SUNSHINE CANYON LANDFILL

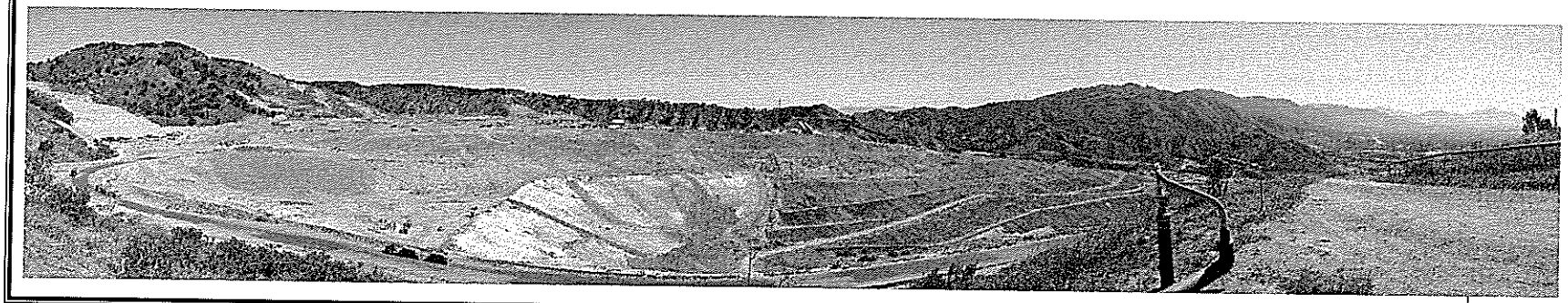
SCL - LEA

LOCAL ENFORCEMENT AGENCY

South Coast AQMD

Sunshine Canyon Landfill
Proposed Modification to
Stipulated Abatement Order

April 30, 2026



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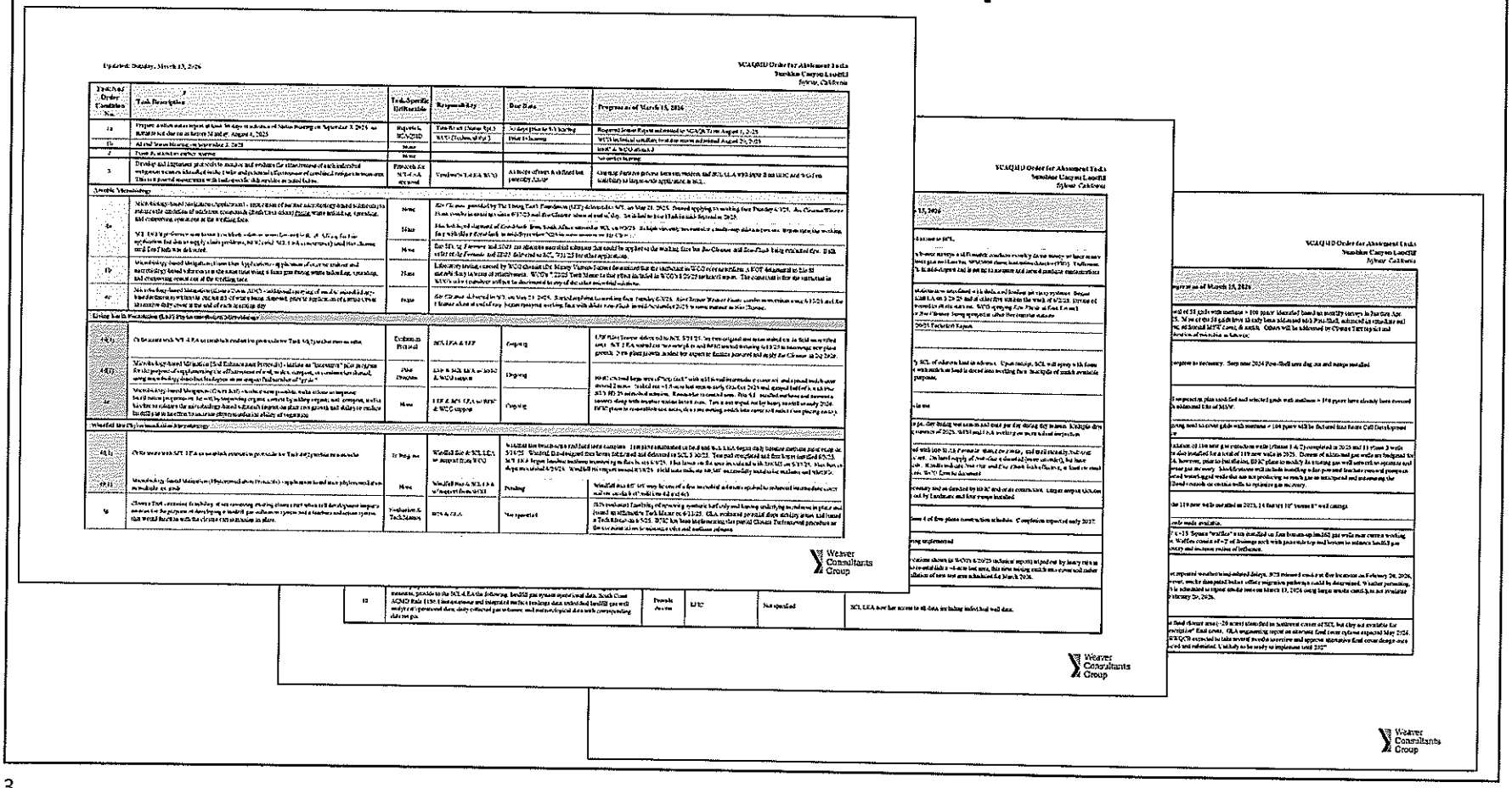
Overview of Presentation

- Status of the implementation of March 2025 Abatement Order
  - Impact of March 2025 Abatement Order
- Why are there still odors from the landfill?
  - Review of causes of odors: Construction, Weather, Legacy Damage
- What additional measures are recommended by SCAQMD / LEA?
  - Expected benefits and potential risks of supplemental measures
  - Overview of additional mitigation measures and expected results

Summary of Abatement Order Implementation



Updated: Sunday, March 23, 2025

VCAQMD Order for Abatement Tasks
Sunshine Canyon Landfill
Sylmar, California

Task/Ref Order Condition No.	Task Description	Task-Specific Deliverable	Responsible Party	Due Date	Progress as of March 15, 2026
1a	Prepare written status report at least 30 days in advance of Status Hearing on September 3, 2025 on SCSLF to not exceed 36 tons per 24 hrs as of August 1, 2025	Report to BCAQMD	Sun Street (Status Rpt.)	30 days prior to SH hearing	Required Status Report submitted to SCAQMD on August 1, 2025
1b	At the Status Hearing on September 3, 2025	None			WCG to brief on landfill, leachate storm activities and submit August 20, 2025
2	Task 2, standard order wording	None			SCSLF & BCAQMD attend
3	Develop and implement procedures to analyze and evaluate the effectiveness of each individual mitigation measure identified under Order and additional mitigation measures identified under Task 2	Procedures for SCSLF each proposed	Sun Street & LEA, BCAQ	At least 45 days before the last quarterly SH	Ongoing. Parties have been in contact, and SCS, LEA, WCG have been in the field and SCS has been fully engaged with WCG.
Leachate Monitoring					
4a	Weekly leachate monitoring at Operations Yard – inspection of the leachate collection system to identify any areas of the collection system with elevated temperatures, and to identify any areas of exposed refuse, and corrective actions as necessary.	None			Site Closure, provided by The Honorable Earl Pomerleau (ret.), delivered to SCS on May 21, 2025. Passed applying to working face Tuesday 6/3/25. See Closure/Master Plan results in email to SCS on 6/3/25 and Site Closure letter at end of July. SCS failed to have Hydraulic Seal Repaired in 2025.
		Maps			Also, both legal alignment of Geo-Mesh from South Alluvial Slope to WCG on 9/9/25. Both slope variety, two months of a weekly map delivered per task. Report signed by working face with shifts of Geo-Mesh as well as from other WCG to new location in Site Closure.
4b	Weekly leachate monitoring at Operations Yard – inspection of the leachate collection system to identify any areas of the collection system with elevated temperatures, and to identify any areas of exposed refuse, and corrective actions as necessary.	None			Per SCS, 12 Furnaces and 3,000 cm diameter material addresses that could be applied to the working face for Site Closure and Geo-Mesh being completed first. Still subject to the Furnaces bid (2025 delivered to SCS, 7/31/25 for other applications.
4c	Weekly leachate monitoring at Operations Yard – inspection of the leachate collection system to identify any areas of the collection system with elevated temperatures, and to identify any areas of exposed refuse, and corrective actions as necessary.	Maps			Laboratory testing caused by WCG through Dr. Nancy Vernon-Jensen documented that the contractor to WCG never met failure. A POT documented in the SI and 6% Sand (a mixture of solids/waste). WCG's 7.2022 Task Master to that effect included in WCG's 6/9/25 updated report. The contractor is free to continue to WCG under contract subject to documented by any of the other non-critical activities.
4d	Weekly leachate monitoring at Operations Yard – inspection of the leachate collection system to identify any areas of the collection system with elevated temperatures, and to identify any areas of exposed refuse, and corrective actions as necessary.	Maps			Site Closure delivered by WCG on May 21, 2025. Buried Leachate Lateral being from Tuesday 6/3/25. Agent Dennis Wilson Family, another non-contractor using 6/13/25 and the Contractor absent of useful way between operating face with shifts from Phase 1 to Phase 2 (Tuesday 6/3/25 is now normal in Site Closure).
Liquid Soil Stabilization (LSS) Pilot Implementation Methodology					
5(a)	On the assessment with WCG, LEA to establish methods to provide review Task 5(a) pilot test results.	Technical Protocol	SCS, LEA & LEA	Ongoing	LSS Pilot Project delivered to SCS, 5/21/25. Test completed and review ended on the field on or before end. SCS, LEA, and WCG on Tuesday 6/3/25 to discuss the next steps. Pilot Project Update to be delivered to SCS, 7/31/25 for discussion. Pilot Project Update delivered to SCS, 7/31/25 for discussion.
5(b)	Monthly Implementation Update (End Balance and Protocols) – Initiate an "Interagency" plan to discuss the progress of implementing the effectiveness of methods, results, and recommendations obtained, using monthly data collection to assess impact of pilot test.	Pilot Progress	LEA & SCS, LEA & WCG support	Ongoing	Monthly Update Report delivered to SCS, 7/31/25 for discussion. Pilot Project Update delivered to SCS, 7/31/25 for discussion.
5c	Monthly Implementation Update (End Balance and Protocols) – Initiate an "Interagency" plan to discuss the progress of implementing the effectiveness of methods, results, and recommendations obtained, using monthly data collection to assess impact of pilot test.	None	LEA & SCS, LEA & WCG support	Ongoing	Monthly Update Report delivered to SCS, 7/31/25 for discussion. Pilot Project Update delivered to SCS, 7/31/25 for discussion.
Wasteful Gas Pipeline Installation Methodology					
6(a)	On the assessment with SCS, LEA to establish methods to provide review Task 6(a) pilot test results.	If Drilling	Wasteful Gas & SCS, LEA & Support from WCG	Wasteful Gas & SCS, LEA & Support from WCG	Wasteful Gas Pipeline Installation Methodology – Initiate an "Interagency" plan to discuss the progress of implementing the effectiveness of methods, results, and recommendations obtained, using monthly data collection to assess impact of pilot test. Wasteful Gas delivered new forms (data and as) delivered to SCS, 8/30/25. Two pad completed and have been certified 8/5/25. SCS, LEA began baseline methane monitoring on Rain Basin on 6/9/25. This basin on the east was included in the 2024 EI on 5/19/25. Rain Basin Expansion initial 6/29/25. Wasteful Gas report issued 8/18/25. Field tests made on 10/07 successfully installed for methane and VOC's.
6(b)	Monthly Implementation Update (Replacement after Protocols) – update on how much new pipeline will be installed, etc. goals	None		Pending	Wasteful Gas & SCS, LEA & WCG support from WCG
7	Closure Plan – revision to include all new monitoring, sensing, closure, post-closure activities and any improvements to the gas system during operations and all gas collection system and leachate and odor system that would function with the closure and all changes in place.	Evaluation & Technical Memo	SCS & LEA	Not specified	Wasteful Gas & SCS, LEA & WCG support from WCG

Weaver Consultants Group

Overview of Additional Mitigation Measures Recommended by SCL LEA / SCAQMD

- Additional LFG Well Requirements
  - Implement LFG "Well Integrity Program" to ensure full design operational capacity
  - Dewater wells and replace pinched LFG wells
  - Install automated high-capacity water pumps
  - Install "Automated Wellhead Controllers" (focus on maximizing LFG volume)
  - Additional LFG wells as needed (prevent overlapping radius of influence)
  - Supplement LFG wells with implementation of "Pin Wells"
- Dedicated Team for Daily Inspection of Landfill Cover
- Documentation and Performance Metrics to SCAQMD and SCL LEA
- Abatement Order Training: Focus on Prioritizing Operational Parameters to Maximize LFG Collection Volume
  - Change in industry focus and performance standards for LFG collection
  - Training of operational staff and contractors

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Sunshine Canyon Landfill, Facility ID No. 49111
Odor Complaints Reported to South Coast AQMD Alleging SCL; and Notices of Violation (NOV) Summary from 2009 through March 2026

Public Nuisance: South Coast AQMD Rule 402; Calif. H&S 41700

Impact of Abatement Order's Mitigation Measures Taking Affect

Atmospheric Rivers

Hurricane Hillary

New Cell Tie-In Construction

Atmospheric Rivers

April 23, 2026

		Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total NOVs	Total Complaints
2017	Complaints	200	254	324	116	19	10	14	30	44	27	22	18		1028
	NOVs	6	7	6	1	0	0	0	0	0	0	0	0	20	
2018	Complaints	32	18	21	9	5	9	16	6	33	21	2	36		208
	NOVs	0	0	0	0	0	0	0	0	0	0	0	1	1	
2019	Complaints	17	17	76	12	2	5	7	7	95	82	14	16		350
	NOVs	0	1	1	0	0	0	0	0	1	2	0	0	5	
2020	Complaints	29	17	12	33	98	20	23	82	105	121	18	22		580
	NOVs	0	0	0	0	2	1	0	1	3	4	0	1	12	
2021	Complaints	7	10	3	22	4	31	27	71	55	74	59	83		446
	NOVs	0	0	0	1	0	0	0	2	1	2	0	0	6	
2022	Complaints	158	84	58	38	17	40	12	40	85	64	25	32		653
	NOVs	5	1	0	1	0	2	0	0	2	1	0	0	12	
2023	Complaints	226	191	146	185	32	22	34	264	146	230	130	113		1721
	NOVs	6	7	5	11	1	0	1	9	4	6	7	4	61	
2024	Complaints	204	474	272	266	18	31	47	65	179	405	141	85		2187
	NOVs	9	17	9	6	0	0	0	0	5	11	6	2	65	
2025	Complaints	118	340	304	215	129	46	101	183	228	438	298	530		2930
	NOVs	3	12	9	6	4	0	4	4	7	12	9	19	89	
2026	Complaints	673	568	486	80										1727
	NOVs	16	14	10										40	

Total R402 NOVs Issued to Date
Total Complaints * 21,803
Total R402 NOVs Issued ** 505

2025-26 Monthly Rain Totals	
Sep-25	0.22 in
Oct-25	1.4 in
Nov-25	8.0 in
Dec-25	9.8 in
Jan-26	3.21 in
Feb-26	4.94 in
Mar-26	0.71 in
Apr-26	0.66 in

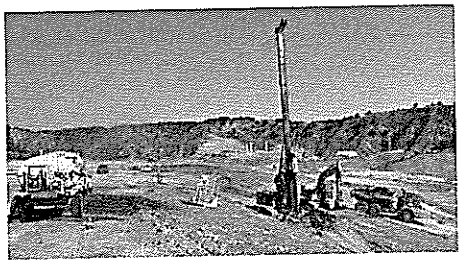
* Includes 9,973 Complaints from 2009 through 2016
** Includes 194 NOVs from 2009 through 2016
*** Includes eight NOVs from 2011 through 2016

April 8, 2026

Page 1 of 2

Increase of Odor Complaints in June 2025 – March 2026

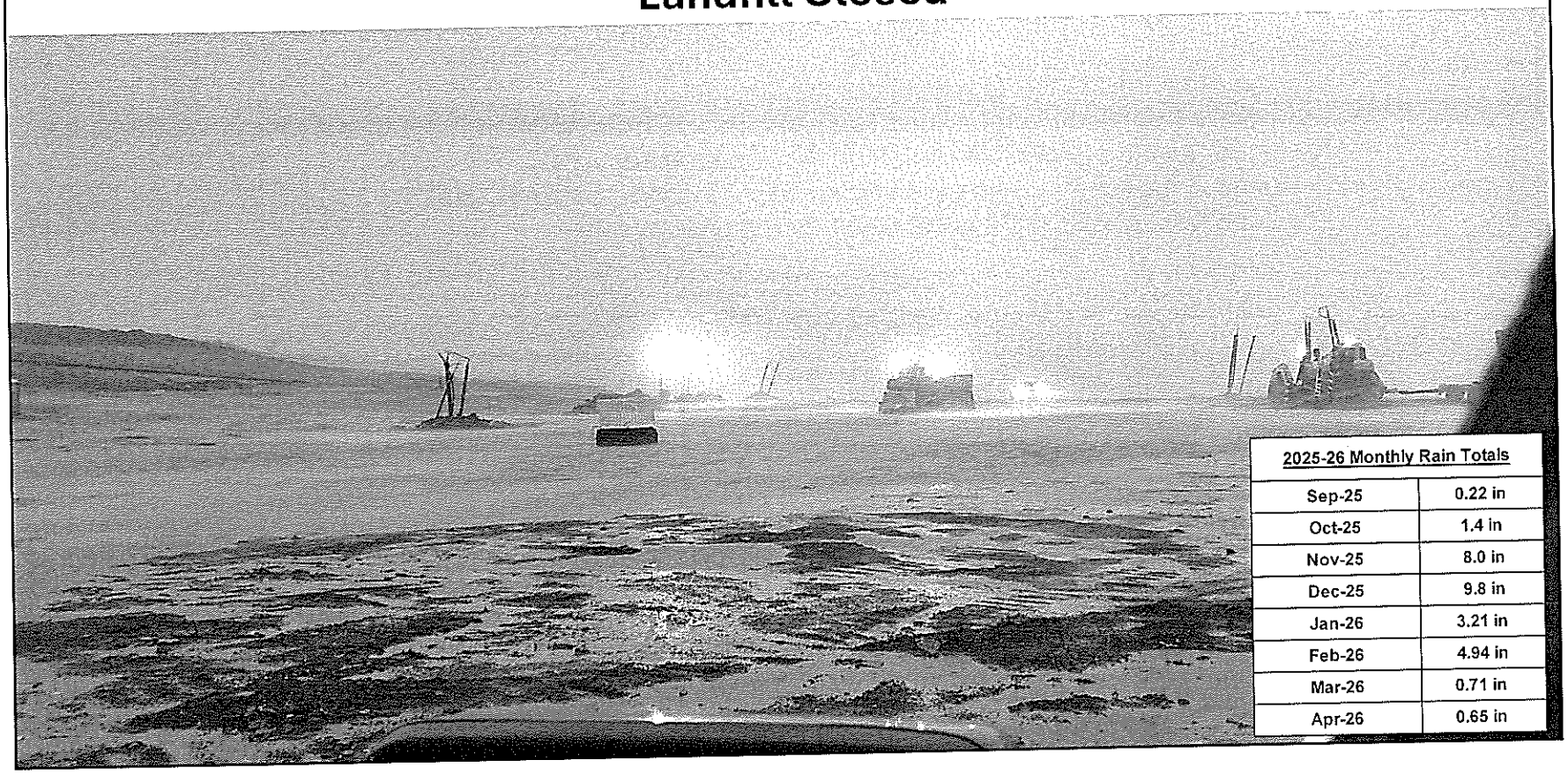
- Construction Activities Related to New Disposal Cell
  - Tie-In Existing Leachate Collection System to New Liner/Leachate System
  - Peeling Back of Closure Turf Exposes Disposed Waste / Seeps
- Trenching (e.g., Horizontal Collectors, etc.)
- Drilling of New Top-Down LFG Collection Wells
  - Six Week Delay in Schedule Due to Accident
  - Drilling Rigs Onsite to Complete 130+ LFG Wells
- Waffle / Pancake Installation
- Impact of Atmospheric River Events



Primary Impact of Inclement Weather on Landfills

- Heavy Rain
  - Erosion of Landfill Cover (Exposure of Trash)
  - Temporary Soil "Sealing" (Trapped Gases Released in Large Quantities)
  - Reduced Soil Efficiency (Creates Mud, Reduces "Filtering")
  - Reduced Atmospheric Dispersion (Trap Odors Close to Ground)
  - Displacement of LFG in Physical Gaps in Disposed Waste
- Wet Trash to Landfill
  - Accelerated Decomposition
  - Wet Paper Cannot be Recycled (Disposed at Landfill)
  - Increase Leachate Production (Potential Leachate Seeps)
- One Rain Day: Takes Ten (10) Days to Clear the Solid Waste Collection Infrastructure to See "Dry Waste" at the Landfill
- Sunshine Canyon Landfill's Wet Weather (December 2025 and January 2026)
  - Took About 30 Days to See "Dry Waste" After Rain Stops

December 24, 2025 (Pineapple Express: 6.4 Inches of Rain) Landfill Closed



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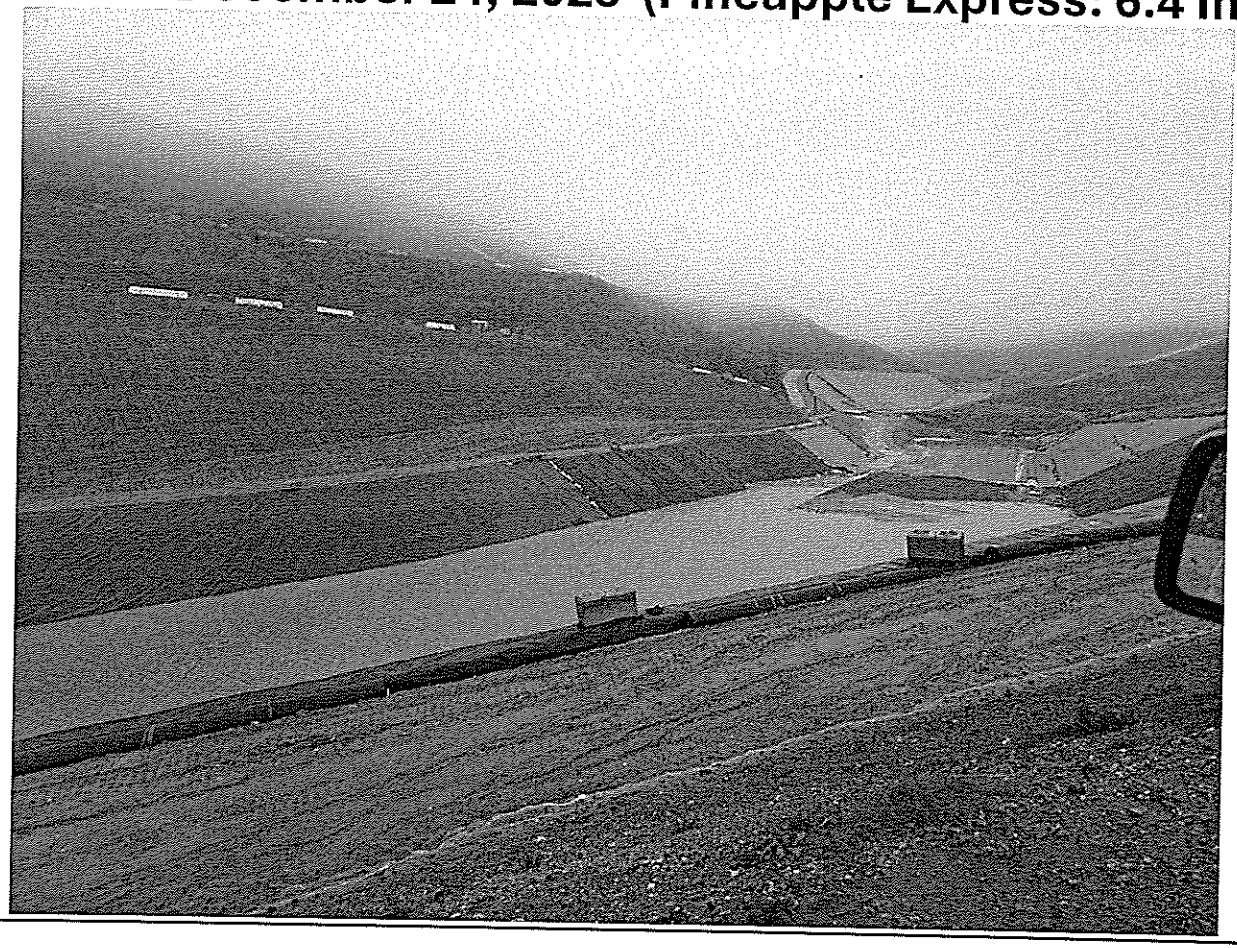

