



Former  
Fort Ord,  
Monterey  
County,  
California

## Fort Ord Operable Unit 2 Landfills

Community Involvement Mobile Workshop, February 2, 2019

Technical Review Committee Meeting, February 5, 2019

Derek S. Lieberman, P.E.



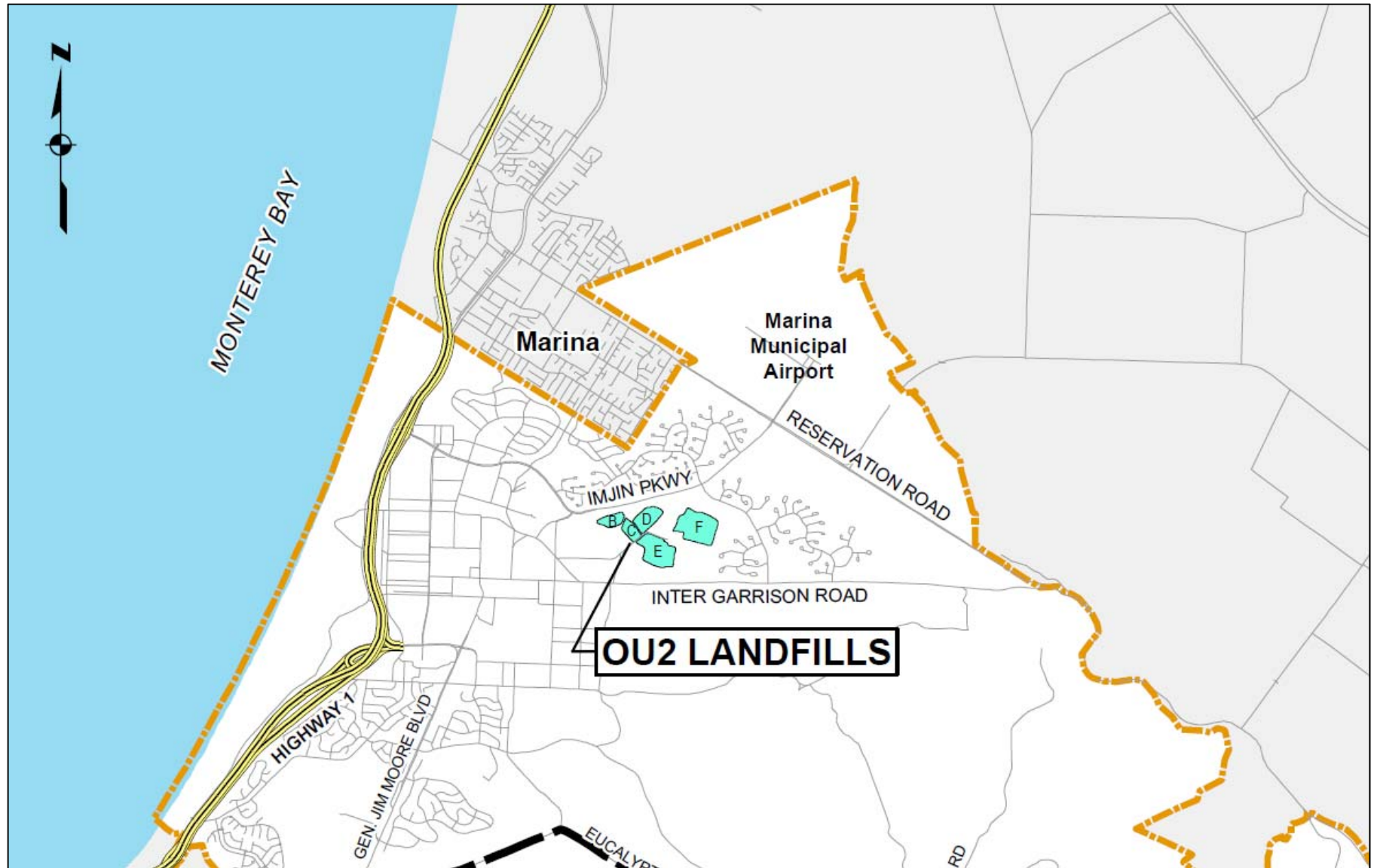
Eric Schmidt

# Fort Ord OU2 Landfills

- Used for residential and on-base waste disposal, 1956 to 1987
- Record of Decision 1994
  - Identifies the selected remedy for the Landfills as an engineered cover system
  - Agreement between the Army, U.S. Environmental Protection Agency (USEPA) and California EPA
- Engineered cover constructed in 3 phases
  - 1997 to 1998
  - 2002 to 2003
  - 2013
- Landfill incorporates soils from other Fort Ord remediation sites, placed under the engineered cover

