

LMOP Baltimore, MD 1/23/14

# Miramar Landfill Gas Utilization Enabling the First Green Marine Corps Facility

FORTISTAR



MCAS



**A PARTNERSHIP BETWEEN**

**THE CITY OF SAN DIEGO**

**FORTISTAR METHANE GROUP, LLC**

**MARINE CORPS AIR STATION  
MIRAMAR (MCAS)**

**NAVAL FACILITIES ENGINEERING  
COMMAND SOUTHWEST(NAVFAC)**

# OUTLINE

- Background
- Situation
- Solution
- Implementation
- Win Wins

An aerial photograph showing a large industrial or landfill site in the foreground, with a city and an airport visible in the background. The site features various structures, roads, and large piles of material. A red circle highlights a specific area within the site. The text 'BACKGROUND' is overlaid in large white letters at the top center.

# BACKGROUND

- City operates Miramar landfill on land leased from DOD
- Over 45 million tons in place of MSW
- Agreements between City and Fortistar for rights to LFG
- Existing projects include LFG fueled power generation of 13 MW

# MCAS Miramar

- Hosts 15,000 service members & their families
- ~14 MW Peak Electricity Consumption
- Home of 3<sup>rd</sup> Marines Aircraft Wing

# F35's



# MV 22 Ospreys



# CH53 Super Stallions





# AV 8 Harrier Fighters



# SITUATION

- Excess LFG produced by landfill
- Difficulty achieving emissions regulatory compliance
- MCAS is directed to achieve green energy goals
- Commanding Officer set MCAS goal to become a net zero installation
- Fortistar looking for new on-site customers

# SOLUTION

- Utilize existing agreements to expand LFG fueled generation to MCAS
- Enhance Public/Private partnership between City, Fortistar, MCAS and NAVFAC
- Utilize existing cogen and LFG infrastructure where possible
- NAVFAC uses Design/Build process to install power transmission line

# IMPLEMENTATION

- Fortistar installs two new LFG fueled CAT 3520's within existing cogen facility, 3.2 MW total



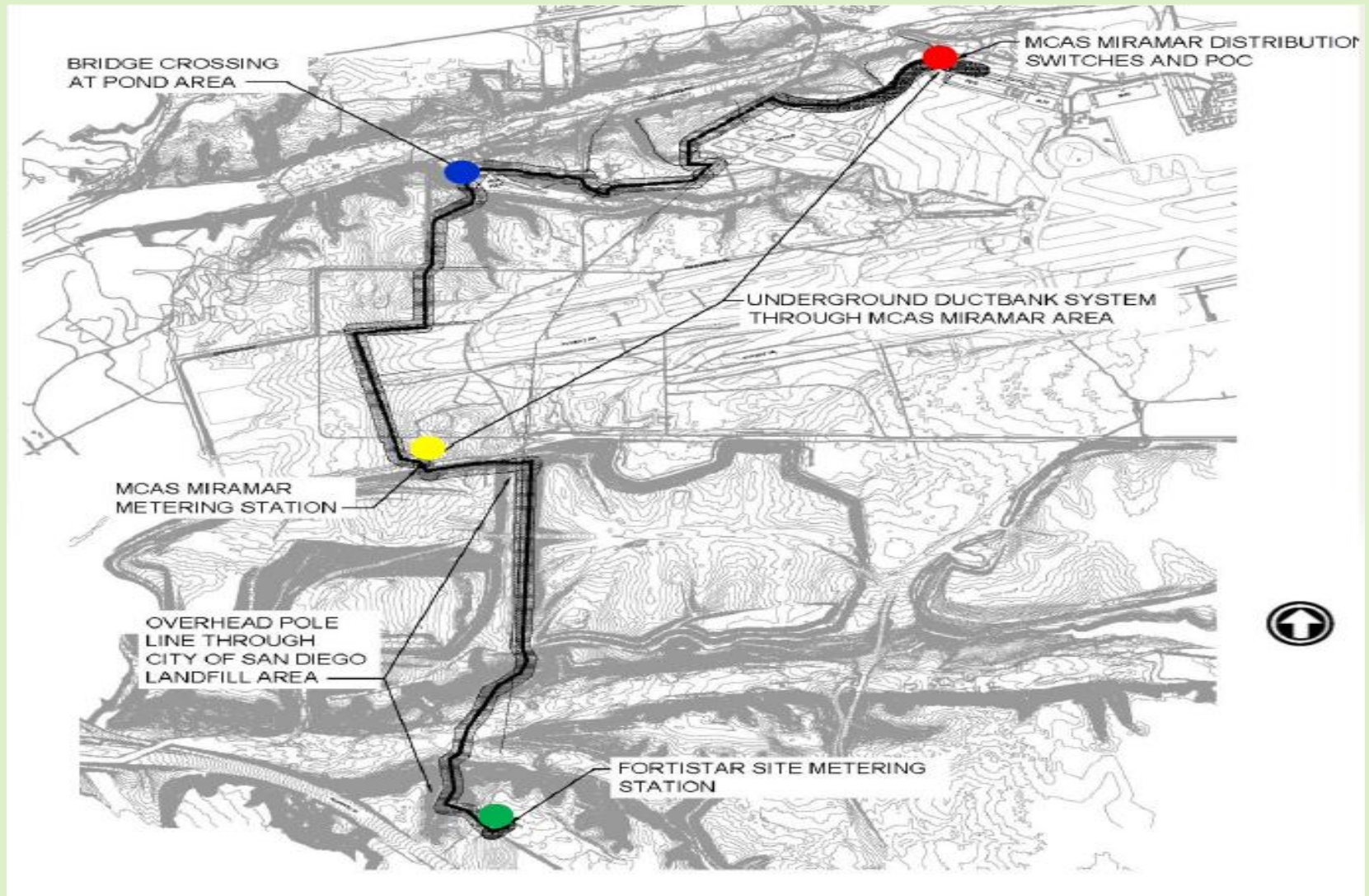
# New CAT 3520's



# New Metering & Switchgear



# power line 6.5 miles



# NAVFAC Installs Power Line





# Powerline Underground and Overhead





# 43 new extraction wells



# WIN WINS

- City makes progress on meeting landfill regulatory compliance objectives
- Fortistar gets “across the fenceline” customer for LFG derived energy
- MCAS Miramar became 50% renewable electricity on the installation with the incorporation of LFG derived power

# Further Information

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