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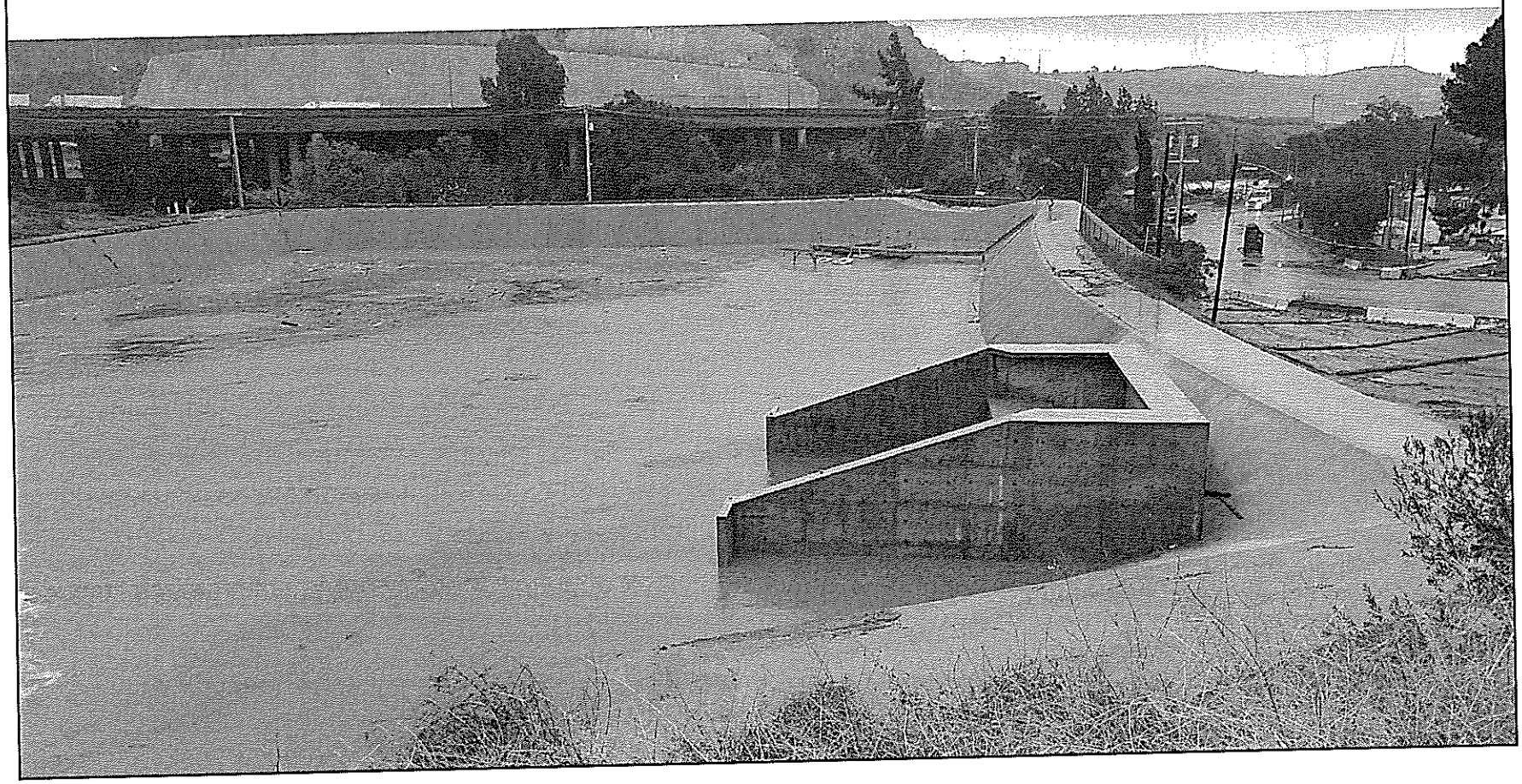

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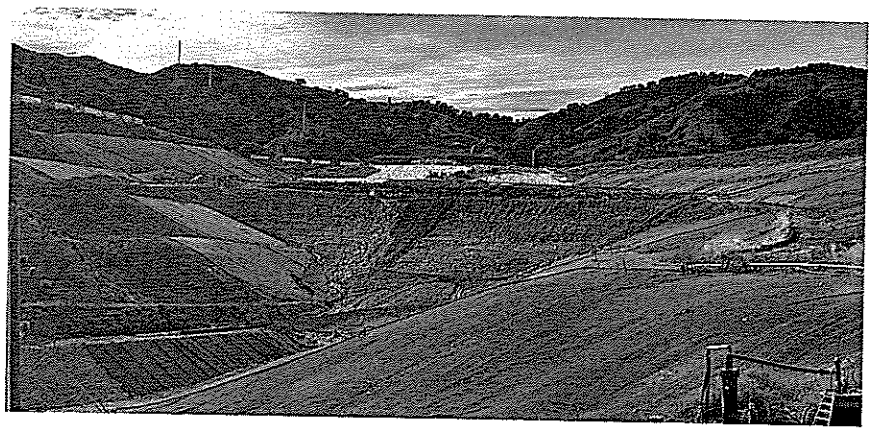
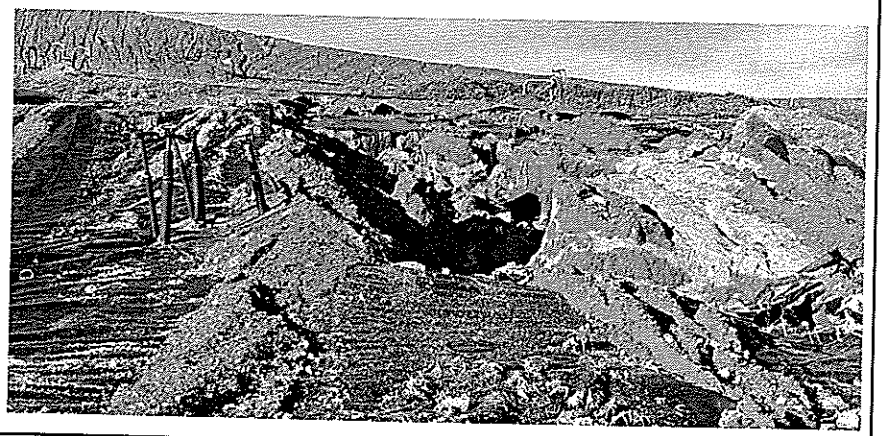
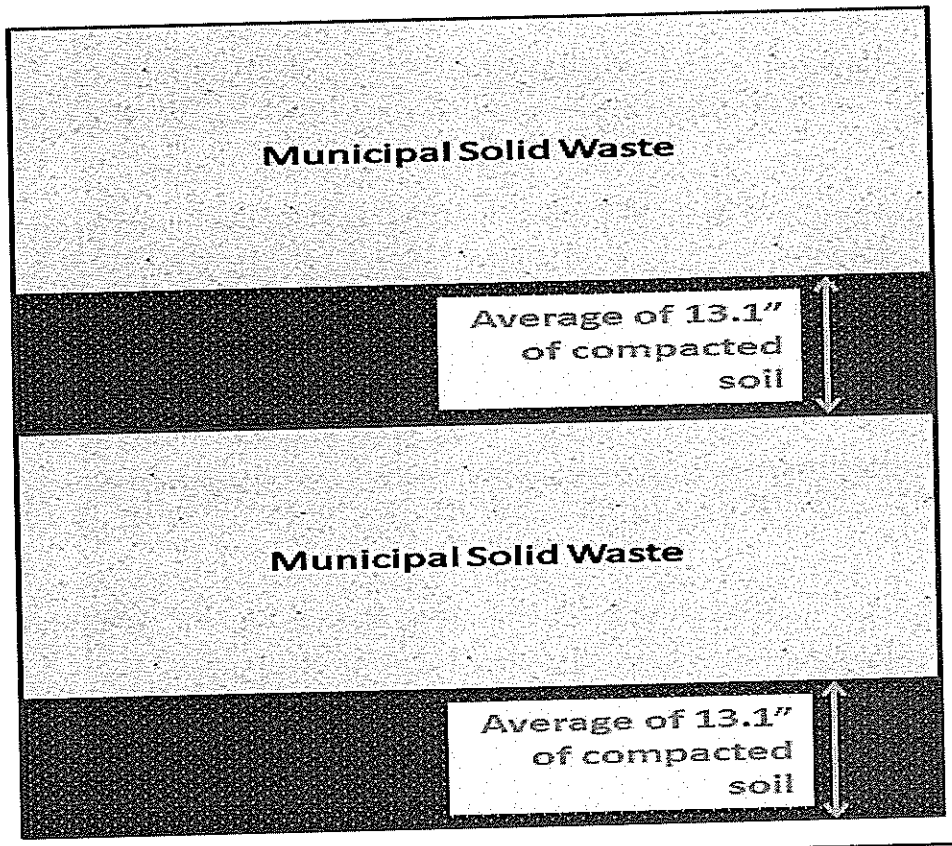
January 6, 2026





9" of Compacted Soil with No Peel-Back



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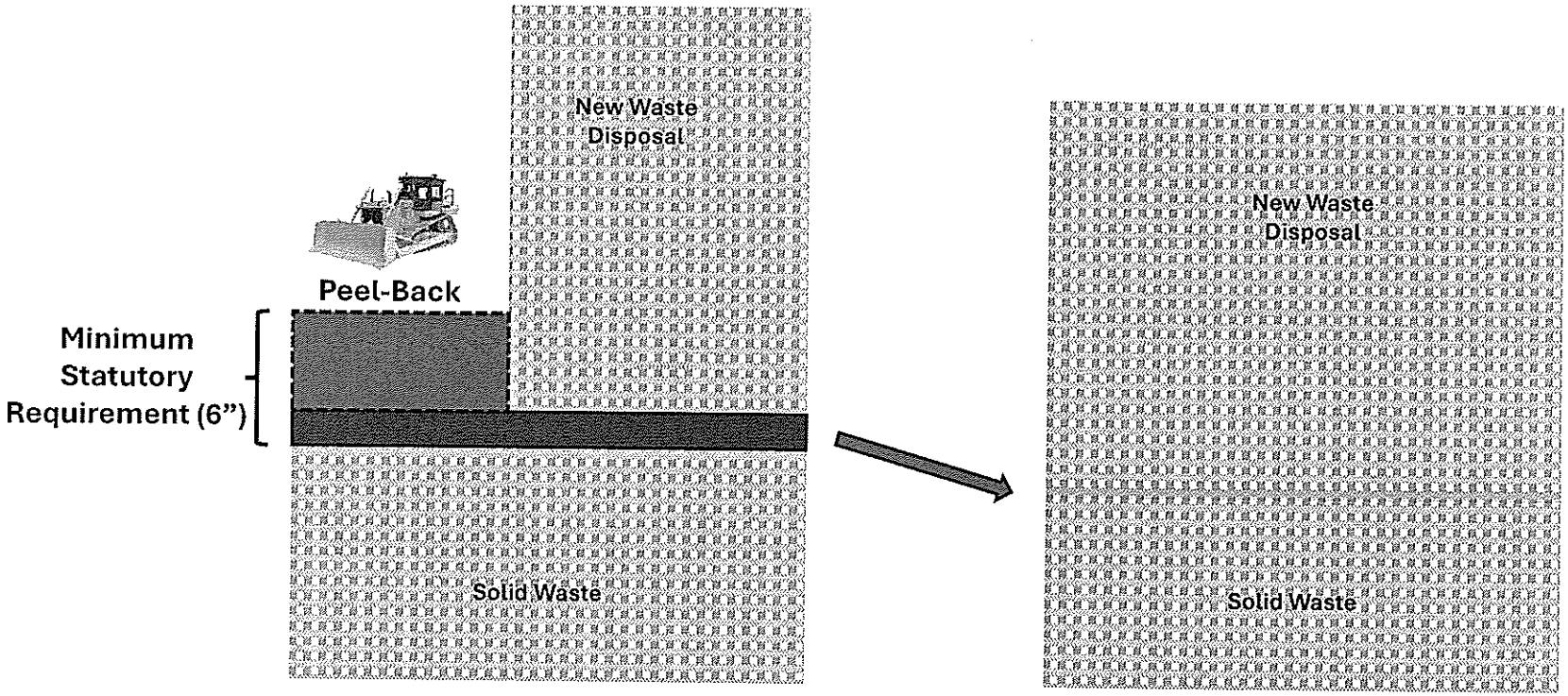
Assimilation of "Peeled-Back" Compacted Cover Soil into Disposed Waste Mass Over Time



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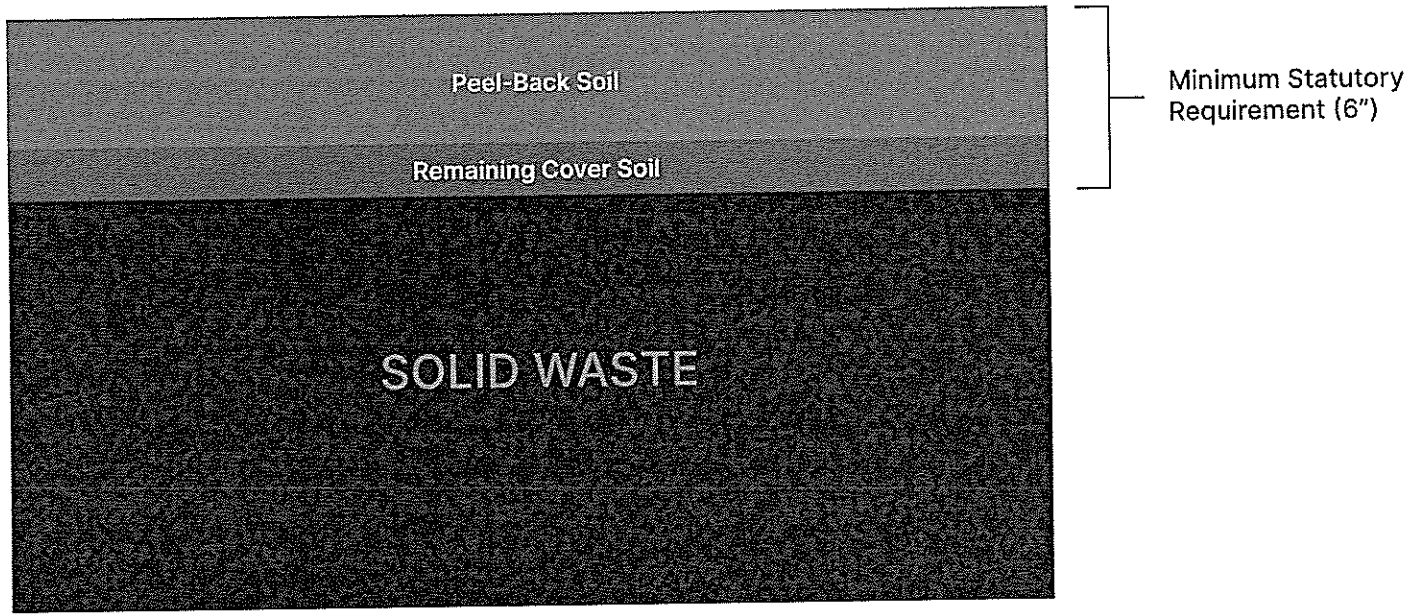
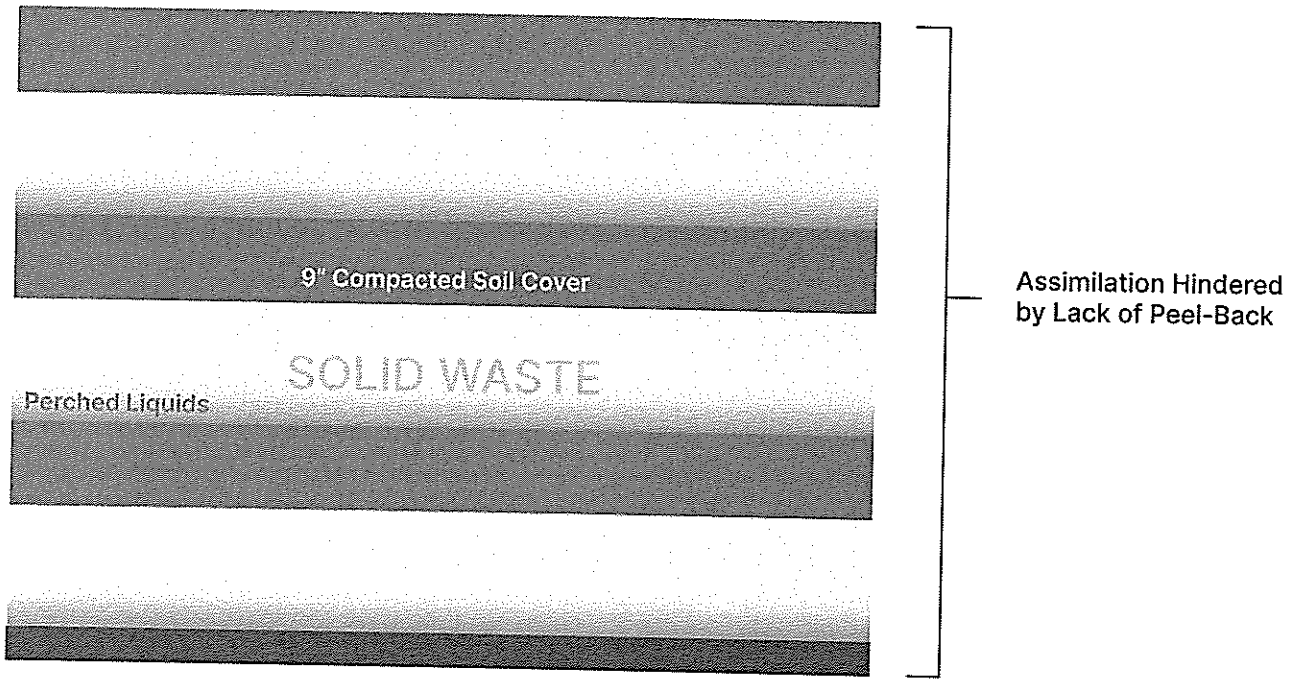
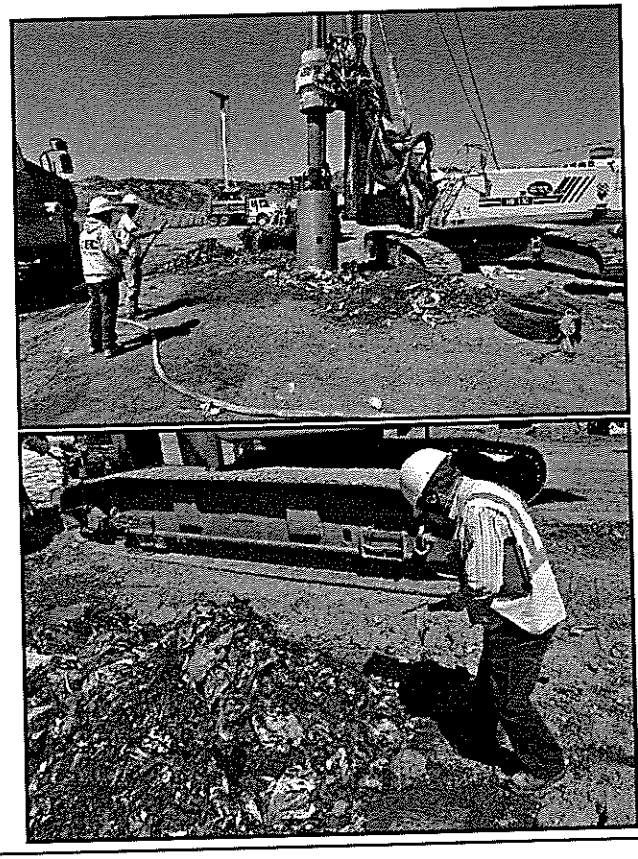


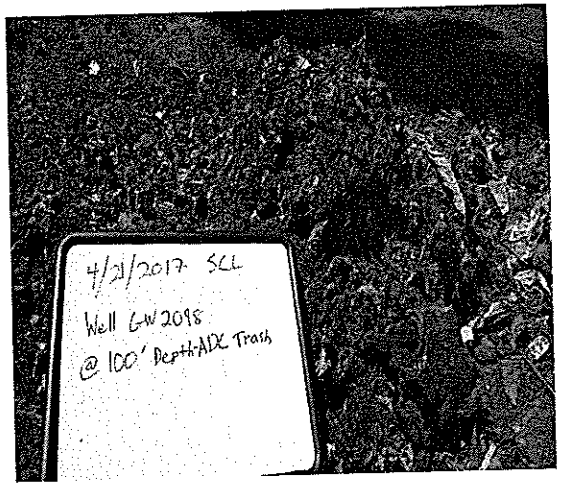
Settlement Over Time from Compaction and Decomposition of Organic Waste (Legacy Damaged Areas)



Inspection of LFG Drilling Materials from EnviroCover ADC vs. 9" Compacted Soil Locations (Without Peel-Back)



Temperature and Moisture Reading



Parameter	CC-3B (ADC Only)	Remaining Wells (No Peel-Back)
Total Vertical Feet Drilled	4,476 feet	14,663 feet
Wells Noted as "Wet" or "Saturated"	363 feet (8.1% of Total)	2.235 feet (15.2% of Total)
Wells Noted as "Severe" Decomposition	83 feet (1.9% of Total)	1,038 feet (7.1% of Total)
Drilling Productivity	28.9 feet/hour	26.6 feet/hour

Republic ADC Evaluation Report, October 11, 2017

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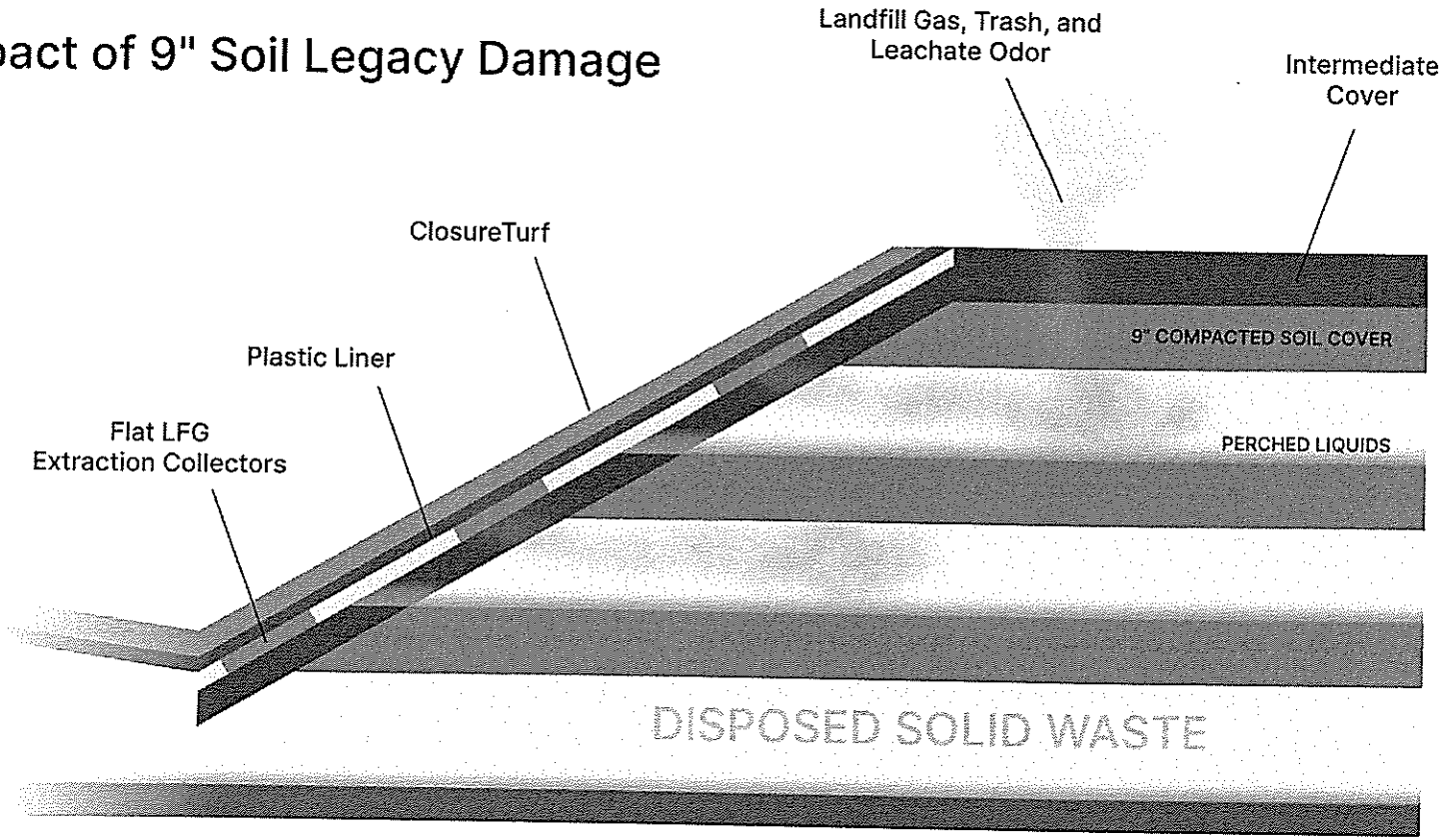
Impact of 9" Soil Legacy Damage