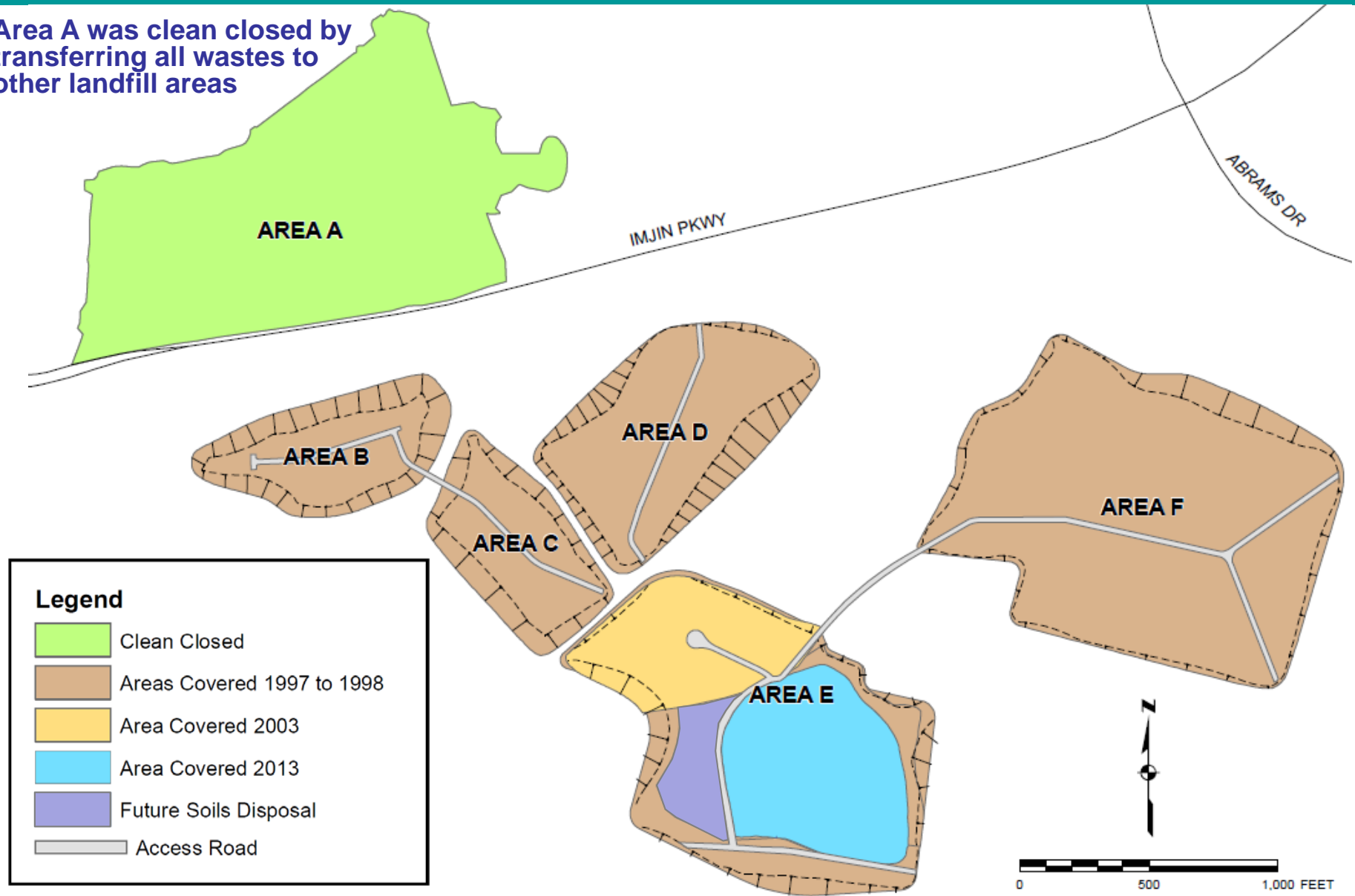


# Fort Ord OU2 Landfills Location



# Fort Ord OU2 Landfills Status

Area A was clean closed by transferring all wastes to other landfill areas

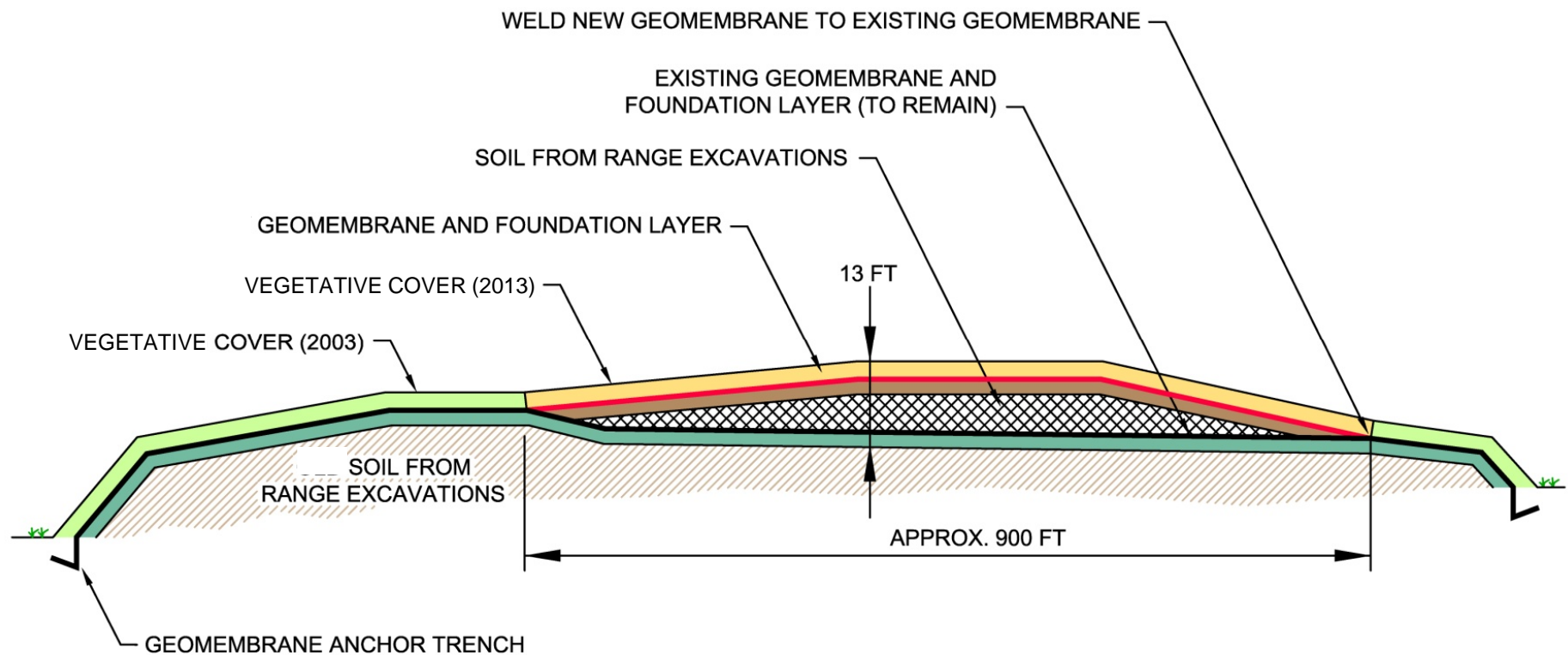




# Area E Cover Construction - 2003



# Area E Cover System Installed in 2013



2013 VEGETATIVE COVER  
2013 GEOMEMBRANE  
2013 FOUNDATION LAYER  
2013 SOIL FROM RANGE EXCAVATIONS

2003 VEGETATIVE COVER  
2003 GEOMEMBRANE  
