

Cal/EPA Integrated Waste Management Board

Newport Terrace Landfill (Continuous Gas Monitoring System)



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Newport Terrace/Gas Investigation CIWMB

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CIA 2

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Introduction

- Newport Terrace LF/Newport City Dump # 1 (1953 – 1967)
- Orange County LEA Requested Investigation Assistance
- CIWMB Performed Gas Investigation (Jul/01 – Dec/02)
- Field Results/System
- Instrumental Gas Migration Status (Structures)
- Determine Compliance of Facility Structures 20919.5(a)(1)

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Site Location

19th Street & Balboa Blvd,
Newport Beach, CA

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Site Location

NEWPORT BEACH

41-ACRE

COSTA MESA

CIA

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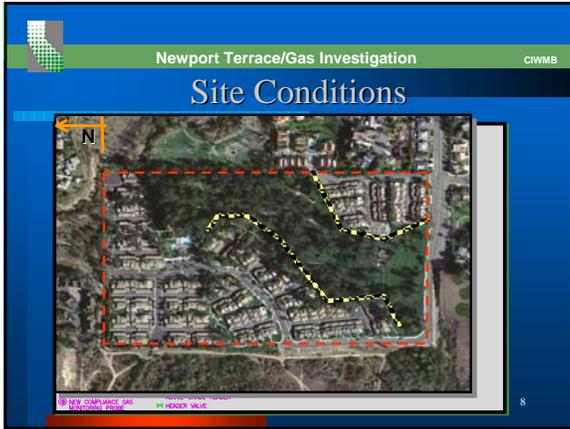
Background

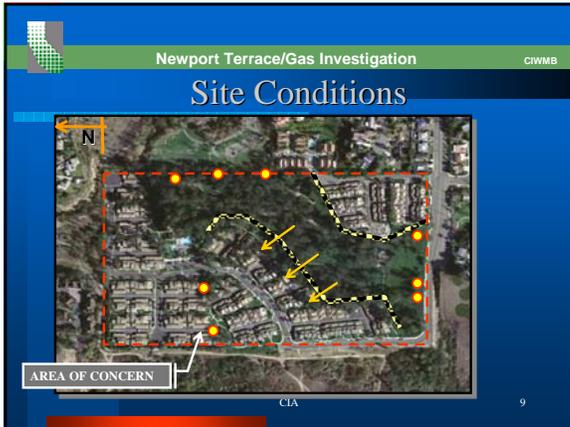
- 1953-1965 Site Utilized for Extraction Aggregate (Asphalt)
(Excavations Below WT)
- 1960-1967 Subsequently Utilized as Refuse Disposal
(Refuse Fill & Rubble Fill Areas)
- 1968-1972 Site Geology & Soil Investigations
- 1972-1975 Site Developed into Condominium Complex
 1. Sand Vent Barrier (1972)
 2. Gas Extraction System in Place (1975)

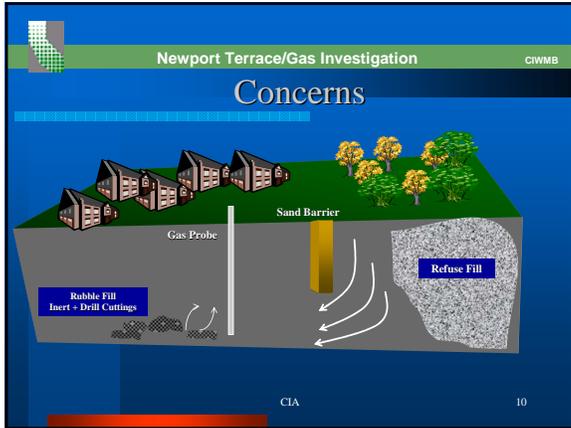
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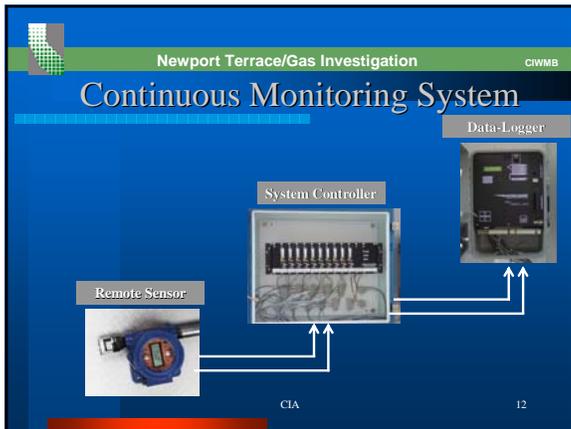








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- ### Gas Assessment
1. Structures Safety and Compliance w/Methane Gas Rule
 2. Assessment – Simulate Worst Case Scenario
 3. Statistically Valid Data = Continuous Monitoring System
- The list is labeled 'CIA' and '11' at the bottom.



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System Installation

1. Assess Structure Safety

2. Simulate Worst Case

3ft bgs

CH₄ from Landfill?

CH₄ from Drill Cuttings?

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Sensor Installation

SELECT LOCATION

MARK LOCATION

BOREHOLE

CIA

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Sensor Installation

SYSTEM SET UP

CONNECTION

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System Layout

10 Methane Sensors Installed
Area of Concern 2-acre
24x7 Monitoring Capability
No CH₄ Detected (18 Months)

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Areas Covered

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System Reports

Checked Time	Sensor 1 (ppm)	Sensor 2 (ppm)	Sensor 3 (ppm)
8/21/03 10:31:43	5.7795.02	1826.41	0.811
8/21/03 11:38:43	5.7795.02	1989.27	4.625
8/21/03 12:29:43	5.7795.02	2068.03	-154.2

CIA

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Conclusions/Determination

- Over 1,400 Data Points Collected Daily/Sensor – Reliable Statistical Analysis.
- No Gas Detected Above SMS – 18 Month Period
- System Reliable - Site Determined Safe with Respect to Gas Occurrences (2001)
- Determined that Engineered Fill underneath Condos - Stopping Gas Migrating into Surface (Structures)
- System Used as Assessment Tool –Dismantled and Made Available for Futures Projects (2002)

CIA 19

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Questions ?



CIA 20