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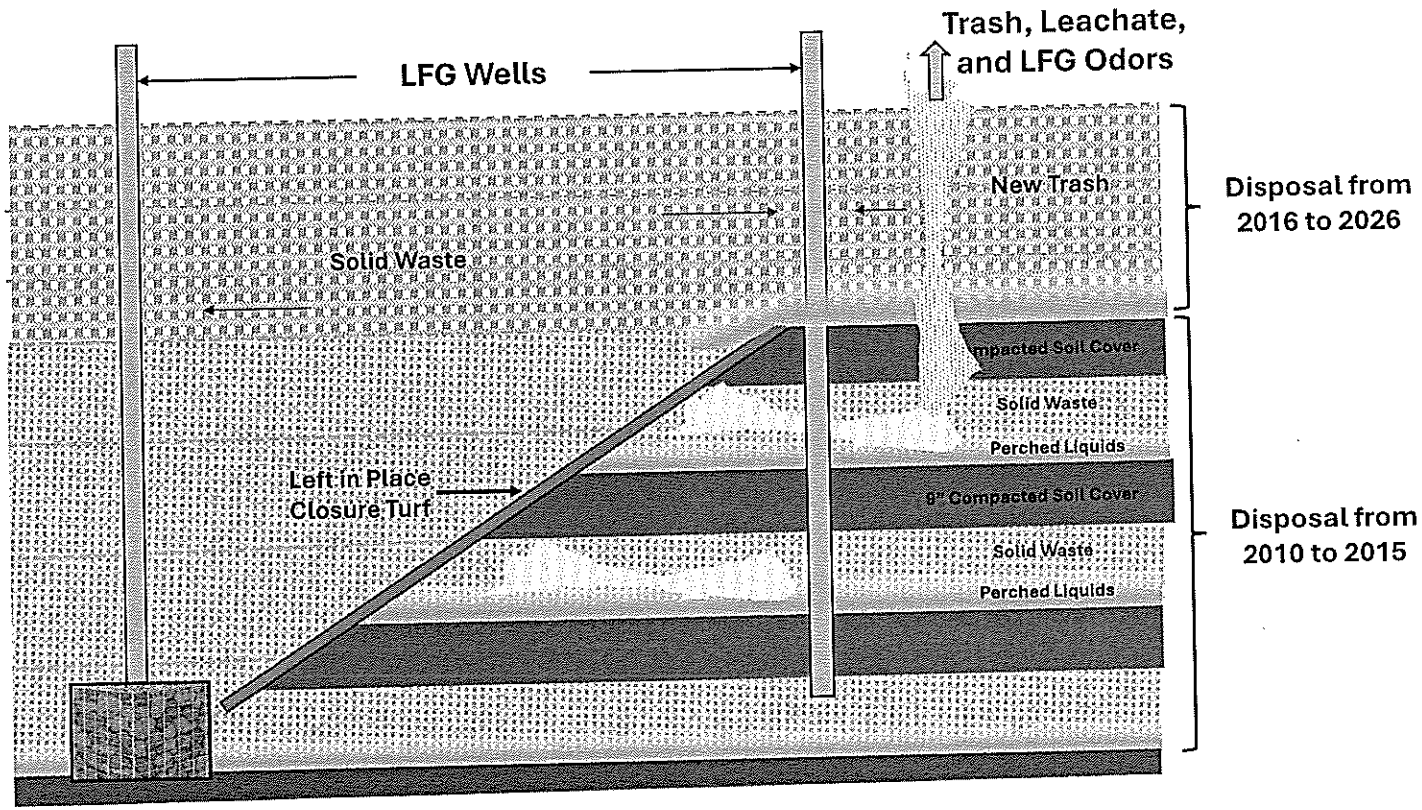
CROSS SECTION OF LANDFLL



Mechanical Engineering Reference Manual for the PE Exam, 13th Edition, M. Lindeburg (2013)

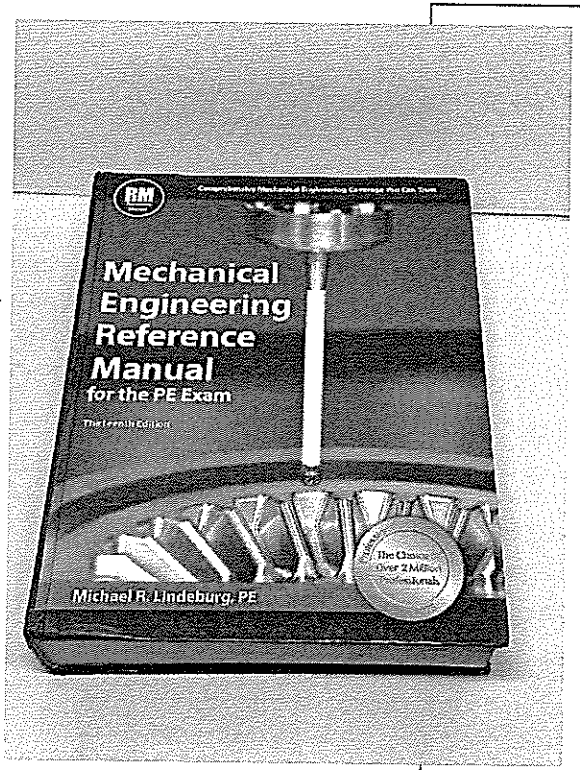
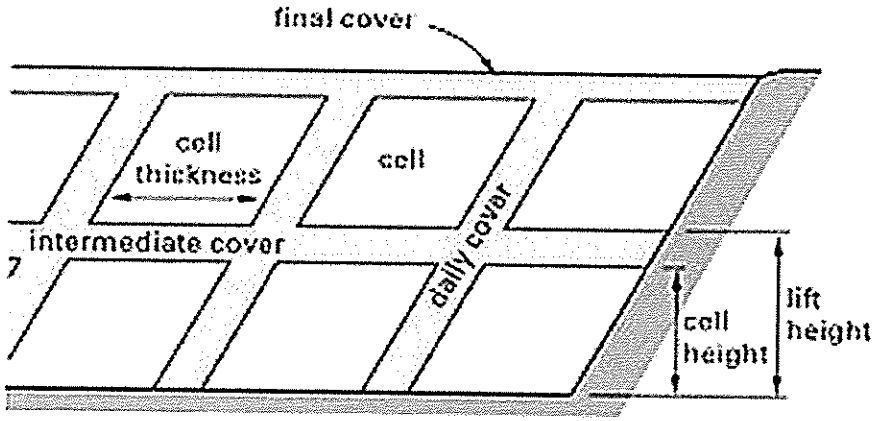
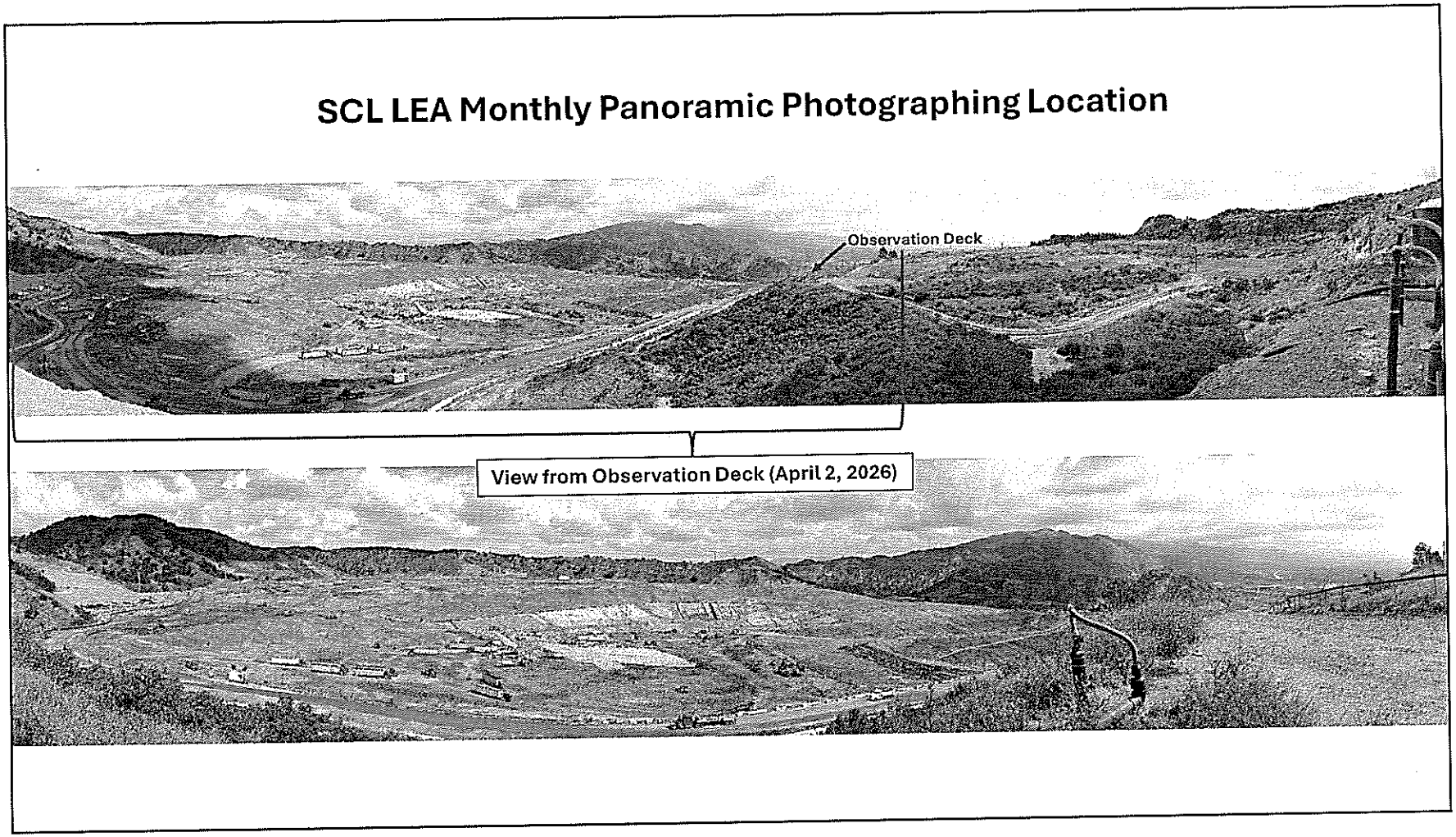


Figure 68.3 Landfill Cells

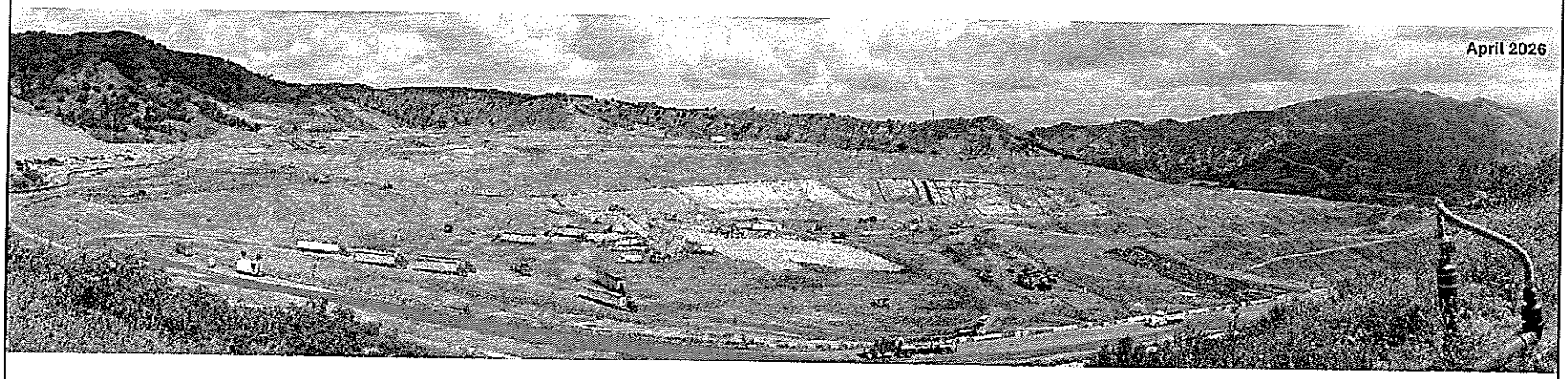


The *cell height* is typically taken as 8 ft (2.4 m) for design studies, although it can actually be much higher. The height should be chosen to minimize the cover material requirement consistent with the regulatory requirements. Cell slopes will be less than 40°, and typically less than 30°.

SCL LEA Monthly Panoramic Photographing Location



Comparative Photos October 2016 vs March 2026



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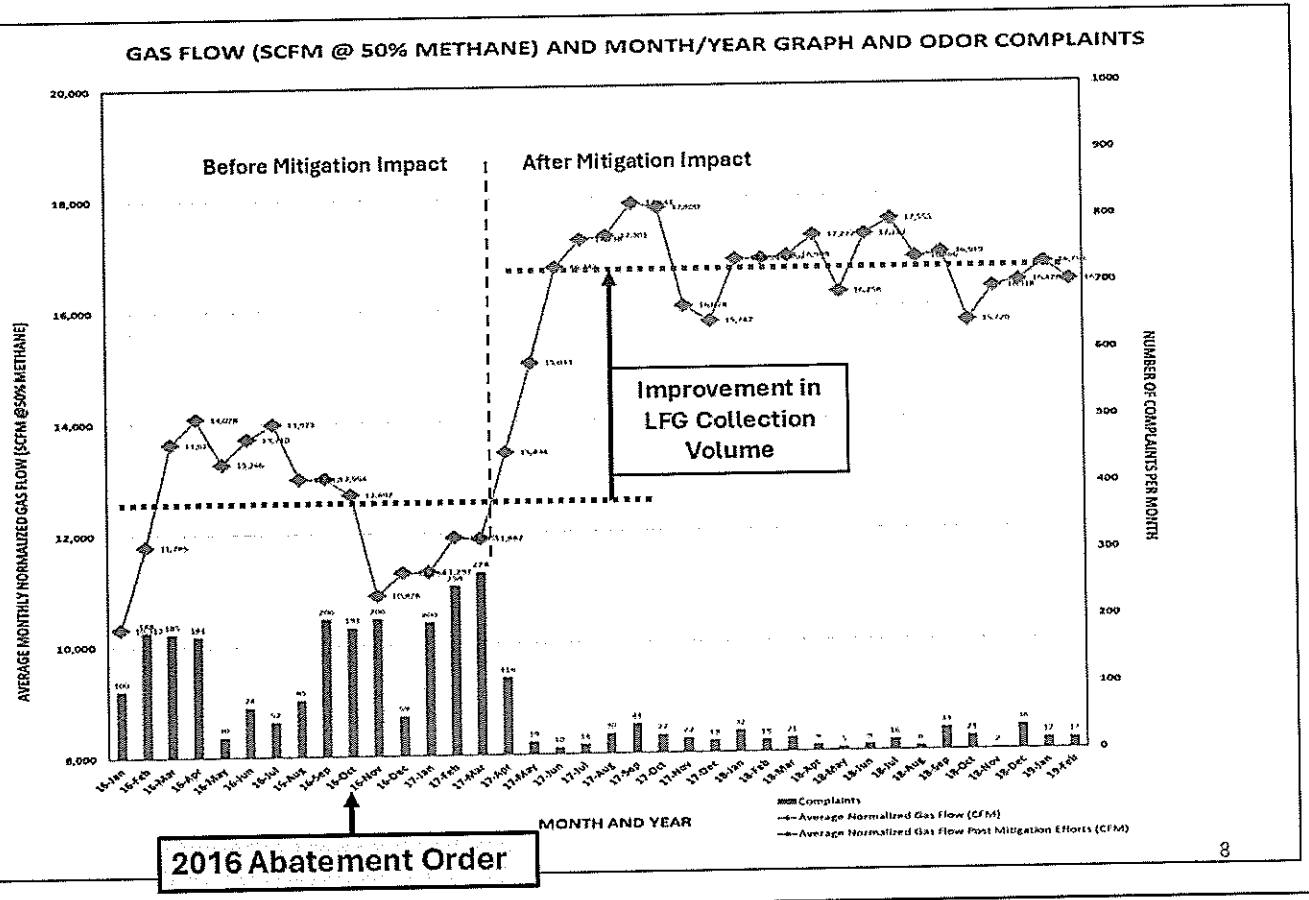
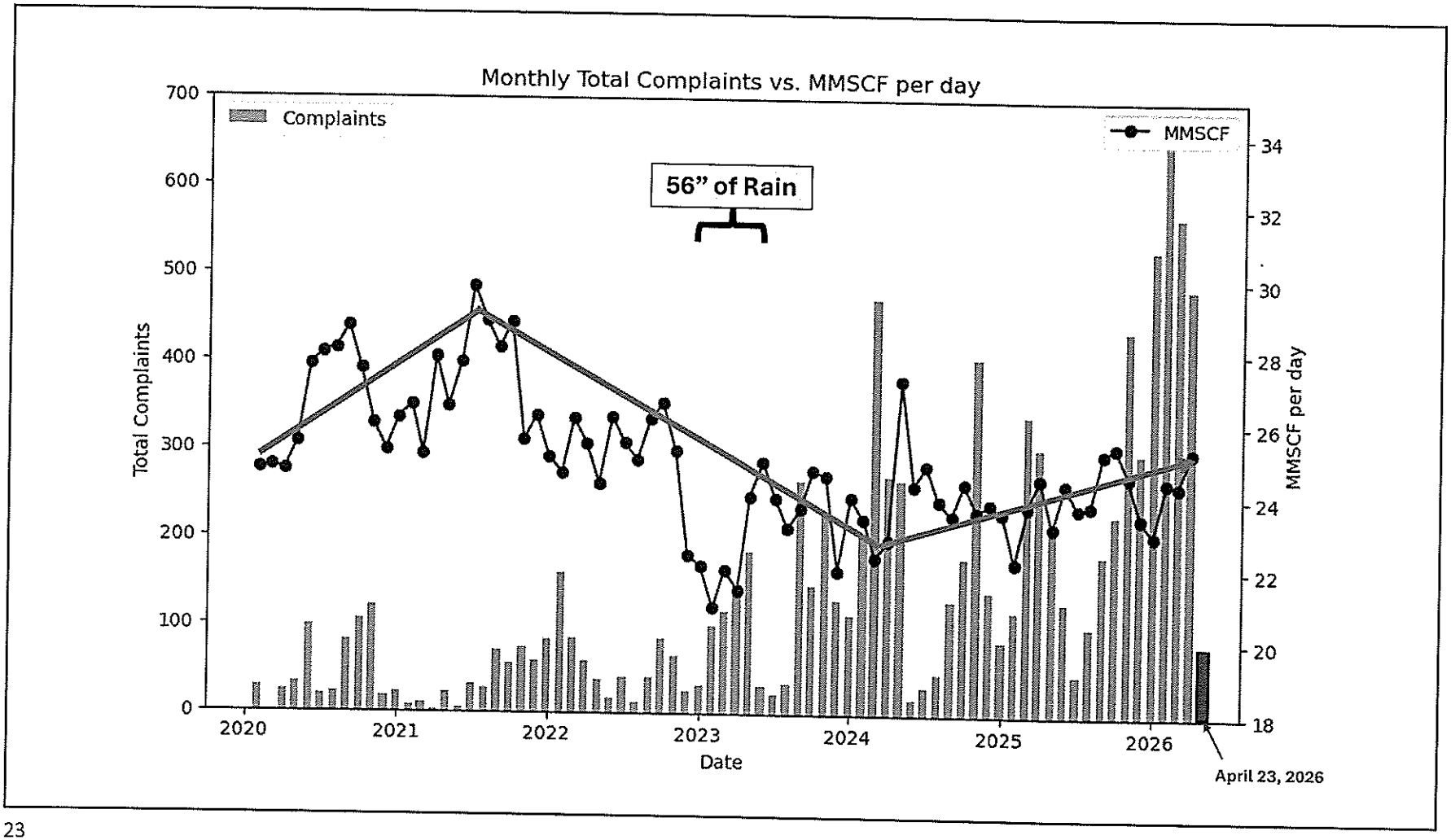
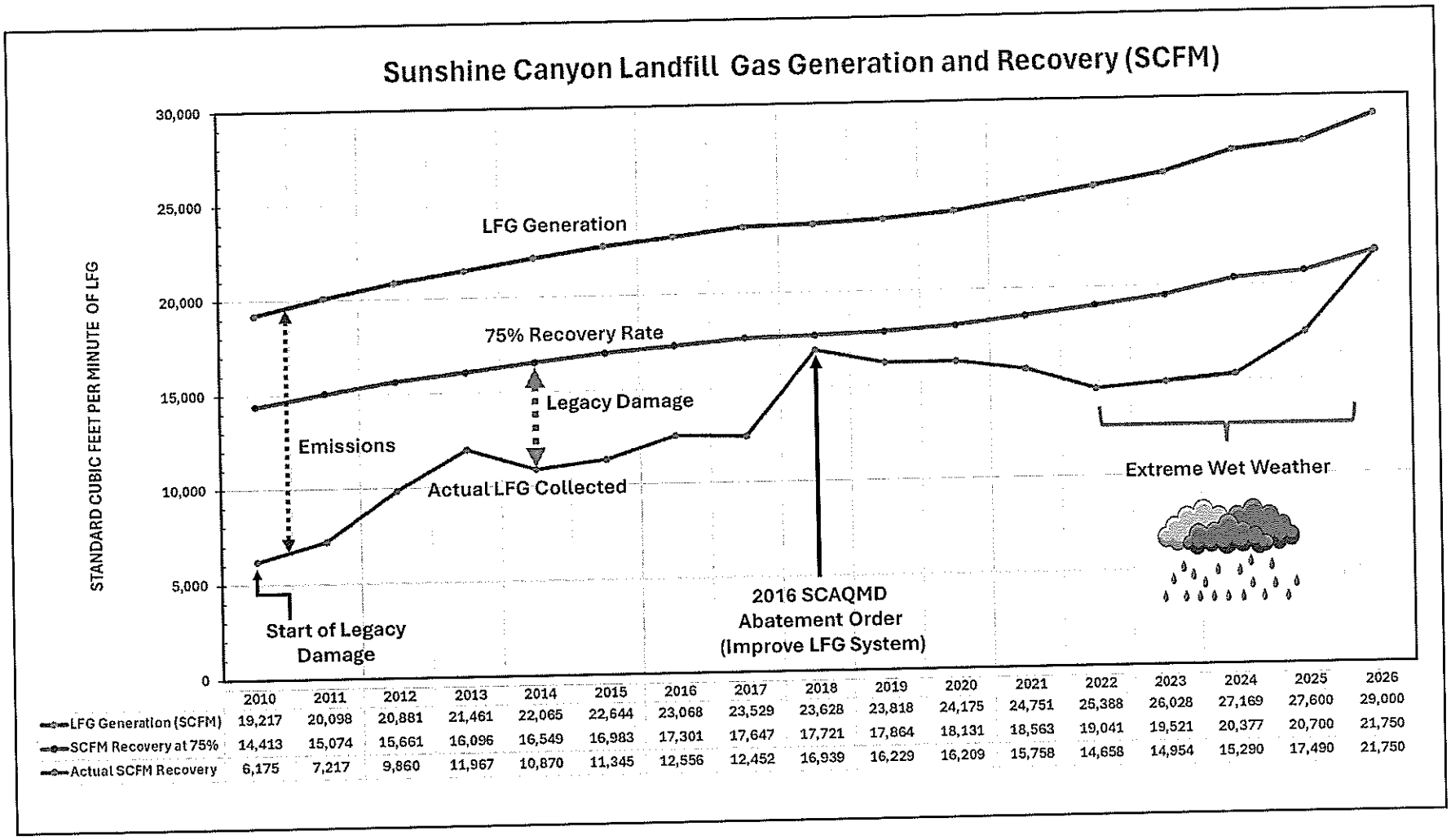
ANALYSIS OF LANDFILL GAS COLLECTION VOLUME / RATE

Date	Average Normalized Gas Flow (CFM)	Complaints
16-Jan	10,312	100
16-Feb	11,785	188
16-Mar	13,625	185
16-Apr	14,078	181
16-May	13,266	30
16-Jun	13,710	74
16-Jul	13,973	52
16-Aug	12,987	85
16-Sep	12,994	200
16-Oct	12,697	193
16-Nov	10,878	206
16-Dec	11,294	59
17-Jan	11,297	200
17-Feb	11,910	254
17-Mar	11,887	274
17-Apr	13,434	116
17-May	15,033	19
17-Jun	16,742	10
17-Jul	17,238	14
17-Aug	17,301	30
17-Sep	17,881	44
17-Oct	17,800	27
17-Nov	16,028	22
17-Dec	15,747	18
18-Jan	16,858	32
18-Feb	16,859	18
18-Mar	16,908	21
18-Apr	17,272	9
18-May	16,256	5
18-Jun	17,782	9
18-Jul	17,555	16
18-Aug	16,866	6
18-Sep	16,949	33
18-Oct	15,720	21
18-Nov	16,318	2
18-Dec	16,428	36
19-Jan	16,753	17
19-Feb	16,428	17