2003 FOUNDATION LAYER  
2003 SOIL FROM RANGE EXCAVATIONS



# Covering Area E in 2013



Geomembrane  
factory inspection



Rolling out  
geomembrane



Joining geomembrane  
seams



Welding  
geomembrane seams



Placing vegetative  
cover soil



Hydroseeding  
with native seed

# Landfills Cover Maintenance



Area F vegetative cover erosion repairs



Area E concrete lined drainage ditch



# Landfills Cover Maintenance



Standard owl nest box installed at  
Area B

Owl nest box with raptor perches  
installed at Area B

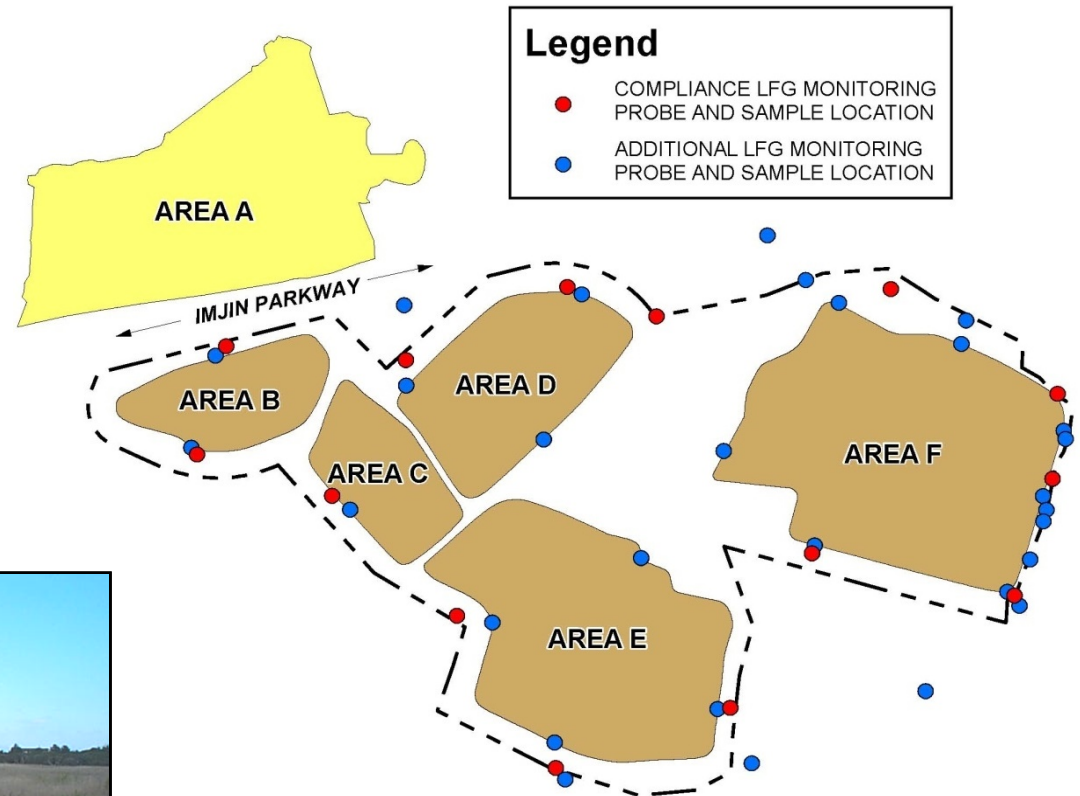
# Landfill Gas

- Produced in all landfills when organic waste decomposes
- Gases are mostly methane and carbon dioxide with small amounts of other organic gases (similar to compounds that have been found in groundwater beneath the landfill)
- Monitoring for landfill gas required by regulation is part of routine maintenance
- Landfill gas is extracted and treated



