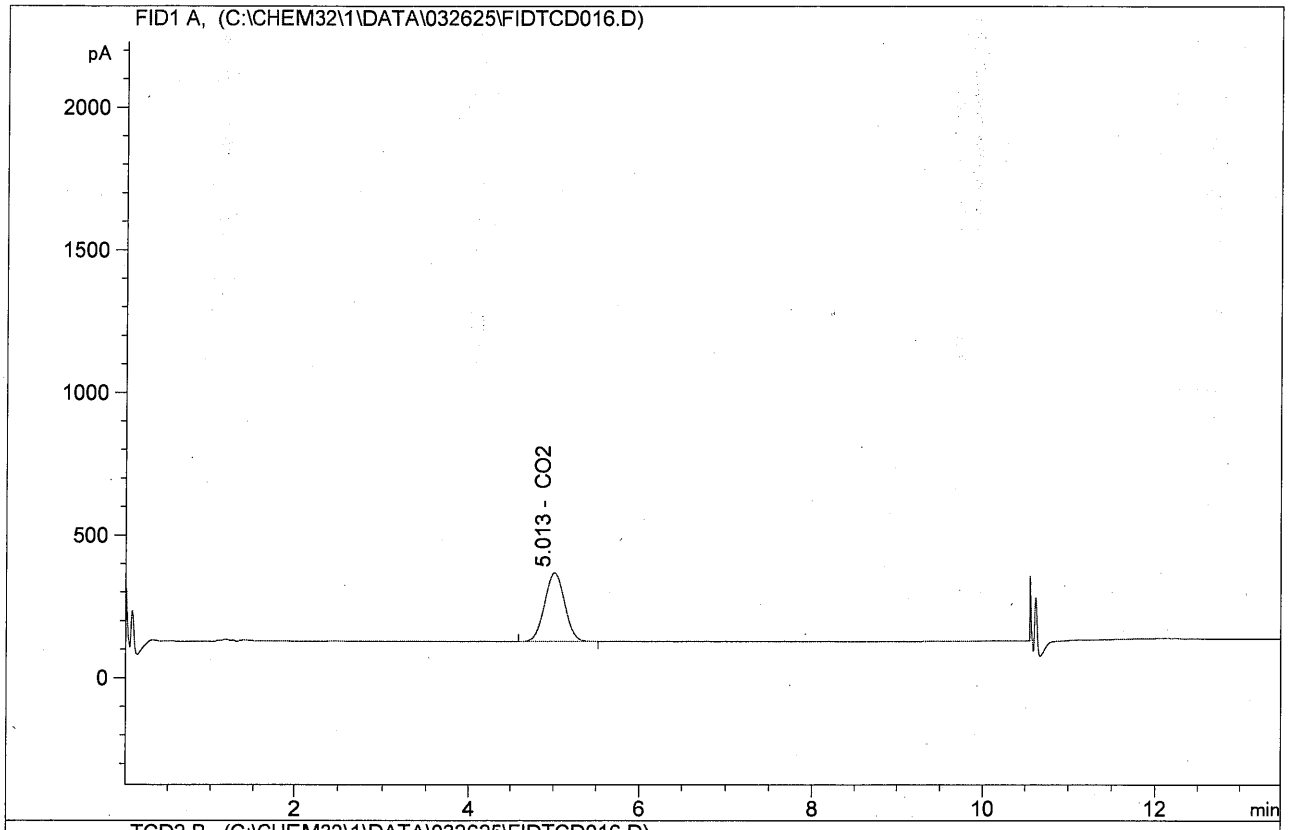
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	5.013	MM	3983.632	302.285	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

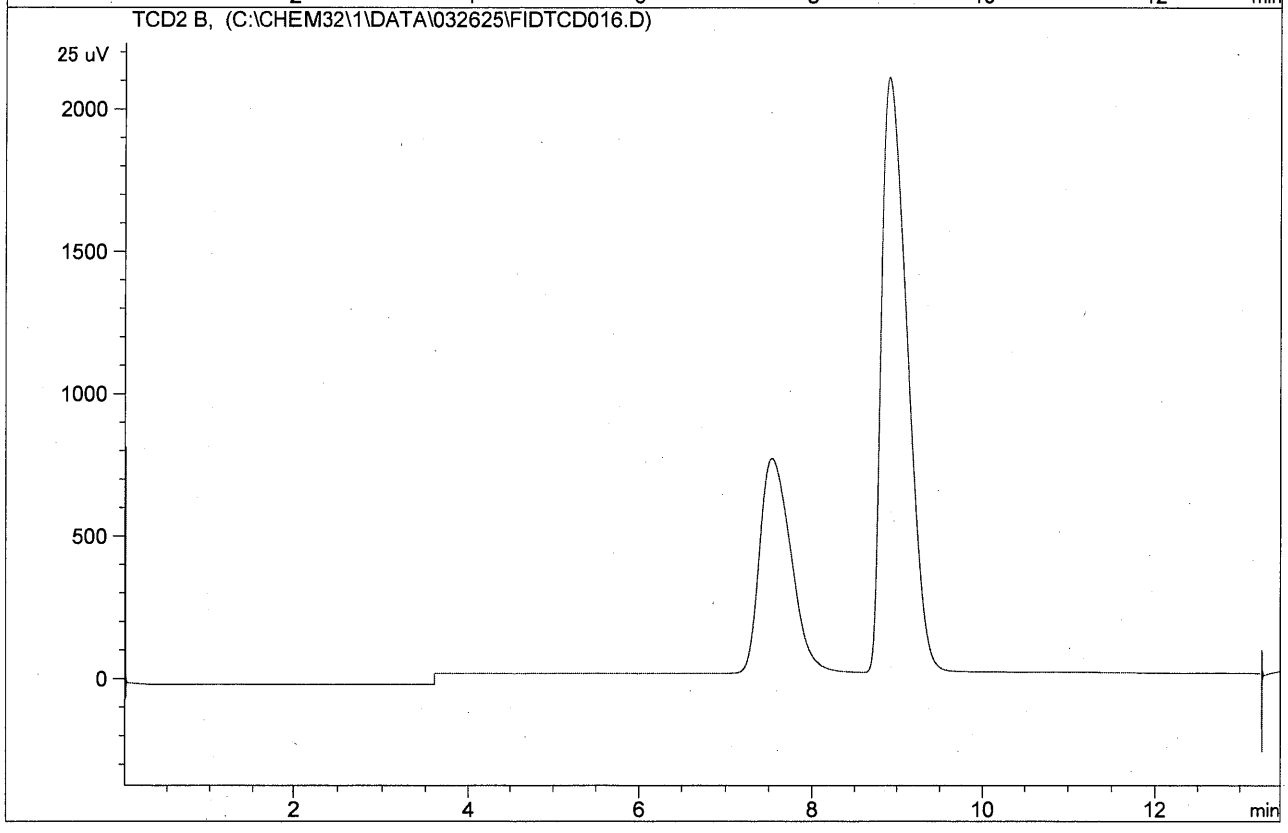
Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	0.000		0.000	0.000	Oxygen
3	0.000		0.000	0.000	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD016.D
Sample Name : 250733-73207B x2 2





*** End of Report ***

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RSF
3/26/25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD017.D
Sample Name : 250733-73207B x2 dp 1

Injection Date : Wed, 26. Mar. 2025 11:56:03 AM
Location : Vial 17
Seq Line : 17
Acq Operator : DL
Acq. Method : C:\CHEM32\1\METHODS\25C3C.M

Analysis Method : C:\CHEM32\1\METHODS\ANALYSIS METHODS\25C3C_070224.M

Last Changed : Wed, 26. Mar. 2025, 10:31:08 am

Customized Report: 25C3C Report

Sorted By Signal
Multiplier : 1.000000
Dilution : 2.000000
Uncalibrated Peaks : not reported

FID units: ppm
TCD units: %

Signal 1:FID1 A,

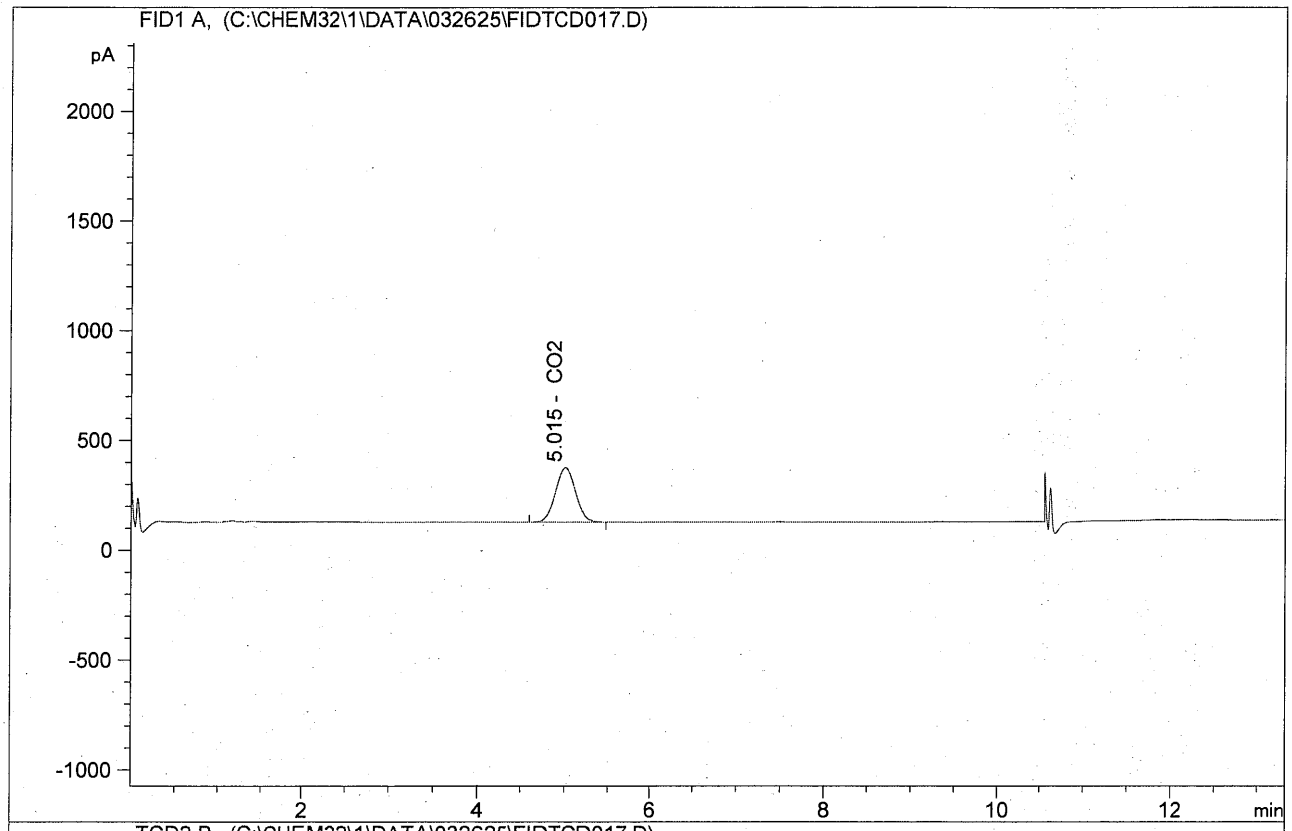
Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	CO
2	0.000		0.000	0.000	CH4
3	5.015	MM	4142.201	314.318	CO2
4	0.000		0.000	0.000	Ethene
5	0.000		0.000	0.000	Ethane
6	0.000		0.000	0.000	NMNEOC

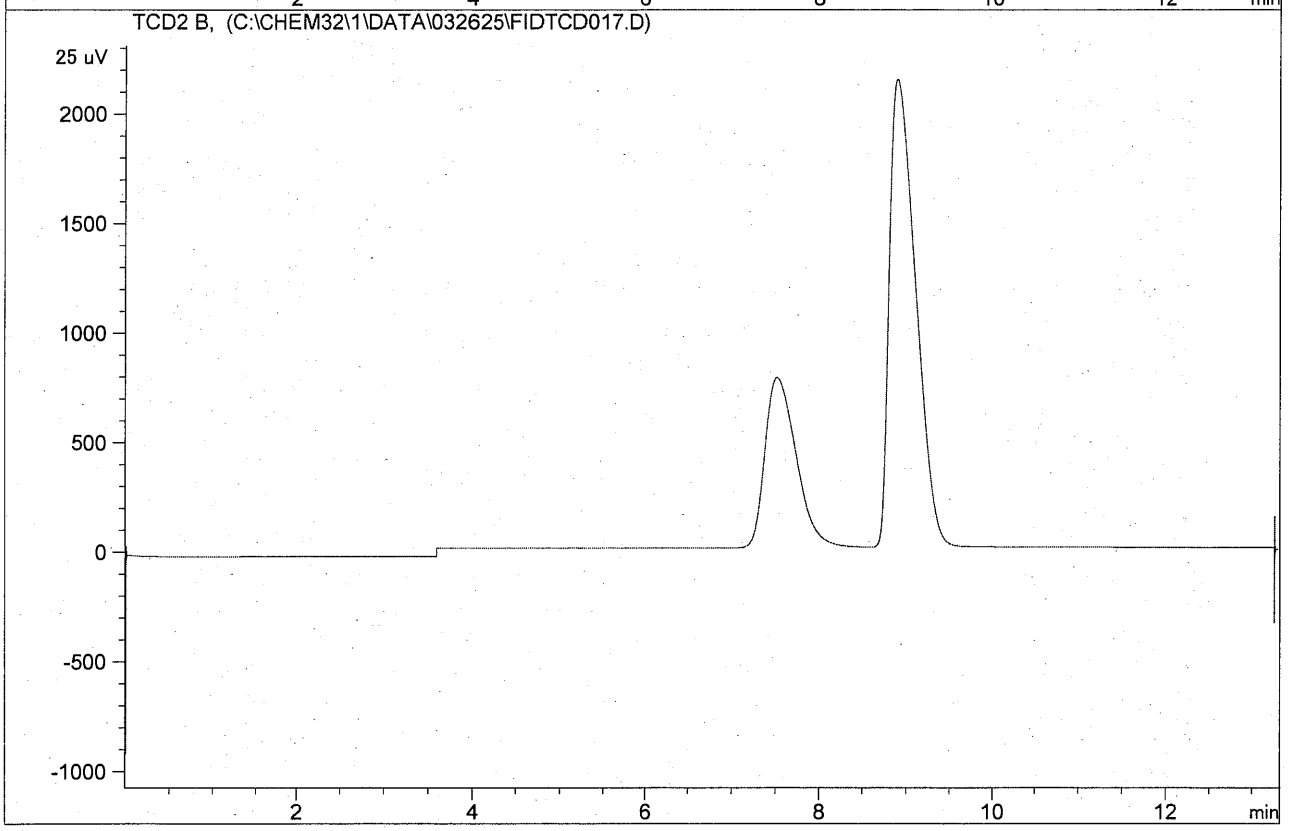
Signal 2:TCD2 B,

Peak #	RT [min]	Type	Area	Amount	Name
1	0.000		0.000	0.000	Hydrogen
2	0.000		0.000	0.000	Oxygen
3	0.000		0.000	0.000	Nitrogen
4	0.000		0.000	0.000	Carbon Monoxide
5	0.000		0.000	0.000	Methane
6	0.000		0.000	0.000	Ethane
7	0.000		0.000	0.000	Carbon Dioxide

MR 3-26-25

Data file : C:\CHEM32\1\DATA\032625\FIDTCD017.D
Sample Name : 250733-73207B x2 dp 2





*** End of Report ***

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NL 3-26-25

Sample

Sample Name:	Sample
Sample ID:	PURGE BLANK HE R2 03/25/2025
Origin:	NPOC.met
Status	Completed
Chk. Result	

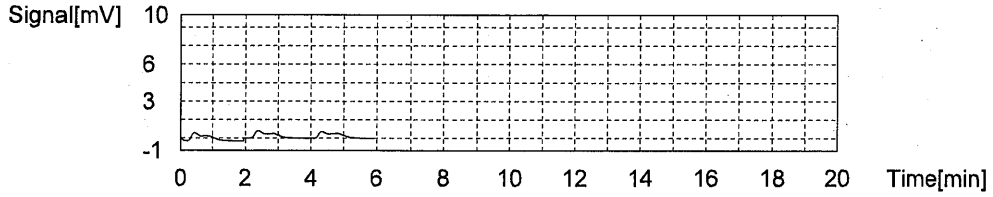
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1177ppm

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.025	0.1235ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/25/2025 11:24:45 AM
2	1.959	0.1168ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/25/2025 11:26:52 AM
3	1.919	0.1128ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/25/2025 11:29:01 AM

Mean Area 1.968
Mean Conc. 0.1177ppm



Sample

Sample Name: Sample
Sample ID: 250733 TRIP BLANK
Origin: NPOC.met
Status Completed
Chk. Result

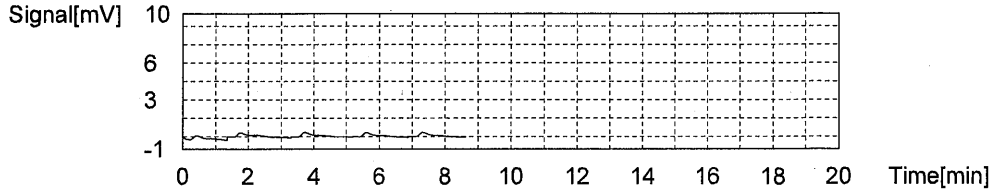
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.00720ppm

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4103	-0.04054ppm	150uL	1	E	012825.2025_01_28_10_17_59.cal	3/27/2025 9:01:14 AM
2	0.9513	0.01443ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:03:21 AM
3	0.9151	0.01075ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:05:23 AM
4	0.7261	-0.00845ppm	150uL	1	E	012825.2025_01_28_10_17_59.cal	3/27/2025 9:07:14 AM
5	0.7739	-0.00359ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:09:07 AM

Mean Area 0.8801
Mean Conc. 0.00720ppm



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Sample

Sample Name: Sample
Sample ID: 250733-73204
Origin: NPOC.met
Status Completed
Chk. Result

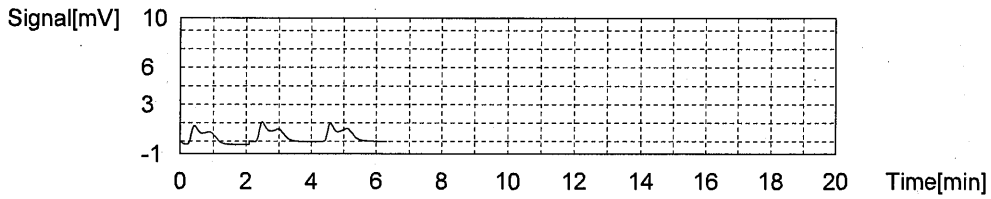
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4463ppm

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.091	0.4351ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:18:31 AM
2	5.267	0.4530ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:20:47 AM
3	5.248	0.4510ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:23:03 AM

Mean Area 5.202
Mean Conc. 0.4463ppm



Sample

Sample Name: Sample
Sample ID: 250733-73205
Origin: NPOC.met
Status Completed
Chk. Result

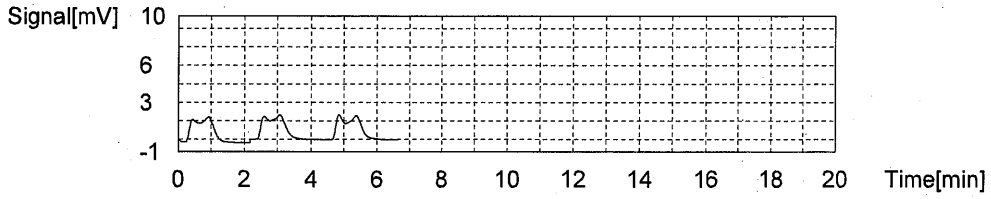
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7948ppm

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.742	0.8061ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:32:38 AM
2	8.693	0.8011ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:35:04 AM
3	8.459	0.7773ppm	150uL	1		012825.2025_01_28_10_17_59.cal	3/27/2025 9:37:26 AM

Mean Area 8.631
Mean Conc. 0.7948ppm



Calibration Summary

EPA Method 25C Calibration Curve (GC/FID/TCA #5)

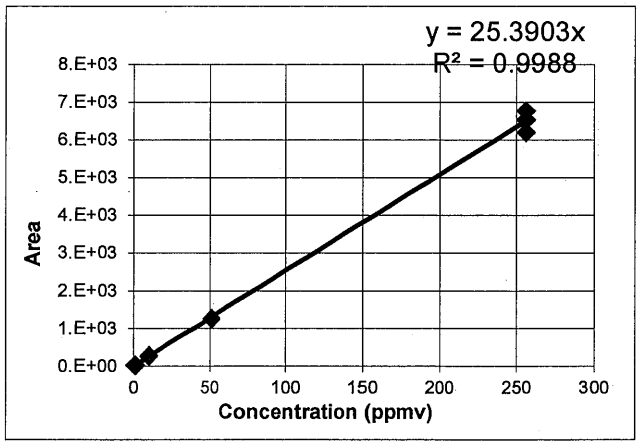
Analysis Date: 10/2/2024 **Analyst:** SS

Analyte: Carbon Monoxide
Retention Time: 1.64

Theoretical Concentration (ppmv)	Response (Area)	Response Factor	RPD from curve (+/- 10%)
1.024	28.7080	28.035	7.4
1.024	28.2600	27.598	5.7
1.024	27.1230	26.487	1.4
10.240	270.4840	26.414	1.1
10.240	273.7950	26.738	2.4
10.240	282.6010	27.598	5.7
51.200	1270.8100	24.821	-5.0
51.200	1263.6150	24.680	-5.5
51.200	1271.1680	24.828	-4.9
256.00	6210.7570	24.261	-7.1
256.00	6532.7760	25.519	-2.3
256.00	6773.2100	26.458	1.3

Calibration Verification Standards:

CCV Concentration (ppmv)	Response Area	Result (ppmv)	% Recovery (90%-110%)
51.20	1244.669	47.66	93.1
51.20	1283.461	49.15	96.0
51.20	1275.395	48.84	95.4



Cal. Type	Linear forced to origin
Equation	Y = 25 X
R2	0.9988
Must be > 0.990	
Average Error	4.145%
Average RF	26
RSD	4.898%

EPA Method 25C Calibration Curve (GC/FID/TCA #5)

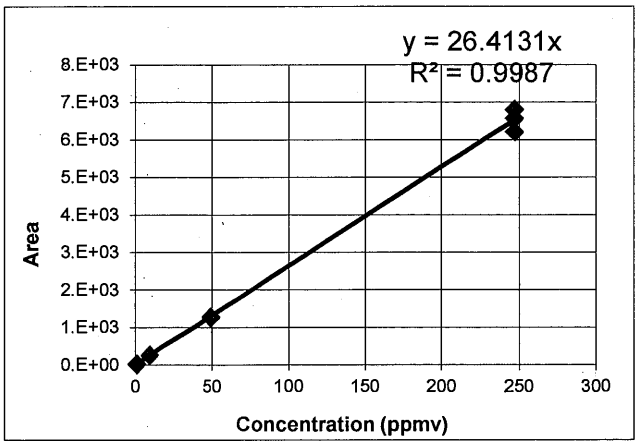
Analysis Date: 10/2/2024 **Analyst:** SS

Analyte: Methane
Retention Time: 2.46

Theoretical Concentration (ppmv)	Response (Area)	Response Factor	RPD from curve (+/- 10%)
0.988	27.3440	27.687	9.8
0.988	24.9600	25.273	0.2
0.988	24.0880	24.390	-3.3
9.876	264.6890	26.801	6.3
9.876	262.7160	26.601	5.5
9.876	270.1900	27.358	8.5
49.38	1287.0090	26.063	3.4
49.38	1270.1380	25.722	2.0
49.38	1284.7770	26.018	3.2
246.90	6209.9840	25.152	-0.2
246.90	6567.4810	26.600	5.5
246.90	6800.2910	27.543	9.2

Calibration Verification Standards:

CCV Concentration (ppmv)	Response Area	Result (ppmv)	% Recovery (90%-110%)
49.38	1256.34	49.83	100.9
49.38	1294.906	51.36	104.0
49.38	1307.753	51.87	105.0



Cal. Type	Linear forced to origin
Equation	Y = 26 X
R2	0.9979
Must be > 0.990	
Average Error	4.766%
Average RF	26
RSD	3.892%

EPA Method 25C Calibration Curve (GC/FID/TCA #5)

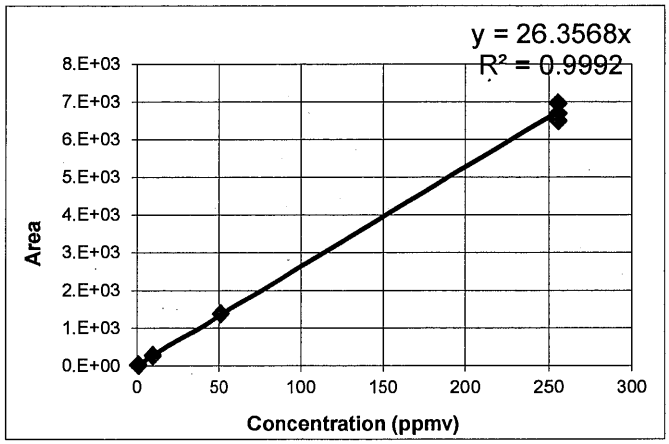
Analysis Date: 10/2/2024 **Analyst:** SS

Analyte: Carbon Dioxide
Retention Time: 4.94

Theoretical Concentration (ppmv)	Response (Area)	Response Factor	RPD from curve (+/- 10%)
1.021	26.6500	26.102	-1.9
1.021	29.2940	28.691	7.8
1.021	27.7100	27.140	2.0
10.21	285.8200	27.994	5.2
10.21	283.7330	27.790	4.4
10.21	277.7560	27.204	2.2
51.05	1388.9690	27.208	2.2
51.05	1390.4390	27.237	2.4
51.05	1387.4320	27.178	2.1
255.25	6502.8340	25.476	-4.3
255.25	6692.6510	26.220	-1.5
255.25	6959.5430	27.266	2.5

Calibration Verification Standards:

CCV Concentration (ppmv)	Response Area	Result (ppmv)	% Recovery (90%-110%)
51.05	1332.769	50.08	98.1
51.05	1379.88	51.85	101.6
51.05	1327.719	49.89	97.7



Cal. Type	Linear forced to origin
Equation	Y = 26 X
R2	0.9995
Must be > 0.990	
Average Error	3.207%
Average RF	27
RSD	3.199%

EPA Method 25C Calibration Curve (GC/FID/TCA #5)

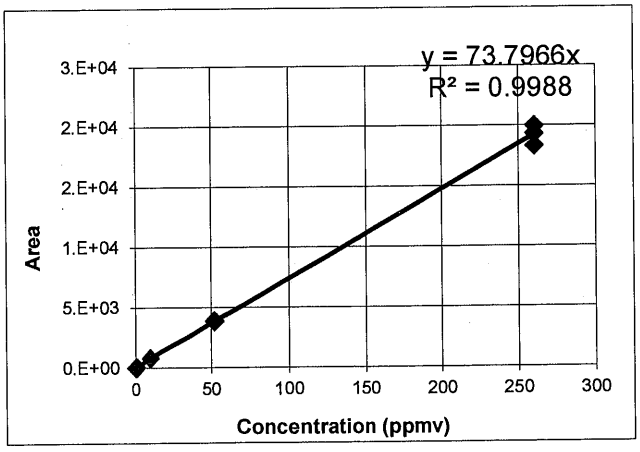
Analysis Date: 10/2/2024 **Analyst:** SS

Analyte: TNMOC (as Propane)
Retention Time: 11.51

Theoretical Concentration (ppmv)	Response (Area)	Response Factor	RPD from curve (+/- 10%)
0.104	7.6930	73.829	-0.2
0.104	7.3090	70.144	-5.2
0.104	8.1970	78.666	6.3
0.261	19.7380	75.770	2.4
0.261	18.8480	72.353	-2.2
0.261	18.3720	70.526	-4.7
1.042	81.2500	77.975	5.4
1.042	77.5130	74.389	0.5
1.042	80.9480	77.685	5.0
10.420	808.9650	77.636	4.9
10.420	813.6530	78.086	5.5
10.420	818.7700	78.577	6.2
52.10	3909.7520	75.043	1.4
52.10	3853.6980	73.967	0.0
52.10	3913.1240	75.108	1.5
260.50	18321.8440	70.333	-5.0
260.50	19326.9220	74.192	0.3
260.50	19989.3930	76.735	3.7

Calibration Verification Standards:

CCV Concentration (ppmv)	Response Area	Result (ppmv)	% Recovery (90%-110%)
52.10	3790.774	51.23	98.3
52.10	3887.67	52.54	100.8
52.10	3915.287	52.91	101.6



Cal. Type	Linear forced to origin
Equation	Y = 74 X
R2	0.9984
Must be > 0.990	
Average Error	1.429%
Average RF	75
RSD	3.798%

Fixed Gases Analysis by GC/TCD

Analysis Date: 10/21/2024
Analyst: : SS

Standard ID: GC-110223-01
Concentration: 20.07
Units: %
Instrument: GC-TCA#5-TCD

CALIBRATION CURVE DATA: Standard H2 (MS5A) [5.0%-20%]

Theoretical Concentration	Retention time (min) (+/- 3 Sec)	Response Area	RPD from avg result (+/- 5%)	Std Deviation	Mean Response Area	Calculated Concentration (From Mean)	Recovery (+/- 10 %)
1.004	3.19	5.834	3.4	0	6.040	1.038	103.4
1.004	3.18	6.245	3.4				
5.018	3.15	56.068	3.8	3	53.996	4.912	97.9
5.018	3.15	51.923	3.8				
10.035	3.11	115.376	2.1	3	117.815	10.176	101.4
10.035	3.11	120.254	2.1				
20.070	3.06	254.387	0.1	0.492	254.039	20.047	99.9
20.070	3.05	253.691	0.1				
Avg RT	3.123						

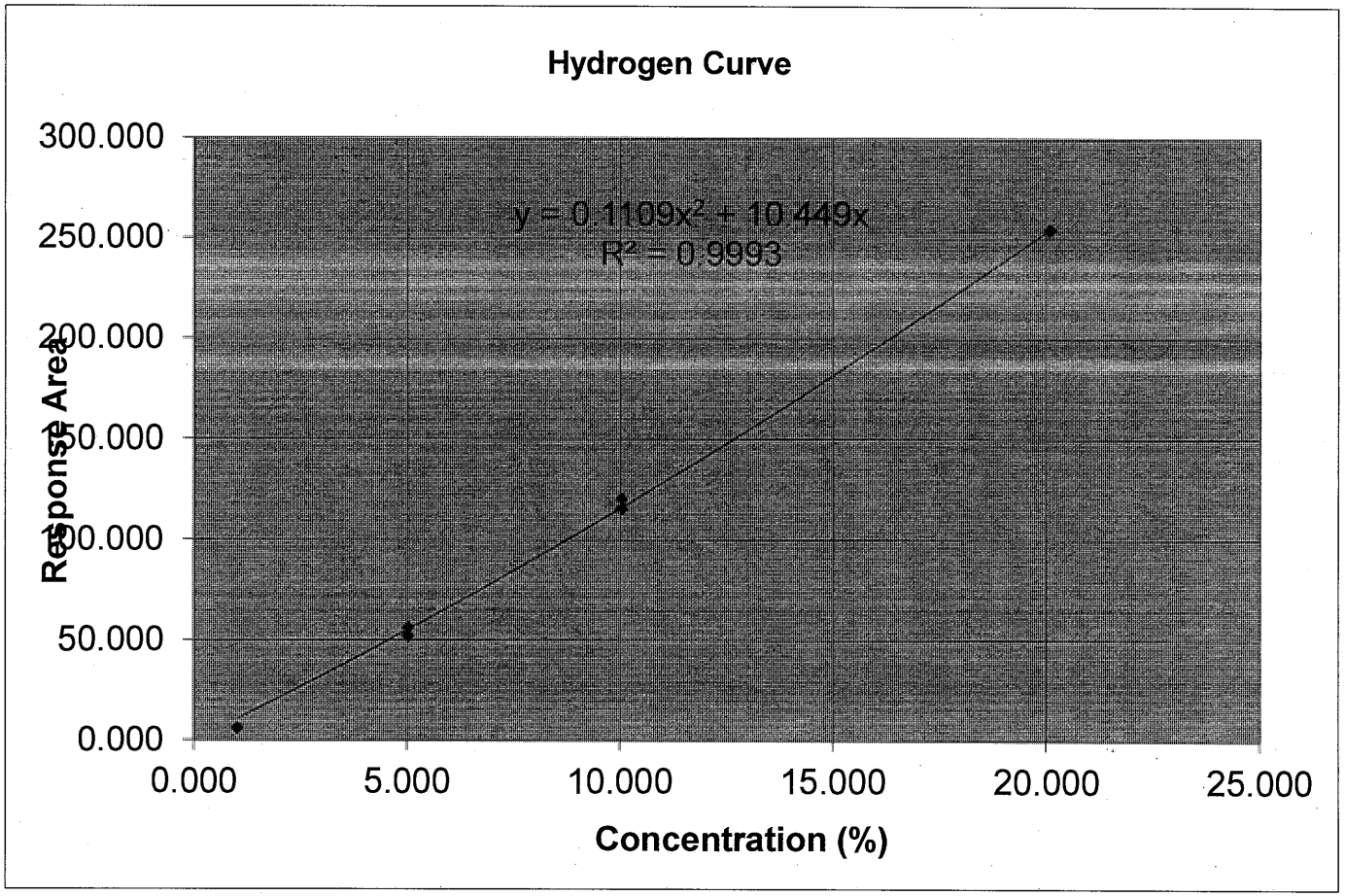
Formula: y = 0.1109x2 + 10.449x
R2 value: 0.999 *(Must be > 0.990)*

Calibration Verification

Check Standard Concentration: 10.04 %

	Resp. (area)	Result (%)	% Rec	% RPD
Initial	108.724	9.460	94.27	2.4
Duplicate	111.680	9.693	96.59	

** All CV's must be +/- 10 % of Actual Concentration and +/- 5% RPD from Initial result.*


Hydrogen Curve
y = 0.1109x² + 10.449x
R² = 0.9993
Response Area
300.000
250.000
200.000
150.000
100.000
50.000
0.000
0.000
5.000
10.000
15.000
20.000
25.000
Concentration (%)

Fixed Gases Analysis by GC/TCD

Analysis Date: 10/21/2024
Analyst: : SS

Standard ID: GC-01-03-24
Concentration: 19.88
Units: %
Instrument: GC-TCA#5-TCD

CALIBRATION CURVE DATA: Standard O2 (MS5A) [0.1-20%]

Theoretical Concentration	Retention time (min) (+/- 3 Sec)	Response Area	RPD from avg result (+/- 5%)	Std Deviation	Mean Response Area	Calculated Concentration (From Mean)	Recovery (+/- 10 %)
0.01	**7.938**	**11.93**	0.7	0	11.851	0.010	99.0
0.01	**7.969**	**11.772**	0.7				
0.099	7.925	117.013	0.5	1	117.660	0.098	98.3
0.099	7.930	118.306	0.5				
0.994	7.904	1165.408	0.9	14	1175.511	0.977	98.2
0.994	7.908	1185.614	0.9				
4.970	7.832	5762.381	0.4	35	5737.849	4.767	95.9
4.970	7.832	5713.316	0.4				
9.940	7.739	11629.529	0.3	43	11659.988	9.686	97.4
9.940	7.738	11690.447	0.3				
19.880	7.524	23959.363	0.8	264	24146.273	20.059	100.9
19.880	7.531	24333.182	0.8				
Avg RT	7.786						