Monthly Total Complaints vs. MMSCF per day
Complaints
MMSCF
56" of Rain
Total Complaints
MMSCF per day
Date
0
100
200
300
400
500
600
700
18
20
22
24
26
28
30
32
34
2020
2021
2022
2023
2024
2025
2026
April 23, 2026



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LFG Generation (SCFM)	19,217	20,098	20,881	21,461	22,065	22,644	23,068	23,529	23,628	23,818	24,175	24,751	25,388	26,028	27,169	27,600	29,000
SCFM Recovery at 75%	14,413	15,074	15,661	16,096	16,549	16,983	17,301	17,647	17,721	17,864	18,131	18,563	19,041	19,521	20,377	20,700	21,750
Actual SCFM Recovery	6,175	7,217	9,860	11,967	10,870	11,345	12,556	12,452	16,939	16,229	16,209	15,758	14,658	14,954	15,290	17,490	21,750

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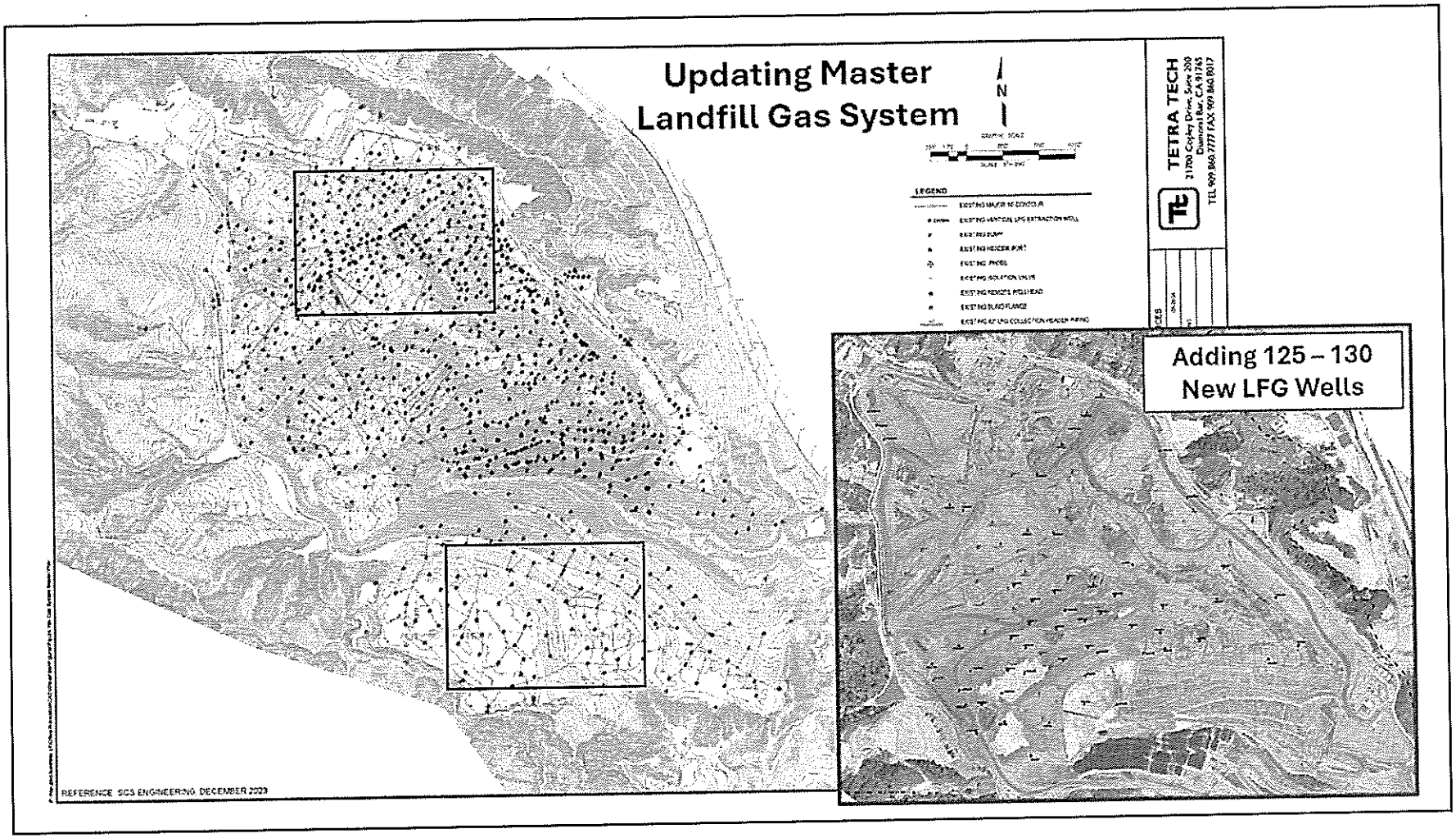
LFG Well Status (April 2026)

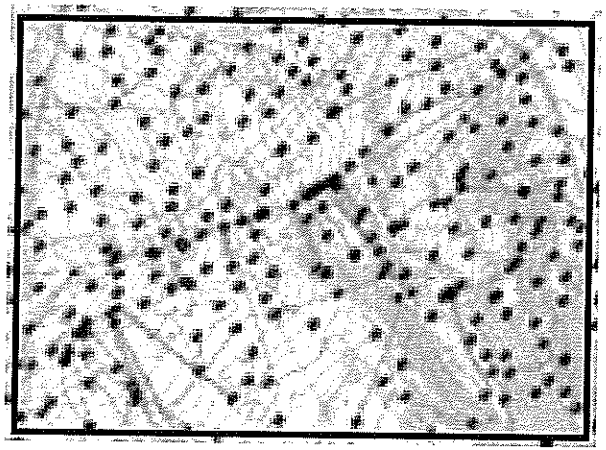
- 119 / 130 Installed and Hooked Up to Header System
- 88 / 119 are Operating at Equilibrium
- LFG Well Status
  - 90% of LFG wells not operating at full effectiveness (Legacy Damage area)
  - 10% remaining wells are pinched from landfill settlement
  - 25 LFG wells to be replaced
- Dewatering Activities
  - 286 pneumatic pumps dewatering
  - 25 new pumps on order (electrical high-capacity Lorentz pumps)
  - Additional LFG wells in 2026 depending upon dewatering progress
- Well Tuning
  - Install automated LFG wellhead controllers (APIS)
  - Takes one month or longer (prevent LFG systems shock)
  - Minimize potential for oxygen intrusion
  - Maintain methanogens for organics decomposition


Updating Master
Landfill Gas System
N
LEGEND
TETRA TECH
Adding 125 – 130
New LFG Wells
REFERENCE SCS ENGINEERING DECEMBER 2023

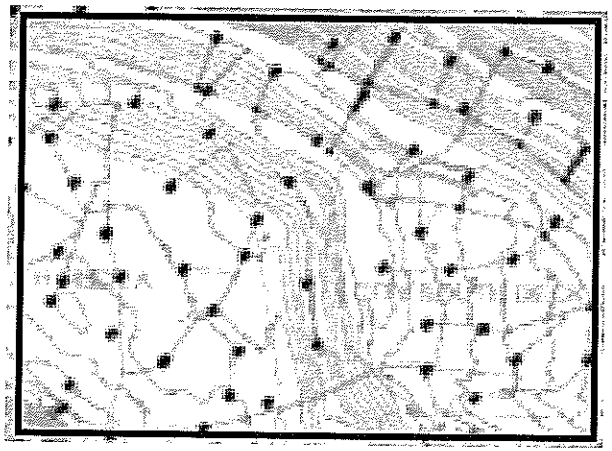
26

LFG Well Density Comparison:

Legacy Damaged (No Peel-Back)



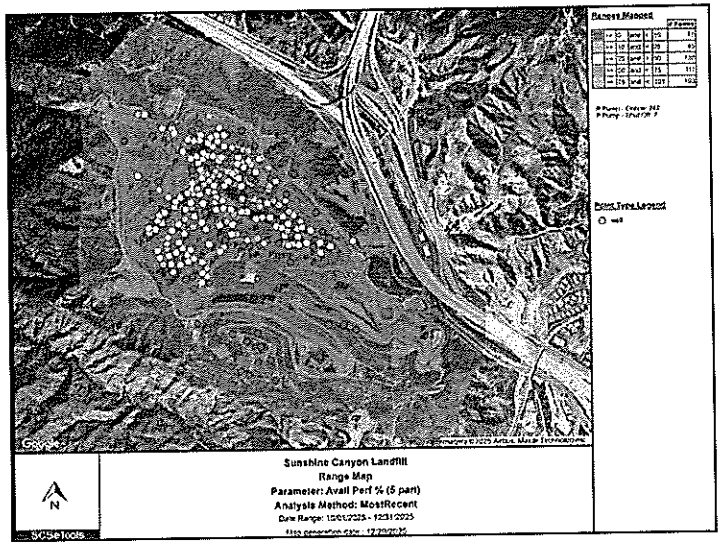
Standard Practice (Peel-Back)

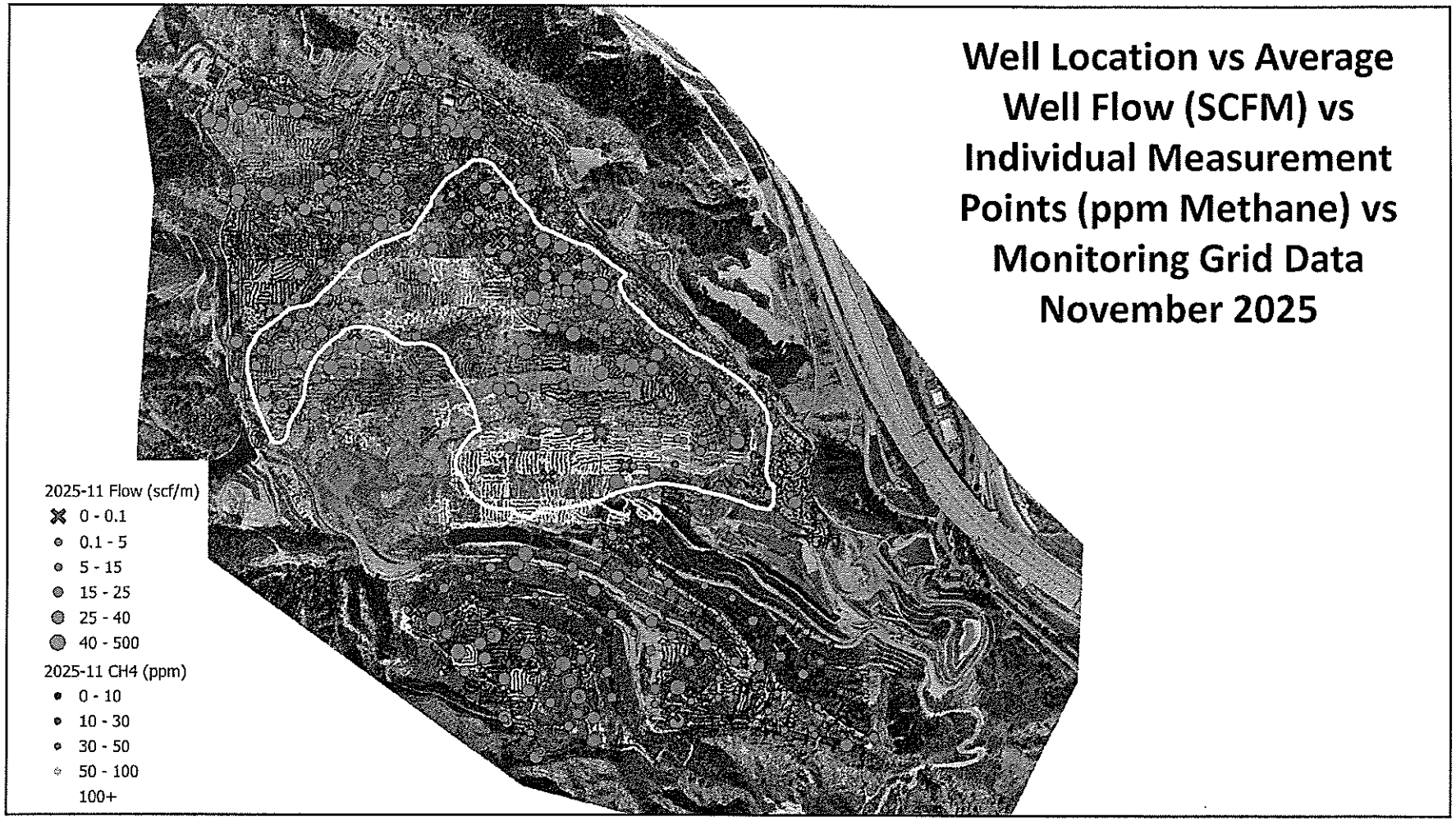


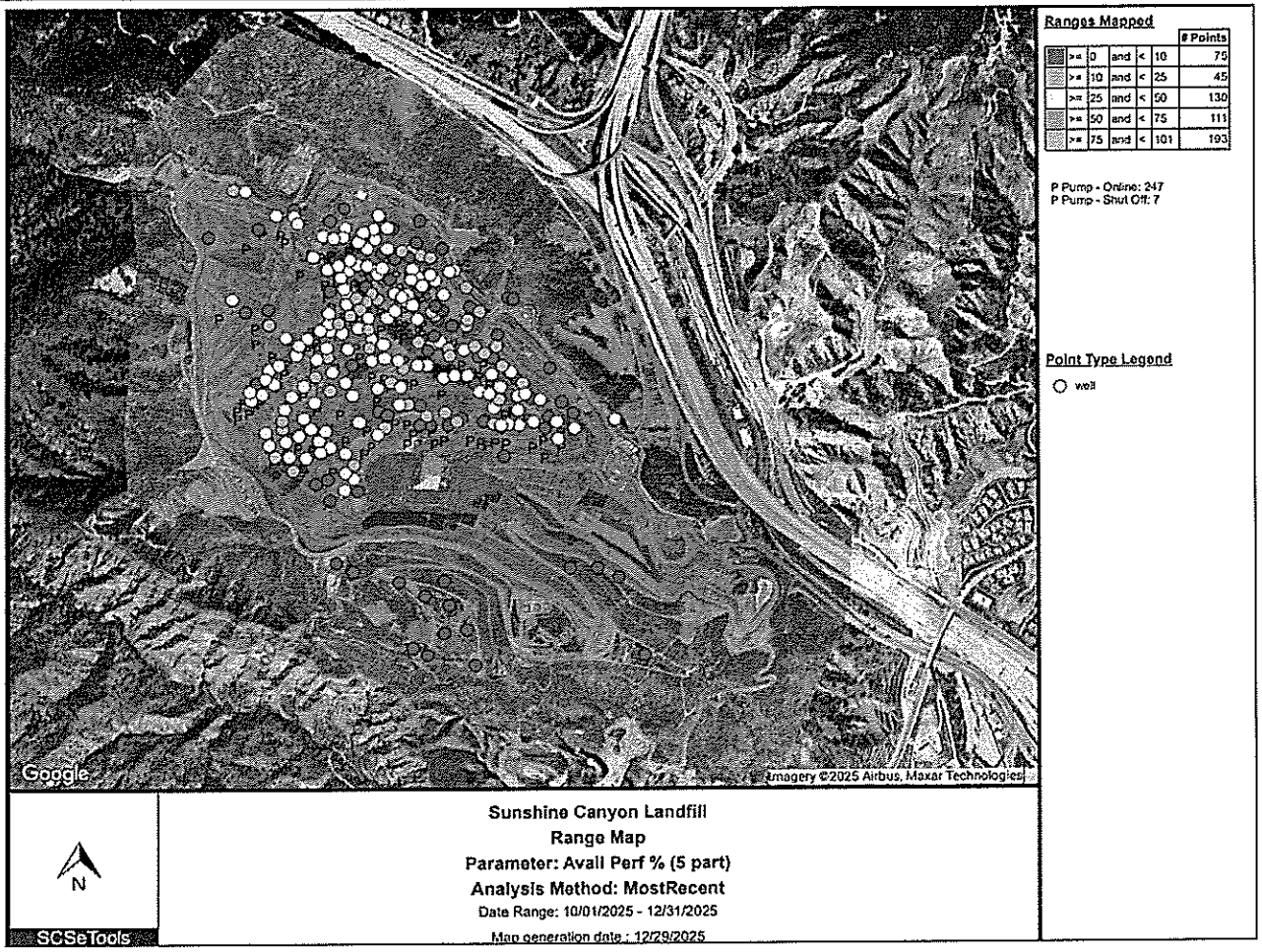
Physical / Site Constraints Impacting LFG Wells

- Legacy Damage (11" to 16" of Compacted Soil without Peel-Back)
  - Blocks Gas Flow
  - Blocks downwards liquids flow (LFG well flooding)
  - Increased impermeability of trash mass
  - Reduced radius of influence of LFG wells

- Well Integrity:
  - LFG flooding (dewatering pumps needed)
  - Waste collapse (decomposed waste areas),
  - LFG well pinching
  - LFG Silt clogging



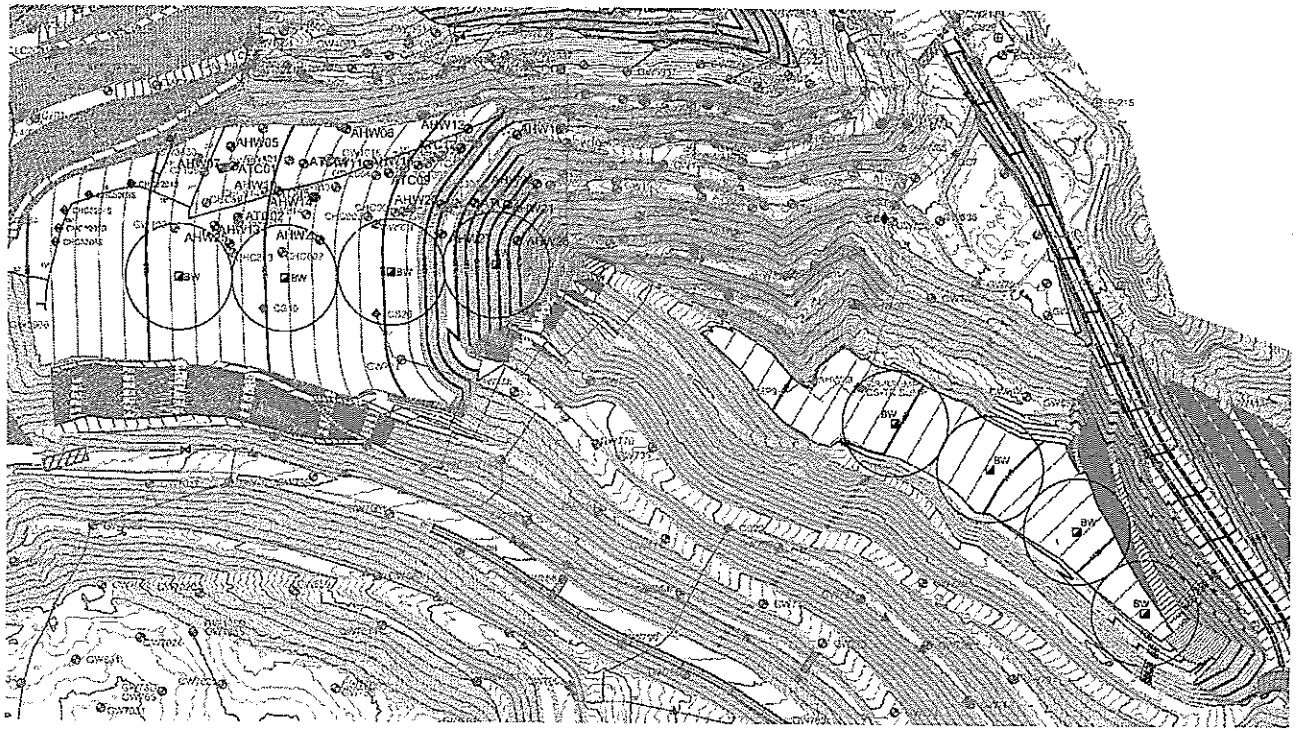

Well Location vs Average Well Flow (SCFM) vs Individual Measurement Points (ppm Methane) vs Monitoring Grid Data November 2025
2025-11 Flow (scf/m)
0 - 0.1
0.1 - 5
5 - 15
15 - 25
25 - 40
40 - 500
2025-11 CH4 (ppm)
0 - 10
10 - 30
30 - 50
50 - 100
100+



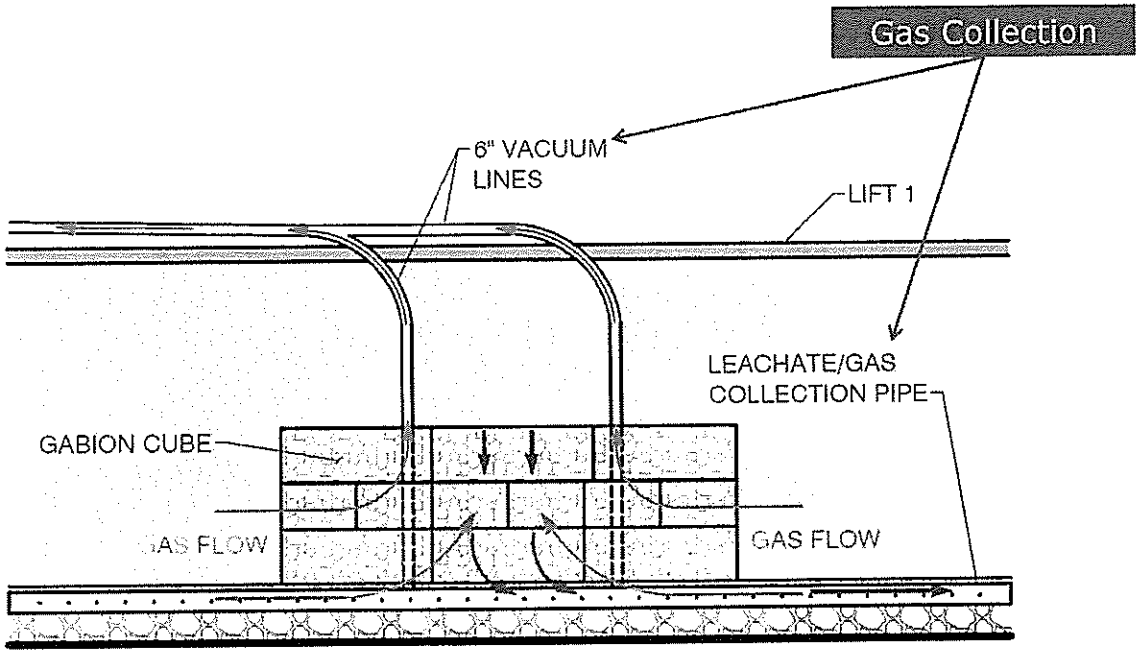
Availability of Perforations for LFG to Move Through to be Removed at Significantly Impacted LFG Wells

