STATE WATER RESOURCES CONTROL BOARD
INFORMATIONAL PRESENTATION

CITY OF LOS ANGELES
DIGESTED SLUDGE, BIOSOLIDS, AND BRINE
INJECTION DEMONSTRATION PROJECT

Jonathan Bishop, Chief Deputy Director
State Water Resources Control Board
1001 I Street Sacramento
CA 95814
PROJECT LOCATION

CHAFFEE ISLAND
PROJECT SITE IS AT CHAFFEE ISLAND IN SOUTHERN CALIFORNIA
PROJECT SITE
SITE COMPONENT DETAILS

1) Wetcake & sludge blending pit
2) Screen
3) Mixing tank
4) Electric Pumps
5) Injection well
6) Monitoring well
7) Office
CONSTRUCTION SITE

THIS PICTURE SHOWS THE INITIAL CONSTRUCTION AT THE SITE. THE LARGE PIPING USED FOR THE INJECTION WELL CASINGS.
DIGESTERS AT SITE

BIOSOLIDS ARE FIRST HELD IN LARGE EGG-SHAPED DIGESTERS IN A THERMOPHILLIC PROCESS TO BREAK DOWN THE SEWAGE SLUDGE PRIOR TO INJECTION.
A TRUCK DUMPS WETCAKE INTO A MIXING TANK FOR SLURRIFICATION WITH THE DIGESTED SLUDGE BEFORE INJECTION
LARGE PUMPS AND ENGINES PUSH THE BIOSOLIDS DEEP INTO THE INJECTION WELL.
The Injection project was proposed to address:

- Large amount of biosolids produced;
- Increasing cost of biosolids management; and
- Restrictive regulations for land application.

Project Advisory Committee:
USEPA, Division of Oil, Gas, & Geothermal Resources, CalTech, USGS, Lawrence Berkeley National Lab
PROJECT CONCEPT:

CONVERT BIOSOLIDS TO RENEWAL FUEL THROUGH DEEP SUBSURFACE PLACEMENT, THERMAL TREATMENT AND BIODEGRADATION

PROJECT FEATURES

- A 5-year experimental demonstration project
- Multiple Well Casing used in Injection well
- Placement zone protected by several impermeable confining layers and major fault lines
- Wells monitored by Geophones, tilt meters, gamma ray, density meters, pressure probes, micro-seismograms etc.
- Depressurization period (8-10 hours)
REGULATORY PERMITS

- USEPA Region 9 issued UIC Class V Experimental Permit No. CA 5060001 to the City of Los Angeles.

- CEQA Compliance: City of Los Angeles adopted a Mitigated Negative Declaration in August 2006.

- A Negative declaration for Phase II of the project in November 2011.

- Other required permits for the project were acquired from the California Coastal Commission, Harbor Department, and SCAQMD.
SUMMARY

- Project met all permit requirements of Phase I & II
- City applied for an expansion permit & new Injection well
- USEPA approved expansion project in December 2013
- Biosolids management cost reduced by $3 million/year
- Eliminated 13.4 tons of NOx & 124 tons of CO emissions
- Provides a renewable energy source of about 3.5 MW (3000 homes)
- Reduced biosolids cost by $1.6 million annually.
- Decrease in brine discharged into LA Harbor
CONTACT INFORMATION

1. For Project Related Information:
   http://www.geoenvironment-technologies.com/?q=node/15

2. USEPA UIC Permit Information:
   https://www.lacitysan.org/san/sandocview?docname=qa001256
   https://www.lacitysan.org/san/sandocview?docname=qa001256

3. City of Los Angeles Mitigated Negative Declaration:
   https://www.lacitysan.org/san/sandocview?docname=qa001257

4. Subsequent Negative Declaration:
   https://www.lacitysan.org/san/sandocview?docname=qa001258

5. State Water Board Contact:
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