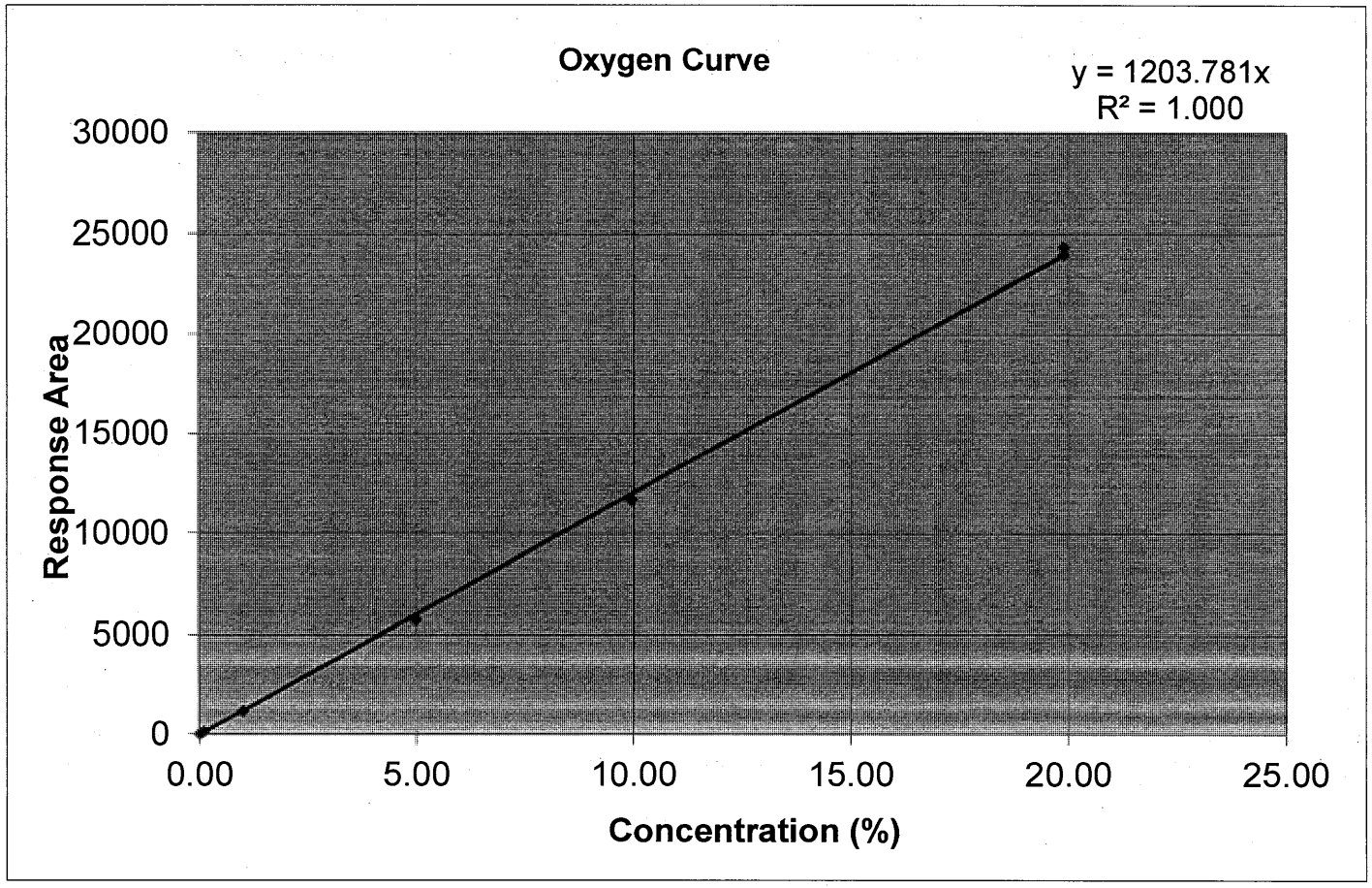
Slope: X = Y / 1203.781
R2 value: 0.999 *(Must be > 0.990)*

Calibration Verification

Check Standard Concentration: 9.94 %

	Resp. (area)	Result (%)	% Rec	% RPD
Initial	11854.801	9.848	99.07	0.0
Duplicate	11857.571	9.850	99.09	

** All CV's must be +/- 10 % of Actual Concentration and +/- 5% RPD from Initial result.*


Oxygen Curve
y = 1203.781x
R² = 1.000
30000
25000
20000
15000
10000
5000
0
Response Area
0.00
5.00
10.00
15.00
20.00
25.00
Concentration (%)

Fixed Gases Analysis by GC/TCD

Analysis Date: 10/21/2024
Analyst: : SS

Standard ID: GC-01-03-24
Concentration: 19.93
Units: %
Instrument: GC-TCA#5-TCD

CALIBRATION CURVE DATA: Standard N2 (MS5A) [0.1-40%]

Theoretical Concentration	Retention time (min) (+/- 3 Sec)	Response Area	RPD from avg result (+/- 5%)	Std Deviation	Mean Response Area	Calculated Concentration (From Mean)	Recovery (+/- 10 %)
0.100	9.142	126.9610	0.5	1	126.385	0.099	99.5
0.100	9.138	125.8090	0.5				
9.965	9.045	14175.1150	4.5	857	13569.025	10.645	106.8
9.965	9.054	12962.9340	4.5				
19.930	8.958	27827.8280	2.8	1089	27057.876	21.228	106.5
19.930	8.969	26287.9240	2.8				
50.000	8.764	64406.7230	0.2	141	64306.672	50.451	100.9
50.000	8.763	64206.6210	0.2				
80.000	8.654	100464.1410	0.6	889	101092.528	79.310	99.1
80.000	8.651	101720.9140	0.6				
Avg RT	8.914						

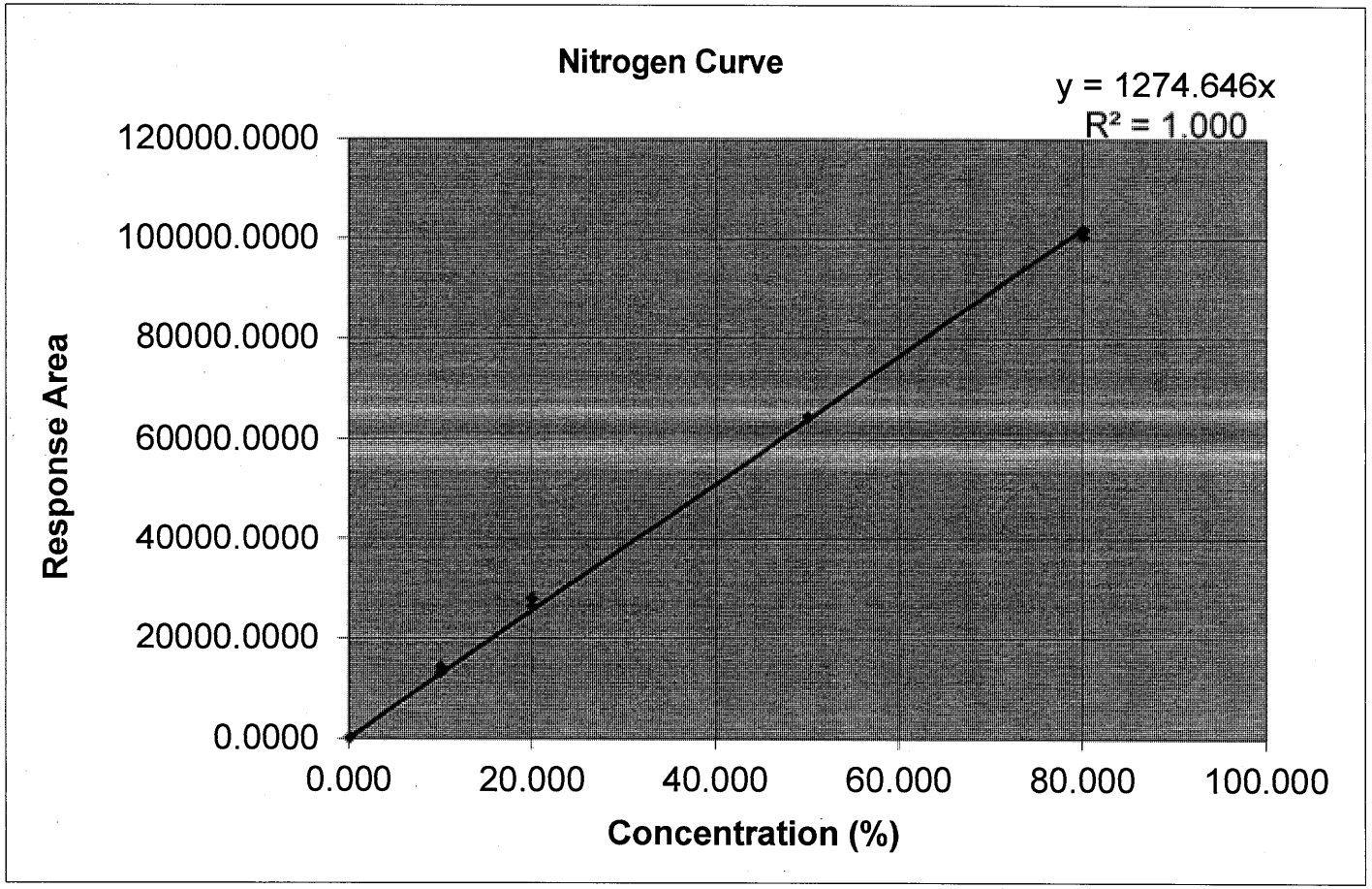
Slope: X = Y / 1274.646
R2 value: 0.999 *(Must be > 0.990)*

Calibration Verification

Check Standard Concentration: 19.93 %

	Resp. (area)	Result (%)	% Rec	% RPD
Initial	27373.117	21.475	107.75	0.7
Duplicate	27576.82	21.635	108.55	

** All CV's must be +/- 10 % of Actual Concentration and +/- 5% RPD from Initial result.*


Nitrogen Curve
y = 1274.646x
R² = 1.000
120000.0000
100000.0000
80000.0000
60000.0000
40000.0000
20000.0000
0.0000
Response Area
0.000
20.000
40.000
60.000
80.000
100.000
Concentration (%)

Fixed Gases Analysis by GC/TCD

Analysis Date: 10/21/2024
Analyst: : SS

Standard ID: GC-110223-01
Concentration: 20.01
Units: %
Instrument: GC-TCA#5-TCD

CALIBRATION CURVE DATA: Standard CO (MS5A) [0.1-20%]

Theoretical Concentration	Retention time (min) (+/- 3 Sec)	Response Area	RPD from avg result (+/- 5%)	Std Deviation	Mean Response Area	Calculated Concentration (From Mean)	Recovery (+/- 10 %)
0.100	10.711	131.443	4.5	9	137.618	0.104	104.2
0.100	10.710	143.792	4.5				
1.001	10.701	1199.134	0.6	9	1205.790	0.913	91.3
1.001	10.701	1212.445	0.6				
5.003	10.671	6646.801	2.4	218	6492.587	4.919	98.3
5.003	10.675	6338.373	2.4				
10.005	10.633	12811.575	1.2	218	12965.732	9.823	98.2
10.005	10.632	13119.888	1.2				
20.010	10.559	26626.934	0.2	85	26567.075	20.127	100.6
20.010	10.562	26507.215	0.2				
Avg RT	10.656						

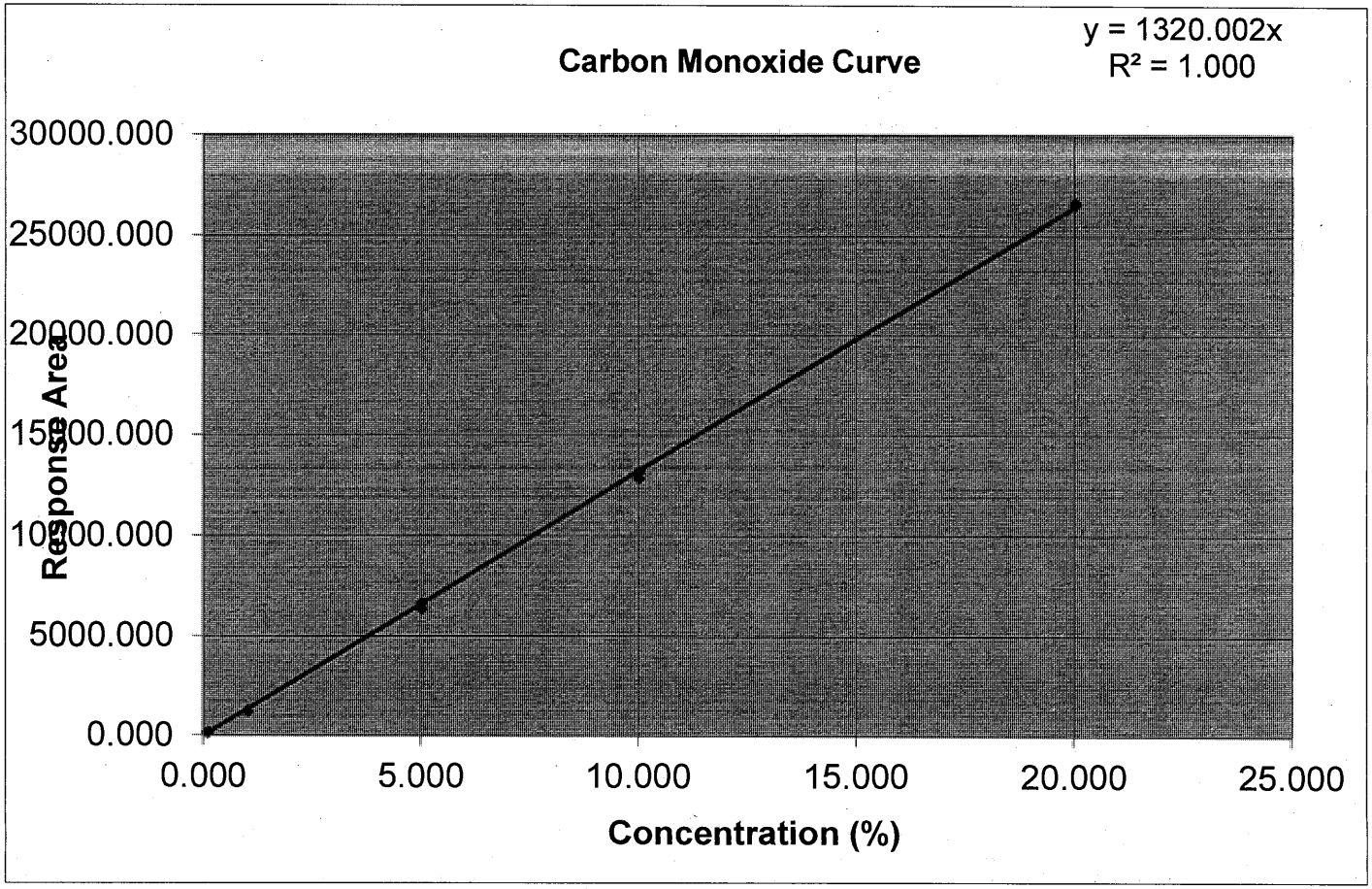
Slope: X = Y / 1320.002
R2 value: 1.000 *(Must be > 0.990)*

Calibration Verification

Check Standard Concentration: 10.01 %

	Resp. (area)	Result (%)	% Rec	% RPD
Initial	12782.767	9.684	96.8	1.7
Duplicate	12998.566	9.848	98.4	

** All CV's must be +/- 10 % of Actual Concentration and +/- 5% RPD from Initial result.*


Carbon Monoxide Curve
y = 1320.002x
R² = 1.000
30000.000
25000.000
20000.000
15000.000
10000.000
5000.000
0.000
Response Area
0.000
5.000
10.000
15.000
20.000
25.000
Concentration (%)

Fixed Gases Analysis by GC/TCD

Analysis Date: 10/21/2024
Analyst: : SS

Standard ID: GC-110223-01
Concentration: 19.90
Units: %
Instrument: GC-TCA#5-TCD

CALIBRATION CURVE DATA: Standard CH4 (MS5A) [0.1-20%]

Theoretical Concentration	Retention time (min) (+/- 3 Sec)	Response Area	RPD from avg result (+/- 5%)	Std Deviation	Mean Response Area	Calculated Concentration (From Mean)	Recovery (+/- 10 %)
0.100	12.605	91.954	2.5	3	94.266	0.097	97.7
0.100	12.600	96.577	2.5				
0.995	12.586	924.748	0.2	3	926.600	0.956	96.1
0.995	12.592	928.451	0.2				
9.950	12.500	9871.120	1.0	146	9974.570	10.291	103.4
9.950	12.495	10078.019	1.0				
19.900	12.393	20513.184	0.2	45	20481.475	21.132	106.2
19.900	12.392	20449.766	0.2				
50.000	12.182	49120.211	1.2	832	49708.793	51.287	102.6
50.000	12.176	50297.375	1.2				
90.000	12.003	85440.664	0.9	1126	86236.781	88.975	98.9
90.000	11.992	87032.898	0.9				
Avg RT	12.376						

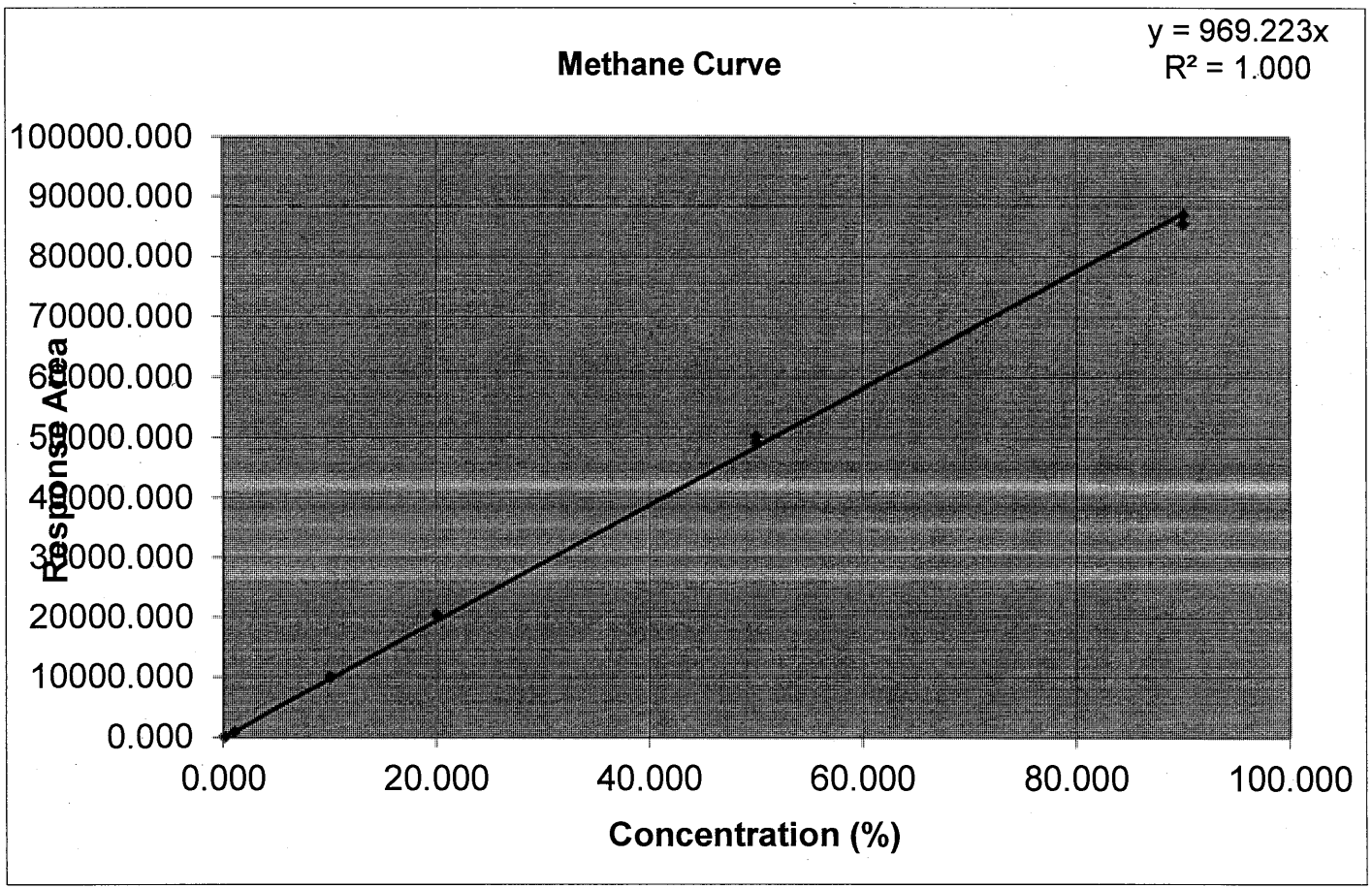
Slope: X = Y / 969.223
R2 value: 0.999 *(Must be > 0.990)*

Calibration Verification

Check Standard Concentration: 9.95 %

	Resp. (area)	Result (%)	% Rec	% RPD
Initial	9569.417	9.873	99.2	1.0
Duplicate	9663.503	9.970	100.2	

** All CV's must be +/- 10 % of Actual Concentration and +/- 5% RPD from Initial result.*


Methane Curve
y = 969.223x
R² = 1.000
100000.000
90000.000
80000.000
70000.000
60000.000
50000.000
40000.000
30000.000
20000.000
10000.000
0.000
Response Area
0.000
20.000
40.000
60.000
80.000
100.000
Concentration (%)

Fixed Gases Analysis by GC/TCD

Analysis Date: 10/21/2024
Analyst: : SS

Standard ID: GC-110223-01
Concentration: 19.90
Units: %
Instrument: GC-TCA#5-TCD

CALIBRATION CURVE DATA: Standard CO2 (Q-bond) [0.1-20%]

Theoretical Concentration	Retention time (min) (+/- 3 Sec)	Response Area	RPD from avg result (+/- 5%)	Std Deviation	Mean Response Area	Calculated Concentration (From Mean)	Recovery (+/- 10 %)
0.100	16.521	139.0060	1.3	3	140.895	0.094	95.0
0.100	16.512	142.7830	1.3				
9.950	16.567	14872.6030	0.6	130	14964.803	10.037	100.9
9.950	16.570	15057.0030	0.6				
19.900	16.628	30778.4900	0.3	133	30684.647	20.580	103.4
19.900	16.622	30590.8030	0.3				
50.000	16.774	76899.9140	0.5	570	76496.973	51.305	102.6
50.000	16.768	76094.0310	0.5				
80.000	16.876	116129.9840	1.4	2356	117796.035	79.004	98.8
80.000	16.882	119462.0860	1.4				
Avg RT	16.672						

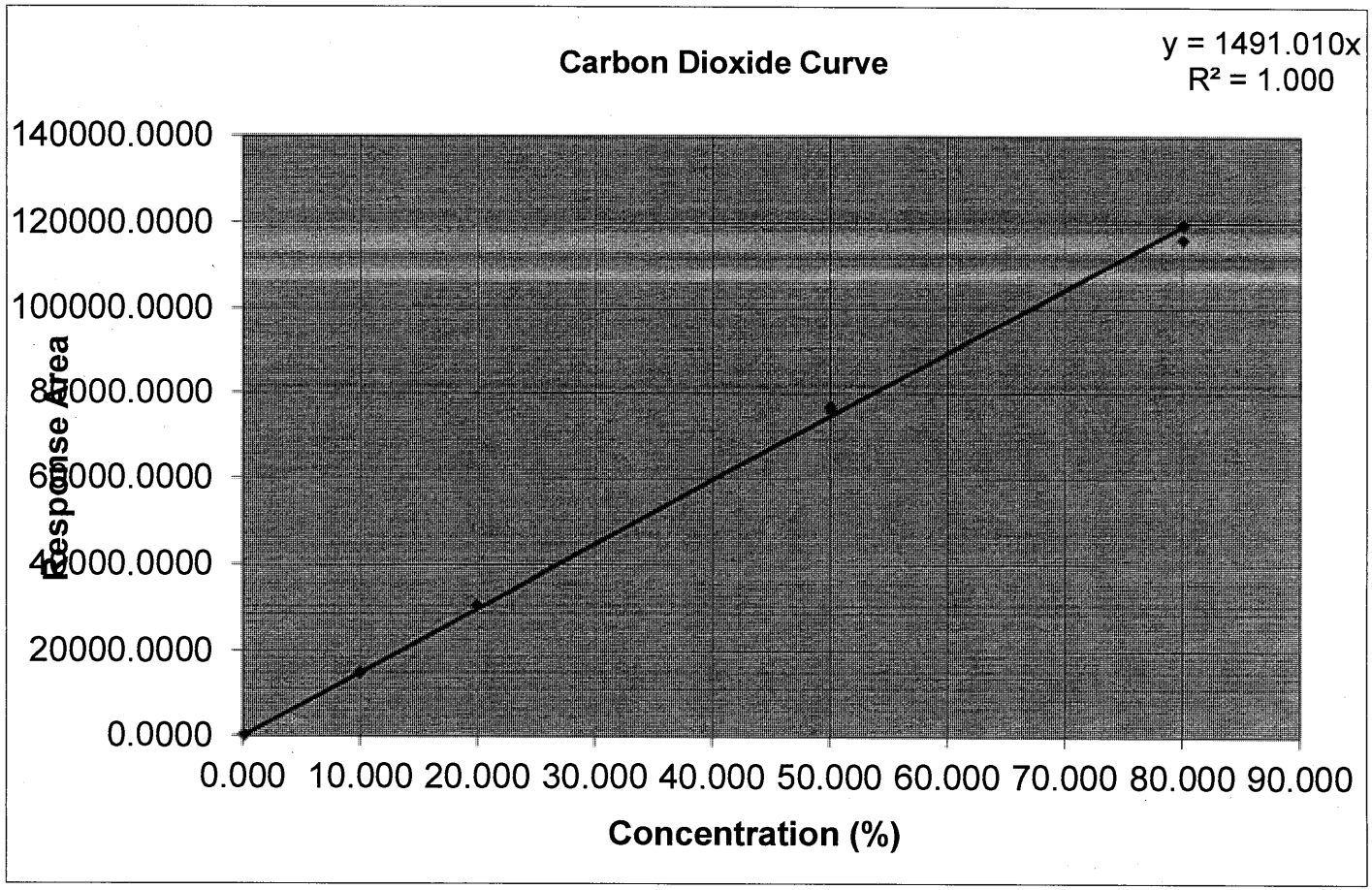
Slope: X = Y / 1491.010
R2 value: 0.999 *(Must be > 0.990)*

Calibration Verification

Check Standard Concentration: 9.95 %

	Resp. (area)	Result (%)	% Rec	% RPD
Initial	14928.445	10.01	100.6	0.7
Duplicate	15035.975	10.08	101.3	

** All CV's must be +/- 10 % of Actual Concentration and +/- 5% RPD from Initial result.*


Carbon Dioxide Curve
y = 1491.010x
R² = 1.000
140000.0000
120000.0000
100000.0000
80000.0000
60000.0000
40000.0000
20000.0000
0.0000
Response Area
0.000 10.000 20.000 30.000 40.000 50.000 60.000 70.000 80.000 90.000
Concentration (%)

Cal. Curve

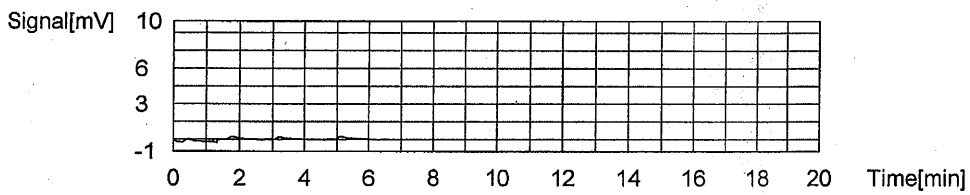
Sample Name: Calibration Standard
Sample ID: GC-012225-01
Cal. Curve: 012825.2025_01_28_10_17_59.cal
Status Completed

Type	Anal.
Standard	NPOC

Conc: 0.000ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.3124	150uL	1	*******		1/28/2025 10:24:22 AM
2	0.3486	150uL	1	*******		1/28/2025 10:25:58 AM
3	0.000	150uL	1	*******	E	1/28/2025 10:28:01 AM
4	0.3952	150uL	1	*******		1/28/2025 10:29:49 AM

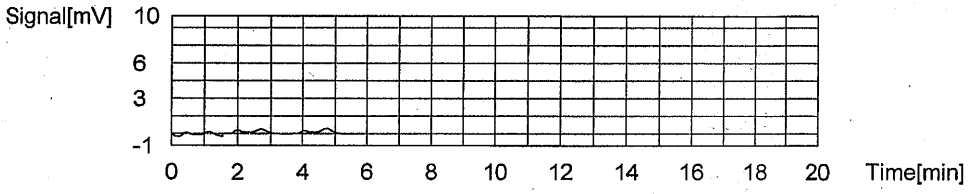
Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 0.3521



Conc: 0.1000ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1.474	150uL	1	*******		1/28/2025 10:38:35 AM
2	1.319	150uL	1	*******		1/28/2025 10:40:48 AM
3	1.389	150uL	1	*******		1/28/2025 10:43:00 AM

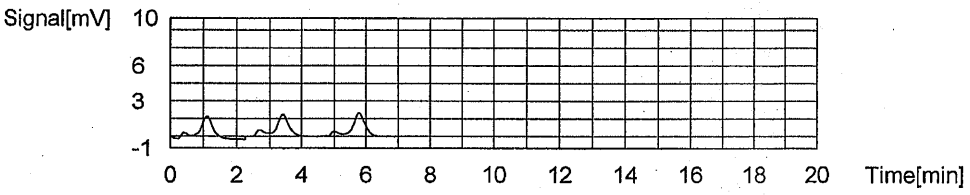
Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 1.394



Conc: 0.5000ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	5.436	150uL	1	*******		1/28/2025 10:52:40 AM
2	5.612	150uL	1	*******		1/28/2025 10:55:09 AM
3	5.550	150uL	1	*******		1/28/2025 10:57:39 AM

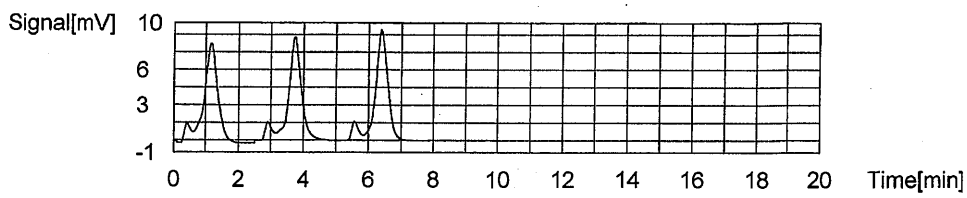
Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 5.533



Conc: 2.500ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	25.89	150uL	1	*******		1/28/2025 11:07:35 AM
2	25.70	150uL	1	*******		1/28/2025 11:10:23 AM
3	25.98	150uL	1	*******		1/28/2025 11:13:04 AM

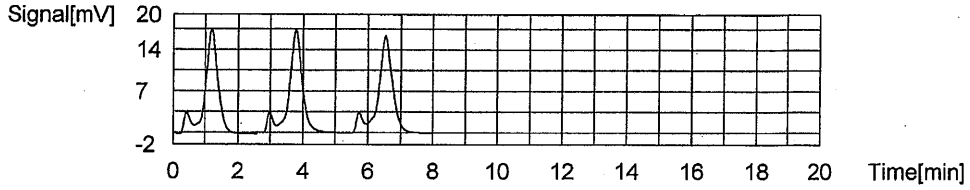
Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 25.86



Conc: 5.000ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	50.22	150uL	1	*******		1/28/2025 11:23:04 AM
2	50.72	150uL	1	*******		1/28/2025 11:25:57 AM
3	50.52	150uL	1	*******		1/28/2025 11:28:46 AM

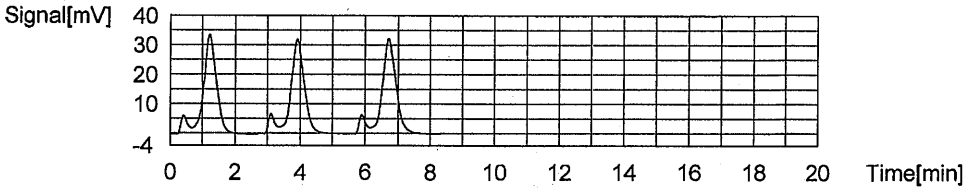
Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 50.49



Conc: 10.00ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	99.48	150uL	1	*******		1/28/2025 11:38:53 AM
2	100.1	150uL	1	*******		1/28/2025 11:41:49 AM
3	99.93	150uL	1	*******		1/28/2025 11:44:50 AM

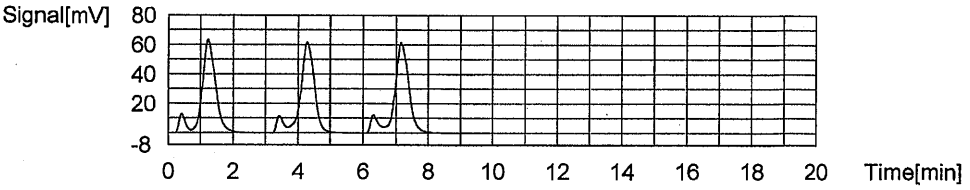
Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 99.84



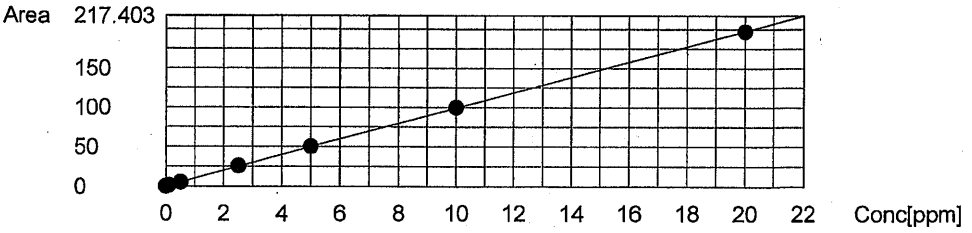
Conc: 20.00ppm

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	196.3	150uL	1	*******		1/28/2025 11:55:16 AM
2	197.3	150uL	1	*******		1/28/2025 11:58:19 AM
3	197.9	150uL	1	*******		1/28/2025 12:01:28 PM

Acid Add. 1.500%
Sp. Time 90.00sec
Mean Area 197.2



Slope: 9.841
Intercept 0.8093
r^2 1.0000
r 1.0000
Zero Shift No



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Appendix E

QA/QC Data

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2 - Outlet
Project No. AST-2025-1080
Parameter PM

Date	Nozzle ID	Nozzle Diameter (in.) #1	#2	#3	Dn (Average)	Difference	Criteria	Material
3/21/25	INC-2-4	0.631	0.631	0.631	0.631	0.000	≤ 0.004 in.	--

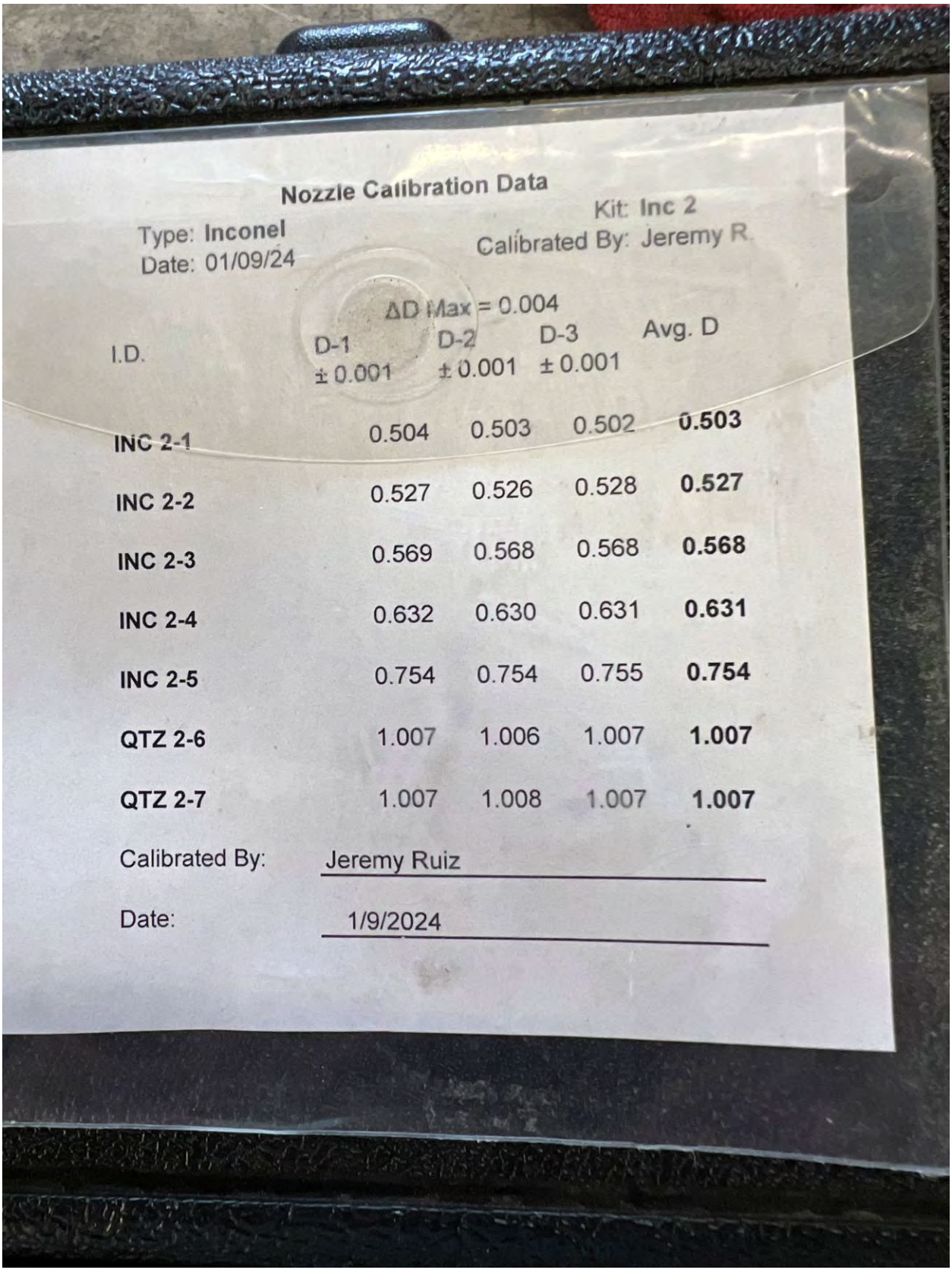
Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?
3/21/25	INCTC-8-1	no	no	

Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length
3/21/25	INCP-8-1			--	± 1.5 % (absolute)	--

Field Balance Check						
Date	**03/21/25**					
Balance ID:	**B5**					
Certified Weight ID:	**4974**					
Certified Weight Expiration:						
Certified Weight (g):	**500.0**					
Measured Weight (g):	**499.7**					
Weight Difference (g):	**0.3**	--	--	--	--	--

Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location
3/21/25	Weather Station				LONG BEACH, CA AIRPORT

Date	Meter Box ID	Positive Pressure Leak Check
3/21/25	MB-4	Pass



Nozzle Calibration Data

Type: **Inconel**
Date: 01/09/24

Kit: **Inc 2**
Calibrated By: Jeremy R.