30

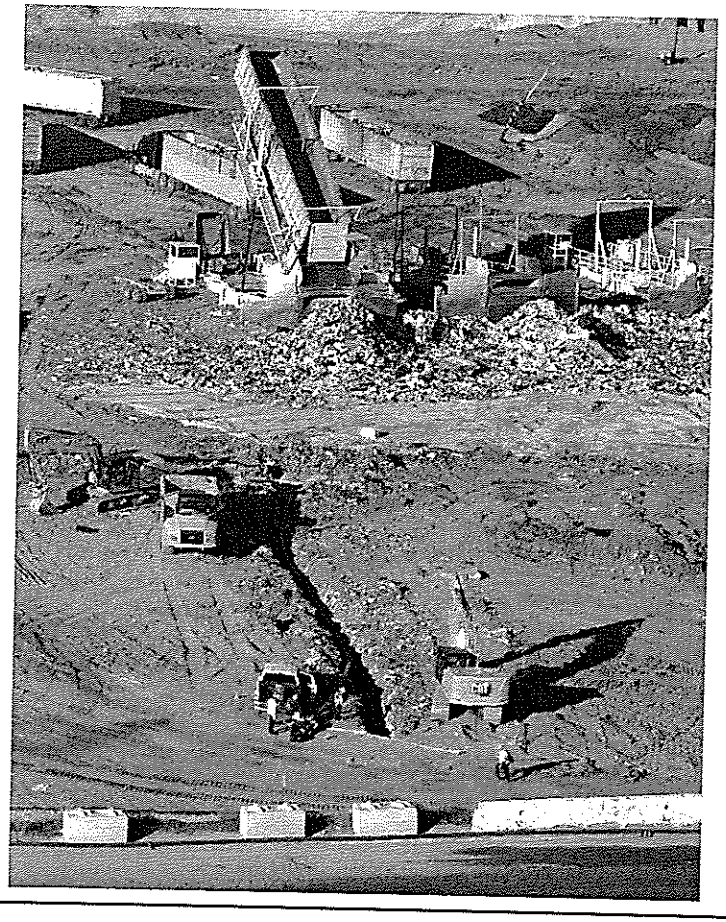
Bottom Wells and New Cell

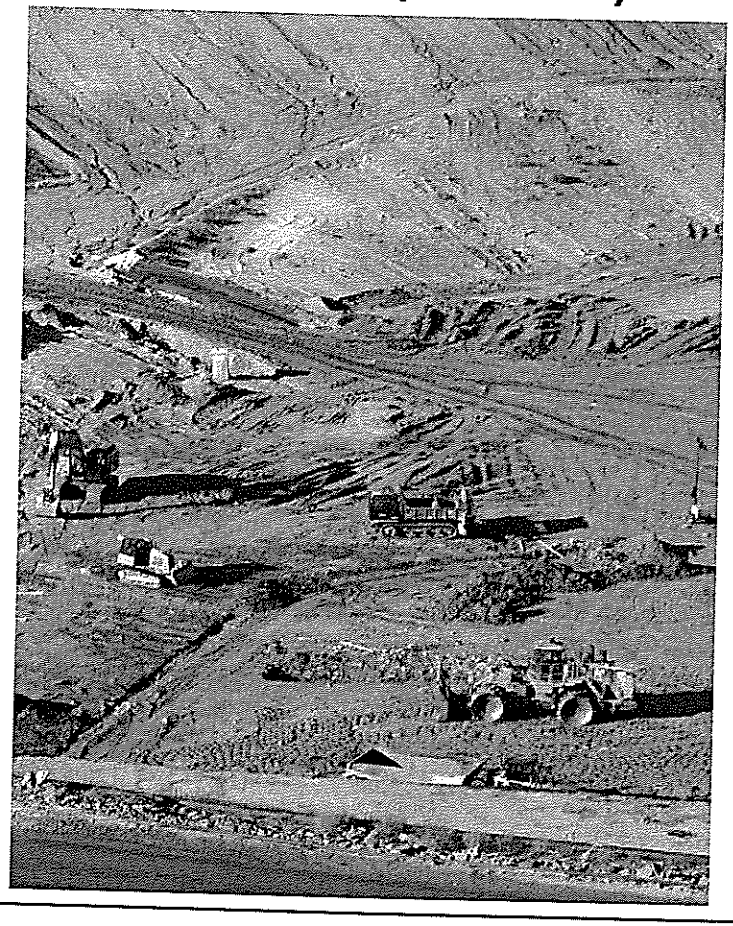


Implementation of Innovative Design of Landfill Gas Collection System (in Addition to Vertical Wells) (Cdtn 12)

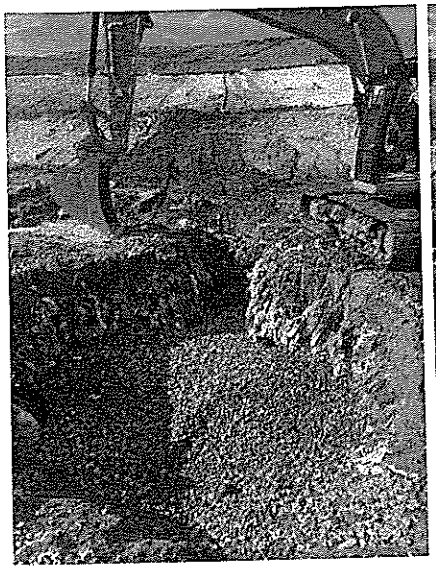


Installation of Horizontal LFG Collectors (Cdtn 12)

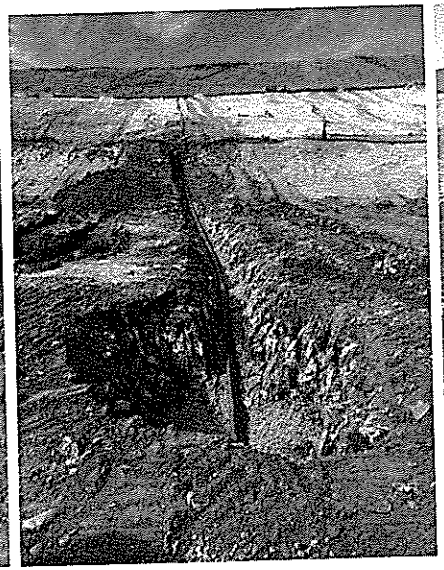




Installation of Horizontal Collectors (March 2026)



Trenching and Laying of Gravel



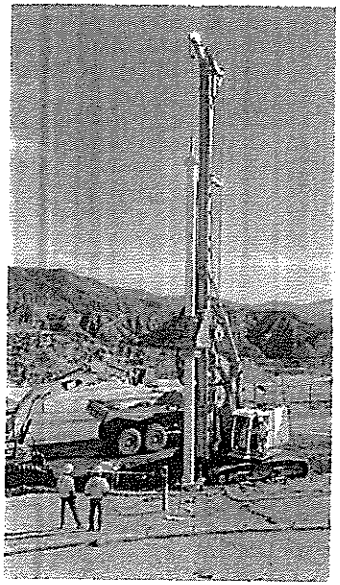
Installing Horizontal Collector Pipe

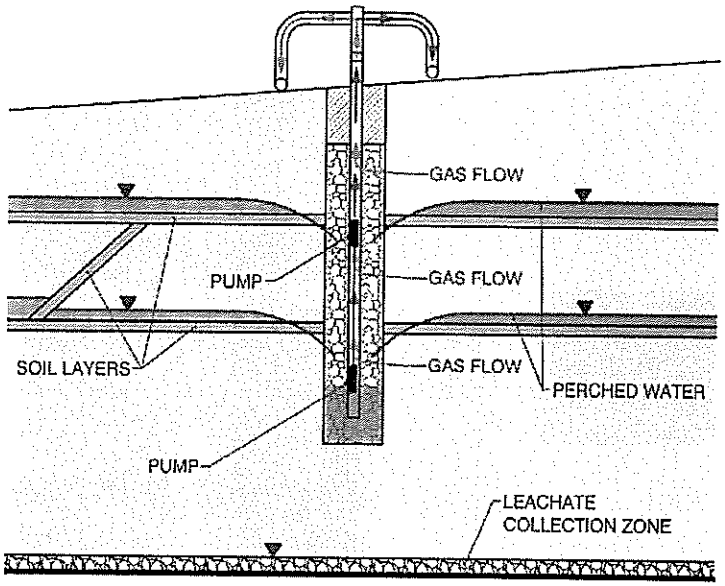
Installing Permeable Geosynthetic Layer

Applying Cover to the Horizontal Collector

Landfill Gas Collection Wells (Cdtns 14 and 15)

Recent Innovative Approaches





2017:
53 Pneumatic Pumps

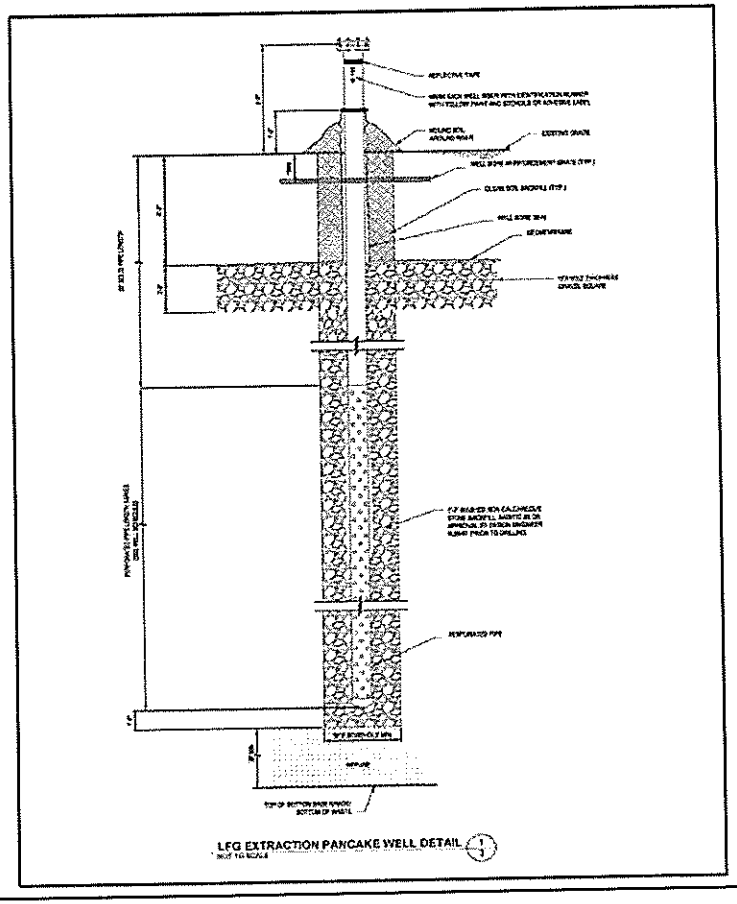
After Atmospheric River Rainfall Events

2023 - 2026:
286 Pneumatic Pumps

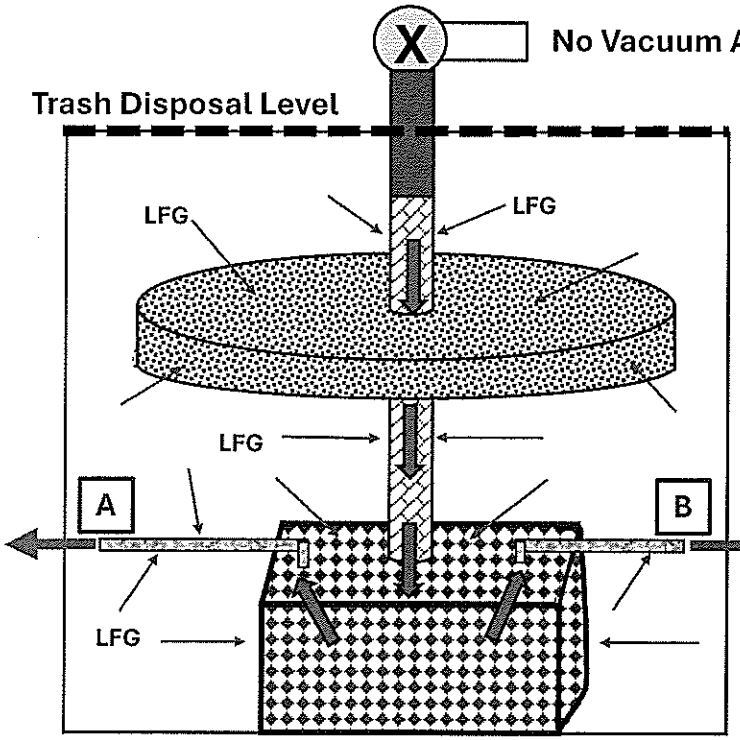
2026:
Modified Abatement Order
25 Lorentz Electrical Pumps with 20X Capacity Throughput
(Total 311 Pumps by May 2026)

35

LFG Well with "Pancake/Waffle" (15' X 15') (Condition 14, 15a, 15b & 16)



Impact of Waffle / Pancake Bottom-Up LFG Wells with Horizontal Collectors



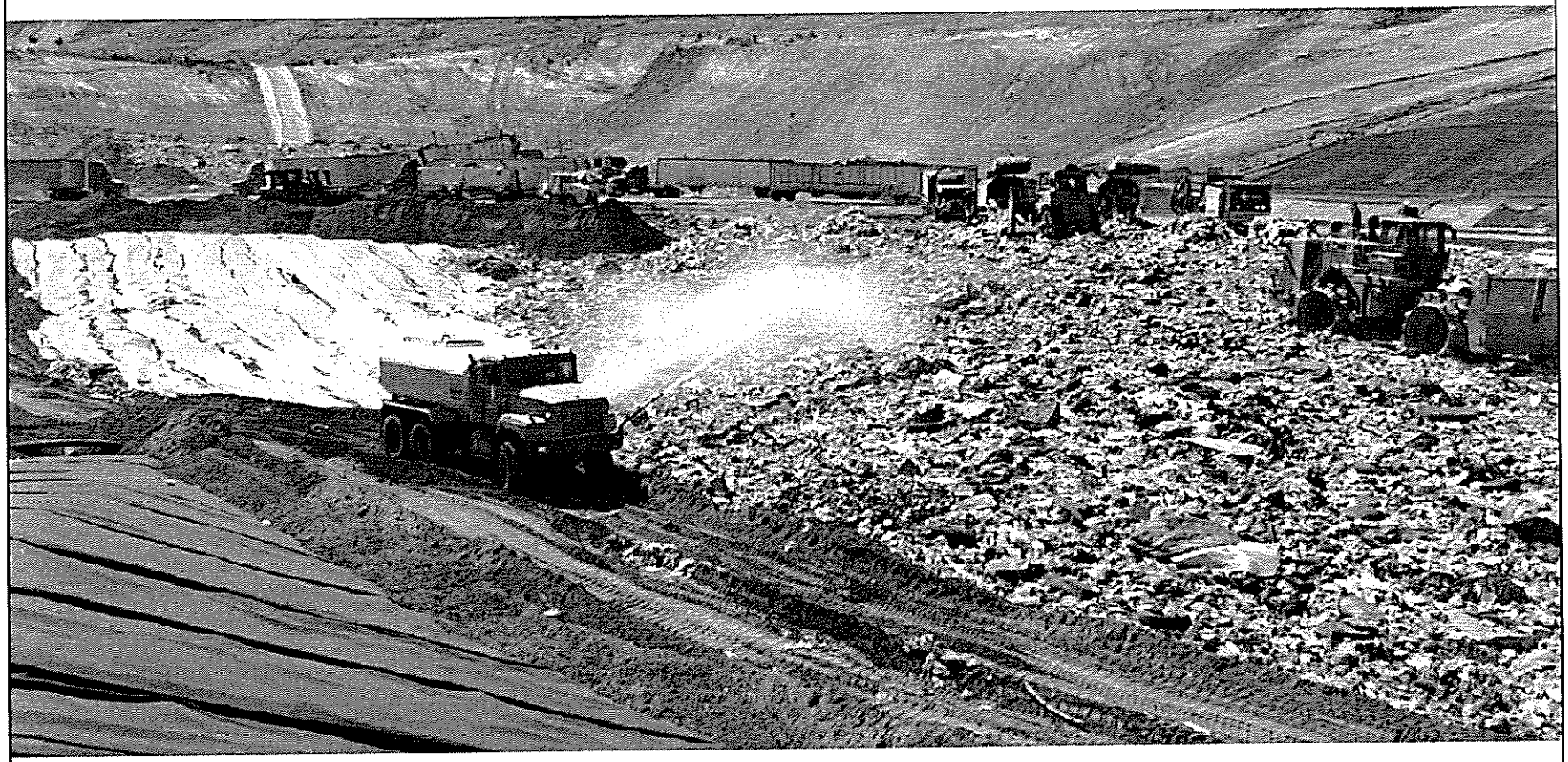
No Vacuum Applied on the Top of Well As of April 4th, 2026

LFG Well ID C03401						
Point ID	Date Time	CH4 %	CO2 %	O2 %	Adj Temp [?]	Adj Flow (scfm)
C03401 Wellhead	No Vacuum Applied at Wellhead (Top of Well) Until Several Lifts Covers Pancake/Waffle					
HC03401A	4/5/2026 7:29	43	55.4	1.6	61.9	52.6
HC03401B	4/5/2026 6:58	45.3	53.5	1.2	59.1	62.5
					Total SCFM	115.1

LFG Well ID C03402						
Well ID	Date Time	CH4 %	CO2 %	O2 %	Adj Temp [?]	Adj Flow (scfm)
C03402 Wellhead	No Vacuum Applied at Wellhead (Top of Well) Until Several Lifts Covers Pancake/ Waffle					
HC03402A	4/5/2026 7:53	52.9	46.9	0.2	69.7	59.1
HC03402B	4/5/2026 7:39	49.7	48.5	1.8	64.1	34.2
					Total SCFM	93.3

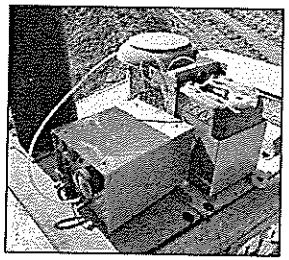
Vacuum Currently Only Applied to Horizontal Collector A and Collector B

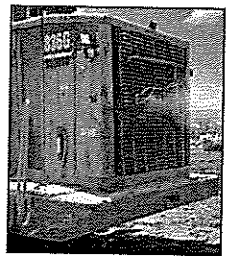
Spraying Odor Neutralizer and Microbiology on Working Face (Condition #4)



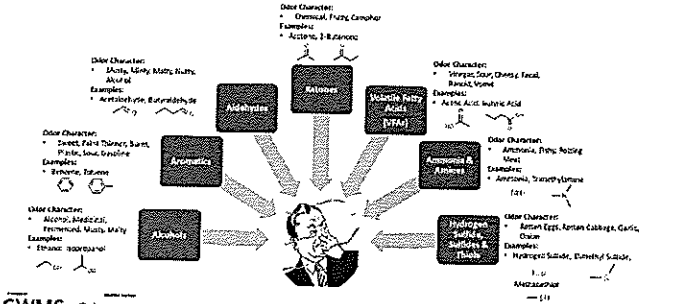
GPS-Guided/Tracked Compactors Fitted with Odor Neutralizer Spray System

ExWON System





Odorous Compounds: What Are They?



GWMS

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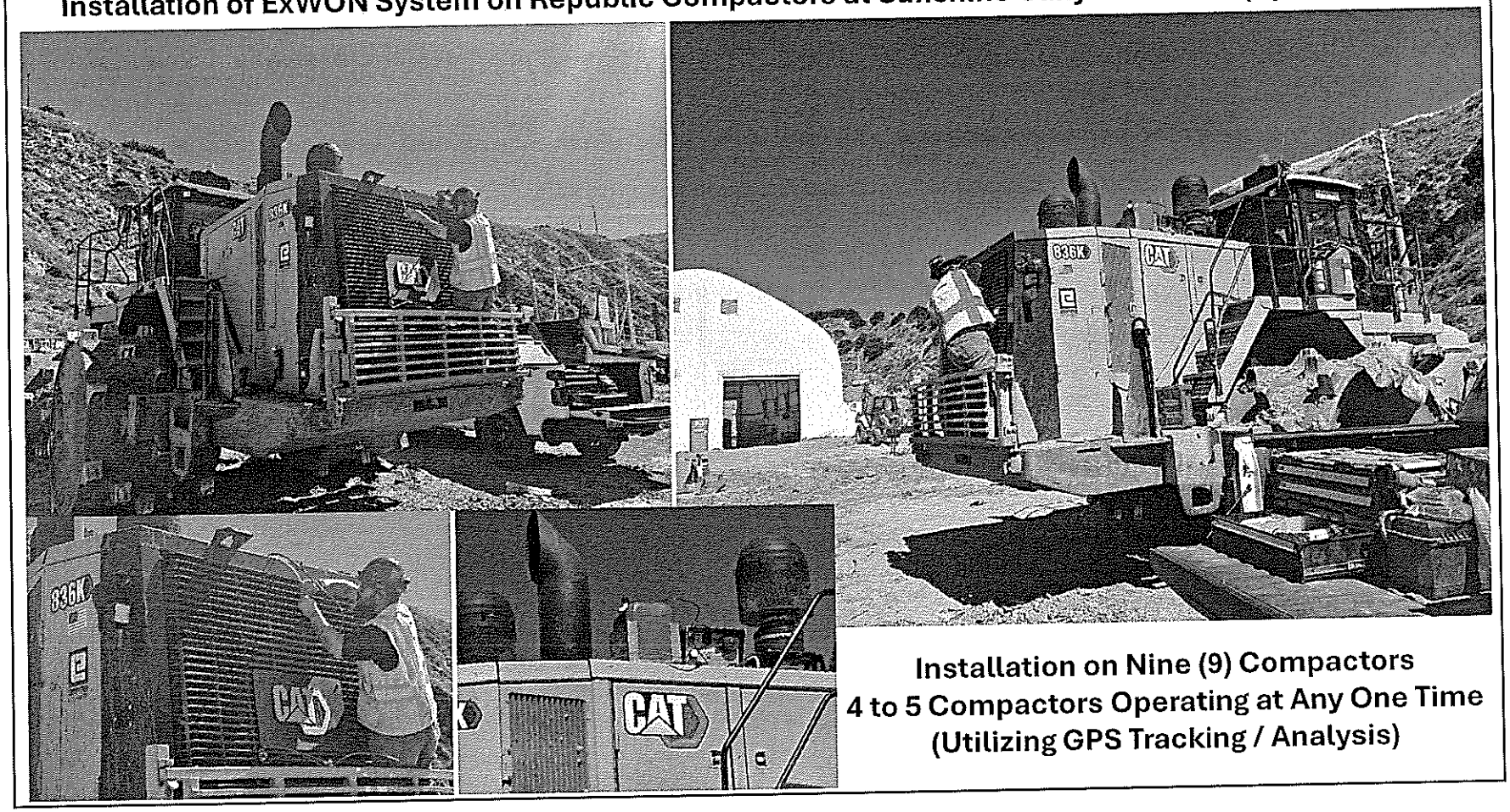
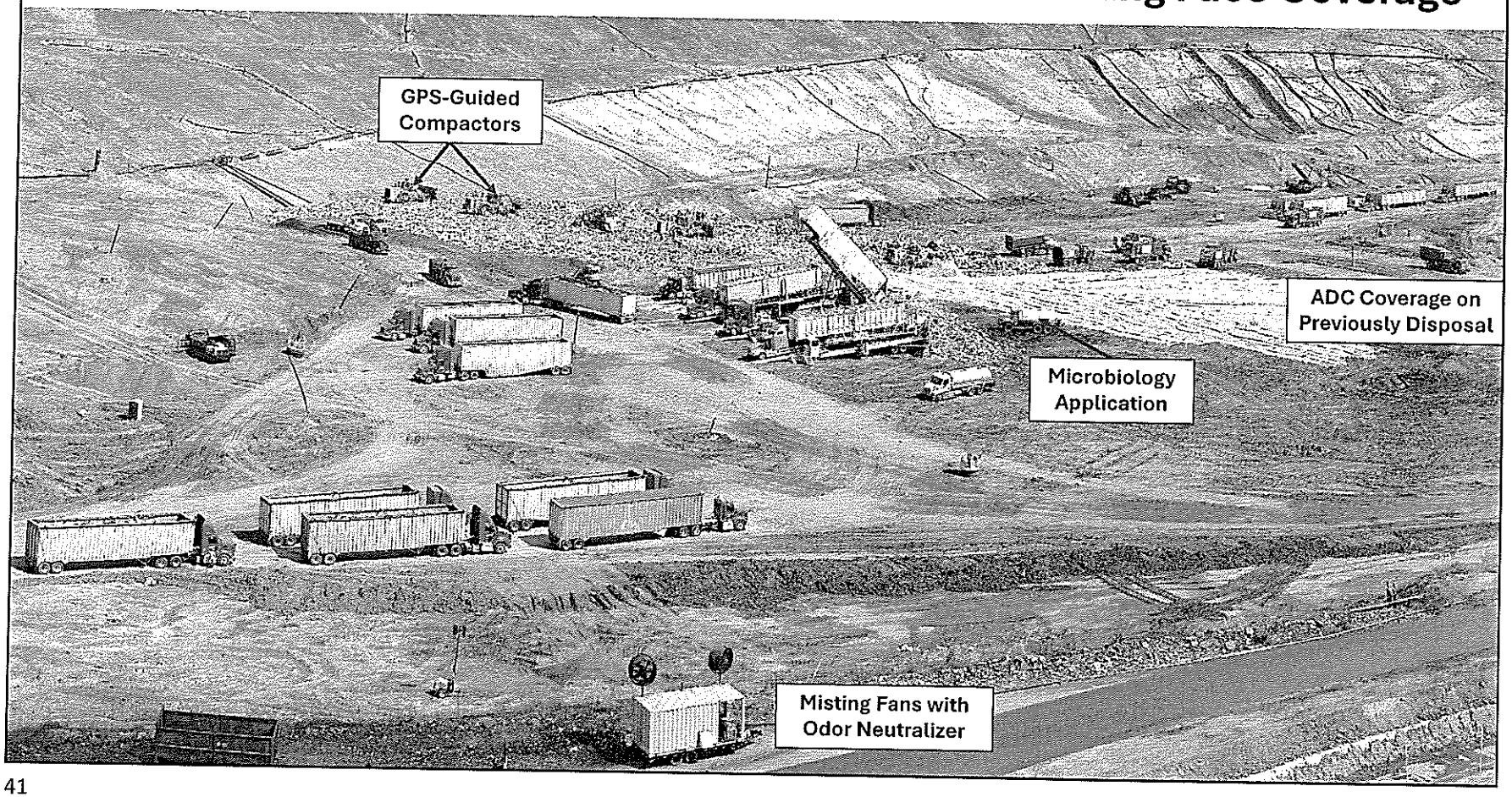
Installation of ExWON System on Republic Compactors at Sunshine Canyon Landfill (April 8, 2026)