# Landfill Gas Monitoring Locations

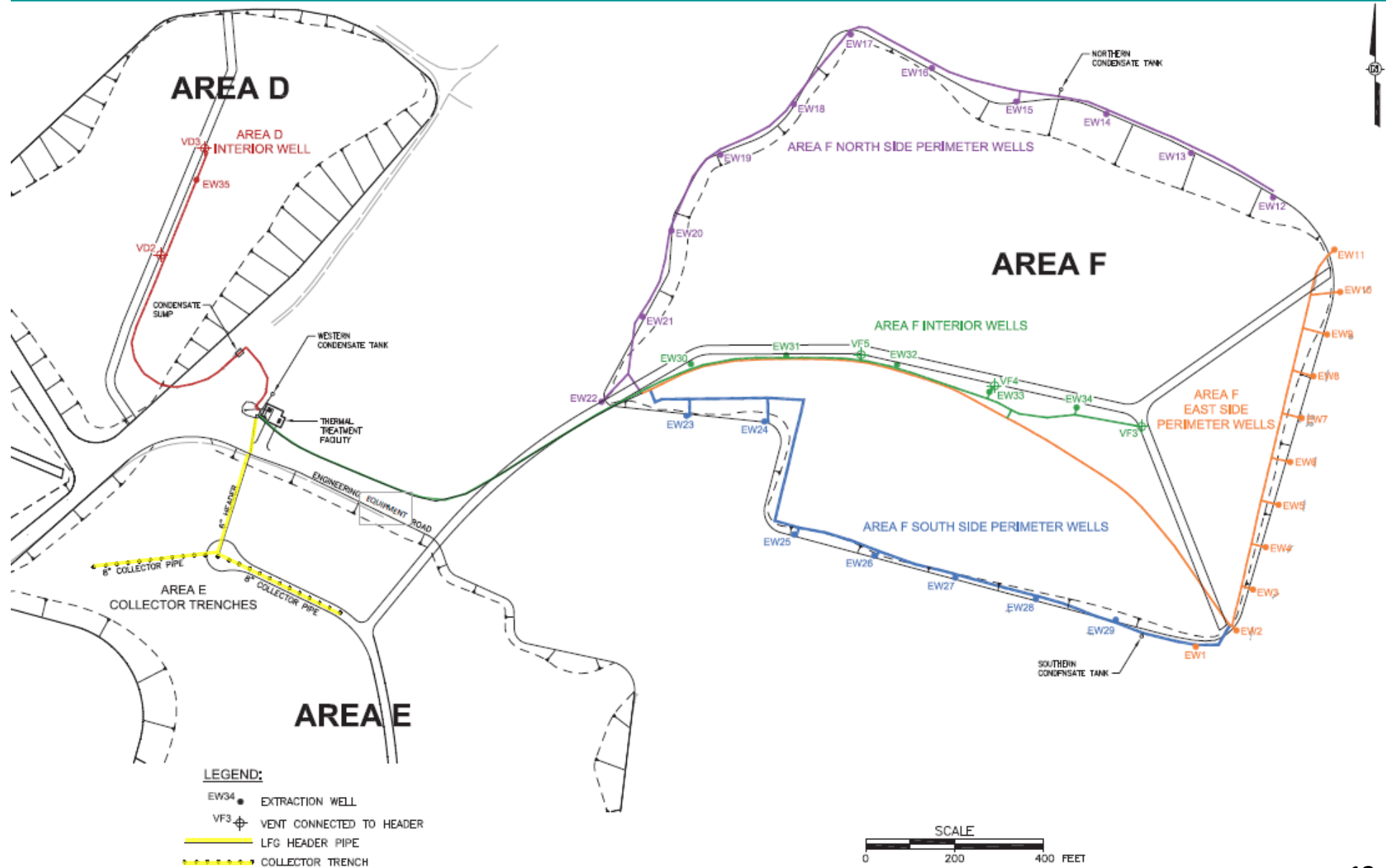
- Monitoring is required by California regulation to show that methane does not exceed 5% at landfill perimeter
- Monitoring of probes and ambient air has demonstrated no impact to surrounding community