ΔD Max = 0.004

I.D.	D-1 ± 0.001	D-2 ± 0.001	D-3 ± 0.001	Avg. D
INC 2-1	0.504	0.503	0.502	**0.503**
INC 2-2	0.527	0.526	0.528	**0.527**
INC 2-3	0.569	0.568	0.568	**0.568**
INC 2-4	0.632	0.630	0.631	**0.631**
INC 2-5	0.754	0.754	0.755	**0.754**
QTZ 2-6	1.007	1.006	1.007	**1.007**
QTZ 2-7	1.007	1.008	1.007	**1.007**

Calibrated By: Jeremy Ruiz

Date: 1/9/2024

10602 WALKER STREET
CYPRESS, CA 90630

STACK TEMPERATURE SENSOR SEMIANNUAL CALIBRATION

Temp. Sensor (TC I.D #):	INCTC-8-1	Date:	2/24/2025
TC Length Inches:	96	Expiration Date:	8/23/2025
		Calibrated By:	WMB

Readout I.D.:	14000017	3/10/2026

ICE BATH		Ref. TC S/N: 8733		Ref. TC Cal. Due Date:	3/10/2026
Reference Digital NIST Traceable Thermometer		Temp. Sensor being Calibrated Temperature		Absolute Temperature Difference	Absolute Temperature Difference
°F	°R	°F	°R	°R	%
30.0	490.0	30.0	490.0	0.0	0.00
30.0	490.0	29.5	489.5	0.5	0.10
30.0	490.0	29.1	489.1	0.9	0.18

BOILING WATER		Ref. TC S/N: C12027		Ref. TC Cal. Due Date:	3/10/2026
Reference Digital NIST Traceable Thermometer		Temp. Sensor being Calibrated Temperature		Absolute Temperature Difference	Absolute Temperature Difference
°F	°R	°F	°R	°R	%
211.0	671.0	210.0	670.0	1.0	0.15
211.0	671.0	210.0	670.0	1.0	0.15
211.0	671.0	210.3	670.3	0.7	0.10

BOILING OIL		Ref. TC S/N: C12027		Ref. TC Cal. Due Date:	3/10/2026
Reference Digital NIST Traceable Thermometer		Temp. Sensor being Calibrated Temperature		Absolute Temperature Difference	Absolute Temperature Difference
°F	°R	°F	°R	°R	%
640.6	1100.6	630.6	1090.6	10.0	0.91
640.6	1100.6	631.0	1091.0	9.6	0.87
640.7	1100.7	631.0	1091.0	9.7	0.88

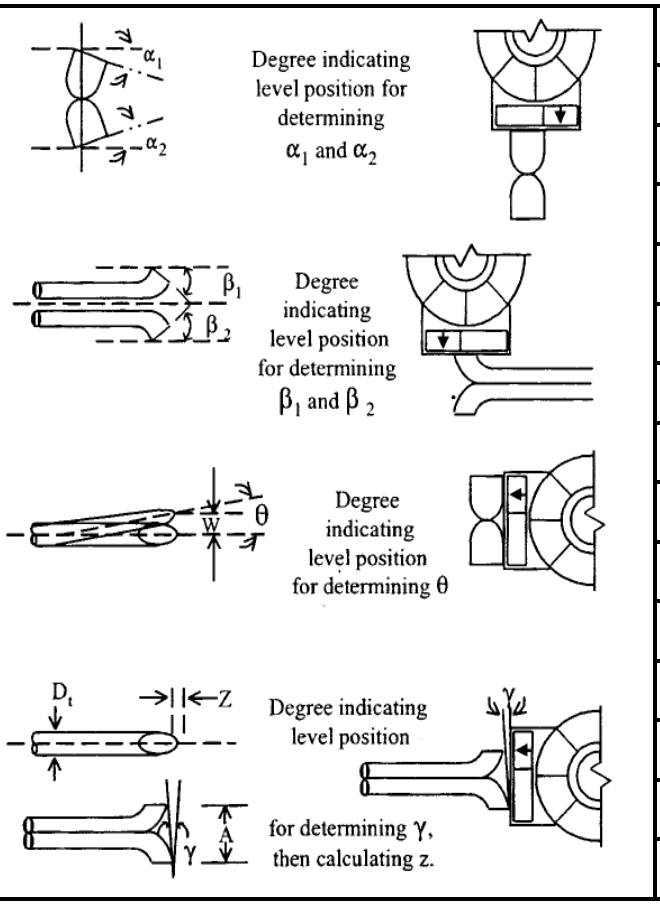
If the absolute temperature values of the reference thermometer being calibrated and the stack temperature sensors agree within 1.5 percent at each of the three calibration points, no correction is needed. Take readings every one minute.

TYPE S PITOT TUBE SEMIANNUAL INSPECTION SHEET

CAL DATE: 1/13/2025

NEXT DUE DATE: 7/14/2025

PITOT ID: PP-8-1



Parameter	Values	Allowable Range
Level and Perpendicular?	Yes OR No	yes
Obstruction?	Yes OR No	no
Damaged?	Yes OR No	no
α1	0	$-10^{o} \leq \alpha 1 \leq +10^{o}$
α2	1	$-10^{o} \leq \alpha 2 \leq +10^{o}$
β1	1	$-5^{o} \leq \beta 1 \leq +5^{o}$
β2	1	$-5^{o} \leq \beta 2 \leq +5^{o}$
γ	0	NA
θ	1	NA
Z = A (tan γ)	0.000	≤ 0.125 in.
W = A (tan θ)	0.016	≤ 0.031 in.
Dt	0.375	0.188 ≤ Dt ≤ 0.375
A	1.101	NA
A/2/(Dt)	1.47	1.05 ≤ PA/Dt ≤ 1.5

Certification:

I certify that this pitot tube meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube calibration factor Cp of 0.84.

Certified By: AAM **Date:** 1/13/2025

Alliance TECHNICAL GROUP

Semi-Annual Field Dry Gas Meter Calibration* Calibration Date: 3/17/2025

Orifice Series: 6-28
Serial Number: 2036s
Cal Type: Semi-Annual

Calibrated by: AAM
(signature):
Reviewed by: SC

DRY GAS METER CALIBRATION FACTOR Y	ORIFICE CALIBRATION FACTOR dH@
Yds = 1.0204	dH@ = 1.804

DRY GAS METER READINGS								QUALITY CONTROL CHECKS			
DGM INLET		DGM OUTLET		Meter Reading		Orifice Reading		($Y_{fm,max}$ - $Y_{fm,min}$) < 0.010 **	0.98 < ($Y_{fm,i}$/Y_{fm}) 1.02	Average Coeff (Y) (0.95<Y<1.05)	$dH@_{i,avg}$ < (dH@ ± 0.15)
Initial (°F)	Final (°F)	Initial (°F)	Final (°F)	Initial (cu.ft.)	Final (cu.ft.)	Initial (in.H2O)	Final (in.H2O)				
NA	NA	64.0	65.0	528.400	534.215	0.140	0.140				
NA	NA	65.0	66.0	534.215	540.065	0.140	0.140	0.0042	1.015	1.035	1.711
NA	NA	66.0	67.0	540.065	545.913	0.140	0.140	PASS	PASS	PASS	PASS
NA	NA	62.0	62.0	501.700	508.275	1.000	1.000				
NA	NA	62.0	63.0	508.275	514.870	1.000	1.000	0.0041	0.999	1.020	1.810
NA	NA	63.0	63.0	514.870	521.445	1.000	1.000	PASS	PASS	PASS	PASS
NA	NA	62.0	62.0	476.400	482.080	2.200	2.200				
NA	NA	62.0	62.0	482.080	487.745	2.200	2.200	0.0027	0.996	1.017	1.833
NA	NA	62.0	62.0	487.745	493.420	2.200	2.200	PASS	PASS	PASS	PASS
NA	NA	62.0	62.0	457.500	463.520	3.400	3.400				
NA	NA	62.0	62.0	463.520	469.552	3.400	3.400	0.0080	0.990	1.010	1.861
NA	NA	62.0	62.0	469.552	475.620	3.400	3.400	PASS	PASS	PASS	PASS

DGM ID: MB-4
Serial #: 23075453

Calibration Interval:
Semi-Annual: X
Bi-monthly:
Other:

Standard Temperature (deg.F)
Tstd = 60

Barometric Pressure (in.Hg)
Initial: 29.88
Final: 29.88
$Pbar_{avg}$: 29.88

Orifice Series No.	Run Time (min)	CRITICAL ORIFICE					DRY GAS METER					CALCULATIONS	
		Orifice K-factor	Tested Vacuum (in.Hg)	Ambient Temp. (°F)	Corrected Flowrate Q'rm (SCFM)	Corrected Volume (cu.ft.)	Orifice dH (in.H2O)	AVG Temp. (°F)	NET Volume (cu.ft.)	Corrected Flowrate Q'fm (SCFM)	Corrected Volume (SCF)	Coefficient $Y_{fm,i}$ (0.95 < $Y_{fm,i}$ < 1.05)	Orifice $dH@_i$ (in.H2O)
6	28.0	0.1632	24.00	62.0	0.2135	5.978	0.140	64.50	5.815	0.206	5.763	1.0373	1.715
6	28.0	0.1632	24.00	62.0	0.213	5.978	0.140	65.50	5.850	0.207	5.787	1.0331	1.711
6	28.0	0.1632	24.00	62.0	0.213	5.978	0.140	66.50	5.848	0.206	5.774	1.0354	1.708
15	12.0	0.4254	21.00	60.0	0.558	6.691	1.000	62.00	6.575	0.547	6.561	1.0198	1.812
15	12.0	0.4254	21.00	60.0	0.558	6.691	1.000	62.50	6.595	0.548	6.575	1.0177	1.810
15	12.0	0.4254	21.00	60.0	0.558	6.691	1.000	63.00	6.575	0.546	6.549	1.0217	1.808
23	7.0	0.6298	19.00	61.0	0.825	5.773	2.200	62.00	5.680	0.812	5.685	1.0155	1.833
23	7.0	0.6298	19.00	61.0	0.825	5.773	2.200	62.00	5.665	0.810	5.670	1.0182	1.833
23	7.0	0.6298	19.00	61.0	0.825	5.773	2.200	62.00	5.675	0.811	5.680	1.0164	1.833
28	6.0	0.7800	17.00	62.0	1.020	6.122	3.400	62.00	6.020	1.007	6.043	1.0132	1.861
28	6.0	0.7800	17.00	62.0	1.020	6.122	3.400	62.00	6.032	1.009	6.055	1.0112	1.861
28	6.0	0.7800	17.00	62.0	1.020	6.122	3.400	62.00	6.068	1.015	6.091	1.0052	1.861

* Critical Orifice used.

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2
Project No. AST-2025-1080

Parameter	O_2 - Outlet	CO_2 - Outlet	CO - Outlet	NOx - Outlet
Make	SERVOMEX	SERVOMEX	TECO	CAI
Model	4900	4900	48I	700 LX
S/N	200329	200329	12401632302	2404019
Operating Range	25	10	100	25
Cylinder ID				
Zero	NA	NA	NA	NA
Low	NA	NA	NA	NA
Mid	CC194808	CC194808	EB0086964	CC261200
High	CC178310	CC178310	CC63451	EB0010071
Cylinder Certified Values				
Zero	NA	NA	NA	NA
Low	NA	NA	NA	NA
Mid	12.11	4.251	46.11	13.02
High	21.93	8.808	90.42	23.14
Cylinder Expiration Date				
Zero	NA	NA	NA	NA
Low	NA	NA	NA	NA
Mid	5/31/32	5/31/32	8/20/27	1/24/28
High	9/30/32	9/30/32	5/14/32	4/17/27
Type of Sample Line	Heated Sample Line			

Response Times

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080

Response Times, seconds				
Parameter	**O_2 - Outlet**	**CO_2 - Outlet**	**CO - Outlet**	**NOx - Outlet**
Zero	28	28	45	40
Low	NA	NA	NA	NA
Mid	28	28	45	40
High	--	--	--	--
Average	28.0	28.0	45.0	40.0

Alliance TECHNICAL GROUP

Calibration Data

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080
Date: 3/21/25

Parameter	O_2 - Outlet	CO_2 - Outlet	CO - Outlet	NOx - Outlet
Expected Average Concentration	12.00	5.00	50.00	12.00
Span Between				
Low	12.00	5.00	50.00	12.00
High	60.00	25.00	250.00	60.00
High Gas Value	21.93	8.81	90.42	23.14
Low Range Gas				
Low	NA	NA	NA	NA
High	NA	NA	NA	NA
Mid Range Gas				
Low	10.00	4.00	40.00	10.00
High	15.00	6.00	60.00	15.00
High Range Gas				
Low	20.00	8.00	80.00	20.00
High	23.75	9.50	95.00	23.75
Actual Concentration (% or ppm)				
Zero	0.00	0.00	0.00	0.00
Low	NA	NA	NA	NA
Mid	12.11	4.25	46.11	13.02
High	21.93	8.81	90.42	23.14
Upscale Calibration Gas (C_{MA})	Mid	Mid	Mid	Mid
Instrument Response (% or ppm)				
Zero	0.02	0.01	0.51	-0.01
Low	NA	NA	NA	NA
Mid	12.13	4.29	45.57	13.18
High	21.90	8.73	90.52	23.14
Performance (% of Range or Cal. Gas Conc.)				
Zero	0.08	0.10	0.51	0.04
Low	NA	NA	NA	NA
Mid	0.08	0.39	0.54	0.64
High	0.12	0.78	0.10	0.00
Linearity (% of Range or Cal. Gas Conc.)				
	0.11	0.71	-0.84	0.66
Status				
Zero	PASS	PASS	PASS	PASS
Low	NA	NA	NA	NA
Mid	PASS	PASS	PASS	PASS
High	PASS	PASS	PASS	PASS

Alliance TECHNICAL GROUP

Calibration Data

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080
Date: 3/21/25

Parameter	O_2 - Outlet	CO_2 - Outlet	CO - Outlet	NOx - Outlet
Expected Average Concentration	12.00	5.00	50.00	12.00
Span Between				
Low	12.00	5.00	50.00	12.00
High	60.00	25.00	250.00	60.00
High Gas Value	21.93	8.81	90.42	23.14
Low Range Gas				
Low	NA	NA	NA	NA
High	NA	NA	NA	NA
Mid Range Gas				
Low	10.00	4.00	40.00	10.00
High	15.00	6.00	60.00	15.00
High Range Gas				
Low	20.00	8.00	80.00	20.00
High	23.75	9.50	95.00	23.75
Actual Concentration (% or ppm)				
Zero	0.00	0.00	0.00	0.00
Low	NA	NA	NA	NA
Mid	12.11	4.25	46.11	13.02
High	21.93	8.81	90.42	23.14
Upscale Calibration Gas (C_{MA})	Mid	Mid	Mid	Mid
Instrument Response (% or ppm)				
Zero	0.03	0.01	-0.10	0.05
Low	NA	NA	NA	NA
Mid	12.15	4.30	46.43	13.15
High	21.92	8.78	90.18	23.17
Performance (% of Range or Cal. Gas Conc.)				
Zero	0.12	0.10	0.10	0.20
Low	NA	NA	NA	NA
Mid	0.16	0.49	0.32	0.52
High	0.04	0.28	0.24	0.12
Linearity (% of Range or Cal. Gas Conc.)	0.13	0.57	0.49	0.37
Status				
Zero	PASS	PASS	PASS	PASS
Low	NA	NA	NA	NA
Mid	PASS	PASS	PASS	PASS
High	PASS	PASS	PASS	PASS

Bias/Drift Determinations

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080

Parameter	O_2 - Outlet	CO_2 - Outlet	CO - Outlet	NOx - Outlet
Run 1 Date 3/21/25				
Range Value	21.93	8.81	90.42	23.14
Initial Instrument Zero Cal Response	0.02	0.01	0.51	-0.01
Initial Instrument Upscale Cal Response	12.13	4.29	45.57	13.18
Final Instrument Zero Cal Response	0.03	0.01	-0.10	0.05
Final Instrument Upscale Cal Response	12.15	4.30	46.43	13.15
Pretest System Zero Response	0.14	0.07	0.16	0.16
Posttest System Zero Response	0.15	0.12	0.23	0.42
Pretest System Upscale Response	12.05	4.27	46.77	12.90
Posttest System Upscale Response	12.01	4.23	46.55	13.24
Bias (%)				
Pretest Zero	0.48	0.60	-0.35	0.68
Posttest Zero	0.48	1.10	0.33	1.48
Pretest Span	-0.32	-0.20	1.20	-1.12
Posttest Span	-0.56	-0.70	0.12	0.36
Drift (%)				
Zero	0.04	0.50	0.07	1.04
Mid	-0.16	-0.40	-0.22	1.36

SCAQMD NOx Converter Check

Location: Waste Management of California, Inc. - Lancaster, CA
Source: Enclosed Flare 2
Project No.: AST-2025-1080

Parameter	NOx	NO	Variable
Make	CAI	CAI	
Model	700 LX	700 LX	
S/N	2404019	2404019	
Operating Range	25	25	A
Cylinder Number ID			
ZERO	NA	NA	
MID	CC261200	CC261200	
HIGH	eb0010071	eb0010071	
Cylinder Certified Values			
ZERO	0.0	0.0	B
MID	13.02	12.81	C
HIGH	23.14	22.91	D
Instrument Response (% or ppm)			
Zero	0.02	0.01	F
Mid	13.15	13.01	G
High	23.17	23.15	H
Calibration Gas Selection (% of Range)			
Mid	52.1	51.2	C*100/A
High	92.6	91.6	D*100/A
Calibration Error Performance (% of Range)			
Zero	0.1	0.0	(F-B)*100/A
Mid	0.5	0.8	(G-C)*100/A
High	0.1	1.0	(H-D)*100/A
Linearity (% of Range)			
	0.4	0.2	{(G-F)-[(H-F)*C]/D}*100/A

NO_2 to NO Converter Efficiency Calculation			
Analyzer Make	CAI	**Cylinder ID #**	CC515893
Analyzer Model	700 LX	**Cylinder Exp. Date**	8/21/27
Gas Type	NO_2	**Cylinder Concentration, ppm**	16.61
Test Date	3/21/25		
Test Time	13:02		
NO_2 Concentration (C_0)	16.61		
Audit Gas With NO Mode (C_1)	0.05		
Audit Gas With NOx Mode (C_2)	15.41		
Is $C_1 < (C_2 \times 0.05)$ (b)	Yes		
D_1: Abs ($C_2 - C_1$)	15.36		
D_2: Abs ($C_0 - C_2$)	1.20		
Converter Efficiency	92.5		
Status (a)	Pass		

**Efficiency must be ≥ 90 %*

$$\text{Converter Efficiency} = \frac{D_1 \times 100}{C_0}$$

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03NI83E15A3830	Reference Number:	48-403053925-1
Cylinder Number:	CC194808	Cylinder Volume:	148.0 CF
Laboratory:	124 - Los Angeles (SAP) - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32024	Valve Outlet:	590
Gas Code:	CO2,O2,BALN	Certification Date:	May 31, 2024

Expiration Date: May 31, 2032

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON DIOXIDE	4.250 %	4.251 %	G1	+/- 0.5% NIST Traceable	05/31/2024
OXYGEN	12.00 %	12.11 %	G1	+/- 0.4% NIST Traceable	05/31/2024
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	97050601	SG9168810BAL	3.224 % CARBON DIOXIDE/NITROGEN	+/- 0.5%	Mar 22, 2030
NTRM	110606	CC338457	14.93 % OXYGEN/NITROGEN	+/- 0.20 %	Nov 02, 2028

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
SIEMENS 6E CO2	NDIR	May 23, 2024
SIEMENS OXYMAT 6	PARAMAGNETIC	May 17, 2024

Triad Data Available Upon Request

Approved for Release

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E03NI69E15A3832	Reference Number:	48-403155217-1
Cylinder Number:	CC178310	Cylinder Volume:	151.0 CF
Laboratory:	124 - Los Angeles - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32024	Valve Outlet:	590
Gas Code:	CO2,O2,BALN	Certification Date:	Sep 30, 2024

Expiration Date: Sep 30, 2032

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON DIOXIDE	8.750 %	8.808 %	G1	+/- 0.6% NIST Traceable	09/30/2024
OXYGEN	22.00 %	21.93 %	G1	+/- 0.3% NIST Traceable	09/30/2024
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	13060402	CC411643	7.489 % CARBON DIOXIDE/NITROGEN	+/- 0.6%	May 14, 2025
NTRM	08010228	K016648	23.20 % OXYGEN/NITROGEN	+/- 0.2%	Feb 16, 2030

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
SIEMENS 6E CO2	NDIR	Sep 23, 2024
SIEMENS OXYMAT 6	PARAMAGNETIC	Sep 12, 2024

Triad Data Available Upon Request

Signature on file

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA, LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number:	E02NI99E15AC055	Reference Number:	48-401575746-1
Cylinder Number:	EB0086964	Cylinder Volume:	144.3 CF
Laboratory:	124 - Los Angeles (SAP) - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32019	Valve Outlet:	350
Gas Code:	CO,BALN	Certification Date:	Aug 20, 2019

Expiration Date: Aug 20, 2027

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON MONOXIDE	45.00 PPM	46.11 PPM	G1	+/- 0.7% NIST Traceable	08/20/2019
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	14060739	CC434387	49.88 PPM CARBON MONOXIDE/NITROGEN	+/- 0.6%	Feb 22, 2020

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AHR0801551 CO	FTIR	Aug 20, 2019

Triad Data Available Upon Request

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E02NI99E15AC672	Reference Number:	48-403043185-1
Cylinder Number:	CC63451	Cylinder Volume:	144.0 CF
Laboratory:	124 - Los Angeles (SAP) - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32024	Valve Outlet:	350
Gas Code:	CO,BALN	Certification Date:	May 14, 2024

Expiration Date: May 14, 2032

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON MONOXIDE	90.00 PPM	90.42 PPM	G1	+/- 0.5% NIST Traceable	05/14/2024
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	11010127	KAL004022	97.31 PPM CARBON MONOXIDE/NITROGEN	+/- 0.4%	May 25, 2028

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet iS50 AUP2010243 CO	FTIR	Apr 18, 2024

Triad Data Available Upon Request

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CEC686

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E02NI99E15AC274	Reference Number:	48-403240562-1
Cylinder Number:	CC261200	Cylinder Volume:	144.0 CF
Laboratory:	124 - Los Angeles - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32025	Valve Outlet:	660
Gas Code:	NO,NOX,BALN	Certification Date:	Jan 24, 2025

Expiration Date: Jan 24, 2028

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	13.00 PPM	13.02 PPM	G1	+/- 1.0% NIST Traceable	01/16/2025, 01/24/2025
NITRIC OXIDE	13.00 PPM	12.81 PPM	G1	+/- 1.0% NIST Traceable	01/16/2025, 01/24/2025
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
GMIS	CK274-2F	GN0029366	10.04 PPM NITRIC OXIDE/NITROGEN	+/- 0.6%	Jan 10, 2027
PRM	C2300301.04B	APE1516613	10.00 PPM NITRIC OXIDE/NITROGEN	+/- 0.5%	Feb 01, 2025
GMIS	CK274-2F	GN0029366-NOX	10.06 PPM NOx/NITROGEN	+/- 0.6%	Jan 10, 2027
PRM	C2300301.04B	APE1516613-NOX	10.01 PPM NOx/NITROGEN	+/- 0.5%	Feb 01, 2025

The SRM, NTRM, PRM, or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Thermo 42-iLS 1115848421 NO	Chemiluminescence	Jan 06, 2025
Thermo 42-iLS 1115848421 NOx	Chemiluminescence	Jan 06, 2025

Triad Data Available Upon Request

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E02NI99E15AC1S8	Reference Number:	48-403015256-1
Cylinder Number:	EB0010071	Cylinder Volume:	144.0 CF
Laboratory:	124 - Los Angeles (SAP) - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32024	Valve Outlet:	660
Gas Code:	NO,NOX,BALN	Certification Date:	Apr 17, 2024

Expiration Date: Apr 17, 2027

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	23.00 PPM	23.14 PPM	G1	+/- 0.8% NIST Traceable	04/09/2024, 04/17/2024
NITRIC OXIDE	23.00 PPM	22.91 PPM	G1	+/- 1.0% NIST Traceable	04/09/2024, 04/17/2024
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	20060403	ND46720	20.72 PPM NITRIC OXIDE/NITROGEN	+/- 1.0%	Dec 21, 2026
PRM	12403	APEX1324265-NOx	20.02 PPM NOx/NITROGEN	+/- 0.5%	Dec 22, 2023
GMIS	20060403	ND46720-NOX	20.81 PPM NOx/NITROGEN	+/- 0.6%	Aug 20, 2024

The SRM, NTRM, PRM, or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
nCLD 844 S 844N0213 NO	Chemiluminescence	Mar 22, 2024
nCLD 844 S 844N0213 NOx	Chemiluminescence	Mar 22, 2024

Triad Data Available Upon Request

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CEC686

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E02NI99E15AC274	Reference Number:	48-403240562-1
Cylinder Number:	CC261200	Cylinder Volume:	144.0 CF
Laboratory:	124 - Los Angeles - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32025	Valve Outlet:	660
Gas Code:	NO,NOX,BALN	Certification Date:	Jan 24, 2025

Expiration Date: Jan 24, 2028

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	13.00 PPM	13.02 PPM	G1	+/- 1.0% NIST Traceable	01/16/2025, 01/24/2025
NITRIC OXIDE	13.00 PPM	12.81 PPM	G1	+/- 1.0% NIST Traceable	01/16/2025, 01/24/2025
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
GMIS	CK274-2F	GN0029366	10.04 PPM NITRIC OXIDE/NITROGEN	+/- 0.6%	Jan 10, 2027
PRM	C2300301.04B	APE1516613	10.00 PPM NITRIC OXIDE/NITROGEN	+/- 0.5%	Feb 01, 2025
GMIS	CK274-2F	GN0029366-NOX	10.06 PPM NOx/NITROGEN	+/- 0.6%	Jan 10, 2027
PRM	C2300301.04B	APE1516613-NOX	10.01 PPM NOx/NITROGEN	+/- 0.5%	Feb 01, 2025

The SRM, NTRM, PRM, or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Thermo 42-iLS 1115848421 NO	Chemiluminescence	Jan 06, 2025
Thermo 42-iLS 1115848421 NOx	Chemiluminescence	Jan 06, 2025

Triad Data Available Upon Request

Approved for Release

Airgas
an Air Liquide company

Airgas Specialty Gases
Airgas USA LLC
11711 S. Alameda Street
Los Angeles, CA 90059
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number:	E02NI99E15W4BQ4	Reference Number:	48-403103474-1
Cylinder Number:	CC515893	Cylinder Volume:	144.0 CF
Laboratory:	124 - Los Angeles (SAP) - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32024	Valve Outlet:	660
Gas Code:	NO2,BALN	Certification Date:	Aug 21, 2024

Expiration Date: Aug 21, 2027

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NITROGEN DIOXIDE	16.50 PPM	16.61 PPM	G1	+/- 1.8% NIST Traceable	08/13/2024, 08/21/2024
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
GMIS	1534012021301	ND73004	15.05 PPM NITROGEN DIOXIDE/NITROGEN	+/- 1.6%	Jun 15, 2025
PRM	12409	D913660	15.01 PPM NITROGEN DIOXIDE/AIR	+/- 1.5%	Feb 18, 2023

The SRM, NTRM, PRM, or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
MKS FTIR NO2 018335821	FTIR	Aug 01, 2024

Triad Data Available Upon Request

PERMANENT NOTES:OXYGEN ADDED TO MAINTAIN STABILITY

Approved for Release

Appendix F

Alliance TECHNICAL GROUP

Project # 25-1080 Client Waste Mgmt Contact _____

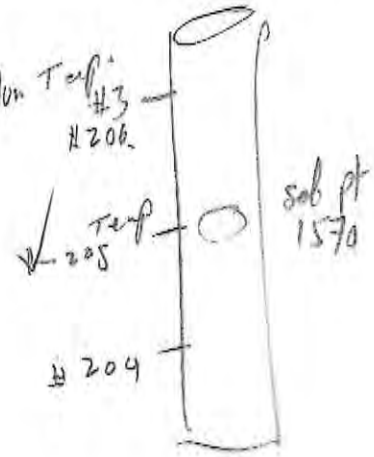
Scope of Work Flare #2

By NNP Date 3/20/25 Sheet ___ of ___

1036/1142-

Process Data

	Flare Temp	Gas Flow	Inlet Press	Condensate Flow	Temp #3 #206
0	1568	1476	-37.4	1.1	
10	1566	1471	-37.1	1.2	
20	1566	1483	-37.0	1.1	#204
30	1566	1471	-37.0	1.1	
1142 40	1568	1476	-36.4	1.1	
50	1566	1473	-36.4	1.1	
60	1567	1476	-36.4	1.1	



Process Operating Data

		Flare Temp	Gas Flow	Inlet Press	Cond Flow
Date	**Time**	**°F**	**scfm**	**in w.c**	**gpm**
03/21/25	10:30:00	1567	1474	-37.4	1.2
03/21/25	10:32:00	1567	1473	-37.5	1.2
03/21/25	10:34:00	1567	1475	-37.4	1.2
03/21/25	10:36:00	1566	1475	-37.3	1.2
03/21/25	10:38:00	1568	1476	-37.3	1.2
03/21/25	10:40:00	1567	1475	-37.3	1.2
03/21/25	10:42:00	1567	1478	-37.2	1.2
03/21/25	10:44:00	1567	1480	-37.2	1.2
03/21/25	10:46:00	1567	1476	-37.2	1.2
03/21/25	10:48:00	1568	1477	-37.2	1.2
03/21/25	10:50:00	1568	1477	-37.2	1.2
03/21/25	10:52:00	1568	1476	-37.1	1.2
03/21/25	10:54:00	1567	1475	-37.1	1.2
03/21/25	10:56:00	1565	1478	-37.1	1.2
03/21/25	10:58:00	1568	1479	-37.1	1.2
03/21/25	11:00:00	1567	1476	-37.1	1.2
03/21/25	11:02:00	1568	1477	-37.1	1.2
03/21/25	11:04:00	1567	1478	-37.1	1.2
03/21/25	11:06:00	1567	1478	-37.0	1.2
03/21/25	11:08:00	1567	1475	-37.0	1.2
03/21/25	11:10:00	1567	1478	-37.0	1.2
03/21/25	11:12:00	1567	1477	-37.0	1.2
03/21/25	11:14:00	1565	1478	-37.0	1.2
03/21/25	11:16:00	1567	1475	-37.0	1.2
03/21/25	11:18:00	1567	1477	-36.9	1.2
03/21/25	11:20:00	1566	1479	-36.9	1.2
03/21/25	11:22:00	1567	1476	-36.9	1.2
03/21/25	11:24:00	1566	1476	-36.9	1.2
03/21/25	11:26:00	1568	1477	-36.8	1.2
03/21/25	11:28:00	1567	1477	-36.8	1.2
03/21/25	11:30:00	1567	1477	-36.8	1.2
03/21/25	11:32:00	1567	1477	-36.8	1.2
03/21/25	11:34:00	1566	1475	-36.8	1.2
03/21/25	11:36:00	1568	1477	-36.8	1.2
03/21/25	11:38:00	1567	1476	-36.7	1.2
03/21/25	11:40:00	1567	1479	-36.7	1.2
03/21/25	11:42:00	1568	1476	-36.7	1.2
03/21/25	11:44:00	1566	1477	-36.6	1.2
03/21/25	11:46:00	1564	1477	-36.6	1.2
03/21/25	11:48:00	1567	1478	-36.6	1.2
03/21/25	11:50:00	1568	1477	-36.6	1.2
03/21/25	11:52:00	1567	1480	-36.5	1.2
03/21/25	11:54:00	1566	1479	-36.5	1.2
03/21/25	11:56:00	1567	1478	-36.5	1.2
03/21/25	11:58:00	1567	1479	-36.5	1.2
03/21/25	12:00:00	1567	1477	-36.5	1.2
03/21/25	12:02:00	1567	1482	-36.5	1.3
03/21/25	12:04:00	1567	1476	-36.5	1.2
03/21/25	12:06:00	1566	1479	-36.5	1.2
03/21/25	12:08:00	1568	1476	-36.5	1.2
03/21/25	12:10:00	1566	1479	-36.5	1.2
03/21/25	12:12:00	1566	1480	-36.5	1.2
Average:		**1577**	**1476**	**-37.4**	**1.2**

Appendix G

0	One (1) Enclosed Flare, LFG Specialties, 60.72 MMBTU/hr., Model EF945I10, 9.0' dia. X 45.0'H, with multiple burners, propane pilot, and electric igniter
0	UV flame scanner, thermocouple with temperature indicator, and recorder
0	Automatic shutdown and alarm system
0	Automatic combustion air regulating system and temperature controller
0	Flame arrestor
0	Landfill gas flow meter and recorder
0	Moisture separator
0	Condensate injection pump and flow indicating and recording device

OPERATING CONDITIONS APPLICABLE TO PERMIT NUMBER C012559:

1. This equipment shall be installed, operated, and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles that produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit. Additionally, this equipment and the associated landfill shall be operated in compliance with NESHAP 40 CFR 63 Subpart AAAA. [AVAQMD Rule 1302, NESHAP40 CFR 63 Subpart AAAA]

2. All collected landfill gas shall be directed to the flare for combustion. (AVAQMD Rule 1150.1]

3. A sufficient number of sight glass windows shall be maintained in the flare to allow visual inspection of the flare flame at all times. Adequate and safe access shall be provided to all sight glass windows. [AVAQMD Rule 204]

4. The owner-operator shall provide sampling ports necessary to perform source tests required to verify compliance with AVAQMD Rules, regulations, and permit conditions. The location of these ports and platforms shall be subject to District approval. [AVAQMD Rule 217]

5. A sampling port shall be maintained at the landfill gas inlet line to allow the collection of a landfill gas sample. [AVAQMD Rule 217]

6. The flare shall be equipped with thermocouples and a recorder that measures and records the gas temperature in the flare stack. The temperature indicator and recorder shall operate whenever the flare is in operation. [40 CFR 70.6 (a)(3)(B) Monitoring requirements, AVAQMD Rule 204]

7. Whenever the flare is in operation, a temperature of not less than 1400 degrees Fahrenheit, 15-minute average, by the temperature indicator and recorder, shall be maintained except during periods of startup and shutdown. Startup is defined as the period from flare ignition to the time when 1400 degrees Fahrenheit is achieved, not to exceed 30 minutes. Shutdown is the period beginning when the gas valve begins to close and ending when the gas valve completely shuts off, not to exceed 30 minutes.