Installation on Nine (9) Compactors
4 to 5 Compactors Operating at Any One Time
(Utilizing GPS Tracking / Analysis)

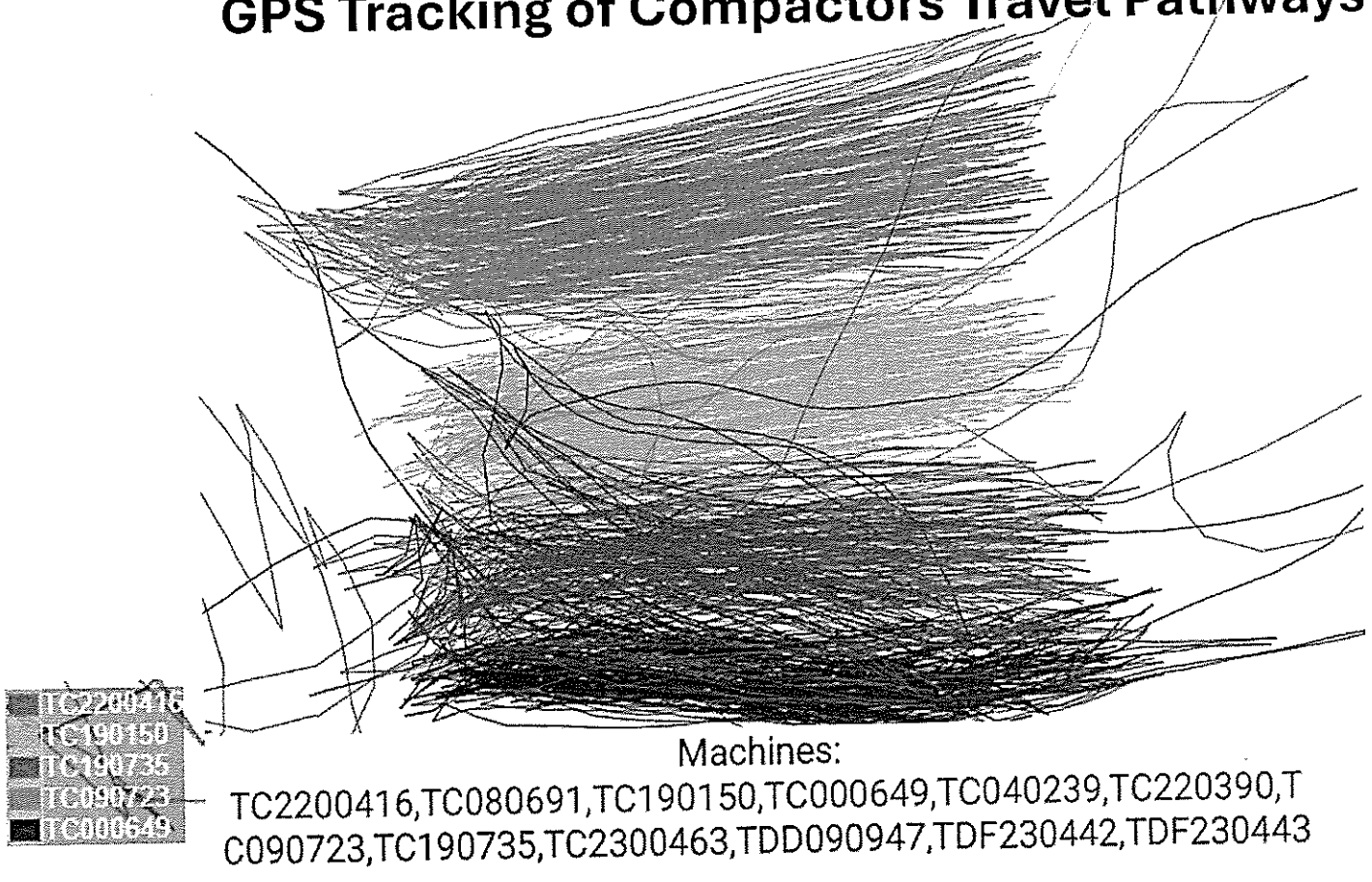
40

GPS-Guided Compactors Optimized for Fastest Working Face Coverage



41

GPS Tracking of Compactors Travel Pathways

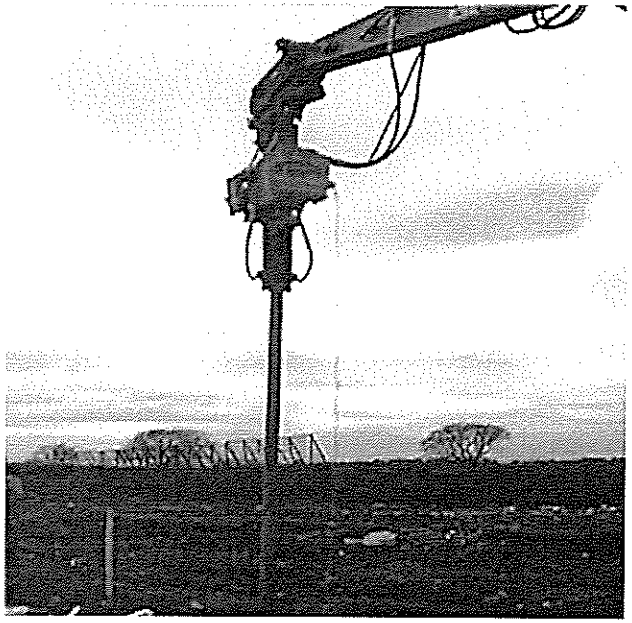


Machines:

TC2200416,TC080691,TC190150,TC000649,TC040239,TC220390,TC090723,TC190735,TC2300463,TDD090947,TDF230442,TDF230443

42

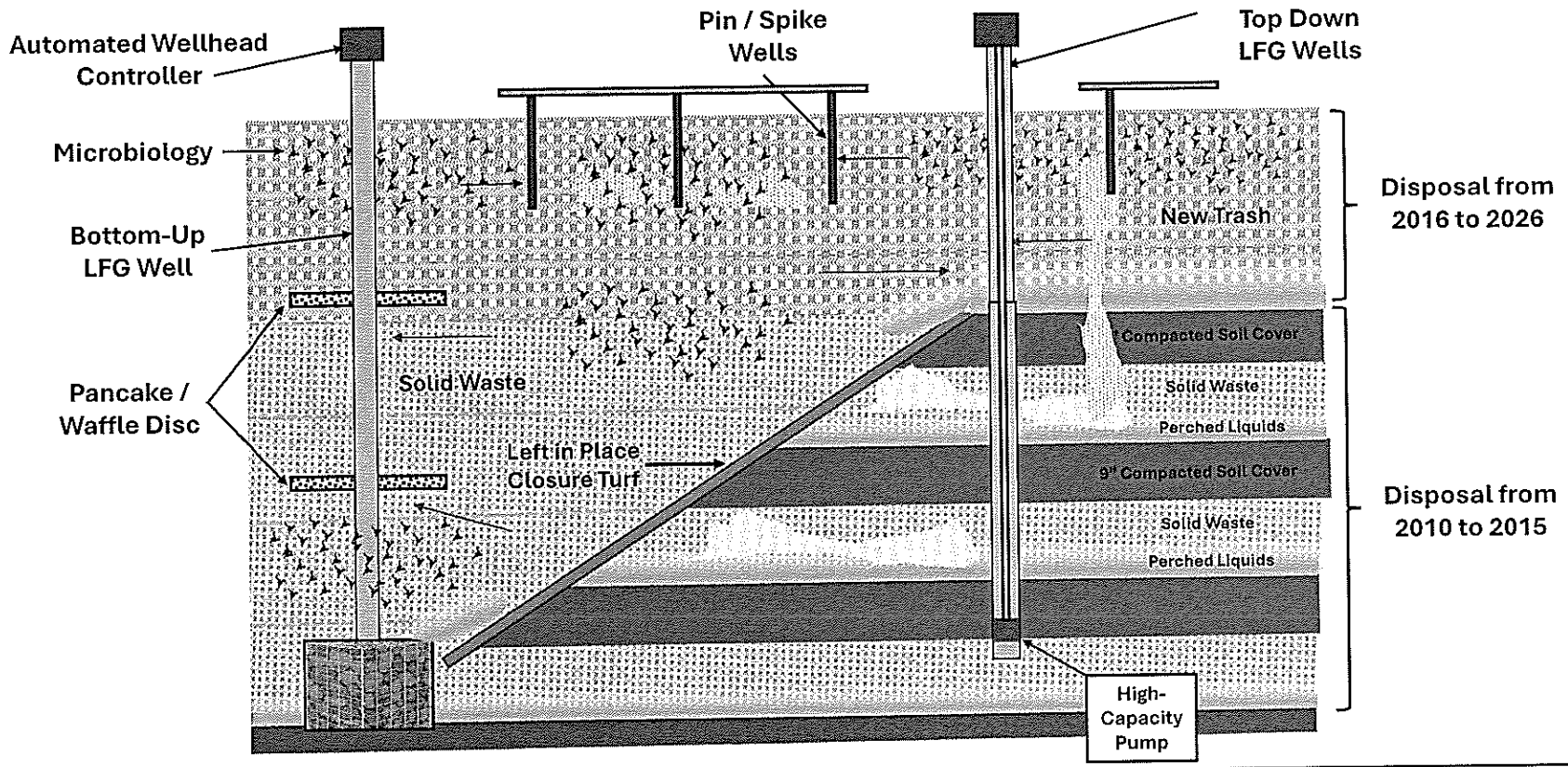
Landfill Pin Wells (Shallow Depth Trash Odor)



Landfill pin wells are a specialized, low-cost extraction method used to capture landfill gas (LFG) and manage surface emissions, particularly in active or temporarily capped areas.

Unlike permanent vertical wells that require heavy drilling rigs, pin wells are often installed by driving a hollow rod or "pin" into the waste mass to create an opening for a perforated pipe.

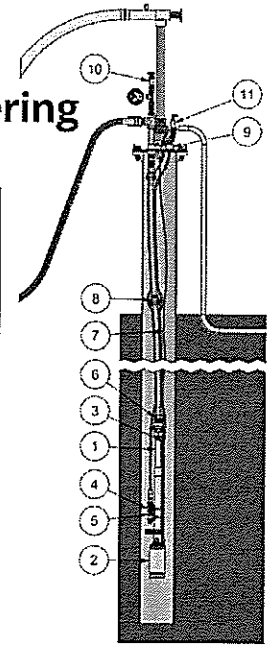
CROSS SECTION OF LANDFLL WITH MITIGATION MEASURES

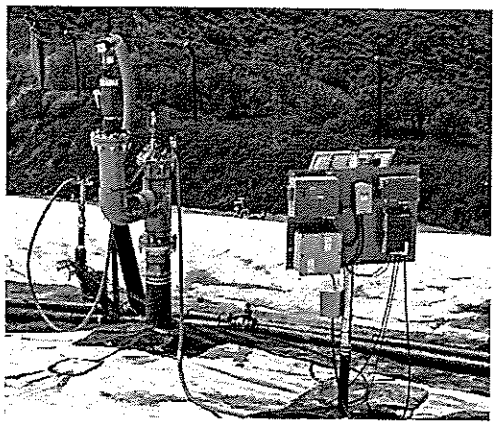


Automated Landfill Gas Well Dewatering

Gas Well Dewatering

1	HRE Pump End
2	ECDRIVE HRE
3	Motor Cable with Plug
4	Liquid Level Sensor
5	Vibra Damper Kit
6	Knock-Out
7	Stainless Steel Safety Rope
8	Camlock
9	Well Head
10	Liquid Pressure Sensor
11	Liquid Pressure/Vacuum Sensor

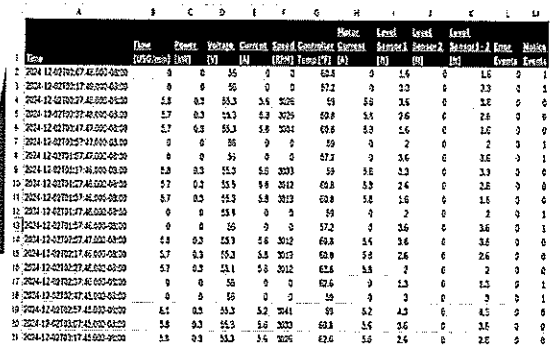




LORENTZ

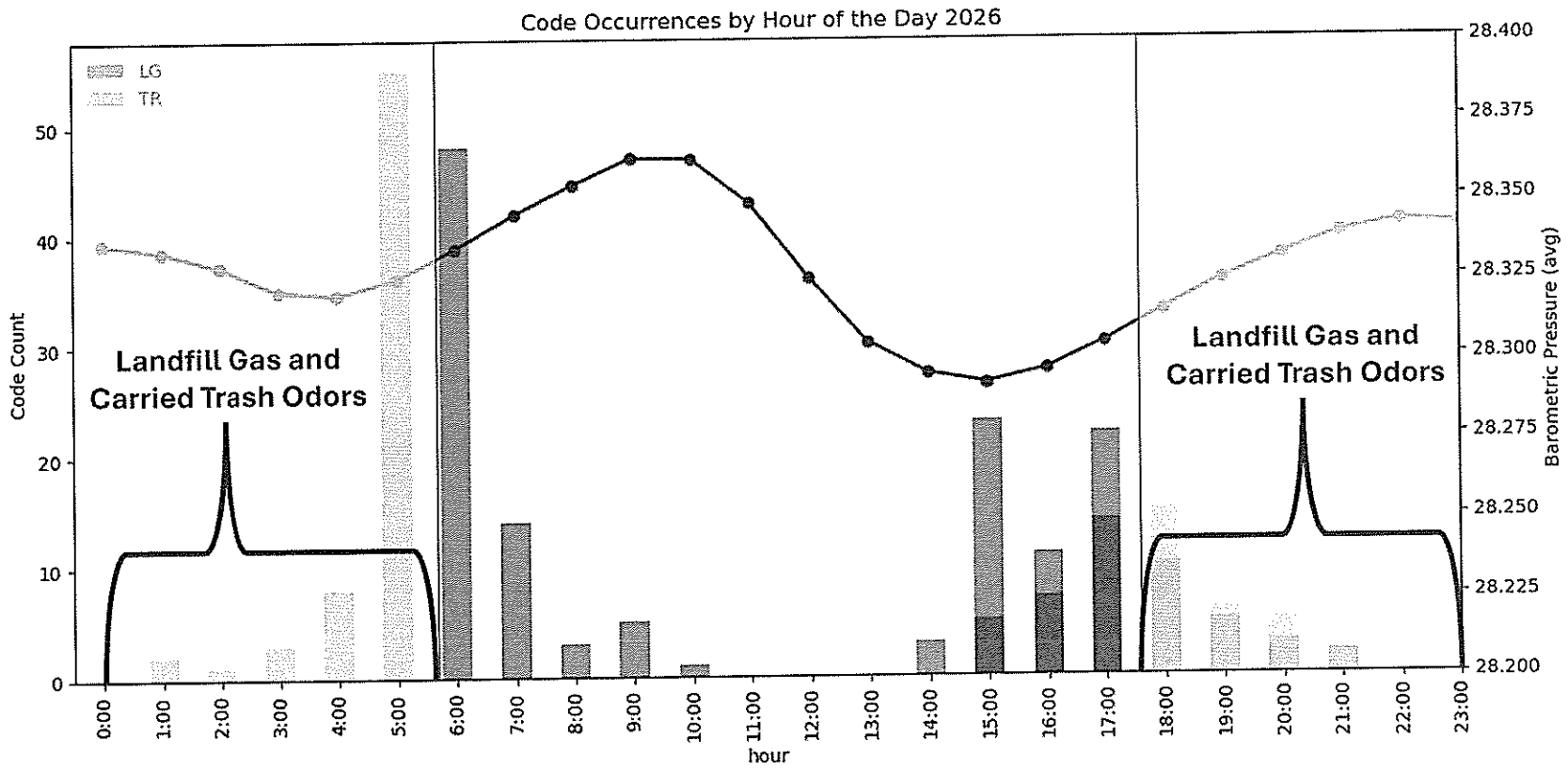
Benefits:

- Positive Displacement
- High Volume
  - Up to 26 Gallons/Minute
- Viscous Liquids
- Automated Pump Controller
  - Liquid Level
  - Pressure
  - Liquid Temperature
  - Flow
- Real Time Data



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Time	Date [US/Chicago]	Elapsed [HH]	Voltage [V]	Current [A]	Speed [RPM]	Controller Temp [°F]	Motor Current [A]	Level Sensor 1 [ft]	Level Sensor 2 [ft]	Level Sensor 1 - 2 [ft]	Error Events	Motion Events
2	2024-12-02T03:47:42.000-05:00	0	0	55	0	0	62.6	0	1.6	0	1.6	0	1
3	2024-12-02T03:17:00.000-05:00	0	0	55	0	0	57.2	0	3.3	0	3.3	0	1
4	2024-12-02T02:47:42.000-05:00	0.5	0.5	55.3	3.5	3026	59	5.6	3.5	0	3.5	0	0
5	2024-12-02T02:17:42.000-05:00	0.7	0.2	55.3	5.8	3025	60.8	5.5	2.6	0	2.6	0	0
6	2024-12-02T01:47:42.000-05:00	0.7	0.0	55.3	5.8	3024	60.6	5.8	1.6	0	1.6	0	0
7	2024-12-02T01:17:42.000-05:00	0	0	55	0	0	59	0	2	0	2	0	1
8	2024-12-02T00:47:42.000-05:00	0	0	55	0	0	57.2	0	3.6	0	3.6	0	1
9	2024-12-02T00:17:42.000-05:00	0.5	0.5	55.3	5.5	3023	59	5.5	3.3	0	3.3	0	0
10	2024-12-01T23:47:42.000-05:00	0.7	0.2	55.5	5.8	3022	60.8	5.8	2.6	0	2.6	0	0
11	2024-12-01T23:17:42.000-05:00	0.7	0.0	55.3	5.8	3023	60.8	5.8	1.6	0	1.6	0	0
12	2024-12-01T22:47:42.000-05:00	0	0	55.5	0	0	59	0	2	0	2	0	1
13	2024-12-01T22:17:42.000-05:00	0	0	55	0	0	57.2	0	3.6	0	3.6	0	1
14	2024-12-01T21:47:42.000-05:00	0.5	0.5	55.3	5.6	3022	59.5	5.6	3.6	0	3.6	0	0
15	2024-12-01T21:17:42.000-05:00	0.7	0.2	55.3	5.8	3023	60.8	5.8	2.6	0	2.6	0	0
16	2024-12-01T20:47:42.000-05:00	0.7	0.0	55.1	5.8	3022	60.6	5.8	2	0	2	0	0
17	2024-12-01T20:17:42.000-05:00	0	0	55	0	0	62.6	0	1.3	0	1.3	0	1
18	2024-12-01T19:47:42.000-05:00	0	0	55	0	0	59	0	3	0	3	0	1
19	2024-12-01T19:17:42.000-05:00	0.5	0.5	55.3	5.2	3041	59	5.2	4.3	0	4.3	0	0
20	2024-12-01T18:47:42.000-05:00	0.5	0.5	55.3	5.6	3020	60.8	5.6	3.6	0	3.6	0	0
21	2024-12-01T18:17:42.000-05:00	0.5	0.5	55.3	5.6	3026	62.6	5.6	2.6	0	2.6	0	0

Number of Complaints and Type of Odor vs Time of Day (2026)



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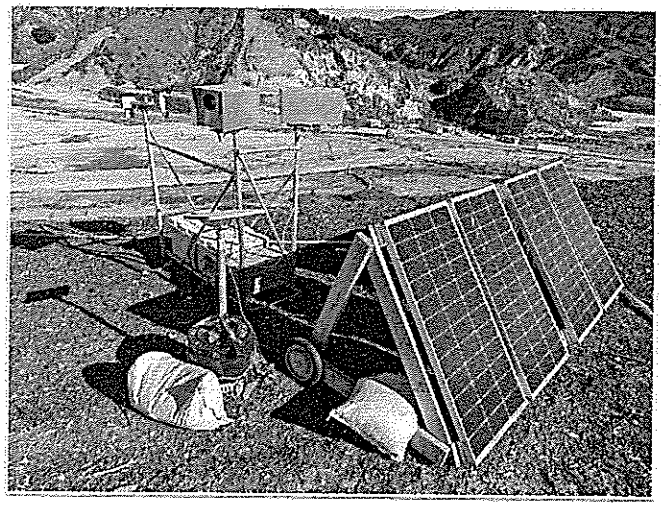
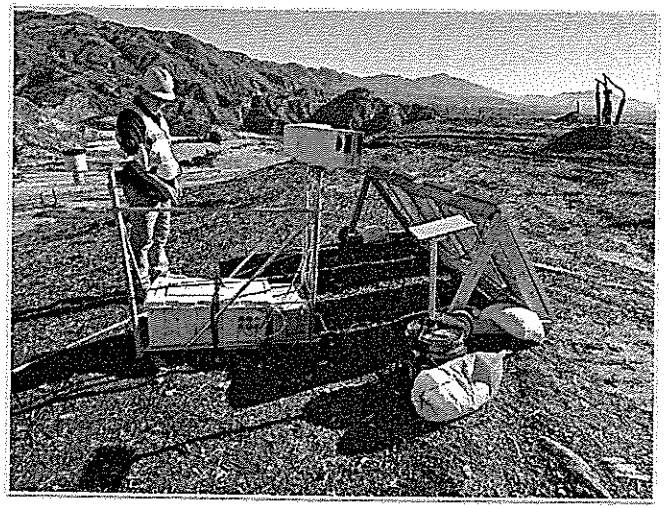
TrelliSense Sensor