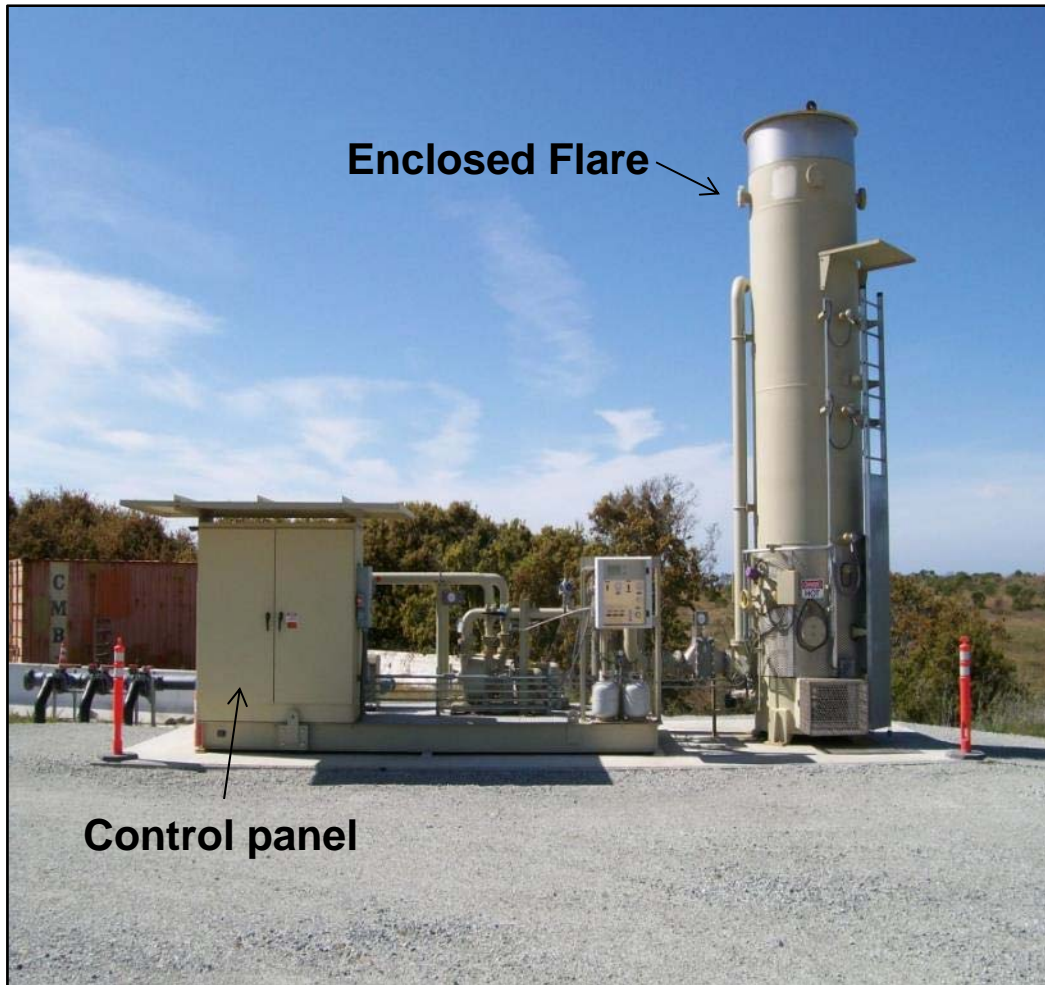
- Methane is monitored below ground with “perimeter probes” installed all around the landfill property boundary



# Landfill Gas Extraction and Treatment



# Landfill Gas Thermal Treatment Unit



- Industry standard design
- High temperature destruction of organic compounds including methane
- Operating since April 2006
- Destroys volatile organic compounds (VOCs) that otherwise could potentially reach soil, groundwater or the atmosphere

# For Additional Information

Visit the Army's website at:  
[www.fortordcleanup.com](http://www.fortordcleanup.com)

Visit the Fort Ord Administrative Record at:  
Building 4463 Gigling Road, Room 101  
Ord Military Community  
Seaside CA 93955  
(831) 393-9693  
[adminrecord@fortordcleanup.com](mailto:adminrecord@fortordcleanup.com)