[AVAQMD Rule 204]

8. The flare shall be equipped with a failure alarm that shuts down the landfill gas blower, associated landfill gas supply valve, and the condensate injection pump to isolate the flare from the landfill gas supply line and condensate supply line, and to notify a responsible party of shutdown in the event of flare failure. This safety system shall be tested annually for proper operation. [AVAQMD Rules 204, 1303]

9. The landfill gas flow rate shall be monitored by a flow indicator and recorder. [AVAQMD Rule 204]

10. The total volume of landfill gas and extracted air burned in the flare shall not exceed 60.72 MMBtu/hr (averaged on an hourly basis). In addition, the total volume of condensate burned in the flare shall not exceed 4 gallons per minute. [AVAQMD Rules 204, 1302]

11. Emissions from the flare shall not exceed the following:
a. NOx (as NO2): 0.060 pounds per million Btu of heat input- 15.96 tpy.
b. SOx (as SO2): 0.062 pounds per million Btu of heat input- 21.56 tpy.
c. CO: 0.200 pounds per million Btu of heat input- 53.19 tpy.
d. PM-10: 17 pounds per million standard cubic foot as Methane (Lbs/MMscf of Methane)- 4.52 tpy.
e. NMHC (VOC): 0.050 pounds per million Btu of heat input- 13.3 tpy.

To ensure continued compliance, these emissions limits shall be calculated based on the most current source test data, and Hydrogen Sulfide Monitoring; a log of the emissions above shall be kept for a minimum of five years and made available to District, State, and Federal Personnel upon request. [AVAQMD Rule 1303]

12. Combined facility emission shall Not Exceed the following Annual Emission Limits to preclude triggering Offset Threshold Amounts as required by AVAQMD Rule 1303:
a. PM10: Shall Not Exceed 14.9 tpy;
b. Oxides of Nitrogen (NOx): Shall Not Exceed 24.9;
c. Oxides of Sulfur (SOx as SO2): Shall Not Exceed 24.9 tpy, and
d. Volatile Organic Compounds (VOC): Shall Not Exceed 24.9 tpy.
[AVAQMD Rule 1303]

13. This equipment shall not be operated unless Landfill Gas is treated with a Hydrogen Sulfide (H2S) Treatment System, Permitted under District Permit C014889, prior to entering Flare Inlet. Integrated H2S levels shall be less than 190 ppmv to ensure Facility annual SOx emissions Do Not Exceed 24.9 TPY. Additionally, pursuant to AVAQMD Rule 431.1, there shall not be at any time fuel entering the Flare that has a daily average hydrogen sulfide concentration in excess of 250 ppmv. [AVAQMD Rules 204, 431.1, 1303]

14. The sulfur removal system shall be operated per manufacturer's recommended operating

specifications and shall be monitored at the flare inlet for hydrogen sulfide concentration using colorimetric H2S detector tubes (Drager). Lab samples shall be taken at the flare inlet for hydrogen sulfide concentration and total reduced sulfur as hydrogen sulfide using SCAQMD Method 307-91 or other EPA or District approved methods. Results of these samples shall be logged pursuant to Condition 17. [AVAQMD Rules 204 and 1150.1]

15. In addition to annual performance tests and pursuant to AVAQMD Rule 431.1, this facility shall conduct the following in accordance with District approved test procedures;
a. Quarterly colorimetric (Drager tube) analysis of the fuel for hydrogen sulfide.
b. Annual laboratory analyses of collected LFG samples for total sulfur (as H2S).
Notification and results shall be made to the District in the manner described in condition 16. All samples shall be collected at the inlet to the flare. When the sulfur level is suspected to be at or above the permit limits for the site as determined by the colorimetric method, the sampling frequency shall be increased to monthly. This frequency shall be maintained until it is determined through three consecutive monthly samples that the fuel sulfur limits are observed. Following this observation, quarterly sampling may continue. [AVAQMD Rule 431.1]

16. Any breakdown or malfunction of this equipment resulting in the emission of raw landfill gas shall be reported to the District within one hour of detection, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere. [AVAQMD Rule 430]

17. This equipment shall be performance tested biennially; additionally, H2S monitoring shall occur in accordance with condition 15. The performance tests shall be conducted in accordance with the District test procedures and furnish the District with written results of such performance tests within sixty (60) days after the tests are conducted. Written notice of the performance tests shall be provided to the District seven (7) days prior to the tests so that an observer may be present. All source testing and analytical methods shall be submitted to the District for approval at least thirty (30) days prior to the start of the tests. The performance tests shall be conducted at the maximum achievable flow rates allowed by this permit and shall include, but shall not be limited to, a test of the inlet landfill gas flare, and the flare exhaust for:
a. Methane
b. Total Non-Methane Organics
c. Oxides of Nitrogen (exhaust only)
d. Carbon Monoxide (exhaust only)
e. PM-10 Particulates (exhaust only)
f. Hydrogen Sulfide (inlet only)
g. C1 and C3 Sulfur Compounds (speciated, inlet only)
h. Carbon Dioxide
i. SCAQMD Rule 1150.1 Table 1 Core Group List of Carcinogenic and Toxic Air Contaminants
j. Oxygen
k. Moisture Content (exhaust only)

l. Temperature (exhaust only)
m. Flow Rate in cfm.
[AVAQMD Rule 204]

18. This equipment shall achieve at least 98% destruction efficiency for non-methane hydrocarbons or less than or equal to 20 parts per million (ppmv as hexane at 3% oxygen), measured from landfill gas inlet to flare exhaust. [AVAQMD Rules 1302 and 1303]

19. The owner-operator shall submit an application to modify this permit should additional flares or other gas control equipment be required for this landfill. [AVAQMD Rule 1302]

20. The owner-operator shall maintain a current, on-site operations log for this system for at least five (5) years, and the log shall be provided to District, State, or Federal personnel upon request. The log shall include, at a minimum, the following information:
a. Flare temperature;
b. Flare failure system test date and test result;
c. Landfill gas flowrate;
d. Condensate flowrate;
e. Hours of operation;
f. Monthly and Yearly emissions of NOx (as NO2), SOX (as SO2), CO, PM-10, and NMHC. [AVAQMD Rules 204, 1150.1, 1302, 1303]

21. This equipment and associated landfill shall be operated in compliance with Rule 1150, 1150.1, 17 CCR 95460-95476 (Methane Emissions from Municipal Solid Waste Landfills), and National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR 63, Subpart AAAA). In the event of conflict between these conditions, the more stringent shall govern. [AVAQMD Rules 204, 1302, 1303]

22. This equipment and the associated Landfill shall be operated such that no Odors are observed at the facility fenceline. [AVAQMD Rules 402 and 1150.1]

23. A facility wide Comprehensive Emission Inventory (CEI) for all emitted criteria and toxic air pollutants must be submitted to the District, in a format approved by the District, upon District request. [AVAQMD Rules 107 and 204, H&S Code 39607 & 44341-44342, and 40 CFR 51, Subpart A]

C. AVAQMD PERMIT NUMBER C006907, GAS CONDENSATE COLLECTION SYSTEM, consisting of: associated Landfill identified as SWIS (Solid Waste Information System) Number 19-AA-0050 and classified as Active.

Four (4) condensate pumps for condensate level control in the condensate drip legs; Condensate holding tank, 8’-0” dia. x 21’-0” S/S, and 10,000-gallon capacity, with gas blanket system or under vacuum. Dual Containment Condensate tank is vented to a 55-gallon carbon filter drum. Collected liquids can be injected in the flare, used as dust control, or injected into the active working face of the landfill.

TABLE 1 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS
(Core Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Benzene	C_6H_6
2.	Benzyl Chloride	$C_6H_5H_2C1$
3.	Chlorobenzene	C_6H_5C1
4.	1,2 Dibromoethane (Ethylene Dibromide)	$BrCH_2CH_2Br$
5.	Dichlorobenzene	$C_6H_4C1_2$
6.	1,1 Dichloroethane (Ethylidene Chloride)	CH_3CHC1_2
7.	1,2 Dichloroethane (Ethylene Dichloride)	$C1H_2H_2C1$
8.	1,1 Dichloroethene (Vinylidene Chloride)	$CH_2 : CC1_2$
9.	Dichloromethane (Methylene Chloride)	CH_2C1_2
10.	Hydrogen Sulfide	H_2S
11.	Tetrachloroethylene (Perchloroethylene)	$C1_2C : CC1_2$
12.	Tetrachloromethane (Carbon Tetrachloride)	$CC1_4$
13.	Toluene	$C_6H_5CH_3$
14.	1,1,1 Trichloroethane (Methyl Chloroform)	CH_3CC1_3
15.	Trichloroethylene	$CHC1 : CC1_2$
16.	Trichloromethane (Chloroform)	$CHC1_3$
17.	Vinyl Chloride	$CH_2 : CHC1$
18.	Xylene	$C_6H_4(CH_3)_2$

Site Specific Test Plan

Waste Management National Services
Lancaster Landfill
600 East Avenue F
Lancaster, CA 93535

Facility ID: 2129

Source to be Tested: Enclosed Flare 2
Proposed Test Date: March 21, 2025
Submittal Date: February 19, 2025

Project No. AST-2025-1080

Prepared By
Alliance Technical Group, LLC
10602 Walker Street
Cypress CA 90630

Regulatory Information

Permit No.	C012559
Regulatory Citation	SCAQMD Rule 1150.1

Source Information

Source Name	*Target Parameters*
Enclosed Flare 2	TNMHC VOC, HV, TRS, H_2S, TO-15, PM, NOx, CO, O_2 and CO_2

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1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by Waste Management National Services (WM) to conduct compliance testing at the Lancaster, California facility. Portions of the facility are subject to provisions of the Antelope Valley Air Quality Management District (AVAQMD) Permit to Operate C012559. Testing will be conducted as outlined in Table 1-1 below.

Table 1-1: Test Matrix

Emission Source	Parameters
Enclosed Flare 2 (Inlet)	Sample Point Determination
	Volumetric Flow Rate
	Oxygen / Carbon Dioxide
	Total Non-Methane Hydrocarbons / Methane
	Moisture Content (Wet Bulb/Dry Bulb)
	Reduced Sulfur Compounds, including Hydrogen Sulfide
	Speciated Organic Compounds
Enclosed Flare 2 (Outlet)	Sample Point Determination
	Volumetric Flow Rate
	Oxygen / Carbon Dioxide
	Moisture Content
	Particulate Matter
	Nitrogen Oxides
	Carbon Monoxide
	Total Non-Methane Hydrocarbons / Methane
	Speciated Organic Compounds

This site-specific test plan (SSTP) has been prepared to address the notification and testing requirements of the AVAQMD permit.

1.1 Source Description

The enclosed landfill gas flare ís a LFG Specialties, Model EF945I10 rated at 60.72 Million British Thermal Units per hour (MMBtu/hr). The flare consists of an insulated steel cylinder 45 feet high and 109 inches inside diameter. It is equipped with multiple burners, a landfill gas flow meter and recorder, a propane gas pilot, and an electric igniter. The flare is also equipped with a UV flame scanner, thermocouple with temperature indicator with recorder, an automatic shutdown alarm system, a flame arrestor, moisture separator and a condensate injection pump with flow indicating and recording device.

1.2 Sample Location

Flare Exhaust

Flare exhaust samples will be obtained from the 109 inch diameter exhaust stack. Two sample ports, positioned at right angles, in accordance with the guidelines of SCAQMD Method 2.1 will be used for sample collection. The exact sample port locations will be verified and measured prior to the commencing the test program. The exact exhaust sampling locations will be provided in the final report.

At the flare exhaust, twenty-four sample points (12 per diameter), determined in accordance with Method 1, will be utilized for the determination of the following compounds:

- particulate matter (PM)
- oxides of nitrogen (NOx)
- carbon monoxide (CO)
- oxygen and carbon monoxide (O_2/CO_2)
- flow Rate
- moisture

A single sample point will be used for the collection of the following samples:

- speciated organic compounds
- total non-methane hydrocarbons
- methane

Landfill Gas Supply Line

Inlet samples will be obtained from the centroid of the landfill gas line supplying the flare. The size of the gas line will be measured prior to the test program and recorded. The sample ports) location will be verified and measured prior to commencing the test program. The exact inlet sampling locations will be provided in the final report.

A single sample point will be utilized for the collection of the following compounds, where applicable:

- total non methane hydrocarbons
- methane
- CO
- CO_2/O_2
- reduced sulfur compounds, including H_2S
- speciated organic compounds, SCAQMD Rule 1150.1 TABLE 1-Carcinogenic and Toxic Air Contaminants list as per Condition 17 of the AVAQMD FOP: 297602129
- BTU content
- moisture

1.3 Project Team

Personnel planned to be involved in this project are identified in the following table.

Table 1-2: Project Team

WM Personnel	Kyle Evans
Regulatory Agency	AVAQMD
Alliance Personnel	Mark Rowlett other field personnel assigned at time of testing event

1.4 Safety Requirements

Testing personnel will undergo site-specific safety training for all applicable areas upon arrival at the site. Alliance personnel will have current OSHA or MSHA safety training and be equipped with hard hats, safety glasses with side shields, steel-toed safety shoes, hearing protection, fire resistant clothing, and fall protection (including shock corded lanyards and full-body harnesses). Alliance personnel will conduct themselves in a manner consistent with Client and Alliance's safety policies.

A Job Safety Analysis (JSA) will be completed daily by the Alliance Field Team Leader.

2.0 Summary of Test Program

To satisfy the requirements of the AVAQMD permit, the facility will conduct a performance test program to determine the compliance status of the Enclosed Flare 2.

2.1 General Description

All testing will be performed in accordance with specifications stipulated in U.S. EPA Reference Test Method TO-15 and SCAQMD Methods 1.1, 2.1, 4.1, 5.1, 10.1, 25.1, 25.3, 100.1and 307-91 and Wet Bulb / Dry Bulb. Table 2-1 presents an outline and tentative schedule for the emissions testing program. The following is a summary of the test objectives.

- Testing will be performed to demonstrate compliance with the AVAQMD Permit to Operate C012559.
- Emissions testing will be conducted on the inlet and outlet of Enclosed Flare 2.
- Performance testing will be conducted at the normal operating conditions.
- Landfill gas moisture content will be determined using a wet bulb/dry bulb thermometer.
- Moisture content of the flare exhaust will be determined using SCAQMD Method 4.1.
- Landfill gas flow rate will be obtained from the facility's permanent, continuous, on-line flow recorders.
- Concurrent duplicate samples will be collected for SCAQMD Methods 25.1, 25.3 and a single sample for 307-91.
- Simultaneous testing will be performed at the flare inlet and outlet to determine destruction efficiencies (DE).

2.2 Process/Control System Parameters to be Monitored and Recorded

Plant personnel will collect operational and parametric data at least once every 15 minutes during the testing. The following list identifies the measurements, observations and records that will be collected during the testing program:

- Flare Temperature;
- Landfill Gas Flowrate;
- Condensate Flowrate
- Hours of operations

2.3 Proposed Test Schedule

Table 2-1 presents an outline and tentative schedule for the emissions testing program.

Table 2-1: Program Outline and Tentative Test Schedule

Testing Location	Parameter	Reference Method	No. of Runs	Est. Onsite Time
DAY 1 – March 20, 2025				
Equipment Setup & Pretest QA/QC Checks				8 hr
DAY 2 – March 21, 2025				
Enclosed Flare 2 (Inlet)	Sample Point Determination	SCAQMD 1.1	--	10 hr
	VFR	SCAQMD 2.1		
	O_2/CO_2	SCAQMD 10.1	1 sample (in duplicate)	
	TNMHC / CH_4	SCAQMD 25.1		
	BWS	Wet Bulb / Dry Bulb	--	
	TRS / H_2S	SCAQMD 307-91	1 sample	
	Speciated Organic Compounds	EPA TO-15	1 sample	
Enclosed Flare 2 (Outlet)	Sample Point Determination	SCAQMD 1.1	1 sample	
	VFR	SCAQMD 2.1		
	BWS	SCAQMD 4.1	1 sample	
	PM as PM-10	SCAQMD 5.1		
	O_2, CO_2, NOx, CO	SCAQMD 100.1		
	TNMHC / CH_4	SCAQMD 25.3	1 sample (in duplicate)	
	Speciated Organic Compounds	EPA TO-15	3 samples	

2.4 Emission Limits

Emission limits for each pollutant are below.

Table 2-2: Emission Limits

Source	Pollutant	Citation
Enclosed Flare 2	NOx (as NO_2) – 0.060 lb/MMBtu	Permit, Condition 11
	SOx (as SO2) – 0.062 lb/MMBtu	Permit, Condition 11
	CO – 0.200 lb/MMBtu	Permit, Condition 11
	PM10 – 17 lb/MMscf of Methane	Permit, Condition 11
	NMNEOC (VOC) – 0.050 lb/MMBtu	Permit, Condition 11
	H2S – 190 ppmvd	Permit, Condition 13
	NMHC DE - ≥ 98% or ≤ 20 ppmv @ 3% O2 (as hexane)	Permit, Condition 18
	Temperature - ≥ 1400 °F	Permit, Condition 7

2.5 Test Report

The final test report must be submitted within 60 days of the completion of the performance test and will include the following information.

- *Introduction* – Brief discussion of project scope of work and activities.
- *Results and Discussion* – A summary of test results and process/control system operational data with comparison to regulatory requirements or vendor guarantees along with a description of process conditions and/or testing deviations that may have affected the testing results.
- *Methodology* – A description of the sampling and analytical methodologies.
- *Sample Calculations* – Example calculations for each target parameter.
- *Field Data* – Copies of actual handwritten or electronic field data sheets.
- *Laboratory Data* – Copies of laboratory report(s) and chain of custody(s).
- *Quality Control Data* – Copies of all instrument calibration data and/or calibration gas certificates.
- *Process Operating/Control System Data* – Process operating and control system data (as provided by WM) to support the test results.

3.0 Testing Methodology

This section provides a description of the sampling and analytical procedures for each test method that will be employed during the test program. All equipment, procedures and quality assurance measures necessary for the completion of the test program meet or exceed the specifications of each relevant test method. The emission testing program will be conducted in accordance with the test methods listed in Table 3-1.

Table 3-1: Source Testing Methodology

Parameter	Reference Test Methods	Notes/Remarks
Sample Point Determination	SCAQMD 1.1	--
Volumetric Flow Rate	SCAQMD 2.1	Full Velocity Traverses
Moisture Content (Inlet)	Wet Bulb / Dry Bulb	--
Moisture Content (Outlet)	SCAQMD 4.1	Gravimetric Analysis
Particulate Matter as PM-10	SCAQMD 5.1	Isokinetic Testing
Oxygen / Carbon Dioxide (Inlet)	SCAQMD 10.1	Integrated Sample
Oxygen / Carbon Dioxide (Outlet)	SCAQMD 100.1	Instrumental Analysis
Nitrogen Oxides	SCAQMD 100.1	Instrumental Analysis
Carbon Monoxide	SCAQMD 100.1	Instrumental Analysis
Reduced Sulfur Compounds, including Hydrogen Sulfide	SCAQMD 307-91	Integrated Sample
Speciated Organic Compounds	EPA TO-15	Constant Rate Canister Sampling
Total Non-Methane Hydrocarbons / Methane (Inlet)	SCAQMD 25.1	Constant Rate Sampling
Total Non-Methane Hydrocarbons / Methane (Outlet)	SCAQMD 25.3	Constant Rate Sampling

All stack diameters, depths, widths, upstream and downstream disturbance distances and nipple lengths will be measured on site with an EPA Method 1 verification measurement provided by the Field Team Leader. These measurements will be included in the test report.

3.1 SCAQMD Method 1.1 - Sampling and Velocity Traverse Points

The number and location of traverse points will be determined according to SCAQMD Method 1.1 based on the physical dimensions of the sampling location and process parameters. In principle, the stack cross-section is divided into equal areas, each of which will be represented by a “traverse point”. Generally, the number of traverse points diminished as the flow profile at the sampling location became uniform. In most cases, the maximum number of sampling points is 24 for particulate testing and 16 for velocity traverses. Fewer traverse points will be permitted as described in the method.

3.2 SCAQMD Method 2.1 - Stack Gas Velocity and Flow Rate

The velocity and volumetric flow rate of the stack gas will be determined according to SCAQMD Method 2.1. In this method, the velocity head (differential pressure) and temperature will be measured at the required traverse points. The stack gas differential pressure head will be determined using an “S” type pitot tube in combination with

inclined liquid manometer. The temperature will be measured using a type "K" thermocouple (TC) and digital temperature readout.

Prior to testing, the measurement system will be set-up and leak checked. Then the velocity head and temperature will be recorded at predetermined traverse points. After the last traverse will be completed, the system will be again leak-checked. After completion of the traverse, the static pressure in the stack will be determined in the centroid of the stack. The stack gas velocity will be calculated using the velocity head, and stack gas temperature, pressure and molecular weight.

QA/QC for the method included field performance checks, and periodic calibrations of test equipment including the pitot tube, differential pressure gauge, TC, and TC-readout. If the sampling location is new or process conditions have changed significantly, then a swirl check is also performed to assess cyclonic flow.

3.3 Wet Bulb / Dry Bulb – Inlet Moisture Content

The gas moisture content will be determined by using a psychrometric chart and measuring the dry bulb/wet bulb temperatures. One (1) temperature measurement will be conducted during each velocity traverse.

3.4 SCAQMD Method 4.1 - Stack Gas Moisture Content

The stack gas moisture content will be determined according to SCAQMD Method 4.1. In this method, water vapor is collected in a condenser while the dry stack gas volume is measured using a dry gas meter. The volume of water vapor will be calculated from the amount of water condensed and the total gas volume will be the sum of water vapor plus dry stack gas. The moisture content will be determined as a fraction of the total wet stack gas volume. The following calculations will be used.

$$B_{WS} = \frac{V_{W,Std}}{V_{M,Std} + V_{W,Std}}$$

$$V_{W,Std} = K_1 \times V_{H2O}$$

$$V_{M,Std} = T_{Std}/P_{Std} \times Y_M \times V_M \times P_M/T_M$$

Where:

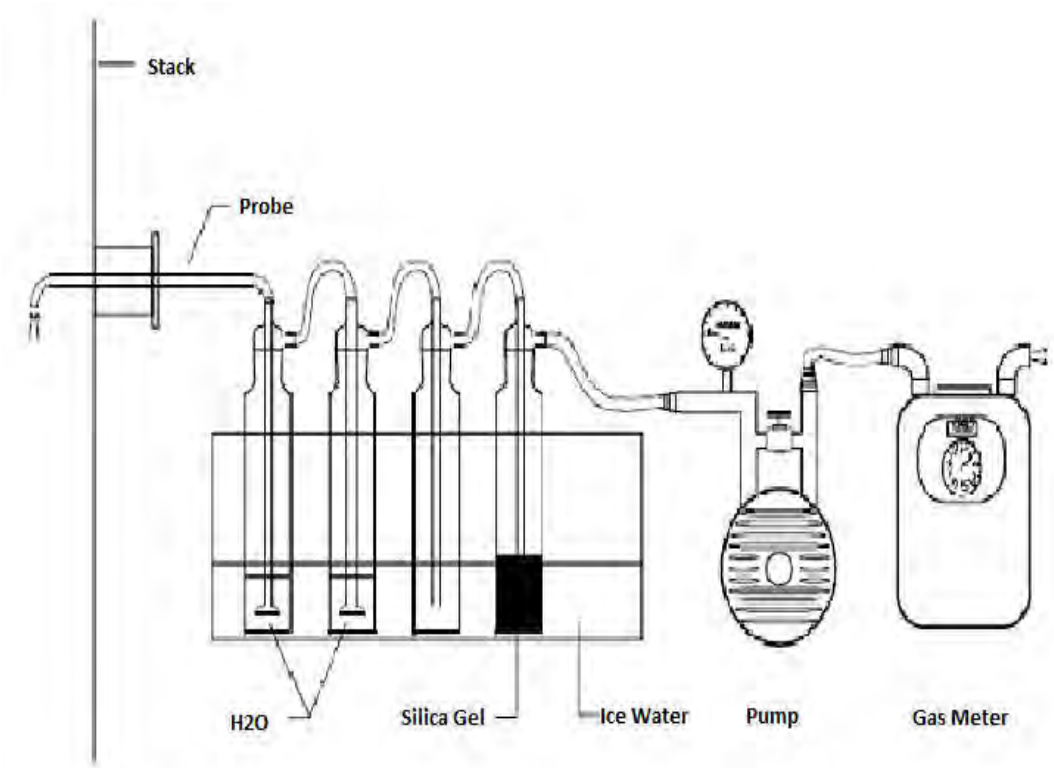
B_{WS}	=	Fraction of water vapor in stack gas
$V_{W,Std}$	=	Volume of water vapor (scf)
$V_{M,Std}$	=	Volume of stack gas sampled (dscf)
K_1	=	Unit volume of water vapor (0.04707 scf @68ºF or 0.0464 scf @60ºF)
T_{Std}	=	Standard Temperature (528ºR or 520ºR)
P_{Std}	=	Standard Pressure, 29.92 in. Hg
Y_M	=	Dry gas meter calibration factor
V_M	=	Measured volume of stack gas sampled
P_M	=	Dry gas meter pressure (in. Hg)
T_M	=	Dry gas meter temperature (ºR)

Sampling for moisture content will be performed as follows:

Moisture will be collected in a sampling train consisting of a probe, TFE line, four impingers in an ice bath, a leak-free pump, a vacuum gauge and a dry gas meter. Figure 3-1 is a schematic of a typical moisture train. Initially, impingers #1 and #2 contain 100 ml of water, impinger #3 will be empty, and impinger #4 contains a known amount (approximately 300 g) of desiccant (e.g. Silica Gel). Prior to sampling, a leak check of the sampling train will be performed. Then, the sampling probe will be inserted into the centroid of the stack, the initial meter readings

(volume, temperatures, etc.) will be recorded, the sample pump will be started and the sampling rate will be adjusted to the desired sampling rate (typically 0.75 dry cfm). Sampling will be conducted until at least 22 dry cubic feet will be collected. After sampling, the final meter readings will be recorded and the impinger train will be recovered. The change in volume and/or weight of the impinger train components will be used to determine the amount of moisture condensed. The volume of water vapor and the corrected volume of dry gas sampled will be used to calculate the moisture fraction as described above.

Figure 3-1: Moisture Train



3.5 SCAQMD Method 5.1 – Total Particulate Matter as PM-10

Measurements to determine total particulate matter will be performed according to SCAQMD Method 5.1. In this method, a stack gas sample will be isokinetically extracted from the stack through a stainless steel nozzle and probe and transported to an impinger train in an ice bath. Entrained particulate will be collected in the impingers and on a back-up filter placed between the 3rd and 4th impingers. Figure 3-2 is a schematic of the sampling apparatus.

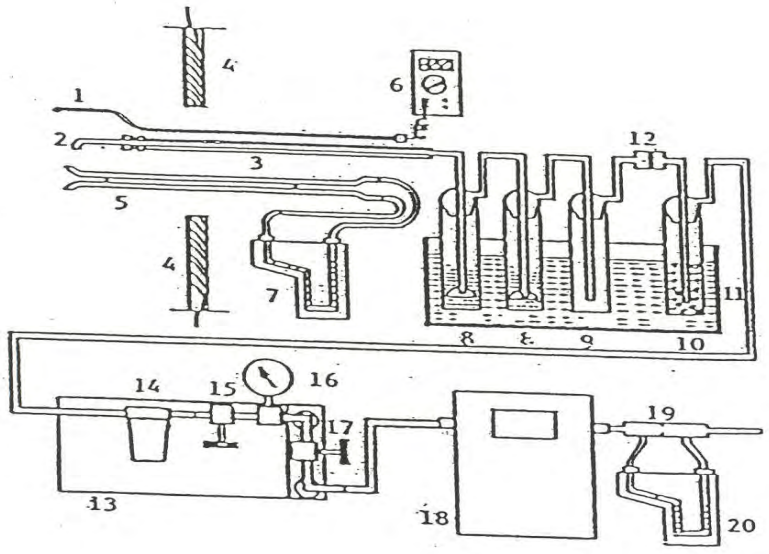
Prior to testing, a series of measurements will be made to determine location and number of traverse points, gas velocity, MW, and moisture content. The results of these measurements will be used to determine the appropriate nozzle size for isokinetic sampling. The sampling rate will be adjusted to maintain isokinetic conditions based on pitot and TC measurements.

The sampling train will be prepared by charging impingers # 1 and # 2 with 100 ml of D.I. water and impinger # 4 with approximately 200 g of silica gel. Impinger # 3 will be left empty. Finally, the sampling train will be the sealed, transported to the sampling location, and leak-checked. Sampling will be performed at each traverse point. After completing the test, the Method 5.1 sample will be taken to a secured area (ie. Mobile test van or Alliance laboratory) and recovered.

The recovered samples will be entered into Alliance Sample Custody Program and delivered to the laboratory for analysis. At the laboratory, samples will be analyzed by gravimetric procedures to determine gross PM weight gain. If necessary, the samples will be further analyzed by wet chemistry to determine acids and sulfates content.

Field and laboratory data will be used to calculate sample volume corrected to standard conditions, stack gas flow rate, and other parameters. Emissions will be reported in gr/dscf, lbs/hr, and lb/MMscf.

Figure 3-2: Sampling Apparatus for Particulate Matter



1. Temperature Sensor
2. Nozzle
3. Glass Lined Stainless Steel Probe
4. S-type Pitot Tube
5. Stack Wall
6. Temperature Sensor Meter
7. Pitot Tube Inclined Manometer
8. Impinger with 100 ml H_2O
9. Empty Bubbler
10. Bubbler with Silica Gel
11. Ice Bath
12. Filter
13. Sealed Pump (Leak Free)
14. Filter for Pump
15. Metering Valve
16. Vacuum Gauge
17. By-pass Valve
18. Temperature Compensated Dry Gas Meter
19. Orifice
20. Orifice Inclined Manometer

3.6 SCAQMD Method 10.1 – Inlet Oxygen/Carbon Dioxide

The gaseous components of the stack gas (e.g. O_2 & CO_2) will be measured using integrated sampling in accordance with the procedures specified in SCAQMD Method 10.1. The integrated gas sample will be collected in a summa canister. The sample will be analyzed by gas chromatography (GC).

3.7 SCAQMD Method 100.1 - Continuous Monitoring of Gaseous Emissions, CEMS

In this method, gaseous components of the stack gas (e.g. NOx, SO_2, O_2, CO_2, CO) will be measured continuously according to SCAQMD Method 100.1 using Alliance's mobile continuous emissions monitoring system (CEMS). Figure 3-3 is a schematic of Alliance's CEMS.

The CEMS extracts and conditions a representative stack gas sample and analyzes the gas using one or more analytical instruments. Typical CEMS instrumentation is described in Table 5-1. The extraction and conditioning system consists of a stainless steel heated probe, a short heated TFE sample line, a conditioning system, a TFE-diaphragm pump and a TFE transport (sample) line. The sample conditioning system, consisting of water knockout impingers and/or a thermoelectric condenser, removes moisture before the gas is delivered to the analyzers. Sample flow and delivery will be controlled using a flow control panel that includes valves, pressure gauges, and flow meters (rotameters). The flow control panel allows the user to deliver sample gas to any and all instruments. Instrument readings will be recorded using a real-time stripchart and an electronic data acquisition system (DAS). Other pertinent data such as calibration gas cylinder numbers and concentrations, test location, dates, times, and operator identification will be also recorded on the strip chart and on the field data form.