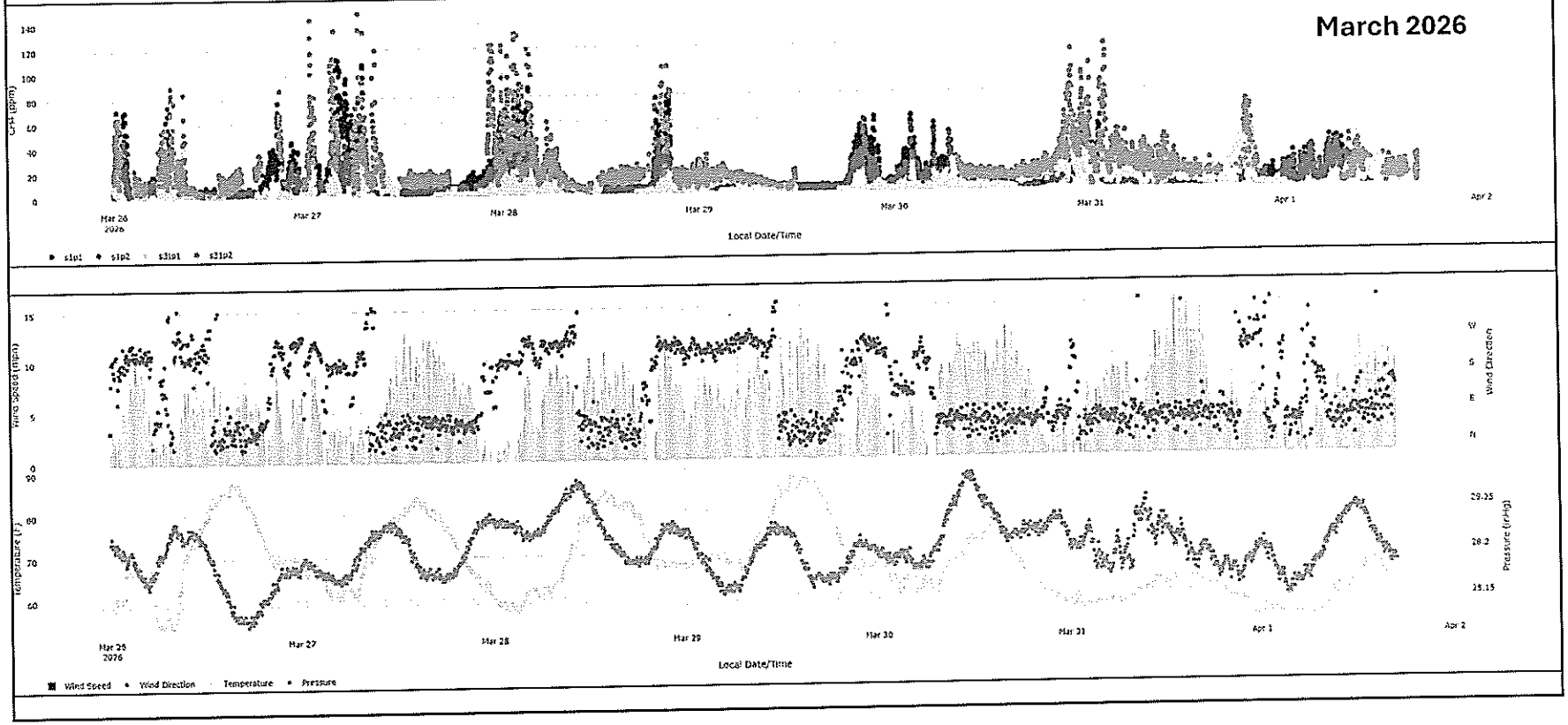


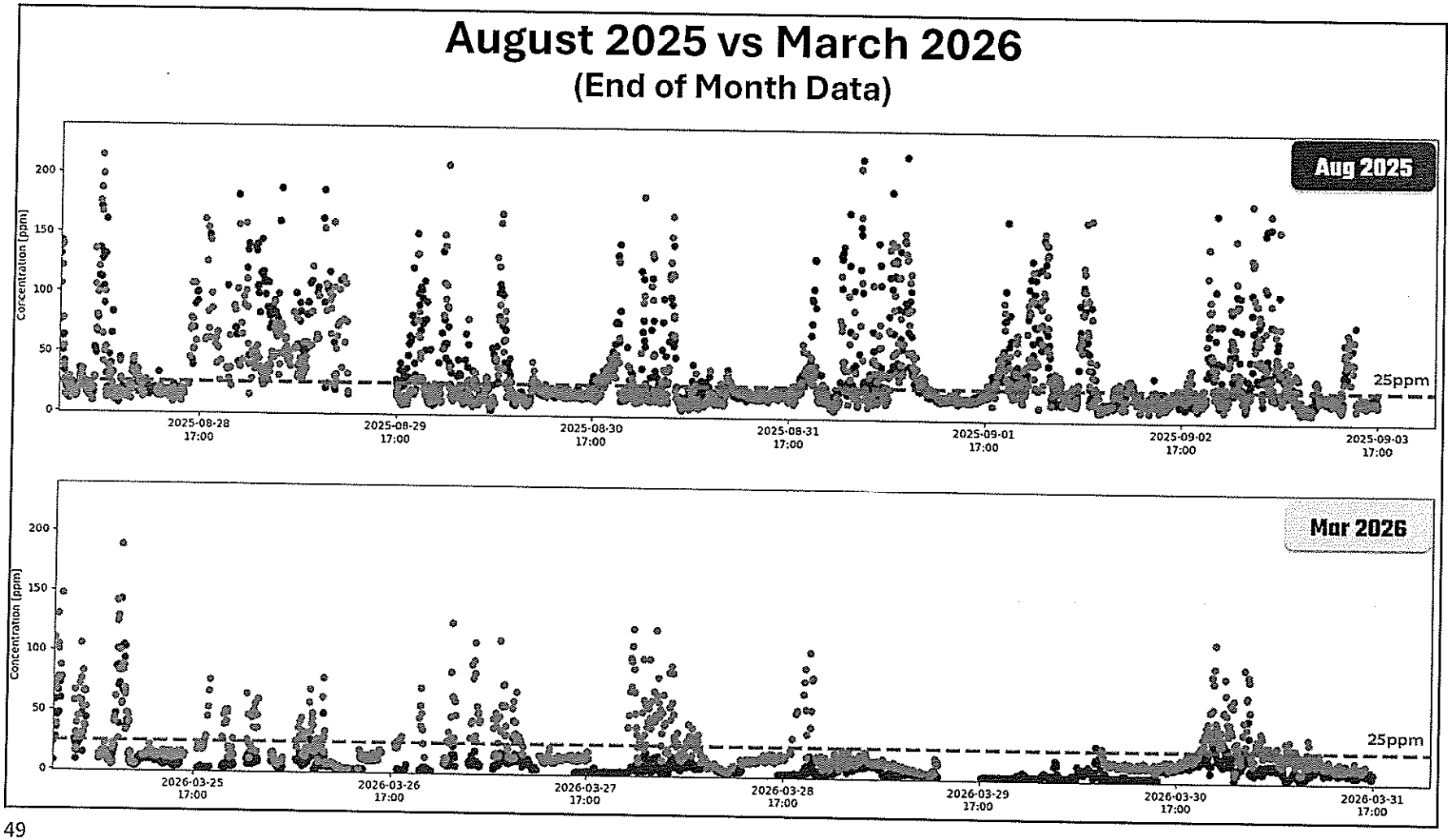


TRELLISENSE

LFG Emissions Across Hydroseeding Area

Example of TrelliSense LIDAR Data (Independent SCL LEA/SCAQMD Measurements)



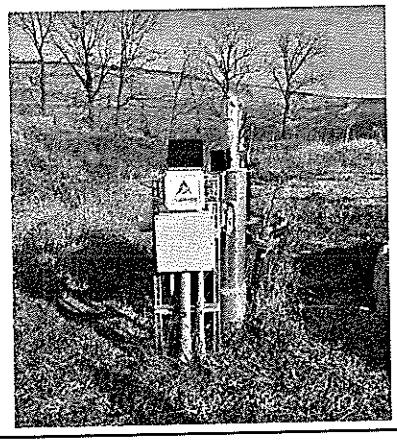

August 2025 vs March 2026
(End of Month Data)
Aug 2025
Concentration (ppm)
200
150
100
50
0
25ppm
2025-08-28 17:00
2025-08-29 17:00
2025-08-30 17:00
2025-08-31 17:00
2025-09-01 17:00
2025-09-02 17:00
2025-09-03 17:00
Mar 2026
Concentration (ppm)
200
150
100
50
0
25ppm
2026-03-25 17:00
2026-03-26 17:00
2026-03-27 17:00
2026-03-28 17:00
2026-03-29 17:00
2026-03-30 17:00
2026-03-31 17:00

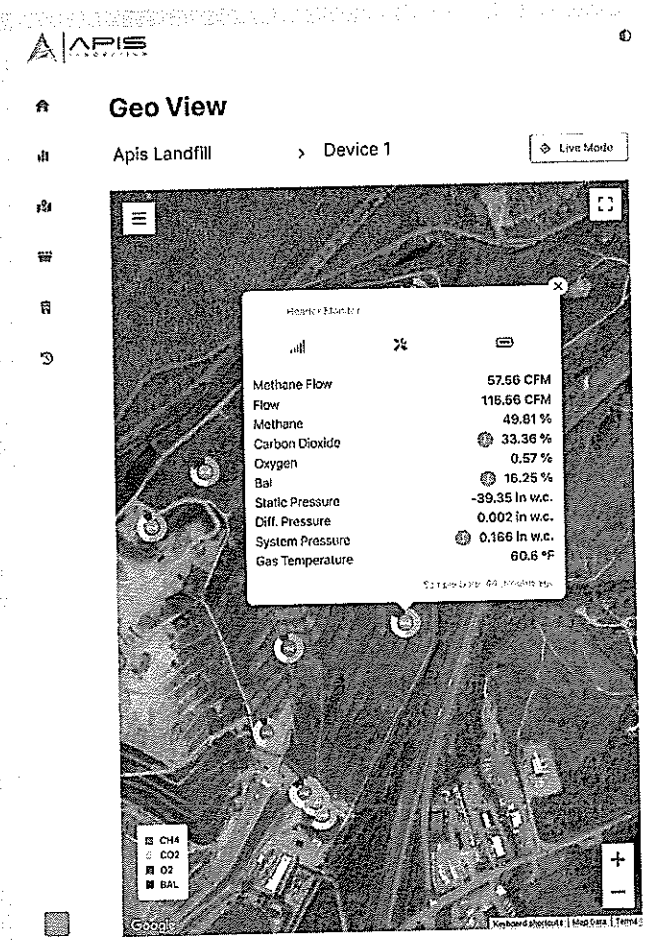
Evaluating Automated LFG Monitoring and LFG Well Tuning

INNOVATION

APIS Innovation Automated Landfill Gas Management System

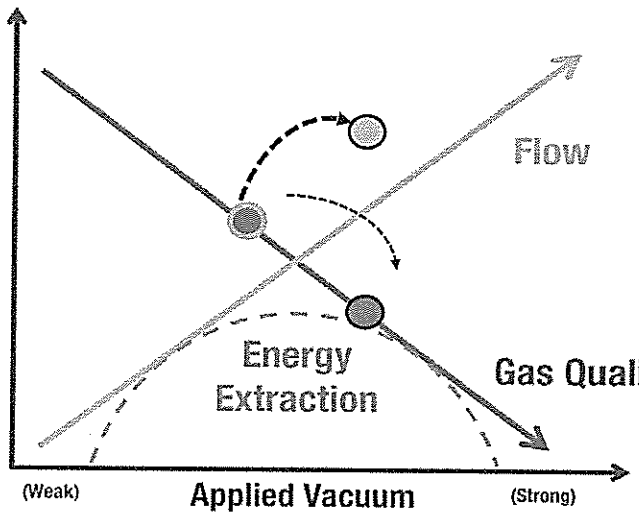
Up to 24 Adjustments per Day (Tuning of Wellhead)





Operational Focus of the LFG Collection System

Typical Well Behavior



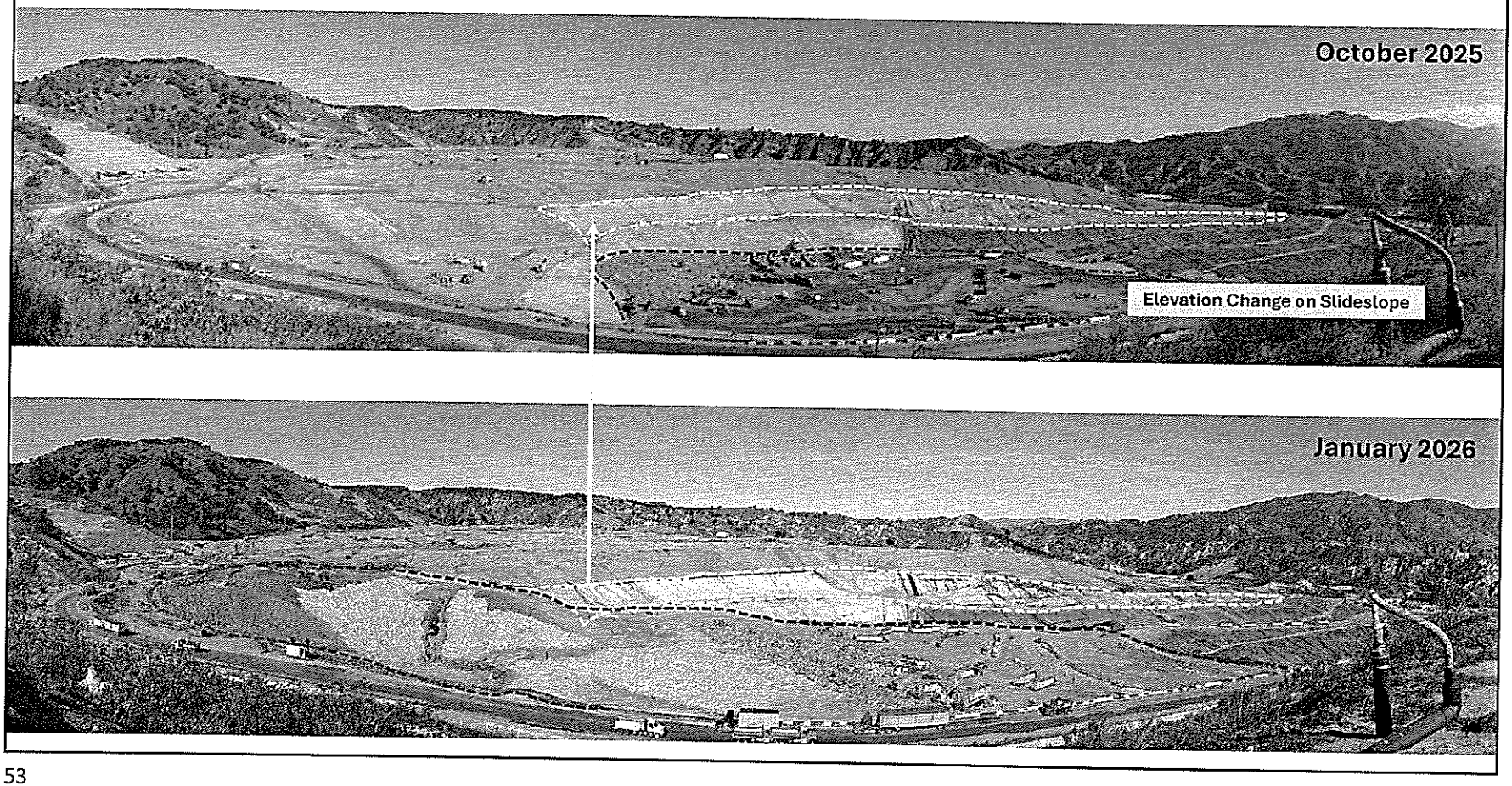
INNOVATION

Algorithm Update: Odor-Prioritized Tuning During Temperature and Barometric Pressure Events		
Aspect	**Default Tuning Profile**	**UPDATED Tuning Profile**
Primary objective	Maximize methane-rich flow (CH_4 flow)	Maximize total LFG flow, with odor control weighted ahead of CH_4 concentration
Parameter handling	Tuned toward CH_4 yield; other parameters bounded by limits	All parameters steered toward target ranges that act as guides for the algorithm
O_2 intrusion & wellhead vacuum	Maintained as operating limits	Unchanged — Maintained as operating limits and constraints across every installed well
Sampling & valve-tuning cadence	Standard cadence across the day	Standard cadence during the day; increased cadence overnight, with further increase during significant barometric pressure and temperature changes

CHANGE CONTROL ALGORITHM

Hydroseeding with Microbiology for Erosion Control and BioFiltration, and Increased Impermeability of Intermediate Landfill Cover (December 2025)

Filling Up Against the Sideslopes



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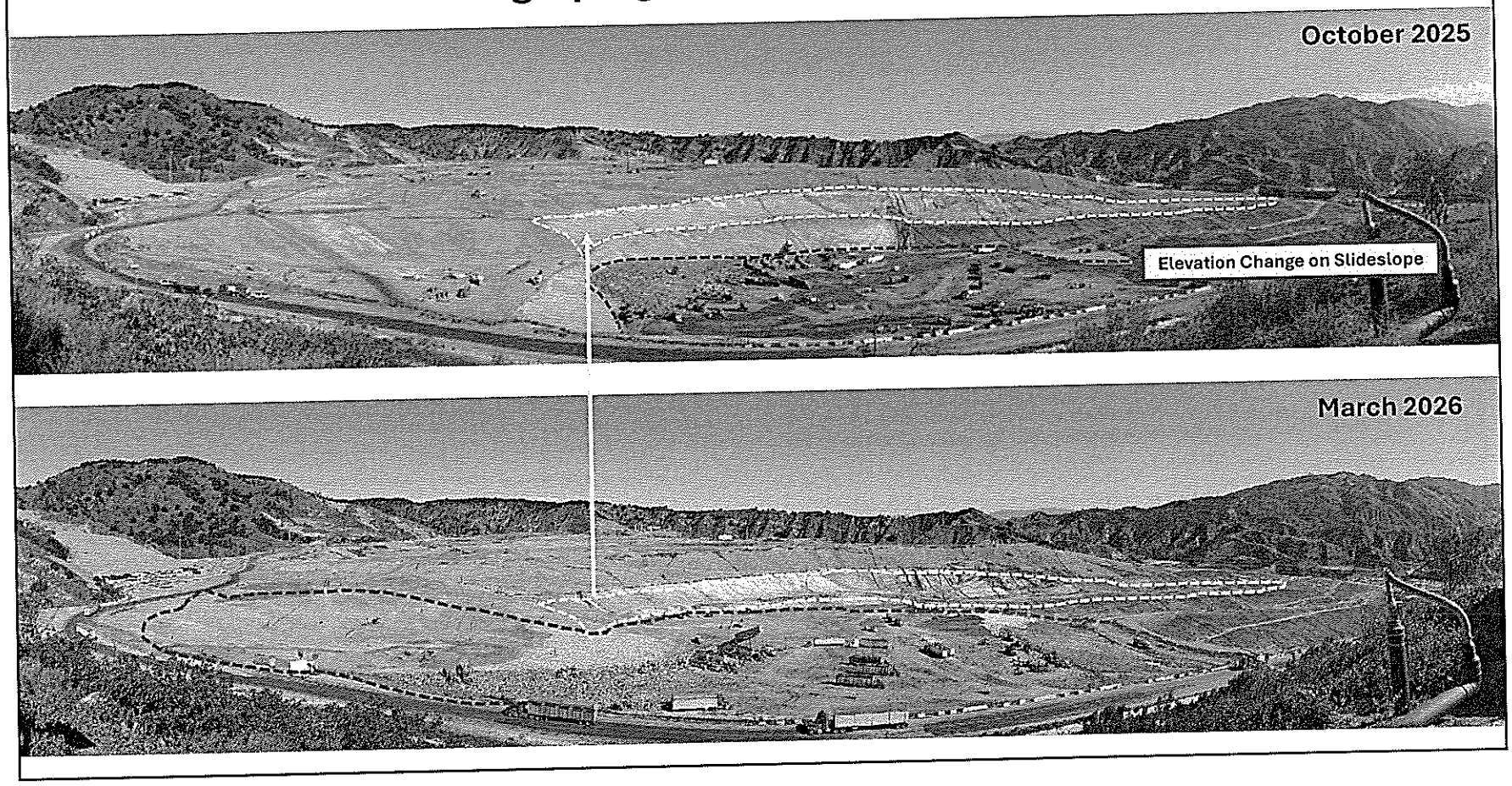
Filling Up Against the Sideslopes



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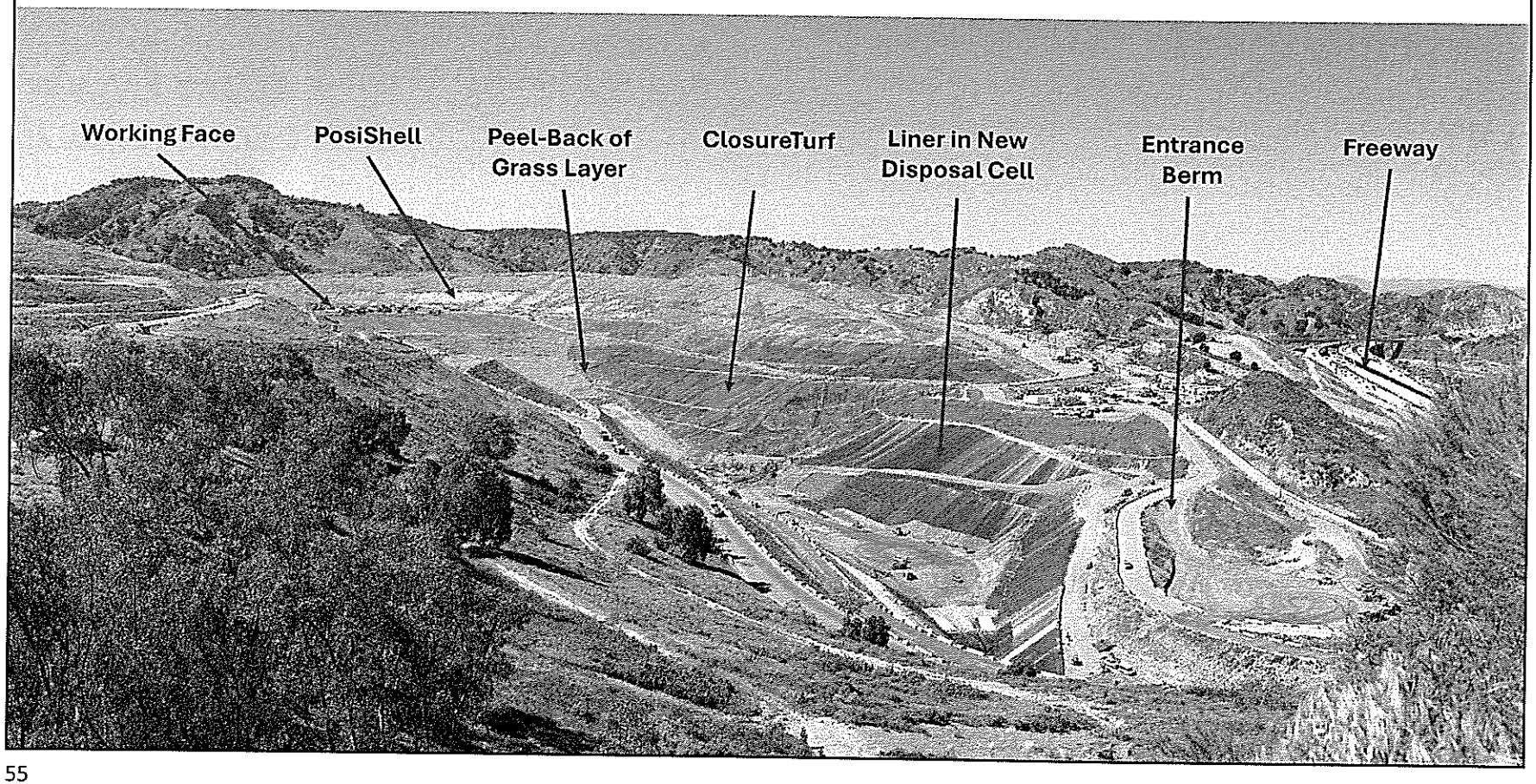
Closeup View From Bluff (Looking West) March 2026



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Drone Flyover December 2025

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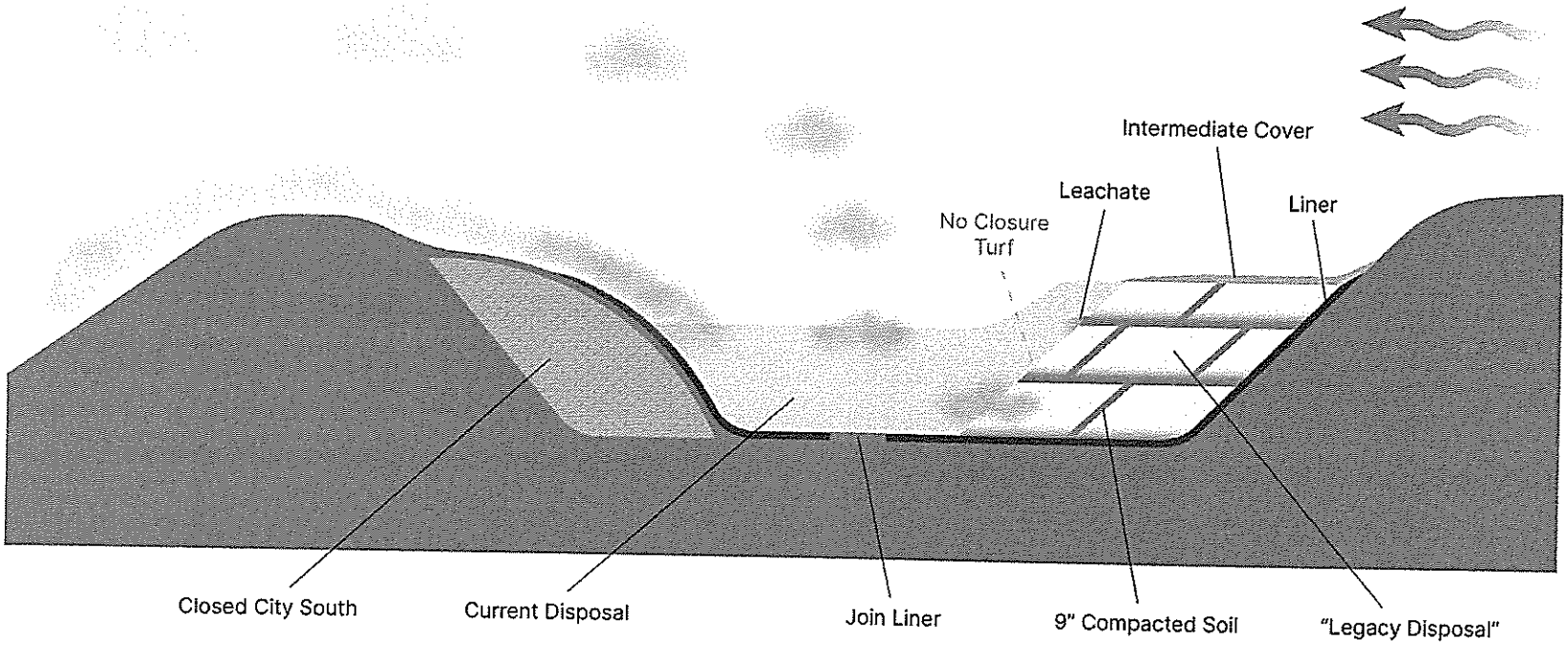
SCAQMD Abatement Order
SMOKE TEST



Smoke Test in New Disposal Cell (Cdtn 17)