Sampling included pretest and post-test calibration and bias checks for each sampling run. Raw concentration data will be corrected for sampling system bias according to Method 100.1 using the following equation:

$$C_{CORR} = C_{MA} \times \frac{(C_i - BIAS_{ZERO})}{(BIAS_{SPAN} - BIAS_{ZERO})}$$

Where:
- C_{CORR} = Concentration, corrected for drift and bias
- C_i = Average measured concentration (raw value)
- $BIAS_{ZERO}$ = Average instrument response during zero bias check
- C_{MA} = Certified concentration of applicable span gas
- $BIAS_{SPAN}$ = Average instrument response during span bias check

The following QA/QC activities will be performed during testing.

- Prior to testing, each individual analyzer will be calibrated (adjusted) by introducing zero, hi-span and mid-span gases directly into each analyzer and by making corresponding adjustments.

- Prior to testing, calibration error, linearity and system bias checks will be performed on each analyzer. Calibration error and linearity checks will be performed by injecting known calibration gases directly to each instrument. System bias checks will be performed by injecting calibration gases at the sampling-probe/junction or at the sampling probe tip.

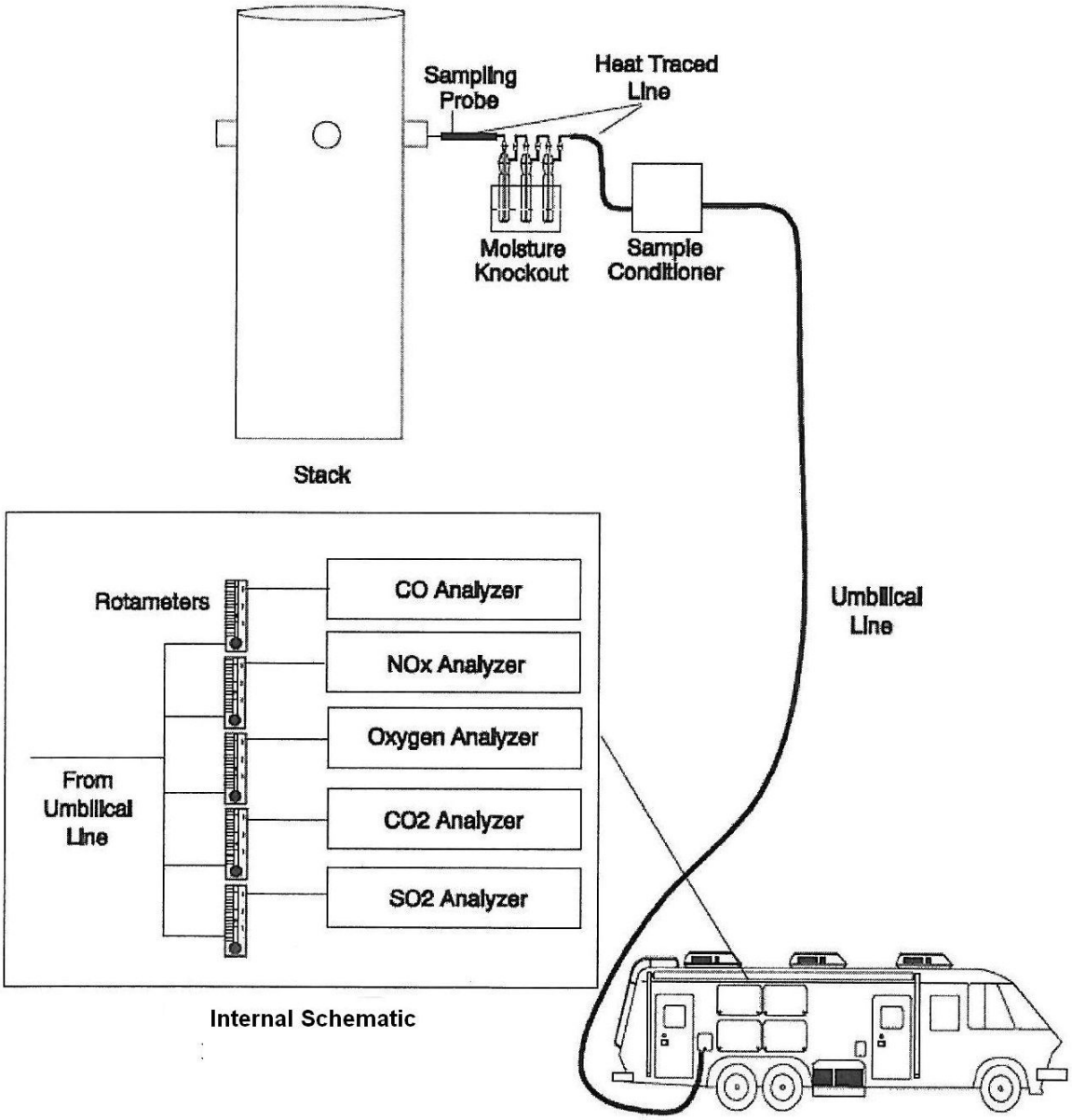
- The system response time for each parameter will be determined at the moment when the calibration gas for the bias check reaches 95% of its expected concentration value.

- A leak check will be conducted before sampling and periodically thereafter to ensure that no leakage occurs in the entire sampling apparatus. The leak check will be performed on the vacuum side by sealing the probe tip and increasing vacuum to above 20 inches of mercury. After the vacuum stabilizes, it should hold constantly at about 20 in. Hg. On the pressure side, the pressure gauge indicator should drop to zero and flow to each individual rotameter also should drop to zero to indicate a successful leak check.

- Calibration gases used to span instrumentation conform to EPA Protocol-1. Certificates of analysis for calibration gases will be included in the report.

- NO_2-to-NO conversion efficiency (CE) check will be performed in the instrument range utilized for RATA testing and according to the procedure in Method 100.1. The result of the Conversion Efficiency check is included in the report.

Figure 3-3: Continuous Emissions Monitoring System



3.8 SCAQMD Method 307-91 – Total Sulfur Compounds

Total sulfur compounds of the fuel content will be measured according to SCAQMD Method 307-91. Field samples will be collected from the sampling location into Tedlar bags and analyzed by gas chromatography using a sulfur chemiluminescent detector (GC/SCD). Field sampling and analytical procedures are described below.

Field sampling will be performed by trained personnel as follows. Prior to sample collection, a sample interface (tubing, valve, etc.) will be connected to the facility's sampling tap. All "wetted" surfaces that may contact the

sample gas will be constructed of inert materials such as TFE, glass, or polypropylene. The sample interface is allowed to bleed slightly between sample collections events in order to maintain conditioning of the sampling equipment.

Only new Tedlar bags will be used. Each Tedlar bag will be conditioned with sample gas prior to sample collection in three steps. First, the new bag will be filled with sample gas, allowed to set for at least five minutes, and then emptied. Then the bag will be filled with sample gas and immediately emptied. Finally, the sample will be collected.

After a sample is collected, it will be immediately labelled and entered in a Chain of Custody. Within four hours after collection, samples will be delivered to the Laboratory for analysis.

Samples will be analyzed by GC/SCD within 24 hours after collection when collected in a Tedlar bag. Sulfur compounds and SO_2 are separated by fuel. These compounds will then be combusted in a hydrogen-rich flame to yield sulfur monoxide and other products. The sulfur monoxide is reacted with ozone to yield sulfur dioxide, oxygen and light. The light is detected with a photomultiplier and the response is calibrated against previously run standards.

Analytical QC includes: pre-test and continuing calibration of equipment, analysis of reference standards, and blanks, and replicate analysis of the sample.

3.9 U.S. EPA Reference Test Method TO-15 – Volatile Organic Compounds

The volatile organic compounds testing will be conducted in accordance with EPA Method Toxic Organics-15 (TO-15). The gas stream will be withdrawn at a constant rate through a unheated Teflon sample line, and into an evacuated stainless steel canister. A gas conditioning system (dry chilled knock out impinger) will be used if the expected source gas moisture is greater than 3.5%. The sample rate will be regulated with a flow controller over the duration of the test run.

Following the completion of each test run, the canister valve will be closed and the sample will be labeled for transport to the identified laboratory for analysis. The samples will be analyzed by high resolution gas chromatography (GC) coupled to a mass spectrometer (MS) in accordance with the analytical guidelines in EPA TO-15. The samples will be analyzed per Condition 17.i. of the AVQMD Permit.

3.10 SCAQMD Method 25.1 – ROG (VOC as NMNEOC High-Level)

This method applies to the measurement of volatile organic compounds (VOC) or total gaseous non-methane organics (TGNMO) as carbon in source emissions. In this Method, gaseous samples will be withdrawn from the gas stream at a constant rate through duplicate chilled condensate traps and collected in evacuated sample tanks. Each sampling train will consist of an in-stack filter (optional), sample probe, condensate trap, a flow control system, and an evacuated sample tank. The flow controller will incorporate a combination vacuum/pressure gauge, which will be connected directly to the canister. The TGNMO will be determined by combining the analytical results obtained from independent analyses of the condensate traps (condensable fraction) and the sample tanks (gaseous fraction). The sampling system is depicted in Figure 3-4.

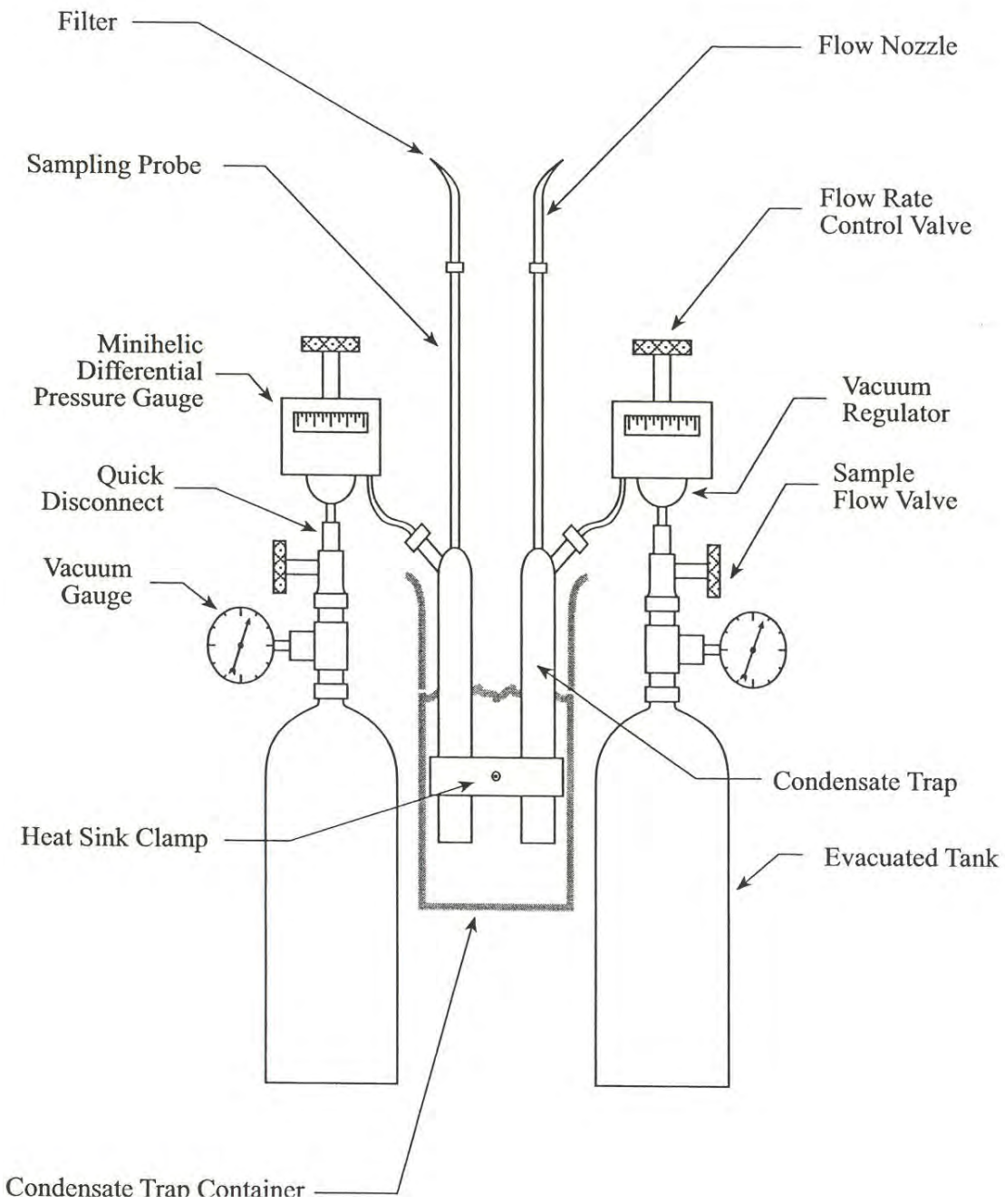
Prior to testing, the sampling system will be pre-cleaned and evacuated in preparation for sample collection. On-site, the sampling system will be leak-checked and crushed dry ice will be placed around each condensate trap. Then the sample probe will be placed in the stack, facing downstream to prevent collection of particulate matter. Pretest data will be recorded and the sample valve was opened. The flow controller will be based on a critical orifice that will be

preset to flow at a rate of 80-cc/min +/- 15%. Periodically, sampling train readings (i.e. tank vacuum) will be recorded on the field data sheet. Sampling will be stopped when one hour had elapsed. Then, the sampling train will be removed from the stack and a leak check was performed. Samples will be logged in and delivered to the laboratory for analysis.

The analytical system will consist of two major sub-systems: an oxidation system for the recovery and the conditioning of the condensate trap contents, and a non-methane organics (NMO) analyzer. The NMO analyzer will be a gas chromatograph (GC) with backflush capability for NMO analysis and will be equipped with an oxidation catalyst, reduction catalyst, and flame ionization detector (FID). The system for the recovery and conditioning of the organics captured in the condensate trap will consist of a heat source, oxidation catalyst, non-dispersive infrared (NDIR) CO_2 analyzer and an intermediate collection vessel (ICV).

The organic content of each condensate trap will be oxidized to carbon dioxide (CO_2), which is quantitatively collected in an evacuated vessel (the ICV); then a portion of the CO_2 will be reduced to methane (CH_4) and measured by GC/NDIR or GC/FID. The organic content of the sample fraction collected in the sampling tank will be measured by injecting a gas sample into the GC to separate the NMO from CO, CO_2 and CH4. The NMO will be oxidized to CO_2, reduced to CH_4, and measured by the FID. In this manner, the variable response of the FID (associated with different type of organic compounds) will be eliminated. The sampling apparatus and sample analysis services will be provided by AAC Laboratory in Ventura, California.

Figure 3-4: Sampling Apparatus for NMNEOC per SCAQMD Method 25.1



3.11 SCAQMD Method 25.3 - Volatile Organic Compounds, VOC, as TGNMNEOC (Low-level)

This method applies to the measurement of low-concentration (</= 50 ppmv) volatile organic compounds (VOC) or total gaseous non-methane organics (TGNMNEOC) as carbon in source emissions. In this Method, gaseous samples will be withdrawn from the gas stream at a constant rate through duplicate chilled condensate traps and collected in evacuated sample tanks. The sampling system is depicted in Figure 3-5. Each sampling train (there will be two) consisted of an in-stack filter (optional), sample probe, water-chilled mini-impinger, a flow control system, and an evacuated sample tank. The flow controller incorporated a combination vacuum/pressure gauge, which will be connected directly to the canister. The TGNMO will be determined by combining the analytical results obtained from independent analyses of the condensate traps (condensable fraction) and the sample tanks (gaseous fraction).

Prior to testing, the sampling system will be pre-cleaned and evacuated in preparation for sample collection. On-site, the sampling system will be leak-checked and the impingers will be placed in an ice-slurry (the impingers will be chilled for at least 10 minutes prior to sampling). Then the sample probe will be placed in the stack, facing downstream to prevent collection of particulate matter. Pretest data will be recorded, and the sample valve will be opened. The flow controller will be based on a critical orifice that will be preset to flow at a rate of 80-cc/min +/- 15%. Periodically, sampling train readings (i.e. tank vacuum) will be recorded on the field data sheet. Sampling will be stopped when one hour had elapsed and/or and tank vacuum reached 2 inches as indicated by the vacuum gauge. Then, the sampling train will be removed from the stack and a leak check will be performed. Samples will be logged in and delivered to the laboratory for analysis.

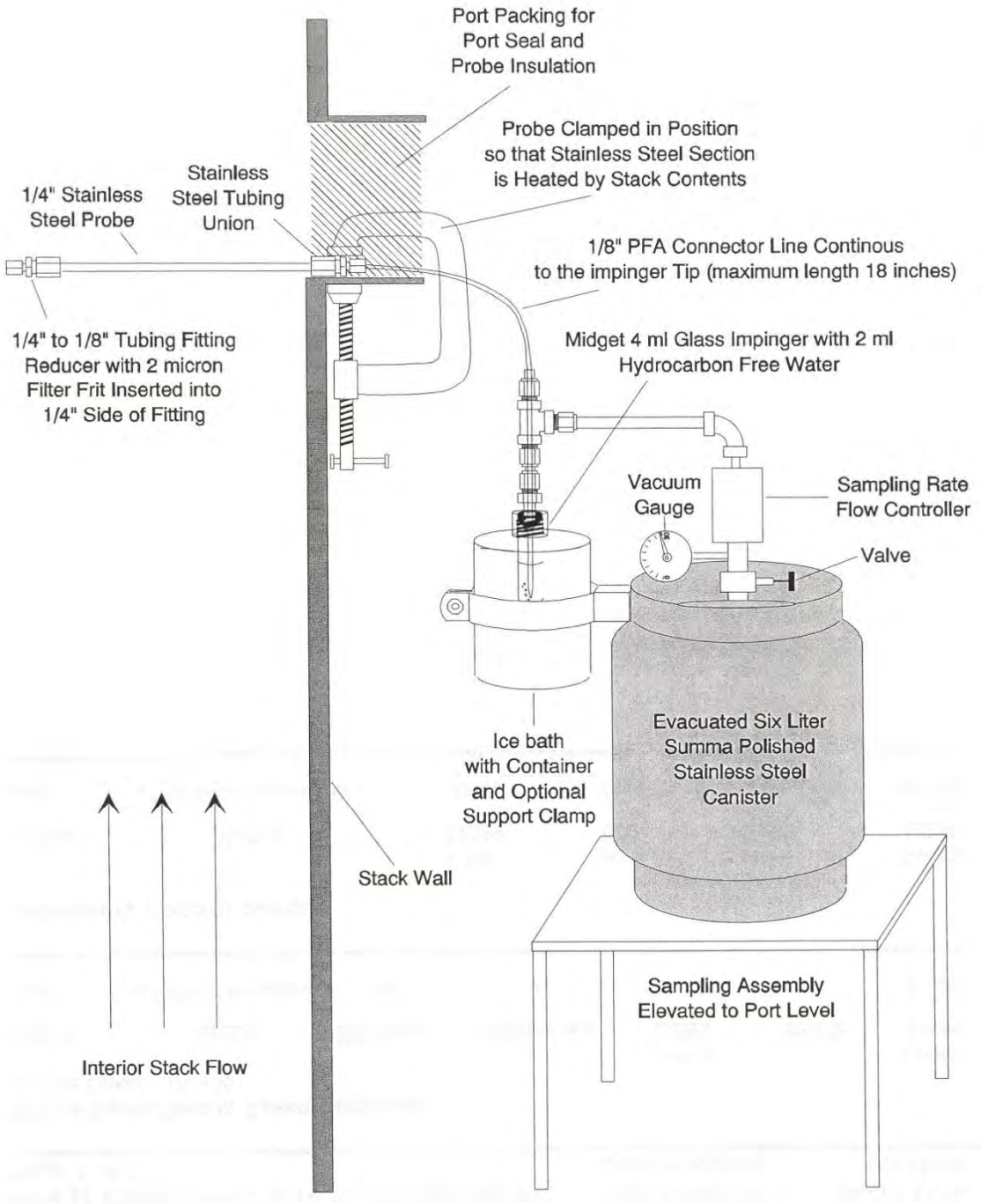
The analytical system consisted of two major sub-systems: a total organic carbon (TOC) analyzer capable of differentiating between total carbon (TC) and inorganic carbon (IC) and a non-methane organics (NMO) analyzer. The NMO analyzer will be a gas chromatograph (GC) with back flush capability for NMO analysis and will be equipped with an oxidation catalyst, reduction catalyst, and flame ionization detector (FID). The system for the recovery and conditioning of the organics captured in the condensate trap consisted of a heat source, oxidation catalyst, non-dispersive infrared (NDIR) CO_2 analyzer and an intermediate collection vessel (ICV). Analyses will be performed as follows.

NMO collected in the water impinger will be analyzed in the TOC analyzer. The TOC analyzer determined both TC and IC. And the TOC will be calculated as the difference between TC and IC.

The organic content of the sample fraction collected in the sampling tank will be measured by injecting a gas sample into the GC to separate the NMO from carbon monoxide (CO), CO_2 and CH_4. The NMO will be oxidized to CO_2, reduced to CH_4, and measured by the FID. In this manner, the variable response of the FID (associated with different type of organic compounds) will be eliminated. The samples will be analyzed by AAC Laboratory in Ventura, California.

Figure 3-5: Sampling Apparatus for TGNMNEOC per SCAQMD Method 25.3

(Figure shows one train – actual method was run in duplicate simultaneously)



4.0 Quality Assurance Program

Alliance follows the procedures outlined in the Quality Assurance/Quality Control Management Plan to ensure the continuous production of useful and valid data throughout the course of this test program. The QC checks and procedures described in this section represent an integral part of the overall sampling and analytical scheme. Adherence to prescribed procedures is quite often the most applicable QC check.

4.1 Equipment

Field test equipment is assigned a unique, permanent identification number. Prior to mobilizing for the test program, equipment is inspected before being packed to detect equipment problems prior to arriving on site. This minimizes lost time on the job site due to equipment failure. Occasional equipment failure in the field is unavoidable despite the most rigorous inspection and maintenance procedures. Therefore, replacements for critical equipment or components are brought to the job site. Equipment returning from the field is inspected before it is returned to storage. During the course of these inspections, items are cleaned, repaired, reconditioned and recalibrated where necessary.

Calibrations are conducted in a manner, and at a frequency, which meets or exceeds U.S. EPA specifications. The calibration procedures outlined in the U.S. EPA Methods, and those recommended within the Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III (EPA-600/R-94/038c, September 1994) are utilized. When these methods are inapplicable, methods such as those prescribed by the American Society for Testing and Materials (ASTM) or other nationally recognized agency may be used. Data obtained during calibrations is checked for completeness and accuracy. Copies of calibration forms are included in the report.

The following sections elaborate on the calibration procedures followed by Alliance for these items of equipment.

- Dry Gas Meter and Orifice. A full meter calibration using critical orifices as the calibration standard is conducted at least semi-annually, more frequently if required. The meter calibration procedure determines the meter correction factor (Y) and the meter's orifice pressure differential (ΔH@). Alliance uses approved Alternative Method 009 as a post-test calibration check to ensure that the correction factor has not changed more than 5% since the last full meter calibration. This check is performed after each test series.
- Pitot Tubes and Manometers. Type-S pitot tubes that meet the geometric criteria required by U.S. EPA Reference Test Method 2 are assigned a coefficient of 0.84 unless a specific coefficient has been determined from a wind tunnel calibration. If a specific coefficient from a wind tunnel calibration has been obtained that coefficient will be used in lieu of 0.84. Standard pitot tubes that meet the geometric criteria required by U.S. EPA Reference Test Method 2 are assigned a coefficient of 0.99. Any pitot tubes not meeting the appropriate geometric criteria are discarded and replaced. Manometers are verified to be level and zeroed prior to each test run and do not require further calibration.
- Temperature Measuring Devices. All thermocouple sensors mounted in Dry Gas Meter Consoles are calibrated semi-annually with a NIST-traceable thermocouple calibrator (temperature simulator) and verified during field use using a second NIST-traceable meter. NIST-traceable thermocouple calibrators are calibrated annually by an outside laboratory.
- Nozzles. Nozzles are measured three (3) times prior to initiating sampling with a caliper. The maximum difference between any two (2) dimensions is 0.004 in.
- Digital Calipers. Calipers are calibrated annually by Alliance by using gage blocks that are calibrated annually by an outside laboratory.

- Barometer. The barometric pressure is obtained from a nationally recognized agency or a calibrated barometer. Calibrated barometers are checked prior to each field trip against a mercury barometer. The barometer is acceptable if the values agree within ± 2 percent absolute. Barometers not meeting this requirement are adjusted or taken out of service.
- Balances and Weights. Balances are calibrated annually by an outside laboratory. A functional check is conducted on the balance each day it is use in the field using a calibration weight. Weights are re-certified every two (2) years by an outside laboratory or internally. If conducted internally, they are weighed on a NIST traceable balance. If the weight does not meet the expected criteria, they are replaced.
- Other Equipment. A mass flow controller calibration is conducted on each Environics system annually following the procedures in the Manufacturer's Operation manual. A methane/ethane penetration factor check is conducted on the total hydrocarbon analyzers equipped with non-methane cutters every six (6) months following the procedures in 40 CFR 60, Subpart JJJJ. Other equipment such as probes, umbilical lines, cold boxes, etc. are routinely maintained and inspected to ensure that they are in good working order. They are repaired or replaced as needed.

4.2 Field Sampling

Field sampling will be done in accordance with the Standard Operating Procedures (SOP) for the applicable test method(s). General QC measures for the test program include:

- Cleaned glassware and sample train components will be sealed until assembly.
- Sample trains will be leak checked before and after each test run.
- Appropriate probe, filter and impinger temperatures will be maintained.
- The sampling port will be sealed to prevent air from leaking from the port.
- Dry gas meter, ΔP, ΔH, temperature and pump vacuum data will be recorded during each sample point.
- An isokinetic sampling rate of 90-110% will be maintained, as applicable.
- All raw data will be maintained in organized manner.
- All raw data will be reviewed on a daily basis for completeness and acceptability.

4.3 Analytical Laboratory

Analytical laboratory selection for sample analyses is based on the capabilities, certifications and accreditations that the laboratory possesses. An approved analytical laboratory subcontractor list is maintained with a copy of the certificate and analyte list as evidence of compliance. Alliance assumes responsibility to the client for the subcontractor's work. Alliance maintains a verifiable copy of the results with chain of custody documentation.

Appendix H

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

January 31, 2025

Charles Figueroa
Alliance Technical Group
11105 Dana Circle
Cypress, CA 90630

Subject: LAP Approval Notice
Reference # 93LA0827

Dear Mr. Figueroa:

We completed our review of the application you submitted for approval under the South Coast Air Quality Management District's Laboratory Approval Program (LAP) for a change of location. We are pleased to inform you that your firm is approved for the period beginning January 31, 2025, and ending June 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 Method 10.1
South Coast AQMD Method 100.1
ASTM D6522-00/ USEPA CTM-030
South Coast AQMD Rule 1420/1420.1/ 1420.2 – (Lead) Source Sampling
South Coast AQMD Rule 1420/1420.1/ 1420.2 – (Lead) Ambient Sampling
South Coast AQMD Method 7.1
South Coast AQMD Rule 1121/ 1146.2 Protocols
South Coast AQMD Rule 462 Testing
South Coast AQMD Method 25.1 & 25.3 (Sampling)
South Coast AQMD Methods 5.1, 5.2, and 6.1 (Sampling)

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

250131 LAP Renewal.doc

ATTACHMENT

Conditions For Alliance Technical Group's LAP Approval

1) Alliance Technical Group shall adhere to the following requirements when conducting portable analyzer tests using CTM-030 or ASTM D6522:

   a) Deviations to CTM-030 or ASTM D6522 shall be documented in the Test Critique section of the test report;

   b) The test report shall be formatted and organized in a manner consistent with the example portable analyzer test report, dated September 24, 2011, and the Source Test Manual, Chapter II; and,

   c) NO_2 measurements may be quantified to 10% of the NO_2 span under the following conditions:

      - Calibrations shall be conducted per Sections 7.3 and 7.6 of CTM-030 at the span, mid-span (40-60% of span), low-span (10% of span), and zero level. The low-span calibration shall satisfy the requirements in Section 4.2 of CTM-030;
      - A linearity check shall be conducted once every five days using the low-span calibration gas; and,
      - If the measured NO_2 emission is less than 10% of the NO_2 span, it shall be reported as less than 10% of the span, and added to the NO emission to determine the total NOx concentration.

2) Alliance Technical Group (Alliance) shall adhere to all requirements of an independent testing laboratory, as defined in Rule 304. Furthermore, for purposes of evaluating whether a conflict of interest exists, Alliance must disclose at least 14 days prior to future source tests, all consulting work performed by Alliance, or any affiliates of Alliance on the equipment being tested. Consulting work includes (but is not limited to) the following:

   - Permit processing work for the basic and/or control equipment;
   - Design, construction, operation, and maintenance activities of the basic equipment, control equipment, CEMS, and other air pollution monitoring equipment; and,
   - Training or advising in the operations of the basic equipment, control equipment, CEMS, and other air pollution monitoring equipment.

   The 14 day notification shall be submitted by e-mail to Colin Eckerle (ceckerle@aqmd.gov) and Dipankar Sarkar (dsarkar@aqmd.gov). Testing may be delayed pending review by South Coast AQMD staff, or cancelled if a conflict of interest is found.

July 30, 2024

Tim Brennan
Technical Director
Alliance Source Testing, LLC
18828 Highway 65
Bakersfield, California 93308
tim.brennan@AllianceTG.com

Dear Tim Brennan:

I am pleased to inform you that the California Air Resources Board (CARB) has renewed Alliance Source Testing, LLC as an Independent Contractor, by means of the enclosed Executive Order I-24-012. This approval will allow Alliance Source Testing, LLC to perform CARB Test Methods 1, 2, 3, 4, 5, 6, 8, 17, 20 100 (CO, CO_2, NO_X, O_2, SO_2), Visible Emissions Evaluation and U.S. Environmental Protection Agency Test Methods 18, 201A, 202, 205. The approval is valid through June 30, 2027, during which time additional audits of Alliance Source Testing, LLC's testing ability may be performed.

If you have questions or need further assistance, please contact the *Independent Contractor Program*[1].

Sincerely,

Walter Ham Digitally signed by Walter Ham
Date: 2024.07.30 11:04:47
-07'00'

Walter Ham, Ph.D., Chief, Monitoring and Laboratory Division

Enclosure

[1] *icp@arb.ca.gov*

State of California
Air Resources Board

Executive Order I-24-012

Relating to Independent Contractor Approval under
California Code of Regulations, title 17, section (§) 91207 and following

Alliance Source Testing, LLC

Whereas, the California Air Resources Board (CARB), pursuant to California Health and Safety Code, § 41512, has established the procedures contained in California Code of Regulations, title 17, § 91200 and following, to allow the use of independent testers for compliance tests required by CARB;

Whereas, it has been determined that Alliance Source Testing, LLC meets the requirements of CARB for performing CARB Test Methods 1, 2, 3, 4, 5, 6, 8, 17, 20 100 (CO, CO_2, NO_X, O_2, SO_2), Visible Emissions Evaluation (VEE) and U.S. Environmental Protection Agency (U.S. EPA) Test Methods 18, 201A, 202, 205 pursuant to Cal. Code Regs., title 17, § 91200 and following, when the following conditions are met:

1. Alliance Source Testing, LLC includes the following information on all strip charts and/or emissions data sheets: pollutant of interest, source, analyzer range, date and time, zero offsets, and the name(s) of the person(s) operating the instruments;
2. The person performing VEE must pass MM104: Visible Emissions Evaluation (Online) and MM105: Visible Emissions Evaluation: In Class and is currently certified to conduct VEE. Any recertification for VEE, following the initial passage of CARB's MM104, must be from a certifying body recognized by CARB at the time VEE is performed; and

Whereas, CARB Executive Officer, pursuant to California Health and Safety Code § 39516, issued Executive Order G-02-008, delegating to the Chief of CARB Monitoring and Laboratory Division (MLD) the authority to approve independent testers in accordance with Cal. Code Regs., tit. 17, § 91200 and following.

Now, therefore, I, Walter Ham, Division Chief of MLD, order that Alliance Source Testing, LLC is granted approval from the date of execution of this Executive Order through June 30, 2027, to perform the test methods identified above subject to compliance with Cal. Code Regs., tit. 17, § 91200 and following.

Be it is further ordered that during the approved period the Executive Officer or his or her authorized representative may field audit one or more tests performed pursuant to this Executive Order for each test method identified above.

It is further ordered that Executive Order I-24-010 is superseded by this order.

Executed at Sacramento, California, this 30th day of July 2024.

Walter Ham Digitally signed by Walter Ham
Date: 2024.07.30 11:03:18 -07'00'

Walter Ham, Ph.D., Chief
Monitoring and Laboratory Division

Last Page of Report

Flare Source Re-Test Report

Source Test Report

Waste Management of California, Inc.
Lancaster Landfill & Recycling Center
600 East Avenue F
Lancaster, CA 93535

Facility ID: 2129

Source Tested: Enclosed Flare 2
Test Date: October 6, 2025
Report Submittal Date: November 7, 2025

Project No. AST-2025-4168

Prepared By
Alliance Technical Group, LLC
11105 Dana Circle
Cypress, CA 90630

Regulatory Information

Permit No. C012559

Source Information

Source Name
Enclosed Flare 2

Target Parameter
TRS as H_2S

Contact Information

Test Location
Waste Management of
California, Inc.
600 East Avenue F
Lancaster, CA 93535

Lancaster Landfill &
Recycling Center

Facility ID: 2129

Facility Contact
Kyle Evans
kevans9@wm.com
707-477-4749

Test Company
Alliance Technical Group, LLC
11105 Dana Circle
Cypress, CA 90630

Project Manager
Greg Rubin
greg.rubin@alliancetg.com
(714) 421-9068

Field Team Leader
Nick Pham
nick.pham@alliancetg.com
(657) 281-8350

QA/QC Manager
Katie Shonk
katie.shonk@alliancetg.com
(812) 452-4785

Report Coordinator
Cynthia Nonobe
cynthia.nonobe@alliancetg.com

Analytical Laboratory
Quantum Analytical Services, Inc.
1210 E 223rd St. #314
Carson, CA 90745
(310) 830-2226

Regulatory Agency
Antelope Valley Air Quality
Management District
2551 W Avenue H
Lancaster, CA 93536
avreporting@avaqmd.ca.gov

Alliance Technical Group, LLC (Alliance) has completed the source testing as described in this report. Results apply only to the source(s) and operating condition(s) that were tested during the specific test date(s) and time(s) identified within this report. All results are intended to be considered in their entirety, and Alliance is not responsible for use of less than the complete test report without written consent. This report shall not be reproduced in full or in part without written approval from the customer.

To the best of my knowledge and abilities, all information, facts and test data are correct. The data presented in this report has been checked for completeness and is accurate, error-free and legible. Onsite testing was conducted in accordance with approved internal Standard Operating Procedures. Any deviations or problems are detailed in the relevant sections of this test report.

This report is only considered valid once an authorized representative of Alliance has signed in the space provided below; any other version is considered draft. This document was prepared in portable document format (.pdf) and contains pages as identified in the bottom footer of this document.



November 7, 2025
Date

Greg Rubin
Operations Manager
Alliance Technical Group, LLC

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APPENDICES

Appendix A Field Data
Appendix B Laboratory Data
Appendix C SSTP and Associated Documentation
Appendix D Certifications

Introduction

1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by Waste Management of California, Inc. (WM) to conduct compliance testing at the Lancaster, California facility. Portions of the facility are subject to provisions of the Antelope Valley Air Quality Management District (AVAQMD) Permit to Operate C012559. Testing was conducted as outlined in Table 1-1 below.

Table 1-1: Test Matrix

Emission Source	Parameter
Enclosed Flare 2 (Inlet)	Total Reduced Sulfur Compounds, including Hydrogen Sulfide

1.1 Source Description

The enclosed landfill gas flare ís a LFG Specialties, Model EF945I10 rated at 60.72 Million British Thermal Units per hour (MMBtu/hr). The flare consists of an insulated steel cylinder 45 feet high and 109 inches inside diameter. It is equipped with multiple burners, a landfill gas flow meter and recorder, a propane gas pilot, and an electric igniter. The flare is also equipped with a UV flame scanner, thermocouple with temperature indicator with recorder, an automatic shutdown alarm system, a flame arrestor, moisture separator and a condensate injection pump with flow indicating and recording device.

1.2 Project Team

Personnel involved in this project are identified in the following table.

Table 1-2: Project Team

WM Personnel	Kyle Evans
Regulatory Agency	AVAQMD
Alliance Personnel	Nick Pham

1.3 Site Specific Test Plan & Notification

Testing was conducted in accordance with the Site-Specific Test Plan (SSTP) submitted to AVAQMD on February 19, 2025. A copy may be found in Appendix G.

1.4 Technical Discussion

No technical difficulties or protocol deviations were encountered during this test program.

Summary of Results

2.0 Summary of Results

Alliance conducted compliance testing at the WM facility in Lancaster, California on October 6, 2025. Testing consisted of determining the emission rates of TRS as H_2S, at the inlet of Enclosed Flare 2.

Table 2-1 provides a summary of the emission testing results with comparisons to the applicable AVAQMD permit limits. Any difference between the summary results listed in the following table and the detailed results contained in appendices is due to rounding for presentation.

Table 2-1: Summary of Results – Flare 2

Run Number	**Run 1**	**Permit Limit**
Date	**10/6/25**	**--**
Fuel Heating Value, Btu/scf	347	--
Fuel Factor (O_2 dry), dscf/MMBtu	9,638	--
Fuel Rate, scfh	953	--
Total Fuel Gas Sulfur as H_2S		
Concentration, ppm	0.36	250.0 (PTO, Cond. 13)
Emission Factor (as SO_2), lb/MMBtu	0.00017	0.062 (PTO, Cond. 11)

Testing Methodology

3.0 Testing Methodology

The emission testing program was conducted in accordance with the test method listed in Table 3-1. Method description is provided below.

Table 3-1: Source Testing Methodology

Parameter	Reference Test Method	Notes/Remarks
Reduced Sulfur Compounds, including Hydrogen Sulfide	SCAQMD 307-91	Integrated Sample

3.1 SCAQMD Method 307-91 – Total Sulfur Compounds

Total sulfur compounds of the fuel content was measured according to SCAQMD Method 307-91. Field samples were collected from the sampling location into Tedlar bags and analyzed by gas chromatography using a sulfur chemiluminescent detector (GC/SCD). Field sampling and analytical procedures are described below.

Field sampling was performed by trained personnel as follows. Prior to sample collection, a sample interface (tubing, valve, etc.) was connected to the facility's sampling tap. All "wetted" surfaces that may contact the sample gas were constructed of inert materials such as TFE, glass, or polypropylene. The sample interface was allowed to bleed slightly between sample collections events in order to maintain conditioning of the sampling equipment.
Only new Tedlar bags were used. Each Tedlar bag was conditioned with sample gas prior to sample collection in three steps. First, the new bag was filled with sample gas, allowed to set for at least five minutes, and then emptied. Then the bag was filled with sample gas and immediately emptied. Finally, the sample was collected.

After a sample is collected, it was immediately labelled and entered in a Chain of Custody. Within four hours after collection, samples were delivered to the Laboratory for analysis.

Samples were analyzed by GC/SCD within 24 hours after collection when collected in a Tedlar bag. Sulfur compounds and SO_2 are separated by fuel. These compounds were then combusted in a hydrogen-rich flame to yield sulfur monoxide and other products. The sulfur monoxide reacts with ozone to yield sulfur dioxide, oxygen and light. The light is detected with a photomultiplier and the response is calibrated against previously run standards.

Analytical QC includes: pre-test and continuing calibration of equipment, analysis of reference standards, and blanks, and replicate analysis of the sample.

Appendix A

Location Waste Management of California, Inc. - Lancaster, CA
Source Enclosed Flare 2
Project No. AST-2025-4168

Source Data		
Fuel Heating Value, Btu/scf	F_{HV}	347
Fuel Factor (O2 dry), dscf/MMBtu	Fd	9,638
Fuel Rate, scfh	F_R	953
Fuel Analysis		
Fuel Gas Sulfur Concentration, ppm	C_{ppm}	0.36
Fuel Gas Sulfur Emission Factor (as SO_2), lb/MMBtu	EF	0.00017

Alliance TECHNICAL GROUP

Lancaster, CA.

Project # 25-4168 Client Waste Mgmt Contact _____

Scope of Work Bag sample @ Inlet - TRS & Heating.

By NMP Date 10/6/25 Sheet ___ of ___

	Inlet Gas Flow SCFM	Inlet Press Inches W.C	Humidity 52.7%
0750-0	953	-34.8	
10	948	-34.8	
Flow shut off 20	950	-31.8	Bar. 29.8
0525 - 30	952	-34.6	
0550 → 40	955	-34.8	
50	958	-34.8	
60	953	-34.8	

TRS/H2S → SCAQMD 307-91

SCAQMD 207.1 & ASTM D1945 / D3588

Appendix B

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: Alliance Source Testing
CLIENT PROJ NO: Lancaster Flare Inlet
LABORATORY NO: 25-1213
SAMPLING DATE: 10/06/25
RECEIVING DATE: 10/06/25
ANALYSIS DATE: 10/07/25
REPORT DATE: 10/10/25

Laboratory Analysis Report

Analysis Method: ASTM 1945-03 ; HHV Calculation: ASTM 3588-98

Analyte, Units	Sample ID	254168-F-M18-In-Bag
	Sample Date	10/06/25
	Lab ID	27925-22
	Units	Mole %
Methane, %		34.36
Ethane, %		<0.01
Ethylene, %		<0.01
Propane, %		<0.01
Propylene, %		<0.01
i-Butane, %		<0.01
n-Butane, %		<0.01
1-Butene, %		<0.01
i-Butylene, %		<0.01
trans-2-Butene,%		<0.01
cis-2-Butene,%		<0.01
i-Pentane, %		<0.01
n-Pentane, %		<0.01
2,2-Dimethyl Butane, %		<0.01
2,3-Dimethyl Butane, %		<0.01
2-Methyl Pentane, %		<0.01
3-Methyl Pentane, %		<0.01
n-Hexane, %		<0.01
C6+, %		<0.01
CO2, %		28.74
CO, %		<0.01
O2, %		5.94
N2, %		30.96
H2, %		<0.01
H2S, %		<0.01
Average Molecular Weight		**28.735**
Total Wt.% Adjusted Sp. Gravity		**0.9921**
Compressibility Factor (14.696 Psi, 60 F)		**0.9981**
NET BTU/Cub. Ft		**312**
GROSS BTU/Cub. Ft		**347**
CHONS		**%**
Carbon		26.38
Hydrogen		4.82
Oxygen		38.62
Nitrogen		30.18
Sulfur		<0.01
Dry F Factor (60 F, 1 Atm); SDCF/MMBTU, ASTM 3588		**9638**

Dr. Andrew Kitto
President

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT:	**Alliance Source Testing**
CLIENT PROJ NO:	**Lancaster Flare Inlet**
LABORATORY NO:	**25-1213**
SAMPLING DATE:	10/06/25
RECEIVING DATE:	10/06/25
ANALYSIS DATE:	10/06/25
REPORT DATE:	10/10/25

Laboratory Analysis Report

Analysis Method	**SCAQMD 307-91**	
Detection Limits	**0.05 PPMV**	
Analyte	**Sample ID**	**254168-F-M18-In-Bag**
	Sample Date	**10/06/25**
	Sample Time	**0750**
	Lab ID	**27925-22**
	Units	**PPMV**
Hydrogen Sulfide		0.23
Carbonyl Sulfide		<0.05
Methyl Mercaptan		<0.05
Ethyl Mercaptan		<0.05
Unidentified S Compounds		0.13
TRS as H_2S		**0.36**

TRS: Total Reduced Sulfur as Hydrogen Sulfide

Dr. Andrew Kitto
President

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Alliance Source Testing**
CLIENT PROJ NO: **Lancaster Flare Inlet**
LABORATORY NO: **25-1213**
SAMPLING DATE: 10/06/25
RECEIVING DATE: 10/06/25
ANALYSIS DATE: 10/06/25
REPORT DATE: 10/10/25

Quality Assurance Report

Duplicate Analyses

Sample ID: 254168-F-M18-In-Bag **Lab ID: 27925-22**

Analysis Method		**SCAQMD 307-91**		
Detection Limit		**0.05 PPMV**		
Analyte	**Aver. Conc. PPMV**	**Dil. Factor Ambient Air**	**DF*A/CF PPMV**	**% Sample Recovery***
Hydrogen Sulfide	0.23	1	0.23	100
Carbonyl Sulfide	<0.05	1	<0.05	N/A
Methyl Mercaptan	<0.05	1	<0.05	N/A
Ethyl Mercaptan	<0.05	1	<0.05	N/A
Unidentified S Compounds	0.13	1	0.14	103
TRS as H_2S	0.36	**1**	0.36	**101**

N/A: Not Applicable *Must be ±10%

Dr. Andrew Kitto
President

25-1213

Alliance SOURCE TESTING

CHAIN OF CUSTODY RECORDS

INVOICE TO:

ATTN:

REPORT TO:

ALLIANCE Source Testing
10602 Walker St.
Cypress, CA 90630
(714) 689-4000 Fax (714) 689-7030
charles.figueroa@stacktest.com
Contact: Charles Figueroa

PO #:

AST Office:

Turnaround Time
Standard: Other:
Rush:
Depends on # of Samples
5 - 10 days
3 - 7 days

Job # 25-4168 Unit # Flare Inlet Client: Location: Lancaster, CA

Samplers: (Signature)

Project Manager: Nick Pham

Unit Information:

Sample Date	Sample Time	Sample Identification	Lab Sample #	Type Of Sample: LIQUID	GAS	SOLID	No of Containers	ANALYSIS REQUESTED: SCAQMD 307.91	ASTM 1945/D3588	Return or Dispose	REMARKS
10/6/25	0750	254168-F-M18-IN-Bag-	27925-22		✓		1	✓	✓		SCAQMD 307.91 & ASTM D1945 & D3588

Relinquished by: Nick Pham
Date: 10/6/25 Time: 1120

Received by:
Date: 10/6/25 Time: 11.35

Relinquished by:
Date: Time:

Received by:
Date: Time:

Relinquished by:
Date: Time:

Received by:
Date: Time:

Relinquished by:
Date: Time:

Received by:
Date: Time:

Appendix C

0	One (1) Enclosed Flare, LFG Specialties, 60.72 MMBTU/hr., Model EF945I10, 9.0' dia. X 45.0'H, with multiple burners, propane pilot, and electric igniter
0	UV flame scanner, thermocouple with temperature indicator, and recorder
0	Automatic shutdown and alarm system
0	Automatic combustion air regulating system and temperature controller
0	Flame arrestor
0	Landfill gas flow meter and recorder
0	Moisture separator
0	Condensate injection pump and flow indicating and recording device

OPERATING CONDITIONS APPLICABLE TO PERMIT NUMBER C012559:

1. This equipment shall be installed, operated, and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles that produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit. Additionally, this equipment and the associated landfill shall be operated in compliance with NESHAP 40 CFR 63 Subpart AAAA. [AVAQMD Rule 1302, NESHAP40 CFR 63 Subpart AAAA]

2. All collected landfill gas shall be directed to the flare for combustion. (AVAQMD Rule 1150.1]

3. A sufficient number of sight glass windows shall be maintained in the flare to allow visual inspection of the flare flame at all times. Adequate and safe access shall be provided to all sight glass windows. [AVAQMD Rule 204]

4. The owner-operator shall provide sampling ports necessary to perform source tests required to verify compliance with AVAQMD Rules, regulations, and permit conditions. The location of these ports and platforms shall be subject to District approval. [AVAQMD Rule 217]

5. A sampling port shall be maintained at the landfill gas inlet line to allow the collection of a landfill gas sample. [AVAQMD Rule 217]

6. The flare shall be equipped with thermocouples and a recorder that measures and records the gas temperature in the flare stack. The temperature indicator and recorder shall operate whenever the flare is in operation. [40 CFR 70.6 (a)(3)(B) Monitoring requirements, AVAQMD Rule 204]

7. Whenever the flare is in operation, a temperature of not less than 1400 degrees Fahrenheit, 15-minute average, by the temperature indicator and recorder, shall be maintained except during periods of startup and shutdown. Startup is defined as the period from flare ignition to the time when 1400 degrees Fahrenheit is achieved, not to exceed 30 minutes. Shutdown is the period beginning when the gas valve begins to close and ending when the gas valve completely shuts off, not to exceed 30 minutes.

[AVAQMD Rule 204]

8. The flare shall be equipped with a failure alarm that shuts down the landfill gas blower, associated landfill gas supply valve, and the condensate injection pump to isolate the flare from the landfill gas supply line and condensate supply line, and to notify a responsible party of shutdown in the event of flare failure. This safety system shall be tested annually for proper operation. [AVAQMD Rules 204, 1303]

9. The landfill gas flow rate shall be monitored by a flow indicator and recorder. [AVAQMD Rule 204]

10. The total volume of landfill gas and extracted air burned in the flare shall not exceed 60.72 MMBtu/hr (averaged on an hourly basis). In addition, the total volume of condensate burned in the flare shall not exceed 4 gallons per minute. [AVAQMD Rules 204, 1302]

11. Emissions from the flare shall not exceed the following:
a. NOx (as NO2): 0.060 pounds per million Btu of heat input- 15.96 tpy.
b. SOx (as SO2): 0.062 pounds per million Btu of heat input- 21.56 tpy.
c. CO: 0.200 pounds per million Btu of heat input- 53.19 tpy.
d. PM-10: 17 pounds per million standard cubic foot as Methane (Lbs/MMscf of Methane)- 4.52 tpy.
e. NMHC (VOC): 0.050 pounds per million Btu of heat input- 13.3 tpy.

To ensure continued compliance, these emissions limits shall be calculated based on the most current source test data, and Hydrogen Sulfide Monitoring; a log of the emissions above shall be kept for a minimum of five years and made available to District, State, and Federal Personnel upon request. [AVAQMD Rule 1303]

12. Combined facility emission shall Not Exceed the following Annual Emission Limits to preclude triggering Offset Threshold Amounts as required by AVAQMD Rule 1303:
a. PM10: Shall Not Exceed 14.9 tpy;
b. Oxides of Nitrogen (NOx): Shall Not Exceed 24.9;
c. Oxides of Sulfur (SOx as SO2): Shall Not Exceed 24.9 tpy, and
d. Volatile Organic Compounds (VOC): Shall Not Exceed 24.9 tpy.
[AVAQMD Rule 1303]

13. This equipment shall not be operated unless Landfill Gas is treated with a Hydrogen Sulfide (H2S) Treatment System, Permitted under District Permit C014889, prior to entering Flare Inlet. Integrated H2S levels shall be less than 190 ppmv to ensure Facility annual SOx emissions Do Not Exceed 24.9 TPY. Additionally, pursuant to AVAQMD Rule 431.1, there shall not be at any time fuel entering the Flare that has a daily average hydrogen sulfide concentration in excess of 250 ppmv. [AVAQMD Rules 204, 431.1, 1303]

14. The sulfur removal system shall be operated per manufacturer's recommended operating

specifications and shall be monitored at the flare inlet for hydrogen sulfide concentration using colorimetric H2S detector tubes (Drager). Lab samples shall be taken at the flare inlet for hydrogen sulfide concentration and total reduced sulfur as hydrogen sulfide using SCAQMD Method 307-91 or other EPA or District approved methods. Results of these samples shall be logged pursuant to Condition 17. [AVAQMD Rules 204 and 1150.1]

15. In addition to annual performance tests and pursuant to AVAQMD Rule 431.1, this facility shall conduct the following in accordance with District approved test procedures;
a. Quarterly colorimetric (Drager tube) analysis of the fuel for hydrogen sulfide.
b. Annual laboratory analyses of collected LFG samples for total sulfur (as H2S).
Notification and results shall be made to the District in the manner described in condition 16. All samples shall be collected at the inlet to the flare. When the sulfur level is suspected to be at or above the permit limits for the site as determined by the colorimetric method, the sampling frequency shall be increased to monthly. This frequency shall be maintained until it is determined through three consecutive monthly samples that the fuel sulfur limits are observed. Following this observation, quarterly sampling may continue. [AVAQMD Rule 431.1]

16. Any breakdown or malfunction of this equipment resulting in the emission of raw landfill gas shall be reported to the District within one hour of detection, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere. [AVAQMD Rule 430]

17. This equipment shall be performance tested biennially; additionally, H2S monitoring shall occur in accordance with condition 15. The performance tests shall be conducted in accordance with the District test procedures and furnish the District with written results of such performance tests within sixty (60) days after the tests are conducted. Written notice of the performance tests shall be provided to the District seven (7) days prior to the tests so that an observer may be present. All source testing and analytical methods shall be submitted to the District for approval at least thirty (30) days prior to the start of the tests. The performance tests shall be conducted at the maximum achievable flow rates allowed by this permit and shall include, but shall not be limited to, a test of the inlet landfill gas flare, and the flare exhaust for:
a. Methane
b. Total Non-Methane Organics
c. Oxides of Nitrogen (exhaust only)
d. Carbon Monoxide (exhaust only)
e. PM-10 Particulates (exhaust only)
f. Hydrogen Sulfide (inlet only)
g. C1 and C3 Sulfur Compounds (speciated, inlet only)
h. Carbon Dioxide
i. SCAQMD Rule 1150.1 Table 1 Core Group List of Carcinogenic and Toxic Air Contaminants
j. Oxygen
k. Moisture Content (exhaust only)

l. Temperature (exhaust only)
m. Flow Rate in cfm.
[AVAQMD Rule 204]

18. This equipment shall achieve at least 98% destruction efficiency for non-methane hydrocarbons or less than or equal to 20 parts per million (ppmv as hexane at 3% oxygen), measured from landfill gas inlet to flare exhaust. [AVAQMD Rules 1302 and 1303]

19. The owner-operator shall submit an application to modify this permit should additional flares or other gas control equipment be required for this landfill. [AVAQMD Rule 1302]

20. The owner-operator shall maintain a current, on-site operations log for this system for at least five (5) years, and the log shall be provided to District, State, or Federal personnel upon request. The log shall include, at a minimum, the following information:
a. Flare temperature;
b. Flare failure system test date and test result;
c. Landfill gas flowrate;
d. Condensate flowrate;
e. Hours of operation;
f. Monthly and Yearly emissions of NOx (as NO2), SOX (as SO2), CO, PM-10, and NMHC. [AVAQMD Rules 204, 1150.1, 1302, 1303]

21. This equipment and associated landfill shall be operated in compliance with Rule 1150, 1150.1, 17 CCR 95460-95476 (Methane Emissions from Municipal Solid Waste Landfills), and National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR 63, Subpart AAAA). In the event of conflict between these conditions, the more stringent shall govern. [AVAQMD Rules 204, 1302, 1303]

22. This equipment and the associated Landfill shall be operated such that no Odors are observed at the facility fenceline. [AVAQMD Rules 402 and 1150.1]

23. A facility wide Comprehensive Emission Inventory (CEI) for all emitted criteria and toxic air pollutants must be submitted to the District, in a format approved by the District, upon District request. [AVAQMD Rules 107 and 204, H&S Code 39607 & 44341-44342, and 40 CFR 51, Subpart A]

C. AVAQMD PERMIT NUMBER C006907, GAS CONDENSATE COLLECTION SYSTEM, consisting of: associated Landfill identified as SWIS (Solid Waste Information System) Number 19-AA-0050 and classified as Active.

Four (4) condensate pumps for condensate level control in the condensate drip legs; Condensate holding tank, 8’-0” dia. x 21’-0” S/S, and 10,000-gallon capacity, with gas blanket system or under vacuum. Dual Containment Condensate tank is vented to a 55-gallon carbon filter drum. Collected liquids can be injected in the flare, used as dust control, or injected into the active working face of the landfill.

TABLE 1 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS (Core Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Benzene	C_6H_6
2.	Benzyl Chloride	$C_6H_5H_2C1$
3.	Chlorobenzene	C_6H_5C1
4.	1,2 Dibromoethane (Ethylene Dibromide)	$BrCH_2CH_2Br$
5.	Dichlorobenzene	$C_6H_4C1_2$
6.	1,1 Dichloroethane (Ethylidene Chloride)	CH_3CHC1_2
7.	1,2 Dichloroethane (Ethylene Dichloride)	$C1H_2H_2C1$
8.	1,1 Dichloroethene (Vinylidene Chloride)	$CH_2 : CC1_2$
9.	Dichloromethane (Methylene Chloride)	CH_2C1_2
10.	Hydrogen Sulfide	H_2S
11.	Tetrachloroethylene (Perchloroethylene)	$C1_2C : CC1_2$
12.	Tetrachloromethane (Carbon Tetrachloride)	$CC1_4$
13.	Toluene	$C_6H_5CH_3$
14.	1,1,1 Trichloroethane (Methyl Chloroform)	CH_3CC1_3
15.	Trichloroethylene	$CHC1 : CC1_2$
16.	Trichloromethane (Chloroform)	$CHC1_3$
17.	Vinyl Chloride	$CH_2 : CHC1$
18.	Xylene	$C_6H_4(CH_3)_2$

Site Specific Test Plan

Waste Management National Services
Lancaster Landfill
600 East Avenue F
Lancaster, CA 93535

Facility ID: 2129

Source to be Tested: Enclosed Flare 2
Proposed Test Date: March 21, 2025
Submittal Date: February 19, 2025

Project No. AST-2025-1080

Prepared By
Alliance Technical Group, LLC
10602 Walker Street
Cypress CA 90630

Regulatory Information

Permit No.	C012559
Regulatory Citation	SCAQMD Rule 1150.1

Source Information

Source Name	*Target Parameters*
Enclosed Flare 2	TNMHC VOC, HV, TRS, H_2S, TO-15, PM, NOx, CO, O_2 and CO_2

Contact Information

Test Location
Waste Management National Services
600 East Avenue F
Lancaster, CA 93535

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Regulatory Agency
Antelope Valley Air Quality Management District
2551 W Avenue H
Lancaster, CA 93536

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1.0 Introduction

Alliance Technical Group, LLC (Alliance) was retained by Waste Management National Services (WM) to conduct compliance testing at the Lancaster, California facility. Portions of the facility are subject to provisions of the Antelope Valley Air Quality Management District (AVAQMD) Permit to Operate C012559. Testing will be conducted as outlined in Table 1-1 below.

Table 1-1: Test Matrix

Emission Source	Parameters
Enclosed Flare 2 (Inlet)	Sample Point Determination
	Volumetric Flow Rate
	Oxygen / Carbon Dioxide
	Total Non-Methane Hydrocarbons / Methane
	Moisture Content (Wet Bulb/Dry Bulb)
	Reduced Sulfur Compounds, including Hydrogen Sulfide
	Speciated Organic Compounds
Enclosed Flare 2 (Outlet)	Sample Point Determination
	Volumetric Flow Rate
	Oxygen / Carbon Dioxide
	Moisture Content
	Particulate Matter
	Nitrogen Oxides
	Carbon Monoxide
	Total Non-Methane Hydrocarbons / Methane
	Speciated Organic Compounds

This site-specific test plan (SSTP) has been prepared to address the notification and testing requirements of the AVAQMD permit.

1.1 Source Description

The enclosed landfill gas flare ís a LFG Specialties, Model EF945I10 rated at 60.72 Million British Thermal Units per hour (MMBtu/hr). The flare consists of an insulated steel cylinder 45 feet high and 109 inches inside diameter. It is equipped with multiple burners, a landfill gas flow meter and recorder, a propane gas pilot, and an electric igniter. The flare is also equipped with a UV flame scanner, thermocouple with temperature indicator with recorder, an automatic shutdown alarm system, a flame arrestor, moisture separator and a condensate injection pump with flow indicating and recording device.

1.2 Sample Location

Flare Exhaust

Flare exhaust samples will be obtained from the 109 inch diameter exhaust stack. Two sample ports, positioned at right angles, in accordance with the guidelines of SCAQMD Method 2.1 will be used for sample collection. The exact sample port locations will be verified and measured prior to the commencing the test program. The exact exhaust sampling locations will be provided in the final report.

At the flare exhaust, twenty-four sample points (12 per diameter), determined in accordance with Method 1, will be utilized for the determination of the following compounds:

- particulate matter (PM)
- oxides of nitrogen (NOx)
- carbon monoxide (CO)
- oxygen and carbon monoxide (O_2/CO_2)
- flow Rate
- moisture

A single sample point will be used for the collection of the following samples:

- speciated organic compounds
- total non-methane hydrocarbons
- methane

Landfill Gas Supply Line

Inlet samples will be obtained from the centroid of the landfill gas line supplying the flare. The size of the gas line will be measured prior to the test program and recorded. The sample ports) location will be verified and measured prior to commencing the test program. The exact inlet sampling locations will be provided in the final report.

A single sample point will be utilized for the collection of the following compounds, where applicable:

- total non methane hydrocarbons
- methane
- CO
- CO_2/O_2
- reduced sulfur compounds, including H_2S
- speciated organic compounds, SCAQMD Rule 1150.1 TABLE 1-Carcinogenic and Toxic Air Contaminants list as per Condition 17 of the AVAQMD FOP: 297602129
- BTU content
- moisture

1.3 Project Team

Personnel planned to be involved in this project are identified in the following table.

Table 1-2: Project Team

WM Personnel	Kyle Evans
Regulatory Agency	AVAQMD
Alliance Personnel	Mark Rowlett other field personnel assigned at time of testing event

1.4 Safety Requirements

Testing personnel will undergo site-specific safety training for all applicable areas upon arrival at the site. Alliance personnel will have current OSHA or MSHA safety training and be equipped with hard hats, safety glasses with side shields, steel-toed safety shoes, hearing protection, fire resistant clothing, and fall protection (including shock corded lanyards and full-body harnesses). Alliance personnel will conduct themselves in a manner consistent with Client and Alliance's safety policies.

A Job Safety Analysis (JSA) will be completed daily by the Alliance Field Team Leader.

2.0 Summary of Test Program

To satisfy the requirements of the AVAQMD permit, the facility will conduct a performance test program to determine the compliance status of the Enclosed Flare 2.

2.1 General Description

All testing will be performed in accordance with specifications stipulated in U.S. EPA Reference Test Method TO-15 and SCAQMD Methods 1.1, 2.1, 4.1, 5.1, 10.1, 25.1, 25.3, 100.1and 307-91 and Wet Bulb / Dry Bulb. Table 2-1 presents an outline and tentative schedule for the emissions testing program. The following is a summary of the test objectives.

- Testing will be performed to demonstrate compliance with the AVAQMD Permit to Operate C012559.
- Emissions testing will be conducted on the inlet and outlet of Enclosed Flare 2.
- Performance testing will be conducted at the normal operating conditions.
- Landfill gas moisture content will be determined using a wet bulb/dry bulb thermometer.
- Moisture content of the flare exhaust will be determined using SCAQMD Method 4.1.
- Landfill gas flow rate will be obtained from the facility's permanent, continuous, on-line flow recorders.
- Concurrent duplicate samples will be collected for SCAQMD Methods 25.1, 25.3 and a single sample for 307-91.
- Simultaneous testing will be performed at the flare inlet and outlet to determine destruction efficiencies (DE).

2.2 Process/Control System Parameters to be Monitored and Recorded

Plant personnel will collect operational and parametric data at least once every 15 minutes during the testing. The following list identifies the measurements, observations and records that will be collected during the testing program:

- Flare Temperature;
- Landfill Gas Flowrate;
- Condensate Flowrate
- Hours of operations

2.3 Proposed Test Schedule

Table 2-1 presents an outline and tentative schedule for the emissions testing program.

Table 2-1: Program Outline and Tentative Test Schedule

Testing Location	Parameter	Reference Method	No. of Runs	Est. Onsite Time
DAY 1 – March 20, 2025				
Equipment Setup & Pretest QA/QC Checks				8 hr
DAY 2 – March 21, 2025				
Enclosed Flare 2 (Inlet)	Sample Point Determination	SCAQMD 1.1	--	10 hr
	VFR	SCAQMD 2.1		
	O_2/CO_2	SCAQMD 10.1	1 sample (in duplicate)	
	TNMHC / CH_4	SCAQMD 25.1		
	BWS	Wet Bulb / Dry Bulb	--	
	TRS / H_2S	SCAQMD 307-91	1 sample	
	Speciated Organic Compounds	EPA TO-15	1 sample	
Enclosed Flare 2 (Outlet)	Sample Point Determination	SCAQMD 1.1	1 sample	
	VFR	SCAQMD 2.1		
	BWS	SCAQMD 4.1	1 sample	
	PM as PM-10	SCAQMD 5.1		
	O_2, CO_2, NOx, CO	SCAQMD 100.1		
	TNMHC / CH_4	SCAQMD 25.3	1 sample (in duplicate)	
	Speciated Organic Compounds	EPA TO-15	3 samples	

2.4 Emission Limits

Emission limits for each pollutant are below.

Table 2-2: Emission Limits

Source	Pollutant	Citation
Enclosed Flare 2	NOx (as NO_2) – 0.060 lb/MMBtu	Permit, Condition 11
	SOx (as SO2) – 0.062 lb/MMBtu	Permit, Condition 11
	CO – 0.200 lb/MMBtu	Permit, Condition 11
	PM10 – 17 lb/MMscf of Methane	Permit, Condition 11
	NMNEOC (VOC) – 0.050 lb/MMBtu	Permit, Condition 11
	H2S – 190 ppmvd	Permit, Condition 13
	NMHC DE - ≥ 98% or ≤ 20 ppmv @ 3% O2 (as hexane)	Permit, Condition 18
	Temperature - ≥ 1400 °F	Permit, Condition 7

2.5 Test Report

The final test report must be submitted within 60 days of the completion of the performance test and will include the following information.

- *Introduction* – Brief discussion of project scope of work and activities.
- *Results and Discussion* – A summary of test results and process/control system operational data with comparison to regulatory requirements or vendor guarantees along with a description of process conditions and/or testing deviations that may have affected the testing results.
- *Methodology* – A description of the sampling and analytical methodologies.
- *Sample Calculations* – Example calculations for each target parameter.
- *Field Data* – Copies of actual handwritten or electronic field data sheets.
- *Laboratory Data* – Copies of laboratory report(s) and chain of custody(s).
- *Quality Control Data* – Copies of all instrument calibration data and/or calibration gas certificates.
- *Process Operating/Control System Data* – Process operating and control system data (as provided by WM) to support the test results.

3.0 Testing Methodology

This section provides a description of the sampling and analytical procedures for each test method that will be employed during the test program. All equipment, procedures and quality assurance measures necessary for the completion of the test program meet or exceed the specifications of each relevant test method. The emission testing program will be conducted in accordance with the test methods listed in Table 3-1.

Table 3-1: Source Testing Methodology

Parameter	Reference Test Methods	Notes/Remarks
Sample Point Determination	SCAQMD 1.1	--
Volumetric Flow Rate	SCAQMD 2.1	Full Velocity Traverses
Moisture Content (Inlet)	Wet Bulb / Dry Bulb	--
Moisture Content (Outlet)	SCAQMD 4.1	Gravimetric Analysis
Particulate Matter as PM-10	SCAQMD 5.1	Isokinetic Testing
Oxygen / Carbon Dioxide (Inlet)	SCAQMD 10.1	Integrated Sample
Oxygen / Carbon Dioxide (Outlet)	SCAQMD 100.1	Instrumental Analysis
Nitrogen Oxides	SCAQMD 100.1	Instrumental Analysis
Carbon Monoxide	SCAQMD 100.1	Instrumental Analysis
Reduced Sulfur Compounds, including Hydrogen Sulfide	SCAQMD 307-91	Integrated Sample
Speciated Organic Compounds	EPA TO-15	Constant Rate Canister Sampling
Total Non-Methane Hydrocarbons / Methane (Inlet)	SCAQMD 25.1	Constant Rate Sampling
Total Non-Methane Hydrocarbons / Methane (Outlet)	SCAQMD 25.3	Constant Rate Sampling

All stack diameters, depths, widths, upstream and downstream disturbance distances and nipple lengths will be measured on site with an EPA Method 1 verification measurement provided by the Field Team Leader. These measurements will be included in the test report.

3.1 SCAQMD Method 1.1 - Sampling and Velocity Traverse Points

The number and location of traverse points will be determined according to SCAQMD Method 1.1 based on the physical dimensions of the sampling location and process parameters. In principle, the stack cross-section is divided into equal areas, each of which will be represented by a “traverse point”. Generally, the number of traverse points diminished as the flow profile at the sampling location became uniform. In most cases, the maximum number of sampling points is 24 for particulate testing and 16 for velocity traverses. Fewer traverse points will be permitted as described in the method.

3.2 SCAQMD Method 2.1 - Stack Gas Velocity and Flow Rate

The velocity and volumetric flow rate of the stack gas will be determined according to SCAQMD Method 2.1. In this method, the velocity head (differential pressure) and temperature will be measured at the required traverse points. The stack gas differential pressure head will be determined using an “S” type pitot tube in combination with

inclined liquid manometer. The temperature will be measured using a type "K" thermocouple (TC) and digital temperature readout.

Prior to testing, the measurement system will be set-up and leak checked. Then the velocity head and temperature will be recorded at predetermined traverse points. After the last traverse will be completed, the system will be again leak-checked. After completion of the traverse, the static pressure in the stack will be determined in the centroid of the stack. The stack gas velocity will be calculated using the velocity head, and stack gas temperature, pressure and molecular weight.

QA/QC for the method included field performance checks, and periodic calibrations of test equipment including the pitot tube, differential pressure gauge, TC, and TC-readout. If the sampling location is new or process conditions have changed significantly, then a swirl check is also performed to assess cyclonic flow.

3.3 Wet Bulb / Dry Bulb – Inlet Moisture Content

The gas moisture content will be determined by using a psychrometric chart and measuring the dry bulb/wet bulb temperatures. One (1) temperature measurement will be conducted during each velocity traverse.