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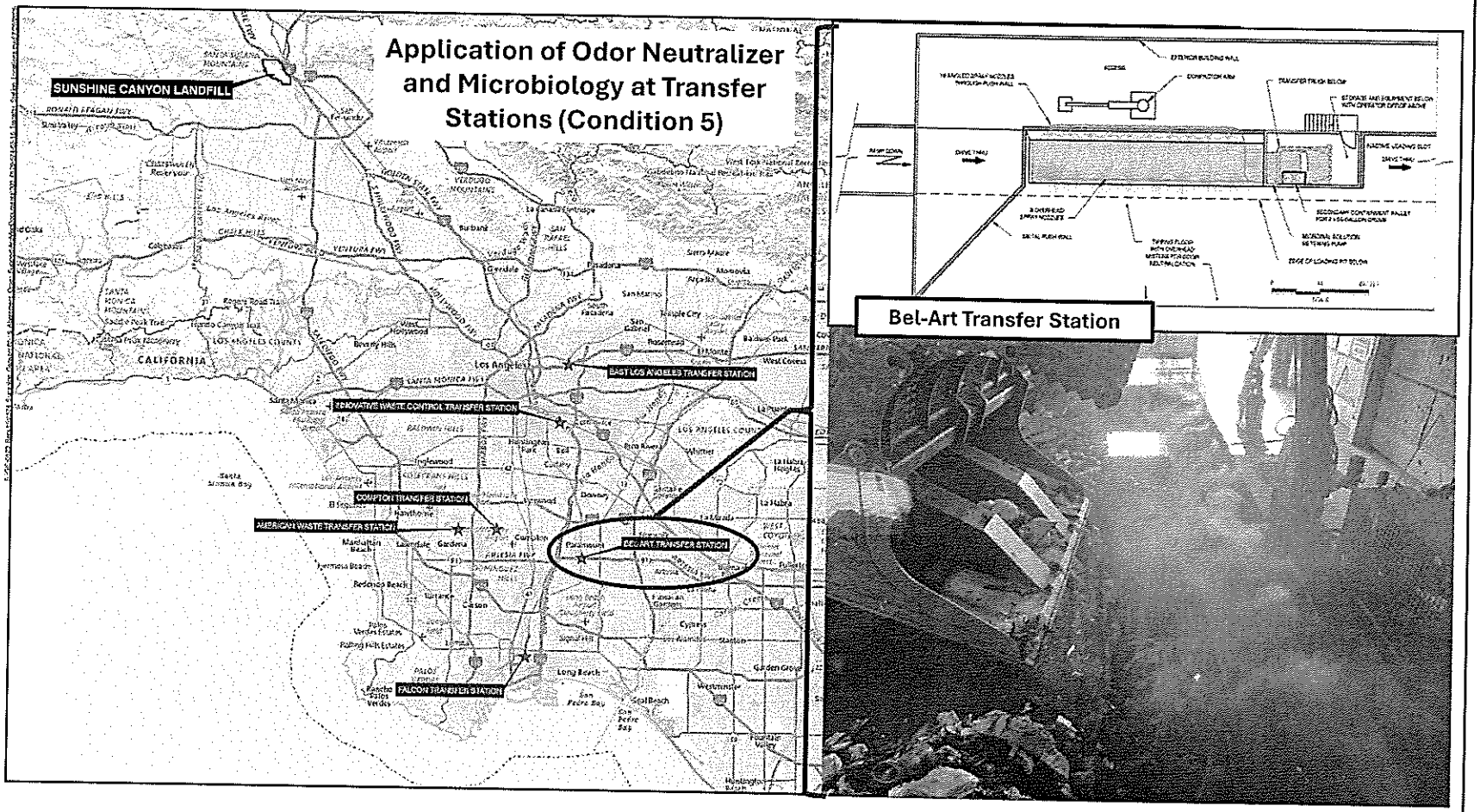
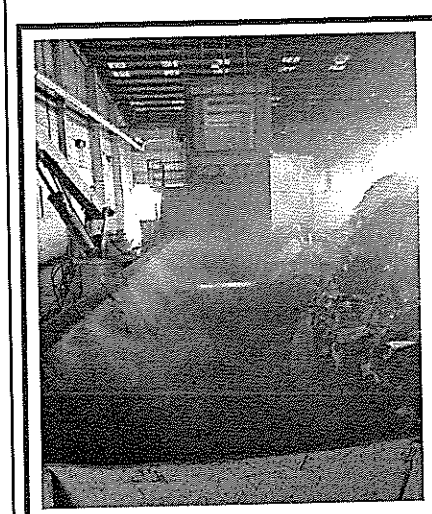
Application of Odor Neutralizer and Microbiology at Transfer Stations (Condition 5)

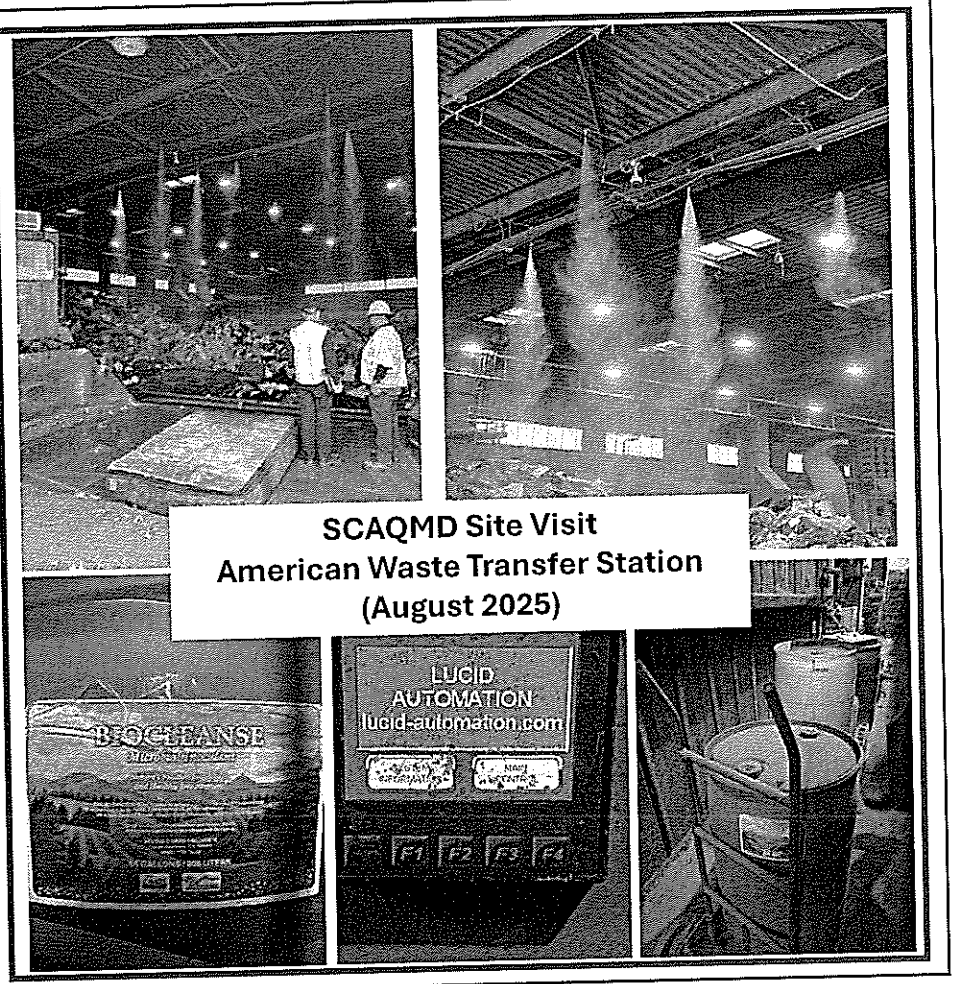


SCAQMD and SCL LEA Site Visits to Republic Owned and Operated Transfer Stations (Condition 5)



Bel Art Transfer Station

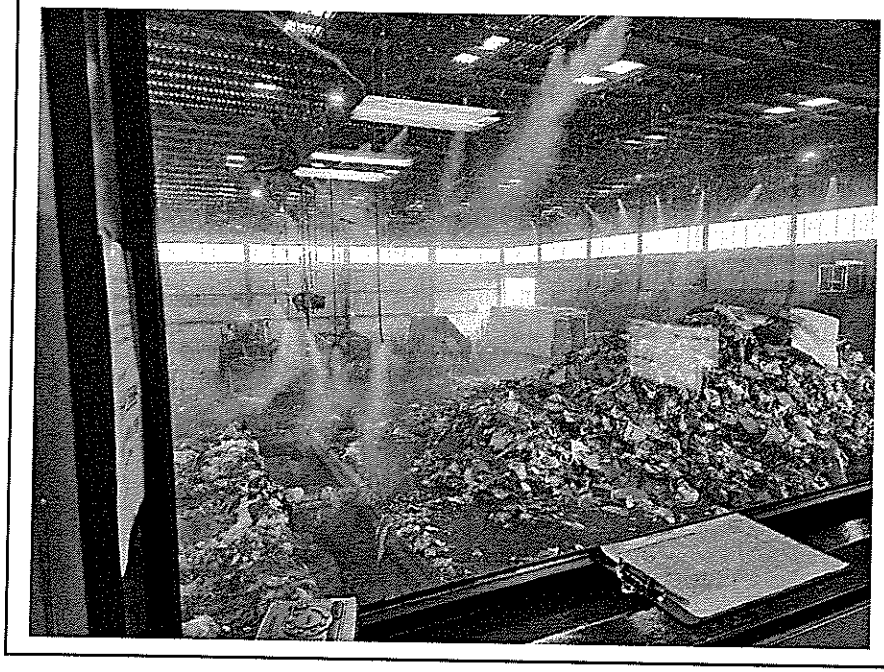
Falcon Transfer Station

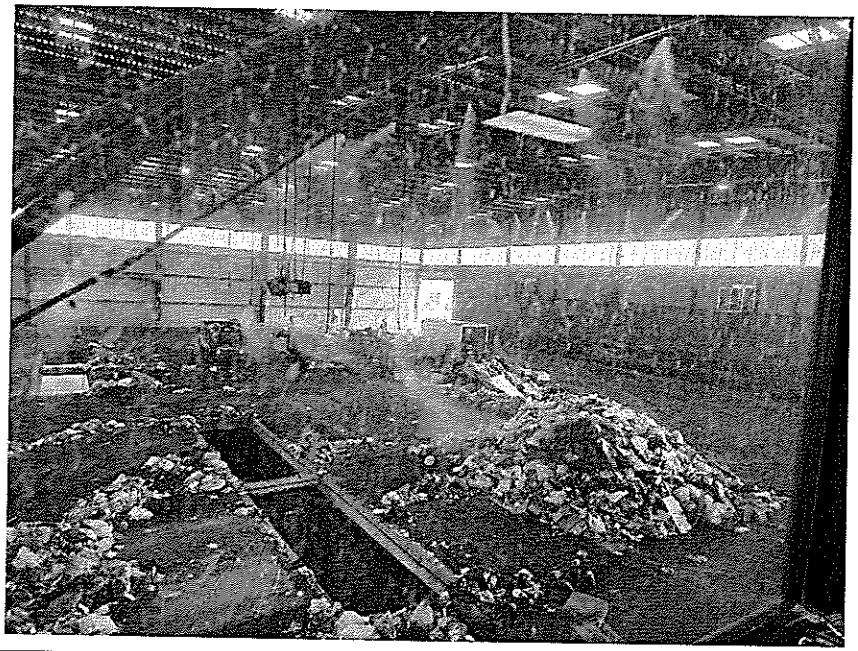


SCAQMD Site Visit
American Waste Transfer Station
(August 2025)

City of Los Angeles CLARTS Facility

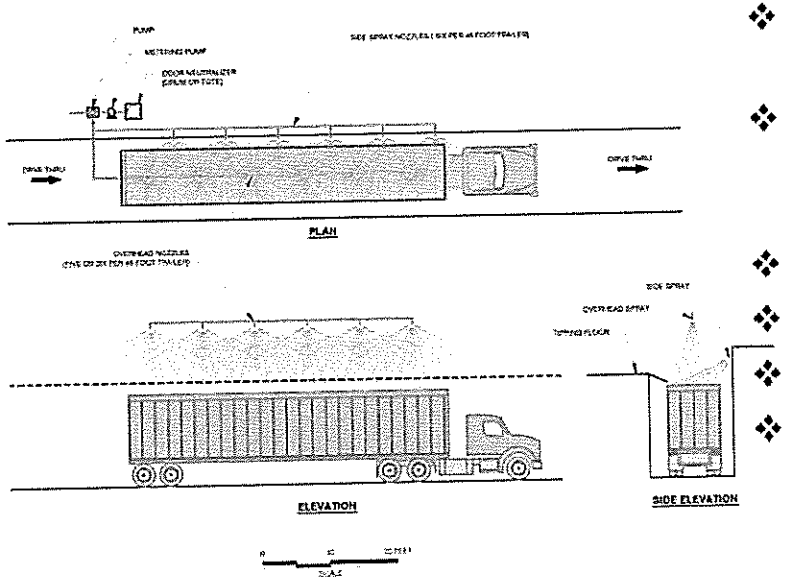
- SCL LEA Discussion with LASAN and CLARTS Facility Management (January 26, 2026)
- Existing Chemical Misting System with Odor Neutralizer Used to Suppress Facility Dust/Odors
- Facility to be Supplemented with Additional Microbiology-Based formulation to Treat MSW





Ideal Loading Pit Spray System

Weaver Consultants Group



- Overhead and side spray
- 8' - 10' nozzle spacing
  - 5 or 6 nozzles per 48' trailer
- Product storage
  - Drums (55-gallon)
  - Totes (250/275-gallon)
- Product metering pump
- Water booster pump
- Hydraulic hose/rigid piping
- Spray nozzles
  - Full circle
  - Half circle, etc.

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Incorporates Most Recent Landfill Odor Research Findings

Optimum Strategy for Working Face Odors:

Use of Non-Removable ADC in Conjunction with Compost and/or Odor Masking/Neutralizing Agents (SWANA Applied Research Foundation (2023))

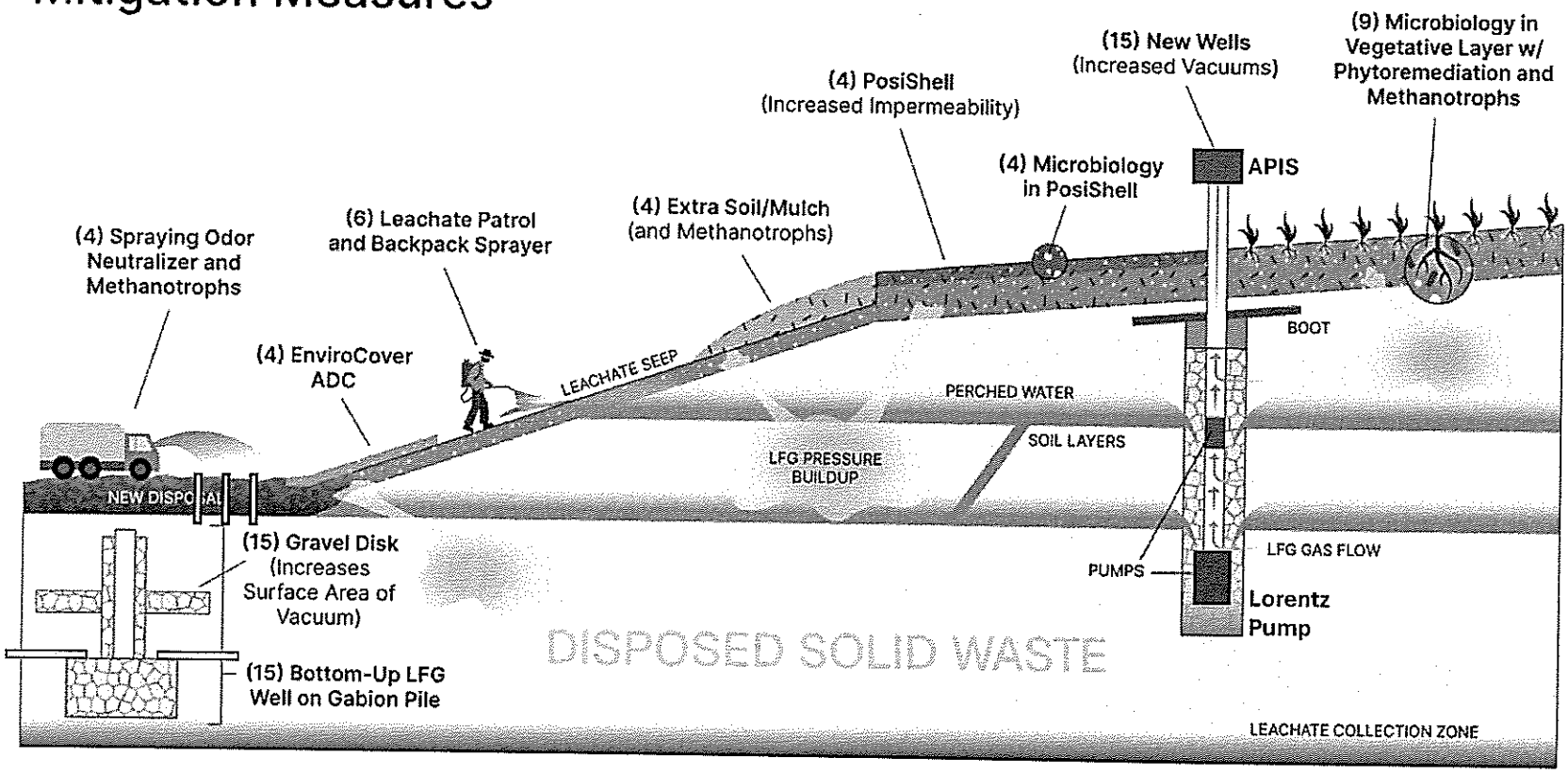
- Solid Waste Association of North America (SWANA) concluded Alternative Daily Cover (ADC) has significant impact on reducing odors
  - Compost as ADC
  - Renewable/Replaceable Tarps and Non-Removable ADC Films
  - Odor Neutralizers (To Eliminate Odors), Sprays and Foams
- EPA White Papers Series (2024)
  - Solid Waste Landfills – Advancements in Technology and Operating Practices
    - Real Time Data Analytics and Controllers (e.g., LFG Wellheads, LFG Well Pumps, etc.)
    - Expanded Monitoring and Evaluation Techniques
    - Utilization of Microbiology (Methanotrophs and Phytoremediation)

Critical Key: Infrastructure Change to Reduce Organics Disposal

Summary of Abatement Order Modifications

- Expands Proven Complementary Mitigation Measures
- Focus on Increasing LFG collection
  - Address the Underestimated Long-Term "Legacy Damage", e.g., (>300 Pumps)
  - Dewatering LFG Wells / Replacing LFG Wells
  - Installing High-Capacity Liquid Pumps
  - Change Industry / Regulatory Focus on LFG Quality (% Methane) to Focus on Actual Collected Volume (SCFM) to Controlling Odor
  - Automated Wellhead Controllers (Real-Time Control at Night)
  - Installing "Pin Wells" (Control LFG in New Disposal Areas)
  - Installing Bottom-Up LFG Wells (with Pancake/Waffles)
  - Upgrading Landfill Cover (e.g., PosiShell, Microbiology, Hydroseeding, Compost, Mulch, Enhance Soil Thickness, and Combinations of Cover Enhancements
- Enhanced Monitoring and Evaluation
  - Automated LFG Wellhead Vacuum and Automated Liquids Pumping Monitoring
  - Monthly Aerial Drone Flyovers
  - Laser-Based Monitoring (Every 15 Seconds)
- Operational Staff and Contractor Training
  - Dedicated QA/QC Team (e.g., Leachate Seeps, Cover Integrity, Utilization of AI / GPS)

Overview of Key Abatement Order Mitigation Measures



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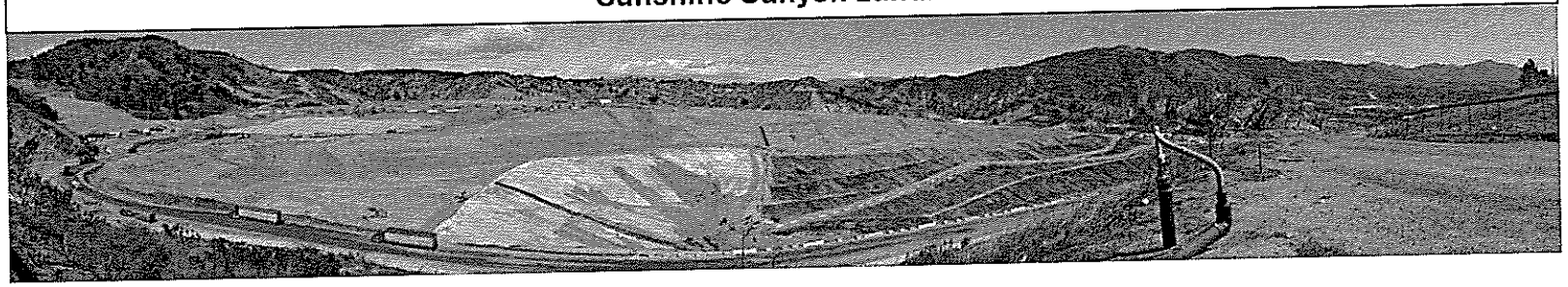
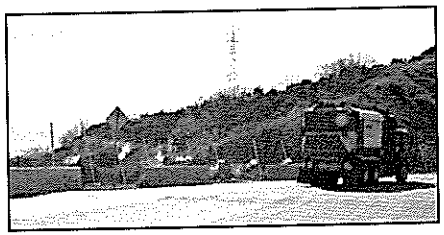
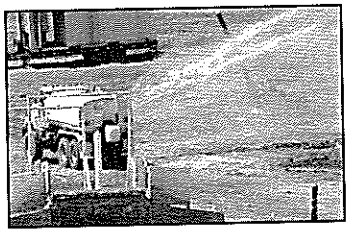
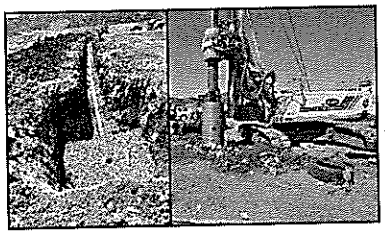
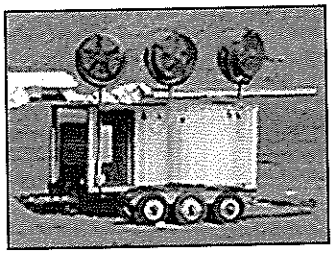
Sunshine Canyon Landfill

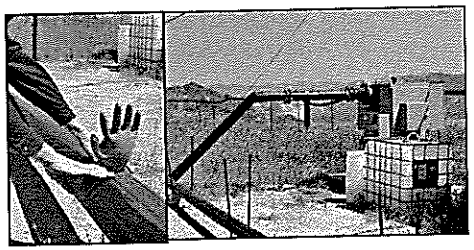


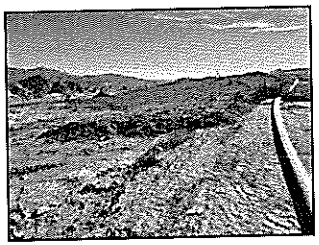












SUNSHINE CANYON LANDFILL
SCL - LEA
LOCAL ENFORCEMENT AGENCY

Sunshine Canyon Landfill Local Enforcement Agency

Questions...?

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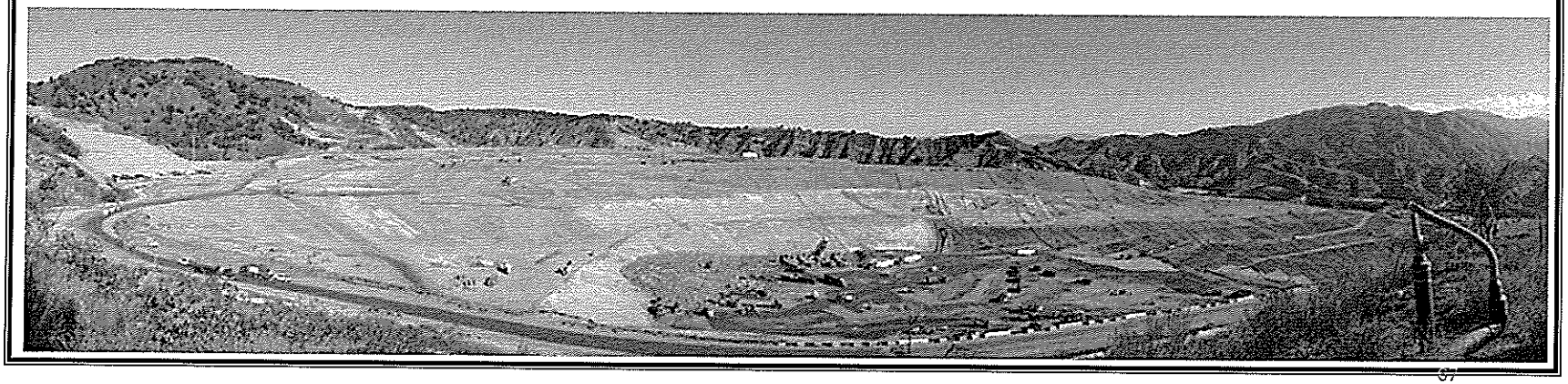

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