3.4 SCAQMD Method 4.1 - Stack Gas Moisture Content

The stack gas moisture content will be determined according to SCAQMD Method 4.1. In this method, water vapor is collected in a condenser while the dry stack gas volume is measured using a dry gas meter. The volume of water vapor will be calculated from the amount of water condensed and the total gas volume will be the sum of water vapor plus dry stack gas. The moisture content will be determined as a fraction of the total wet stack gas volume. The following calculations will be used.

$$B_{WS} = \frac{V_{W,Std}}{V_{M,Std} + V_{W,Std}}$$

$$V_{W,Std} = K_1 \times V_{H2O}$$

$$V_{M,Std} = T_{Std}/P_{Std} \times Y_M \times V_M \times P_M/T_M$$

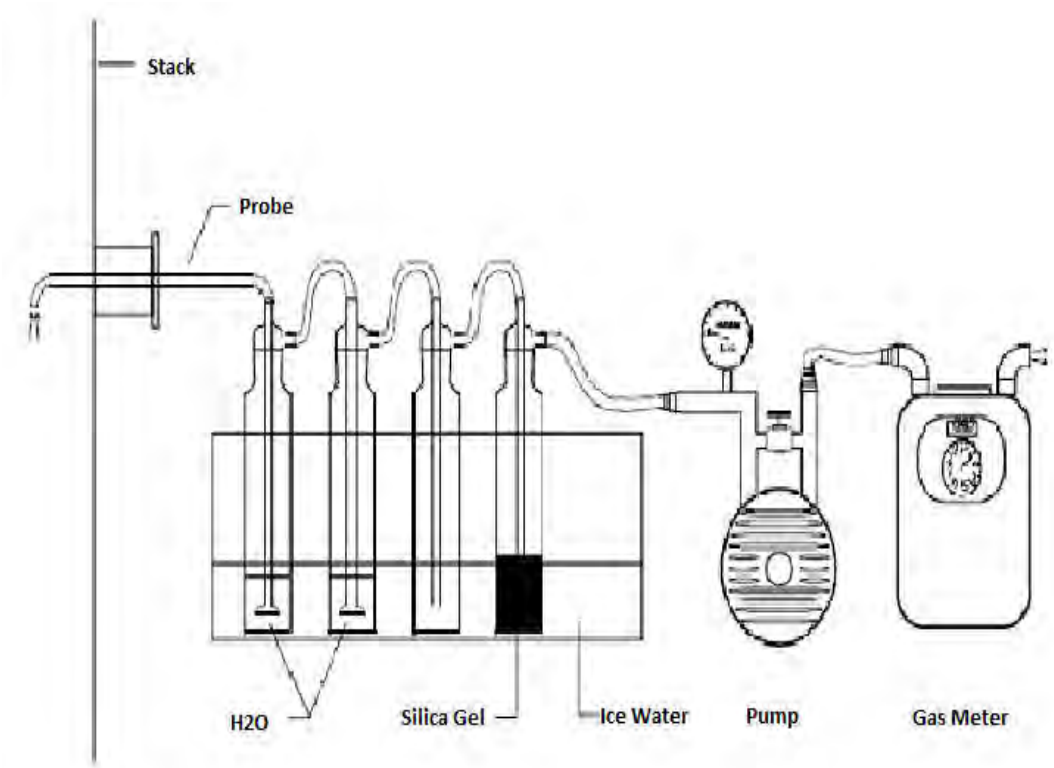
Where:
- B_{WS} = Fraction of water vapor in stack gas
- $V_{W,Std}$ = Volume of water vapor (scf)
- $V_{M,Std}$ = Volume of stack gas sampled (dscf)
- K_1 = Unit volume of water vapor (0.04707 scf @68ºF or 0.0464 scf @60ºF)
- T_{Std} = Standard Temperature (528ºR or 520ºR)
- P_{Std} = Standard Pressure, 29.92 in. Hg
- Y_M = Dry gas meter calibration factor
- V_M = Measured volume of stack gas sampled
- P_M = Dry gas meter pressure (in. Hg)
- T_M = Dry gas meter temperature (ºR)

Sampling for moisture content will be performed as follows:

Moisture will be collected in a sampling train consisting of a probe, TFE line, four impingers in an ice bath, a leak-free pump, a vacuum gauge and a dry gas meter. Figure 3-1 is a schematic of a typical moisture train. Initially, impingers #1 and #2 contain 100 ml of water, impinger #3 will be empty, and impinger #4 contains a known amount (approximately 300 g) of desiccant (e.g. Silica Gel). Prior to sampling, a leak check of the sampling train will be performed. Then, the sampling probe will be inserted into the centroid of the stack, the initial meter readings

(volume, temperatures, etc.) will be recorded, the sample pump will be started and the sampling rate will be adjusted to the desired sampling rate (typically 0.75 dry cfm). Sampling will be conducted until at least 22 dry cubic feet will be collected. After sampling, the final meter readings will be recorded and the impinger train will be recovered. The change in volume and/or weight of the impinger train components will be used to determine the amount of moisture condensed. The volume of water vapor and the corrected volume of dry gas sampled will be used to calculate the moisture fraction as described above.

Figure 3-1: Moisture Train



3.5 SCAQMD Method 5.1 – Total Particulate Matter as PM-10

Measurements to determine total particulate matter will be performed according to SCAQMD Method 5.1. In this method, a stack gas sample will be isokinetically extracted from the stack through a stainless steel nozzle and probe and transported to an impinger train in an ice bath. Entrained particulate will be collected in the impingers and on a back-up filter placed between the 3rd and 4th impingers. Figure 3-2 is a schematic of the sampling apparatus.

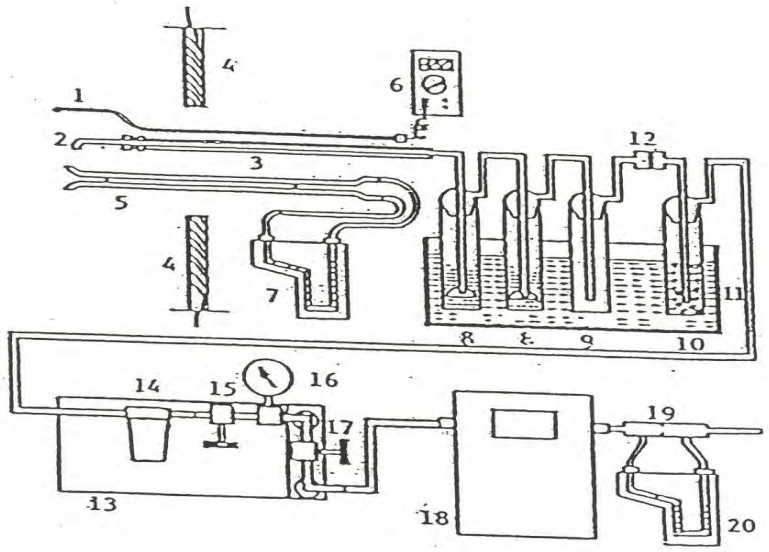
Prior to testing, a series of measurements will be made to determine location and number of traverse points, gas velocity, MW, and moisture content. The results of these measurements will be used to determine the appropriate nozzle size for isokinetic sampling. The sampling rate will be adjusted to maintain isokinetic conditions based on pitot and TC measurements.

The sampling train will be prepared by charging impingers # 1 and # 2 with 100 ml of D.I. water and impinger # 4 with approximately 200 g of silica gel. Impinger # 3 will be left empty. Finally, the sampling train will be the sealed, transported to the sampling location, and leak-checked. Sampling will be performed at each traverse point. After completing the test, the Method 5.1 sample will be taken to a secured area (ie. Mobile test van or Alliance laboratory) and recovered.

The recovered samples will be entered into Alliance Sample Custody Program and delivered to the laboratory for analysis. At the laboratory, samples will be analyzed by gravimetric procedures to determine gross PM weight gain. If necessary, the samples will be further analyzed by wet chemistry to determine acids and sulfates content.

Field and laboratory data will be used to calculate sample volume corrected to standard conditions, stack gas flow rate, and other parameters. Emissions will be reported in gr/dscf, lbs/hr, and lb/MMscf.

Figure 3-2: Sampling Apparatus for Particulate Matter



1. Temperature Sensor
2. Nozzle
3. Glass Lined Stainless Steel Probe
4. S-type Pitot Tube
5. Stack Wall
6. Temperature Sensor Meter
7. Pitot Tube Inclined Manometer
8. Impinger with 100 ml H_2O
9. Empty Bubbler
10. Bubbler with Silica Gel
11. Ice Bath
12. Filter
13. Sealed Pump (Leak Free)
14. Filter for Pump
15. Metering Valve
16. Vacuum Gauge
17. By-pass Valve
18. Temperature Compensated Dry Gas Meter
19. Orifice
20. Orifice Inclined Manometer

3.6 SCAQMD Method 10.1 – Inlet Oxygen/Carbon Dioxide

The gaseous components of the stack gas (e.g. O_2 & CO_2) will be measured using integrated sampling in accordance with the procedures specified in SCAQMD Method 10.1. The integrated gas sample will be collected in a summa canister. The sample will be analyzed by gas chromatography (GC).

3.7 SCAQMD Method 100.1 - Continuous Monitoring of Gaseous Emissions, CEMS

In this method, gaseous components of the stack gas (e.g. NOx, SO_2, O_2, CO_2, CO) will be measured continuously according to SCAQMD Method 100.1 using Alliance's mobile continuous emissions monitoring system (CEMS). Figure 3-3 is a schematic of Alliance's CEMS.

The CEMS extracts and conditions a representative stack gas sample and analyzes the gas using one or more analytical instruments. Typical CEMS instrumentation is described in Table 5-1. The extraction and conditioning system consists of a stainless steel heated probe, a short heated TFE sample line, a conditioning system, a TFE-diaphragm pump and a TFE transport (sample) line. The sample conditioning system, consisting of water knockout impingers and/or a thermoelectric condenser, removes moisture before the gas is delivered to the analyzers. Sample flow and delivery will be controlled using a flow control panel that includes valves, pressure gauges, and flow meters (rotameters). The flow control panel allows the user to deliver sample gas to any and all instruments. Instrument readings will be recorded using a real-time stripchart and an electronic data acquisition system (DAS). Other pertinent data such as calibration gas cylinder numbers and concentrations, test location, dates, times, and operator identification will be also recorded on the strip chart and on the field data form.

Sampling included pretest and post-test calibration and bias checks for each sampling run. Raw concentration data will be corrected for sampling system bias according to Method 100.1 using the following equation:

$$C_{CORR} = C_{MA} \times \frac{(C_i - BIAS_{ZERO})}{(BIAS_{SPAN} - BIAS_{ZERO})}$$

Where:
- C_{CORR} = Concentration, corrected for drift and bias
- C_i = Average measured concentration (raw value)
- $BIAS_{ZERO}$ = Average instrument response during zero bias check
- C_{MA} = Certified concentration of applicable span gas
- $BIAS_{SPAN}$ = Average instrument response during span bias check

The following QA/QC activities will be performed during testing.

- Prior to testing, each individual analyzer will be calibrated (adjusted) by introducing zero, hi-span and mid-span gases directly into each analyzer and by making corresponding adjustments.

- Prior to testing, calibration error, linearity and system bias checks will be performed on each analyzer. Calibration error and linearity checks will be performed by injecting known calibration gases directly to each instrument. System bias checks will be performed by injecting calibration gases at the sampling-probe/junction or at the sampling probe tip.

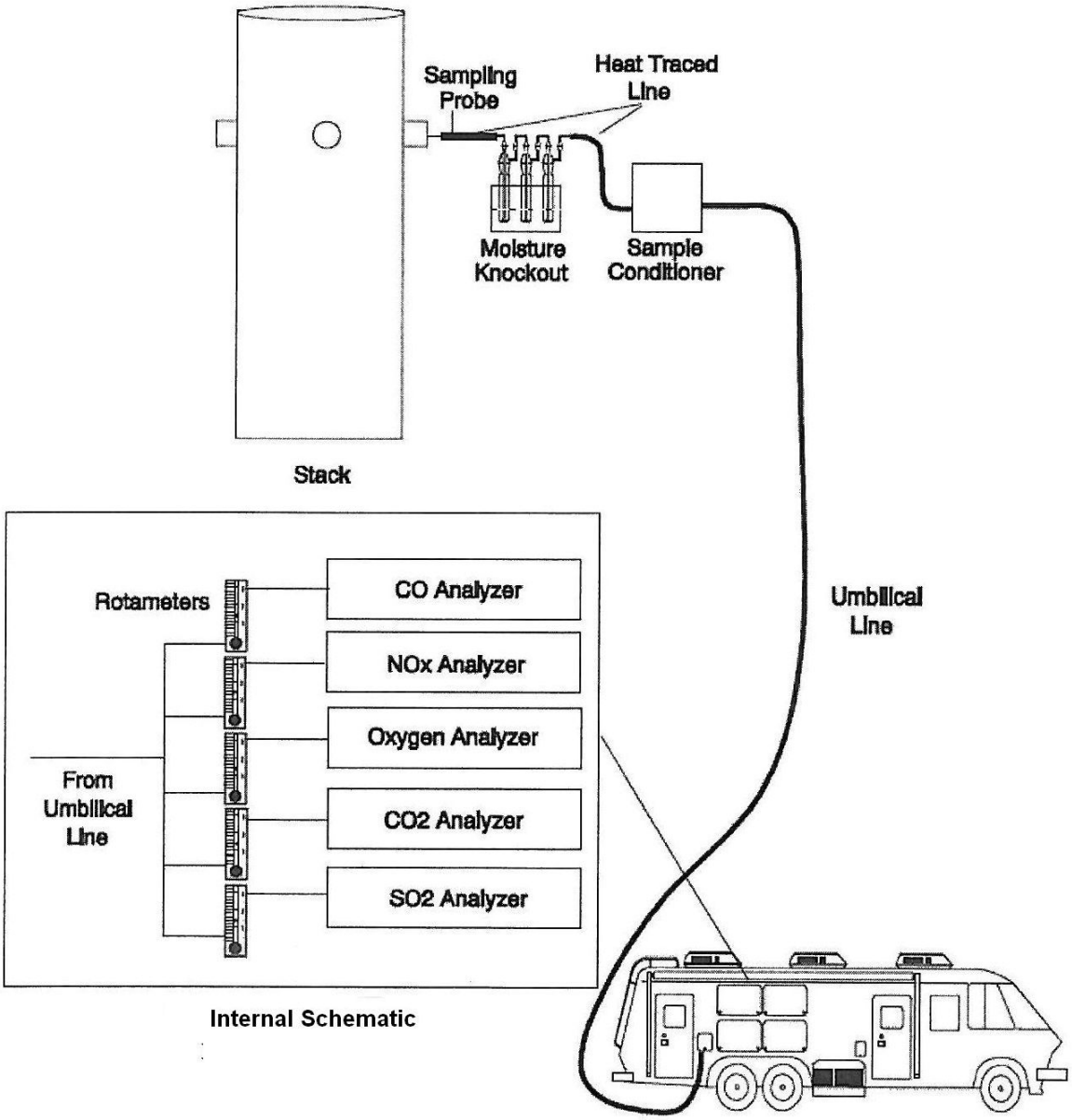
- The system response time for each parameter will be determined at the moment when the calibration gas for the bias check reaches 95% of its expected concentration value.

- A leak check will be conducted before sampling and periodically thereafter to ensure that no leakage occurs in the entire sampling apparatus. The leak check will be performed on the vacuum side by sealing the probe tip and increasing vacuum to above 20 inches of mercury. After the vacuum stabilizes, it should hold constantly at about 20 in. Hg. On the pressure side, the pressure gauge indicator should drop to zero and flow to each individual rotameter also should drop to zero to indicate a successful leak check.

- Calibration gases used to span instrumentation conform to EPA Protocol-1. Certificates of analysis for calibration gases will be included in the report.

- NO_2-to-NO conversion efficiency (CE) check will be performed in the instrument range utilized for RATA testing and according to the procedure in Method 100.1. The result of the Conversion Efficiency check is included in the report.

Figure 3-3: Continuous Emissions Monitoring System



3.8 SCAQMD Method 307-91 – Total Sulfur Compounds

Total sulfur compounds of the fuel content will be measured according to SCAQMD Method 307-91. Field samples will be collected from the sampling location into Tedlar bags and analyzed by gas chromatography using a sulfur chemiluminescent detector (GC/SCD). Field sampling and analytical procedures are described below.

Field sampling will be performed by trained personnel as follows. Prior to sample collection, a sample interface (tubing, valve, etc.) will be connected to the facility's sampling tap. All "wetted" surfaces that may contact the

sample gas will be constructed of inert materials such as TFE, glass, or polypropylene. The sample interface is allowed to bleed slightly between sample collections events in order to maintain conditioning of the sampling equipment.

Only new Tedlar bags will be used. Each Tedlar bag will be conditioned with sample gas prior to sample collection in three steps. First, the new bag will be filled with sample gas, allowed to set for at least five minutes, and then emptied. Then the bag will be filled with sample gas and immediately emptied. Finally, the sample will be collected.

After a sample is collected, it will be immediately labelled and entered in a Chain of Custody. Within four hours after collection, samples will be delivered to the Laboratory for analysis.

Samples will be analyzed by GC/SCD within 24 hours after collection when collected in a Tedlar bag. Sulfur compounds and SO_2 are separated by fuel. These compounds will then be combusted in a hydrogen-rich flame to yield sulfur monoxide and other products. The sulfur monoxide is reacted with ozone to yield sulfur dioxide, oxygen and light. The light is detected with a photomultiplier and the response is calibrated against previously run standards.

Analytical QC includes: pre-test and continuing calibration of equipment, analysis of reference standards, and blanks, and replicate analysis of the sample.

3.9 U.S. EPA Reference Test Method TO-15 – Volatile Organic Compounds

The volatile organic compounds testing will be conducted in accordance with EPA Method Toxic Organics-15 (TO-15). The gas stream will be withdrawn at a constant rate through a unheated Teflon sample line, and into an evacuated stainless steel canister. A gas conditioning system (dry chilled knock out impinger) will be used if the expected source gas moisture is greater than 3.5%. The sample rate will be regulated with a flow controller over the duration of the test run.

Following the completion of each test run, the canister valve will be closed and the sample will be labeled for transport to the identified laboratory for analysis. The samples will be analyzed by high resolution gas chromatography (GC) coupled to a mass spectrometer (MS) in accordance with the analytical guidelines in EPA TO-15. The samples will be analyzed per Condition 17.i. of the AVQMD Permit.

3.10 SCAQMD Method 25.1 – ROG (VOC as NMNEOC High-Level)

This method applies to the measurement of volatile organic compounds (VOC) or total gaseous non-methane organics (TGNMO) as carbon in source emissions. In this Method, gaseous samples will be withdrawn from the gas stream at a constant rate through duplicate chilled condensate traps and collected in evacuated sample tanks. Each sampling train will consist of an in-stack filter (optional), sample probe, condensate trap, a flow control system, and an evacuated sample tank. The flow controller will incorporate a combination vacuum/pressure gauge, which will be connected directly to the canister. The TGNMO will be determined by combining the analytical results obtained from independent analyses of the condensate traps (condensable fraction) and the sample tanks (gaseous fraction). The sampling system is depicted in Figure 3-4.

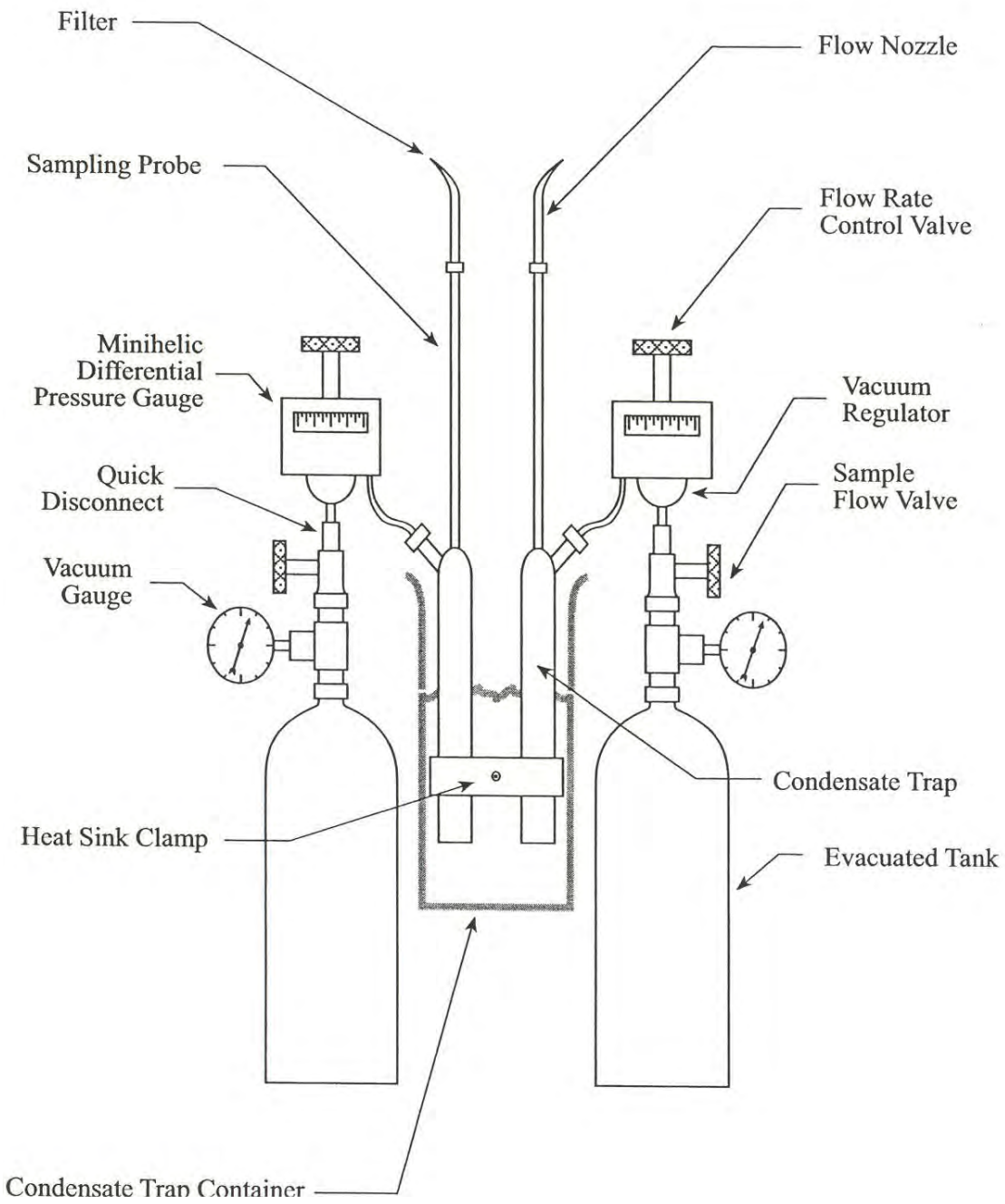
Prior to testing, the sampling system will be pre-cleaned and evacuated in preparation for sample collection. On-site, the sampling system will be leak-checked and crushed dry ice will be placed around each condensate trap. Then the sample probe will be placed in the stack, facing downstream to prevent collection of particulate matter. Pretest data will be recorded and the sample valve was opened. The flow controller will be based on a critical orifice that will be

preset to flow at a rate of 80-cc/min +/- 15%. Periodically, sampling train readings (i.e. tank vacuum) will be recorded on the field data sheet. Sampling will be stopped when one hour had elapsed. Then, the sampling train will be removed from the stack and a leak check was performed. Samples will be logged in and delivered to the laboratory for analysis.

The analytical system will consist of two major sub-systems: an oxidation system for the recovery and the conditioning of the condensate trap contents, and a non-methane organics (NMO) analyzer. The NMO analyzer will be a gas chromatograph (GC) with backflush capability for NMO analysis and will be equipped with an oxidation catalyst, reduction catalyst, and flame ionization detector (FID). The system for the recovery and conditioning of the organics captured in the condensate trap will consist of a heat source, oxidation catalyst, non-dispersive infrared (NDIR) CO_2 analyzer and an intermediate collection vessel (ICV).

The organic content of each condensate trap will be oxidized to carbon dioxide (CO_2), which is quantitatively collected in an evacuated vessel (the ICV); then a portion of the CO_2 will be reduced to methane (CH_4) and measured by GC/NDIR or GC/FID. The organic content of the sample fraction collected in the sampling tank will be measured by injecting a gas sample into the GC to separate the NMO from CO, CO_2 and CH4. The NMO will be oxidized to CO_2, reduced to CH_4, and measured by the FID. In this manner, the variable response of the FID (associated with different type of organic compounds) will be eliminated. The sampling apparatus and sample analysis services will be provided by AAC Laboratory in Ventura, California.

Figure 3-4: Sampling Apparatus for NMNEOC per SCAQMD Method 25.1



3.11 SCAQMD Method 25.3 - Volatile Organic Compounds, VOC, as TGNMNEOC (Low-level)

This method applies to the measurement of low-concentration (</= 50 ppmv) volatile organic compounds (VOC) or total gaseous non-methane organics (TGNMNEOC) as carbon in source emissions. In this Method, gaseous samples will be withdrawn from the gas stream at a constant rate through duplicate chilled condensate traps and collected in evacuated sample tanks. The sampling system is depicted in Figure 3-5. Each sampling train (there will be two) consisted of an in-stack filter (optional), sample probe, water-chilled mini-impinger, a flow control system, and an evacuated sample tank. The flow controller incorporated a combination vacuum/pressure gauge, which will be connected directly to the canister. The TGNMO will be determined by combining the analytical results obtained from independent analyses of the condensate traps (condensable fraction) and the sample tanks (gaseous fraction).

Prior to testing, the sampling system will be pre-cleaned and evacuated in preparation for sample collection. On-site, the sampling system will be leak-checked and the impingers will be placed in an ice-slurry (the impingers will be chilled for at least 10 minutes prior to sampling). Then the sample probe will be placed in the stack, facing downstream to prevent collection of particulate matter. Pretest data will be recorded, and the sample valve will be opened. The flow controller will be based on a critical orifice that will be preset to flow at a rate of 80-cc/min +/- 15%. Periodically, sampling train readings (i.e. tank vacuum) will be recorded on the field data sheet. Sampling will be stopped when one hour had elapsed and/or and tank vacuum reached 2 inches as indicated by the vacuum gauge. Then, the sampling train will be removed from the stack and a leak check will be performed. Samples will be logged in and delivered to the laboratory for analysis.

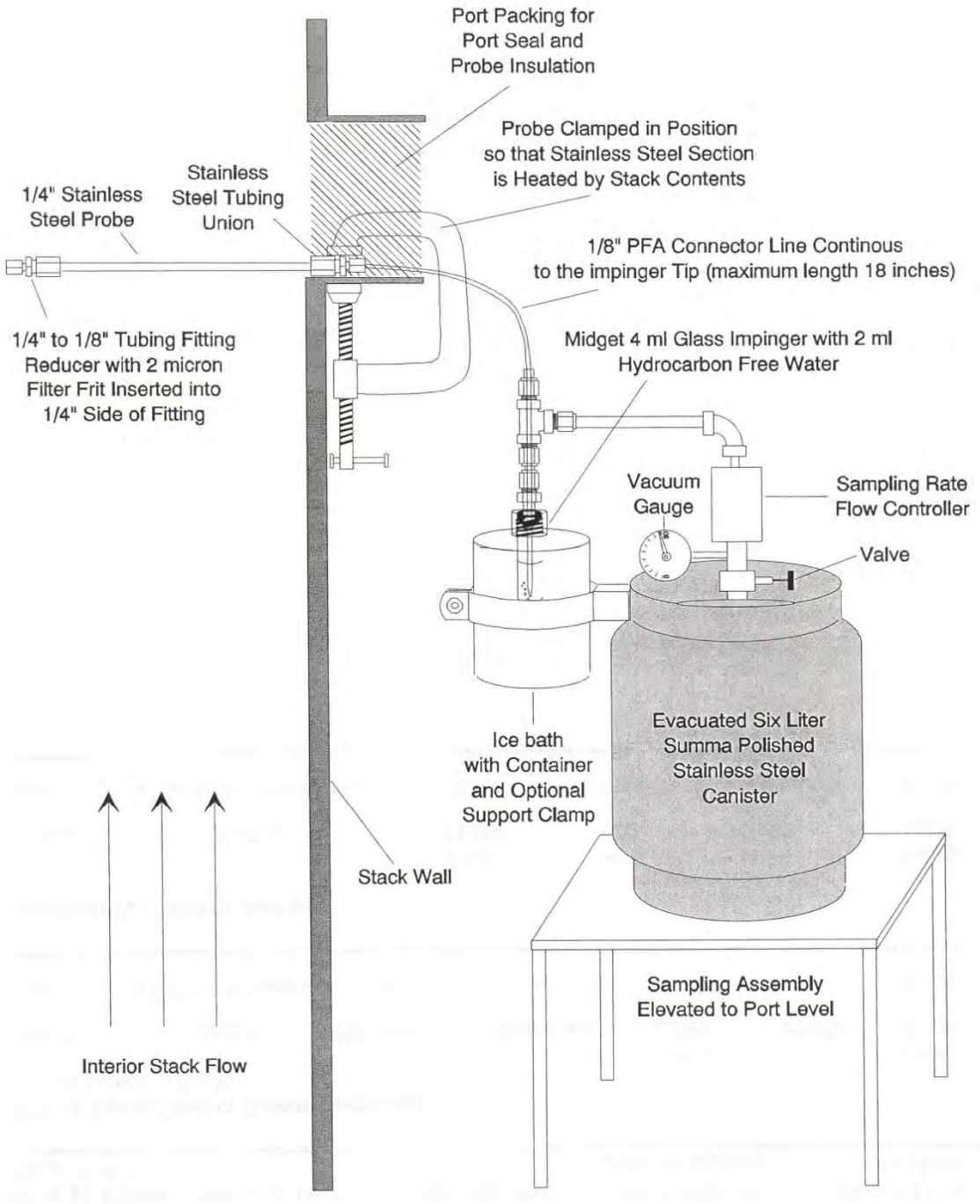
The analytical system consisted of two major sub-systems: a total organic carbon (TOC) analyzer capable of differentiating between total carbon (TC) and inorganic carbon (IC) and a non-methane organics (NMO) analyzer. The NMO analyzer will be a gas chromatograph (GC) with back flush capability for NMO analysis and will be equipped with an oxidation catalyst, reduction catalyst, and flame ionization detector (FID). The system for the recovery and conditioning of the organics captured in the condensate trap consisted of a heat source, oxidation catalyst, non-dispersive infrared (NDIR) CO_2 analyzer and an intermediate collection vessel (ICV). Analyses will be performed as follows.

NMO collected in the water impinger will be analyzed in the TOC analyzer. The TOC analyzer determined both TC and IC. And the TOC will be calculated as the difference between TC and IC.

The organic content of the sample fraction collected in the sampling tank will be measured by injecting a gas sample into the GC to separate the NMO from carbon monoxide (CO), CO_2 and CH_4. The NMO will be oxidized to CO_2, reduced to CH_4, and measured by the FID. In this manner, the variable response of the FID (associated with different type of organic compounds) will be eliminated. The samples will be analyzed by AAC Laboratory in Ventura, California.

Figure 3-5: Sampling Apparatus for TGNMNEOC per SCAQMD Method 25.3

(Figure shows one train – actual method was run in duplicate simultaneously)



4.0 Quality Assurance Program

Alliance follows the procedures outlined in the Quality Assurance/Quality Control Management Plan to ensure the continuous production of useful and valid data throughout the course of this test program. The QC checks and procedures described in this section represent an integral part of the overall sampling and analytical scheme. Adherence to prescribed procedures is quite often the most applicable QC check.

4.1 Equipment

Field test equipment is assigned a unique, permanent identification number. Prior to mobilizing for the test program, equipment is inspected before being packed to detect equipment problems prior to arriving on site. This minimizes lost time on the job site due to equipment failure. Occasional equipment failure in the field is unavoidable despite the most rigorous inspection and maintenance procedures. Therefore, replacements for critical equipment or components are brought to the job site. Equipment returning from the field is inspected before it is returned to storage. During the course of these inspections, items are cleaned, repaired, reconditioned and recalibrated where necessary.

Calibrations are conducted in a manner, and at a frequency, which meets or exceeds U.S. EPA specifications. The calibration procedures outlined in the U.S. EPA Methods, and those recommended within the Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III (EPA-600/R-94/038c, September 1994) are utilized. When these methods are inapplicable, methods such as those prescribed by the American Society for Testing and Materials (ASTM) or other nationally recognized agency may be used. Data obtained during calibrations is checked for completeness and accuracy. Copies of calibration forms are included in the report.

The following sections elaborate on the calibration procedures followed by Alliance for these items of equipment.

- Dry Gas Meter and Orifice. A full meter calibration using critical orifices as the calibration standard is conducted at least semi-annually, more frequently if required. The meter calibration procedure determines the meter correction factor (Y) and the meter's orifice pressure differential (ΔH@). Alliance uses approved Alternative Method 009 as a post-test calibration check to ensure that the correction factor has not changed more than 5% since the last full meter calibration. This check is performed after each test series.
- Pitot Tubes and Manometers. Type-S pitot tubes that meet the geometric criteria required by U.S. EPA Reference Test Method 2 are assigned a coefficient of 0.84 unless a specific coefficient has been determined from a wind tunnel calibration. If a specific coefficient from a wind tunnel calibration has been obtained that coefficient will be used in lieu of 0.84. Standard pitot tubes that meet the geometric criteria required by U.S. EPA Reference Test Method 2 are assigned a coefficient of 0.99. Any pitot tubes not meeting the appropriate geometric criteria are discarded and replaced. Manometers are verified to be level and zeroed prior to each test run and do not require further calibration.
- Temperature Measuring Devices. All thermocouple sensors mounted in Dry Gas Meter Consoles are calibrated semi-annually with a NIST-traceable thermocouple calibrator (temperature simulator) and verified during field use using a second NIST-traceable meter. NIST-traceable thermocouple calibrators are calibrated annually by an outside laboratory.
- Nozzles. Nozzles are measured three (3) times prior to initiating sampling with a caliper. The maximum difference between any two (2) dimensions is 0.004 in.
- Digital Calipers. Calipers are calibrated annually by Alliance by using gage blocks that are calibrated annually by an outside laboratory.

- Barometer. The barometric pressure is obtained from a nationally recognized agency or a calibrated barometer. Calibrated barometers are checked prior to each field trip against a mercury barometer. The barometer is acceptable if the values agree within ± 2 percent absolute. Barometers not meeting this requirement are adjusted or taken out of service.
- Balances and Weights. Balances are calibrated annually by an outside laboratory. A functional check is conducted on the balance each day it is use in the field using a calibration weight. Weights are re-certified every two (2) years by an outside laboratory or internally. If conducted internally, they are weighed on a NIST traceable balance. If the weight does not meet the expected criteria, they are replaced.
- Other Equipment. A mass flow controller calibration is conducted on each Environics system annually following the procedures in the Manufacturer's Operation manual. A methane/ethane penetration factor check is conducted on the total hydrocarbon analyzers equipped with non-methane cutters every six (6) months following the procedures in 40 CFR 60, Subpart JJJJ. Other equipment such as probes, umbilical lines, cold boxes, etc. are routinely maintained and inspected to ensure that they are in good working order. They are repaired or replaced as needed.

4.2 Field Sampling

Field sampling will be done in accordance with the Standard Operating Procedures (SOP) for the applicable test method(s). General QC measures for the test program include:

- Cleaned glassware and sample train components will be sealed until assembly.
- Sample trains will be leak checked before and after each test run.
- Appropriate probe, filter and impinger temperatures will be maintained.
- The sampling port will be sealed to prevent air from leaking from the port.
- Dry gas meter, ΔP, ΔH, temperature and pump vacuum data will be recorded during each sample point.
- An isokinetic sampling rate of 90-110% will be maintained, as applicable.
- All raw data will be maintained in organized manner.
- All raw data will be reviewed on a daily basis for completeness and acceptability.

4.3 Analytical Laboratory

Analytical laboratory selection for sample analyses is based on the capabilities, certifications and accreditations that the laboratory possesses. An approved analytical laboratory subcontractor list is maintained with a copy of the certificate and analyte list as evidence of compliance. Alliance assumes responsibility to the client for the subcontractor's work. Alliance maintains a verifiable copy of the results with chain of custody documentation.

Appendix D

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

January 31, 2025

Charles Figueroa
Alliance Technical Group, LLC
11105 Dana Circle
Cypress, CA 90630

Subject: LAP Approval Notice
Reference # 93LA0827

REFERENCE: Alliance Technical Group, LLC
Method 25.3 and 5.2 (Sampling) Applications for Laboratory Approval Program

Dear Mr. Figueroa:

We completed our review of the applications for Method 25.3 (Sampling) and Method 5.2 (Sampling) you submitted for approval under the South Coast Air Quality Management District's Laboratory Approval Program (South Coast AQMD LAP). We are pleased to inform you that your firm is approved for the period beginning January 31, 2025, and ending June 30, 2025 for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement:

South Coast AQMD Method 25.3 (Sampling)
South Coast AQMD Method 5.2 (Sampling)

Thank you for participating in the South Coast AQMD 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

Attachment

DS:CE

250131 M25.3 and 5.2 Approval.doc

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

June 5, 2025

Will Stuteville
Alliance Technical Group
11105 Dana Circle
Cypress, CA 90630

Subject: LAP Approval Notice
Reference # 93LA0827

Dear Mr. Stuteville:

We completed our review of the application you submitted for approval under the South Coast Air Quality Management District's Laboratory Approval Program (LAP) for a change of location. We are pleased to inform you that your firm is approved for the period beginning June 30, 2025, and ending June 30, 2026, 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 Method 10.1
South Coast AQMD Method 100.1
ASTM D6522-00/ USEPA CTM-030
South Coast AQMD Rule 1420/1420.1/ 1420.2 – (Lead) Source Sampling
South Coast AQMD Rule 1420/1420.1/ 1420.2 – (Lead) Ambient Sampling
South Coast AQMD Method 7.1
South Coast AQMD Rule 1121/ 1146.2 Protocols
South Coast AQMD Rule 462 Testing
South Coast AQMD Method 25.1 & 25.3 (Sampling)
South Coast AQMD Methods 5.1, 5.2, and 6.1 (Sampling)

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 me by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

Colin Eckerle
Senior Air Quality Engineer
Source Test Engineering

CE:CE

250605 LAP Renewal.doc

ATTACHMENT

Conditions For Alliance Technical Group's LAP Approval

1) Alliance Technical Group shall adhere to the following requirements when conducting portable analyzer tests using CTM-030 or ASTM D6522:

   a) Deviations to CTM-030 or ASTM D6522 shall be documented in the Test Critique section of the test report;

   b) The test report shall be formatted and organized in a manner consistent with the example portable analyzer test report, dated September 24, 2011, and the Source Test Manual, Chapter II; and,

   c) NO_2 measurements may be quantified to 10% of the NO_2 span under the following conditions:

      - Calibrations shall be conducted per Sections 7.3 and 7.6 of CTM-030 at the span, mid-span (40-60% of span), low-span (10% of span), and zero level. The low-span calibration shall satisfy the requirements in Section 4.2 of CTM-030;
      - A linearity check shall be conducted once every five days using the low-span calibration gas; and,
      - If the measured NO_2 emission is less than 10% of the NO_2 span, it shall be reported as less than 10% of the span, and added to the NO emission to determine the total NOx concentration.

2) Alliance Technical Group (Alliance) shall adhere to all requirements of an independent testing laboratory, as defined in Rule 304. Furthermore, for purposes of evaluating whether a conflict of interest exists, Alliance must disclose at least 14 days prior to future source tests, all consulting work performed by Alliance, or any affiliates of Alliance on the equipment being tested. Consulting work includes (but is not limited to) the following:

   - Permit processing work for the basic and/or control equipment;
   - Design, construction, operation, and maintenance activities of the basic equipment, control equipment, CEMS, and other air pollution monitoring equipment; and,
   - Training or advising in the operations of the basic equipment, control equipment, CEMS, and other air pollution monitoring equipment.

   The 14 day notification shall be submitted by e-mail to Colin Eckerle (ceckerle@aqmd.gov). Testing may be delayed pending review by South Coast AQMD staff, or cancelled if a conflict of interest is found.

Last Page of Report

fGas Production Tables

Lancaster Landfill and Recycling Center

Flare Monthly Heat Input Rate **2024** **LFG Specialties Flare**

Date	Monthly Runtime Total (Hours)	Average CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (mscf)	Heating Value of CH_4 (BTU/scf)	Monthly Heat Input Total (MMBTU/month)**	Maximum Hourly Heat Input (MMBTU/hr)
[redacted]							
November-24	713.00	35.0	805.4	34,456.7	1,012.0	12,204.6	17.1
December-24	737.40	42.4	756.8	33,482.1	1,012.0	14,366.8	19.5
Annual Data:	**8561.30**			**470,096.7**		**181,788.9**	

Notes: *From monthly flare GHG reads
**PTO/ATC Limit: 60.72 MMBTU/hr
Conversion: 1012 BTU/SCF

Lancaster Landfill and Recycling Center

Flare Monthly Heat Input Rate **2025** **LFG Specialties Flare**

Date	Monthly Runtime Total (Hours)	Average CH_4 (%)*	Average Flow (scfm)	Total LFG Volume (mscf)	Heating Value of CH_4 (BTU/scf)	Monthly Heat Input Total (MMBTU/month)**	Maximum Hourly Heat Input (MMBTU/hr)
January-25	724.60	42.7	686.7	29,855.1	1,012.0	12,886.0	17.8
February-25	672.00	42.9	750.5	30,261.1	1,012.0	13,137.8	19.6
March-25	738.70	37.3	1,022.3	45,312.0	1,012.0	17,104.2	23.2
April-25	660.20	42.4	1,128.9	44,718.9	1,012.0	19,188.3	29.1
May-25	656.50	40.4	993.2	39,121.5	1,012.0	15,994.8	24.4
June-25	676.60	38.0	924.8	37,543.9	1,012.0	14,437.9	21.3
July-25	744.00	39.0	918.9	41,019.5	1,012.0	16,189.6	21.8
August-25	741.58	38.3	932.2	41,480.0	1,012.0	16,077.5	21.7
September-25	711.58	37.6	896.3	38,269.5	1,012.0	14,562.0	20.5
October-25	709.50	36.8	870.8	37,071.1	1,012.0	13,805.9	19.5
Annual Data:	**8479.36**			**458,213.6**		**183,717.0**	

Notes: *From monthly flare GHG reads
**PTO/ATC Limit: 60.72 MMBTU/hr
Conversion: 1012 BTU/SCF

ATTACHMENT H

Form 13

Period of Report: 11/2024
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 19,576.35 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine
Jurisdictin of Origin: Haulers at Gatehouse
If other, please specify: and origin reports received from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 12/2024
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 14,820.36 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio:
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine
Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 01/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 18,486.63 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse and receive origin reports from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 02/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 9,041.51 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse and receive origin reports from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 03/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 9,775.98 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine
Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse and receive origin reports from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 04/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 11,362.49 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from Haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 05/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 11,147.24 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine
Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from Haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 06/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 9,865.77 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.83

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from Haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 07/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 11,514.76 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.80

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 08/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 12,563.18 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.80

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 09/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 11,354.13 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio: 0
Or
Airspace Utilization Factor: 0.80

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

Form 13

Period of Report: 10/2025
Facility Name: Lancaster Landfill
Facility SWIS No.: 19-AA-0050
Facility Address: 600 East Avenue F
Line 2:
City: Lancaster
CBoE Total Tonnage: 12,817.40 tons
Estimated In-Place Density: 0.00 lbs/cubic yards
Waste-To-Cover Ratio:
Or
Airspace Utilization Factor: 0.80

Facility Contact:
Phone Number:
Frequency of Survey: Other
If other, please specify: Annual fly over
Method Used to Determine
Jurisdictin of Origin: Other
If other, please specify: Haulers at gatehouse. Origin reports received from haulers.

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

| Jur. Type | Name of Jurisdiction | Soil Received (Tons) | Total Received (Tons) | BREAKDOWN OF SOLID WASTE QUANTITIES (TONS) | | |

ATTACHMENT I

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
November 2024

			Waste Identification							
Date	Location	Source	Batteries	Paint (Gal.)	Tires	Oil (Gal.)	Antifreeze	Electronic Waste	Other (specify)	Disposition
11/1/2024	Lancaster	Nothing to report								
11/2/2024	Lancaster	Nothing to report								
11/3/2024	Sunday									
11/4/2024	Lancaster	Nothing to report								
11/5/2024	Lancaster	Commercial								
11/6/2024	Lancaster	Nothing to report								
11/7/2024	Lancaster	Residential		10						Returned to Generator
11/8/2024	Lancaster	Residential							2 - Water Heaters, 2 - Propane Tanks	Returned to Generator
11/9/2024	Lancaster	Nothing to report								
11/10/2024	Sunday									
11/11/2024	Lancaster	Nothing to report								
11/12/2024	Lancaster	Residential						1 - TV	1 - Stove	Temporarily Stored
11/13/2024	Lancaster	Residential						1 - TV		Temporarily Stored
11/14/2024	Lancaster	Nothing to report								
11/15/2024	Lancaster	Nothing to report								
11/16/2024	Lancaster	Commercial		6					7 - Flourescent Light Bulbs	Returned to Generator
11/17/2024	Sunday									
11/18/2024	Lancaster	Nothing to report								
11/19/2024	Lancaster	Industrial						2 - TVs		Temporarily Stored
11/20/2024	Lancaster	Industrial						1 - Kitchen Appliance		Temporarily Stored
11/21/2024	Lancaster	Nothing to report								
11/22/2024	Lancaster	Residential		2						Returned to Generator
11/23/2024	Lancaster	Residential			1			1 - Microwave	1 - Refrigerator	Returned to Generator
11/24/2024	Sunday									
11/25/2024	Lancaster	Commercial						1 - TV		Temporarily Stored
11/26/2024	Lancaster	Nothing to report								
11/27/2024	Lancaster	Nothing to report								
11/28/2024	Thanksgiving									
11/29/2024	Lancaster	Nothing to report								
11/30/2024	Lancaster	Residential							1 - AC Unit	Temporarily Stored

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
December 2024

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
12/1/2024	Sunday	Residential								
12/2/2024	Lancaster	Nothing to report								
12/3/2024	Lancaster	Nothing to report								
12/4/2024	Lancaster	Nothing to report								
12/5/2024	Lancaster	Residential			2					Returned to Generator
12/6/2024	Lancaster	Nothing to report								
12/7/2024	Lancaster	Nothing to report								
12/8/2024	Sunday	Residential								
12/9/2024	Lancaster	Nothing to report								
12/10/2024	Lancaster	Nothing to report								
12/11/2024	Lancaster	Nothing to report								
12/12/2024	Lancaster	Residential	1							Returned to Generator
12/13/2024	Lancaster	Nothing to report								
12/14/2024	Lancaster	Residential		5						Returned to Generator
12/15/2024	Sunday	Residential								
12/16/2024	Lancaster	Nothing to report								
12/17/2024	Lancaster	Residential							1 - Kitchen Appliance	Returned to Generator
12/18/2024	Lancaster	Residential							1 - Kitchen Appliance	Returned to Generator
12/19/2024	Lancaster	Nothing to report								
12/20/2024	Lancaster	Nothing to report								
12/21/2024	Lancaster	Residential						1 - Microwave		Temporarily Stored
12/22/2024	Sunday	Residential								
12/23/2024	Lancaster	Residential						1 - Microwave		Temporarily Stored
12/24/2024	Lancaster	Nothing to report								
12/25/2024	Holiday									
12/26/2024	Lancaster	Residential						1 - TV		Temporarily Stored
12/27/2024	Lancaster	Residential						1 - Microwave, 1 - AC Unit		Temporarily Stored
12/28/2024	Lancaster	Nothing to report								
12/29/2024	Sunday	Residential								
12/30/2024	Lancaster	Residential	2							Returned to Generator
12/31/2024	Lancaster	Residential						1 - TV		Temporarily Stored

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
January 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
1/1/2025	Holiday									
1/2/2025	Lancaster	Residential						1 - TV		Temporarily Stored
1/3/2025	Lancaster	Residential		2						Returned to Generator
1/4/2025	Lancaster	Residential	3		1				1 - Stove, 2- Refrigerators	Returned to Generator
1/5/2025	Sunday									
1/6/2025	Lancaster	Nothing to report								
1/7/2025	Lancaster	Residential							1 - White Good Appliance	Temporarily Stored
1/8/2025	Lancaster	Nothing to report								
1/9/2025	Lancaster	Residential							1 - Propane Tank, 4 - Aerosal Cans	Returned to Generator
1/10/2025	Lancaster	Nothing to report								
1/11/2025	Lancaster	Nothing to report								
1/12/2025	Sunday									
1/13/2025	Lancaster	Residential					1		1 - Stove	Temporarily Stored
1/14/2025	Lancaster	Residential						2 - TV's		Temporarily Stored
1/15/2025	Lancaster	Nothing to report								
1/16/2025	Lancaster	Nothing to report								
1/17/2025	Lancaster	Nothing to report								
1/18/2025	Lancaster	Residential		2	1				1 - Air Compressor. 5 - Flourescent Light Bulbs. 1- Refrigerator, 1- Stove	Returned to Generator
1/19/2025	Sunday									
1/20/2025	Lancaster	Residential						1 - TV		Temporarily Stored
1/21/2025	Lancaster	Commerical			4					Temporarily Stored
1/22/2025	Lancaster	Nothing to report								
1/23/2025	Lancaster	Nothing to report								
1/24/2025	Lancaster	Industrial			2					
1/25/2025	Lancaster	Commercial/Residential						2 - TVs, 1 - Stereo, 1- Computer		Temporarily Stored
1/26/2025	Sunday									
1/27/2025	Lancaster	Residential/ Industrial			2	0.25		1 - TV, 1 - Microwave	1 - Refrigerator, 1- Butane Lighter Fluid	Returned to Generator
1/28/2025	Lancaster	Nothing to report								
1/29/2025	Lancaster	Residential							1 - Propane Tank, 2 - Flourscent Light Bulbs	Returned to Generator
1/30/2025	Lancaster	Nothing to report								

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
February 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
2/1/2025	Lancaster	Nothing to report								
2/2/2025	Sunday									
2/3/2025	Lancaster	Nothing to report								
2/4/2025	Lancaster	Nothing to report								
2/5/2025	Lancaster	Residential		10						Returned to Generator
2/6/2025	Lancaster	Commercial			6					Temporarily Stored
2/7/2025	Lancaster	Nothing to report								
2/8/2025	Lancaster	Nothing to report								
2/9/2025	Sunday									
2/10/2025	Lancaster	Nothing to report								
2/11/2025	Lancaster	Residential						2 - TVs		Temporarily Stored
2/12/2025	Lancaster	Residential		5						Returned to Generator
2/13/2025	Lancaster	Nothing to report								
2/14/2025	Lancaster	Nothing to report								
2/15/2025	Lancaster	Nothing to report								
2/16/2025	Sunday									
2/17/2025	Lancaster	Nothing to report								
2/18/2025	Lancaster	Nothing to report								
2/19/2025	Lancaster	Nothing to report								
2/20/2025	Lancaster	Commercial			2					Returned to Generator
2/21/2025	Lancaster	Nothing to report								
2/22/2025	Lancaster	Nothing to report								
2/23/2025	Sunday									
2/24/2025	Lancaster	Commercial						2 - TVs, 1 - Speaker, 1 - Computer Tower		Temporarily Stored
2/25/2025	Lancaster	Residential						2 - TVs		Temporarily Stored
2/26/2025	Lancaster	Nothing to report								
2/27/2025	Lancaster	Nothing to report								
2/28/2025	Lancaster	Residential			5				1 - Freezer	Returned to Generator

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
March 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
3/1/2025	Lancaster	Nothing to report								
3/2/2025	Sunday									
3/3/2025	Lancaster	Nothing to report								
3/4/2025	Lancaster	Residential			5	1				Returned to Generator
3/5/2025	Lancaster	Residential				1				Returned to Generator
3/6/2025	Lancaster	Nothing to report								
3/7/2025	Lancaster	Nothing to report								
3/8/2025	Lancaster	Residential							2 -A/C Units, 1- Water Cooler	Temporarily Stored
3/9/2025	Sunday									
3/10/2025	Lancaster	Residential		1				2 - TVs		Returned to Generator
3/11/2025	Lancaster	Commercial						1 - TV, 1 - Printer		Temporarily Stored
3/12/2025	Lancaster	Nothing to report								
3/13/2025	Lancaster	Nothing to report								
3/14/2025	Lancaster	Nothing to report								
3/15/2025	Lancaster	Residential						1 - Microwave		Temporarily Stored
3/16/2025	Sunday									
3/17/2025	Lancaster	Nothing to report								
3/18/2025	Lancaster	Nothing to report								
3/19/2025	Lancaster	Commerical	2						10 - Flourescent Lightbulbs	Returned to Generator
3/20/2025	Lancaster	Nothing to report								
3/21/2025	Lancaster	Nothing to report								
3/22/2025	Lancaster	Nothing to report								
3/23/2025	Sunday									
3/24/2025	Lancaster	Nothing to report								
3/25/2025	Lancaster	Nothing to report								
3/26/2025	Lancaster	Residential		3						Returned to Generator
3/27/2025	Lancaster	Nothing to report								
3/28/2025	Lancaster	Nothing to report								
3/29/2025	Lancaster	Residential						1 - TV, 2 - Computers, 1 - Microwave	2 - Flourescent Lightbulbs	Temporarily Stored
3/30/2025	Sunday									
3/31/2025	Lancaster	Nothing to report								
TOTAL			2.0	4.0	5.0	2.0	0.0	9	15	

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
April 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
4/1/2025	Lancaster	Nothing to report								
4/2/2025	Lancaster	Nothing to report								
4/3/2025	Lancaster	Nothing to report								
4/4/2025	Lancaster	Nothing to report								
4/5/2025	Lancaster	Residential		30					4 - White Good Appliances	Returned to Generator
4/6/2025	Sunday									
4/7/2025	Lancaster	Nothing to report								
4/8/2025	Lancaster	Nothing to report								
4/9/2025	Lancaster	Nothing to report								
4/10/2025	Lancaster	Residential			3			3 - TVs	1 - Microwave	Returned to Generator
4/11/2025	Lancaster	Nothing to report								
4/12/2025	Lancaster	Residential		10		10				Returned to Generator
4/13/2025	Sunday									
4/14/2025	Lancaster	Residential						2 - TVs		Temporarily Stored
4/15/2025	Lancaster	Nothing to report								
4/16/2025	Lancaster	Nothing to report								
4/17/2025	Lancaster	Nothing to report								
4/18/2025	Lancaster	Residential			1					Returned to Generator
4/19/2025	Lancaster	Residential		3					3 - Flourescent Light Bulbs	Returned to Generator
4/20/2025	Sunday									
4/21/2025	Lancaster	Nothing to report								
4/22/2025	Lancaster	Nothing to report								
4/23/2025	Lancaster	Nothing to report								
4/24/2025	Lancaster	Nothing to report								
4/25/2025	Lancaster	Nothing to report								
4/26/2025	Lancaster	Nothing to report								
4/27/2025	Sunday									
4/28/2025	Lancaster	Residential		1	1					Returned to Generator
4/29/2025	Lancaster	Commercial		1		4		1 - TV		Returned to Generator
4/30/2025	Lancaster	Residential							1 - Refrigerator	Returned to Generator
TOTAL			0.0	45.0	5.0	14.0	0.0	6	9	

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
May 2025

		Waste Identification							
Date	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
5/1/2025	Nothing to report								
5/2/2025	Residential							1 - Refrigerator	Temporarily Stored
5/3/2025	Residential		15					1 - Refrigerator, 7gal Unknown Liquids	Returned to Generator
5/4/2025	Sunday								
5/5/2025	Nothing to report								
5/6/2025	Nothing to report								
5/7/2025	Nothing to report								
5/8/2025	Nothing to report								
5/9/2025	Nothing to report								
5/10/2025	Residential						1 - AC, 1 - Microwave, 2 - TVs	1 - Refrigerator	Temporarily Stored
5/11/2025	Sunday								
5/12/2025	Residential						1 - Microwave	1 - Water Heater	Temporarily Stored
5/13/2025	Nothing to report								
5/14/2025	Nothing to report								
5/15/2025	Residential							1 - Refrigerator	Temporarily Stored
5/16/2025	Nothing to report								
5/17/2025	Residential						2 - TVs	1 - Water Heater	Temporarily Stored
5/18/2025	Sunday								
5/19/2025	Residential						1 - TV	1 - Dishwasher	Temporarily Stored
5/20/2025	Residential						1 - TV		Temporarily Stored
5/21/2025	Nothing to report								
5/22/2025	Residential		5	2					Returned to Generator
5/23/2025	Residential							2 - Dryers, 1 - Washing Machine	Temporarily Stored
5/24/2025	Nothing to report								
5/25/2025	Sunday								
5/26/2025	Holiday								
5/27/2025	Residential						1 - Microwave		Temporarily Stored
5/28/2025	Nothing to report								
5/29/2025	Nothing to report								
5/30/2025	Residential							1 - Water Heater	Temporarily Stored
5/31/2025	Nothing to report								
TOTAL		0.0	20.00	2.0	0.00	0.0	10.0	12	

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
June 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze (Gal.)**	**Electronic Waste**	**Other (specify)**	**Disposition**
6/1/2025	Sunday									
6/2/2025	Lancaster	Nothing to report								
6/3/2025	Lancaster	Commercial			2					Temporarily Stored
6/4/2025	Lancaster	Nothing to report								
6/5/2025	Lancaster	Nothing to report								
6/6/2025	Lancaster	Residential		3						Returned to Generator
6/7/2025	Lancaster	Residential			2			1 - TV	1 - Refrigerator, 2 - Freezers	Returned to Generator
6/8/2025	Sunday									
6/9/2025	Lancaster	Nothing to report								
6/10/2025	Lancaster	Nothing to report								
6/11/2025	Lancaster	Nothing to report								
6/12/2025	Lancaster	Nothing to report								
6/13/2025	Lancaster	Nothing to report								
6/14/2025	Lancaster	Nothing to report								
6/15/2025	Sunday									
6/16/2025	Lancaster	Nothing to report								
6/17/2025	Lancaster	Nothing to report								
6/18/2025	Lancaster	Commercial			19					Temporarily Stored
6/19/2025	Lancaster	Nothing to report								
6/20/2025	Lancaster	Nothing to report								
6/21/2025	Lancaster	Nothing to report								
6/22/2025	Sunday									
6/23/2025	Lancaster	Residential							1 - Refrigerator	Temporarily Stored
6/24/2025	Lancaster	Nothing to report								
6/25/2025	Lancaster	Nothing to report								
6/26/2025	Lancaster	Residential		5						Returned to Generator
6/27/2025	Lancaster	Nothing to report								
6/28/2025	Lancaster	Nothing to report								
6/29/2025	Sunday									
6/30/2025	Lancaster	Residential			2				1 - Propane Tank	Returned to Generator
TOTAL	0.0	0.0	0.0	8.0	25.0	0.0	0.0		5	

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
July 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
7/1/2025	Lancaster	Nothing to Report								
7/2/2025	Lancaster	Nothing to Report								
7/3/2025	Lancaster	Residential				2		1 - TV		Returned to Generator
7/4/2025	Holiday									
7/5/2025	Lancaster	Nothing to Report								
7/6/2025	Sunday	Residential								
7/7/2025	Lancaster	Nothing to Report								
7/8/2025	Lancaster	Residential		5				5 - Misc. Electronic		Temporarily Stored
7/9/2025	Lancaster	Residential								
7/10/2025	Lancaster	Residential							1 - Refrigerator	Temporarily Stored
7/11/2025	Lancaster	Residential		5						Returned to Generator
7/12/2025	Lancaster	Residential			2				1 - Refrigerator, 1- Bug Spray, 1- Chemical Solution	Returned to Generator
7/13/2025	Sunday	Residential								
7/14/2025	Lancaster	Residential						5 - TVs		Temporarily Stored
7/15/2025	Lancaster	Residential		5						Temporarily Stored
7/16/2025	Lancaster	Nothing to Report								
7/17/2025	Lancaster	Residential							3 - Flourescent	Returned to Generator
7/18/2025	Lancaster	Residential			2					Returned to Generator
7/19/2025	Lancaster	Residential						1 - TV		Temporarily Stored
7/20/2025	Sunday	Residential								
7/21/2025	Lancaster	Residential								
7/22/2025	Lancaster	Nothing to Report								
7/23/2025	Lancaster	Residential						1 - TV		Temporarily Stored
7/24/2025	Lancaster	Residential						1- TV		Temporarily Stored
7/25/2025	Lancaster	Commercial				5				Returned to Generator
7/26/2025	Lancaster	Nothing to Report								
7/27/2025	Sunday	Residential								
7/28/2025	Lancaster	Nothing to Report								
7/29/2025	Lancaster	Residential		15					1 - Refrigerator	Temporarily Stored
7/30/2025	Lancaster	Residential						1 - Karaoke Speaker		Temporarily Stored
7/31/2025	Lancaster	Nothing to Report								

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
August 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
8/1/2025	Lancaster	Nothing to report								Temporarily Stored
8/2/2025	Lancaster	Residential						1 - TV, 1 - Electric Console, 1- Microwave		
8/3/2025	Sunday									
8/4/2025	Lancaster	Nothing to report								
8/5/2025	Lancaster	Residential		1						Returned to Generator
8/6/2025	Lancaster	Nothing to report								
8/7/2025	Lancaster	Nothing to report								
8/8/2025	Lancaster	Residential		12						Returned to Generator
8/9/2025	Lancaster	Nothing to report								
8/10/2025	Sunday									
8/11/2025	Lancaster	Nothing to report								
8/12/2025	Lancaster	Nothing to report								
8/13/2025	Lancaster	Nothing to report								
8/14/2025	Lancaster	Nothing to report								
8/15/2025	Lancaster	Commercial						1 - TV		Temporarily Stored
8/16/2025	Lancaster	Residential						1 - Computer Monitor		Temporarily Stored
8/17/2025	Sunday									
8/18/2025	Lancaster	Nothing to report								
8/19/2025	Lancaster	Commercial		5		10				Returned to Generator
8/20/2025	Lancaster	Industrial			16					Temporarily Stored
8/21/2025	Lancaster	Residential						2 - TVs	1 - Water Heater	Temporarily Stored
8/22/2025	Lancaster	Residential						3 - TVs		Temporarily Stored
8/23/2025	Lancaster	Residential			2				25g Mixed Liquids/Chemicals	Returned to Generator
8/24/2025	Sunday									
8/25/2025	Lancaster	Residential		1		5				Returned to Generator
8/26/2025	Lancaster	Nothing to report								
8/27/2025	Lancaster	Nothing to report								
8/28/2025	Lancaster	Nothing to report								
8/29/2025	Lancaster	Nothing to report								
8/30/2025	Lancaster	Nothing to report								
8/31/2025	Sunday									

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
September 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
9/1/2025	Holiday									
9/2/2025	Lancaster	Nothing to report								
9/3/2025	Lancaster	Nothing to report								
9/4/2025	Lancaster	Residential		1	7			1 - TV		
9/5/2025	Lancaster	Residential		6	2	2				Returned to Generator
9/6/2025	Lancaster	Nothing to report								
9/7/2025	Sunday									
9/8/2025	Lancaster	Nothing to report								
9/9/2025	Lancaster	Nothing to report								
9/10/2025	Lancaster	Industrial							2 - Refrigerators	Temporarily Stored
9/11/2025	Lancaster	Nothing to report								
9/12/2025	Lancaster	Nothing to report								
9/13/2025	Lancaster	Residential		5	7			1 - TV		Returned to Generator
9/14/2025	Sunday									
9/15/2025	Lancaster	Nothing to report								
9/16/2025	Lancaster	Residential	1					1 - TV		Returned to Generator
9/17/2025	Lancaster	Industrial						3 - TVs	1 - Refrigerator	Temporarily Stored
9/18/2025	Lancaster	Residential						2 - Microwaves		Temporarily Stored
9/19/2025	Lancaster	Industrial			15				1 - Refrigerator, 1 - Water Heater	Temporarily Stored
9/20/2025	Lancaster	Nothing to report								
9/21/2025	Sunday									
9/22/2025	Lancaster	Residential			2					Temporarily Stored
9/23/2025	Lancaster	Nothing to report								
9/24/2025	Lancaster	Nothing to report								
9/25/2025	Lancaster	Nothing to report								
9/26/2025	Lancaster	Residential							1 - AC Unit	Temporarily Stored
9/27/2025	Lancaster	Residential		2				1 - Printer		Temporarily Stored
9/28/2025	Sunday									
9/29/2025	Lancaster	Commercial						1- TV		Temporarily Stored
9/30/2025	Lancaster	Residential							1- AC Unit, 1- Water Heater	Temporarily Stored
TOTAL			1	14	33	2	0	10	8	

Lancaster Landfill & Recycling Center
Rejected Loads Reporting
October 2025

			Waste Identification							
Date	**Location**	**Source**	**Batteries**	**Paint (Gal.)**	**Tires**	**Oil (Gal.)**	**Antifreeze**	**Electronic Waste**	**Other (specify)**	**Disposition**
10/1/2025	Lancaster	Nothing to report								
10/2/2025	Lancaster	Residential						1 - TV	1 - Refrigerator	Temporarily Stored
10/3/2025	Lancaster	Industrial			8					Temporarily Stored
10/4/2025	Lancaster	Residential		25						Returned to Generator
10/5/2025	Sunday									
10/6/2025	Lancaster	Residential	2							Returned to Generator
10/7/2025	Lancaster	Nothing to report								
10/8/2025	Lancaster	Nothing to report								
10/9/2025	Lancaster	Residential						1 - TV		Temporarily Stored
10/10/2025	Lancaster	Nothing to report								
10/11/2025	Lancaster	Nothing to report								
10/12/2025	Sunday									
10/13/2025	Lancaster	Residential		1		2				Returned to Generator
10/14/2025	Lancaster	Nothing to report								
10/15/2025	Lancaster	Residential							2 - Flourescent Lightbulbs	Returned to Generator
10/16/2025	Lancaster	Residential						1 - Microwave		Temporarily Stored
10/17/2025	Lancaster	Residential						1 - Laptop, 1 - Printer	1 - Dryer, 1 - Refrigerator	Temporarily Stored
10/18/2025	Lancaster	Residential		2	2			3 - TVs	1 - Refrigerator	Returned to Generator
10/19/2025	Sunday									
10/20/2025	Lancaster	Nothing to report								
10/21/2025	Lancaster	Nothing to report								
10/22/2025	Lancaster	Nothing to report								
10/23/2025	Lancaster	Nothing to report								
10/24/2025	Lancaster	Nothing to report								
10/25/2025	Lancaster	Commercial			1			1 - TV	1 - Stove	Temporarily Stored
10/26/2025	Sunday									
10/27/2025	Lancaster	Nothing to report								
10/28/2025	Lancaster	Residential							2 - Appliances	Temporarily Stored
10/29/2025	Lancaster	Nothing to report								
10/30/2025	Lancaster	Nothing to report								
10/31/2025	Lancaster	Commercial		10						
TOTAL			2	38.0	11	2.0	0.0	9	9	

ATTACHMENT J

MONTHLY WATER USAGE LOG

60 acre feet = 19,551,086 gallons

1 acre foot= 325,851 gallons

DATE OF READING	INITIAL READING (IN GALLONS X 100)	MONTHLY USAGE (GAL)	MONTHLY USAGE (ACRE FT)
11/22/24	463136	11963	3.67130989
12/31/24	473857	10721	3.29015409
1/28/25	484111	10254	3.14683705
2/25/25	487064	2953	0.90624242
3/25/25	498287	11223	3.44421223
4/29/25	508693	10406	3.19348414
5/27/25	517705	9012	2.76568125
6/24/25	528260	10555	3.23921056
7/26/25	539735	11475	3.52154819
8/26/25	550560	10825	3.32207052
9/30/25	561281	10721	3.29015409
10/28/25	567391	6110	1.87509015
Total	116,218		
Total * 100	11,621,800	Gallons used from November 2024 to October 2025, equates to 36 acre feet per year (afy)	
AFY	36		

ATTACHMENT K

Complete for every time litter is picked from outside

Litter Collection Log Lancaster November 1, 2024 - October 31, 2025			
DATE	# OF STAFF	LITTER WASTE STREAM	LITTER PICKED FROM (List Specific Streets if
11/26/24	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
12/17/24	3	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, AVENUE F AND DIVISION
1/28/25	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
2/25/25	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, AVENUE F AND DIVISION
3/25/25	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, AVENUE F AND DIVISION
4/29/25	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
5/27/25	3	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, AVENUE F AND DIVISION
6/24/25	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
7/29/25	4	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
8/26/25	3	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
9/30/25	2	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, CHALLENGER WAY
10/28/25	2	GENERIC WINDBLOWN WASTE FROM FILL AREA (I.E. PAPER, LIGHT PLASTIC, LIGHT CARDBOARD)	INTERIOR/IMMEDIATE EXTERIOR OF PROPERTY BORDER FENCELINE, AVENUE F AND DIVISION

ATTACHMENT L

California Environmental Protection Agency

Air Resources Board

January 1, 2024

CERTIFICATE OF REPORTED COMPLIANCE
OFF-ROAD DIESEL VEHICLE REGULATION

is issued to

LANCASTER LANDFILL

This certificate indicates that the fleet listed above has reported off-road diesel vehicles to the California Air Resources Board and has certified they are in compliance with title 13 CCR, section 2449. All applicable vehicles owned by the individual, company, or agency must be reported and labeled, as specified in Section 2449, with all possible completeness, else this certificate is null and void. **Certificate expires 2/28/2025**

Jack Kitowski
Chief, Mobile Source Control Division
California Air Resources Board

Off-road Diesel Fleet Identification

1843

To verify the authenticity of this certificate, enter this number at
http://www.arb.ca.gov/doors/compliance_cert1.html

California Environmental Protection Agency

Air Resources Board

January 1, 2025

CERTIFICATE OF REPORTED COMPLIANCE
OFF-ROAD DIESEL VEHICLE REGULATION

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Jack Kitowski
Chief, Mobile Source Control Division
California Air Resources Board

Off-road Diesel Fleet Identification

1843

To verify the authenticity of this certificate, enter this number at
http://www.arb.ca.gov/doors/compliance_cert1.html