Mitigated Negative Declaration and Initial Study for the Terminal Island Renewable Energy Project

W.O. SZT1169
B.E. 649-06

City of Los Angeles

Bureau of Engineering
Environmental Management Group
August 2006

CITY OF LOS ANGELES

OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT
MITIGATED NEGATIVE DECLARATION

(Article I, City CEQA Guidelines)

LEAD CITY AGENCY AND ADDRESS:
Department of Public Works, Bureau of Engineering
1149 South Broadway, Suite 600, Los Angeles, CA 90015

COUNCIL DISTRICT
15

PROJECT TITLE:
Terminal Island Renewable Energy Project
(W.O. SZT1169)

COUNCIL FILE NO.

PROJECT LOCATION:
Terminal Island Wastewater Treatment Plant
445 Ferry Street, San Pedro, CA 90731

DESCRIPTION:
The facility will occupy one half acre of the 25 acre TITP. The area is a heavy industrial (QM3-1) and non-residential zone. The plant is surrounded by oil storage tanks, cargo container lots, coal handling structures, rail tracks, and cargo roads. The project proposes to construct for a three to five year experiment three 5,300 foot deep wells at the TITP located at 445 Ferry Street in San Pedro. The wells will be used for the placement in non-producing oil formations of up to 400 tons per day of biosolids as a means of disposal and beneficial reuse. Biosolids is an undesirable by-product of wastewater treatment which is currently being trucked for land application to Kern County, 135 miles away. With the project, biosolids trucking in and out of the plant may be stopped; eliminating a mobile source of emission and improving air quality in the basin. The project will, also, recover methane gas generated by the biodegradation of the biosolids. The gas will be reused as a renewable fuel for power co-generation using non-polluting fuel cells; further enhancing air quality. In addition, with biodegradation occurring deep underground, carbon dioxide, a by-product and a "greenhouse" gas is sequestered safely in brine formations underground. In the later phases of the project, a portion of the Hyperion Wastewater Treatment Plant (HTP) biosolids will be trucked to TITP for injection into the well.

NAME AND ADDRESS OF APPLICANT IF OTHER THAN CITY AGENCY:

FINDING:
The **City Engineer** of the City of Los Angeles has determined that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in the Initial Study have been added to the project.
See attached Initial Study.

SEE THE ATTACHED PAGES FOR ANY MITIGATION MEASURES IMPOSED

Any written objections received during the public review period are attached, together with the responses of the lead City agency.

THE INITIAL STUDY PREPARED FOR THIS PROJECT IS ATTACHED

PERSON PREPARING THIS FORM	ADDRESS	TELEPHONE NUMBER
Irene Paul, Environmental Supervisor I	1149 South Broadway, LA, CA 90015	(213) 485-5761

SIGNATURE (Official)
Ara Kasparian, Ph.D., Manager
Environmental Management Group

A. Kasparian

DATE 8/8/2006

CITY OF LOS ANGELES
CALIFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY

(Article I---City CEQA Guidelines)

Council District: 15 August 2006

Lead City Agency: Department of Public Works, Bureau of Engineering

Project Title: Terminal Island Renewable Energy Project

1.0 INTRODUCTION

This Mitigated Negative Declaration (MND) evaluates the potential environmental impacts associated with the development of a renewable energy facility on a half acre parcel for the placement of treated non-hazardous municipal waste biosolids, digested sludge, and associated fluids, into a deep geologic formation below the Terminal Island Wastewater Treatment Plant. The proposed project is intended as a public benefit project that would improve the environment by converting the biosolids into clean energy by deep well injection and biodegradation, while at the same time reducing greenhouse gas emissions through geologic sequestration. The process takes advantage of renewable geothermal energy (heat) in the subsurface to create another source of renewable energy (relatively pure methane from subsurface biodegradation of biosolids). This MND has been prepared in accordance with the California Environmental Quality Act (CEQA) (Ca. Pub. Res. Code sec. 21000 et seq.) and the State CEQA Guidelines (14 Cal. Code of Regs. Sec. 15000 et seq). The City of Los Angeles is the CEQA Lead Agency for this MND.

1.1 CEQA Process

This MND has been prepared pursuant to the requirements of Sections 15063, 15070, and 15071 of the CEQA Guidelines. This document identifies, analyzes and evaluates potential project impacts on the environment, and ways in which the potential significant effects of the project are proposed to be avoided or mitigated.

In accordance with CEQA and the State CEQA Guidelines, this MND will be distributed to public agencies and other interested parties and organizations. In reviewing the MND, public agencies and interested parties should focus on the sufficiency of the document in identifying and analyzing potential project impacts on the environment and ways in which the potential significant effects of the project are proposed to be avoided or mitigated.

Comments on the MND should be submitted in writing prior to the end of the public review period.

Prior to making a determination, the decision-making body of the lead agency must consider the MND together with any comments received during the public comment review process. The decision-making body will adopt the MND only if it finds on the basis of the whole record before it that there is no substantial evidence that the project will have a significant effect on the environment and that the MND reflects the lead agency's independent judgment and analysis.

1.2 Document Format

This MND contains five sections plus technical appendices. Section 1, Introduction, provides an overview of the project and the CEQA environmental documentation process. Section 2, Project Description, provides a description of the project location, project background, and project components. Section 3, Initial Study Checklist, presents the City's Checklist for all impact areas and mandatory findings of significance. Section 4, Mitigation Measures, provides the mitigation measures that would be implemented to ensure that potential adverse impacts of the proposed project would be reduced to a less than significant level. These mitigation measures are referenced in the Initial Study Checklist in Section 3. Section 5, List of Preparers, provides a list of key personnel involved in the preparation of this report. Section 6, Determination – Recommended Environmental Documentation, provides the recommended environmental documentation for the proposed project; and, Section 7, References, provides a list of reference material s used during the preparation of this report. Extensive calculations or technical reports that were used to prepare sections of this report are included in the appendices.

The Initial Study Checklist form in Section 3 follows closely the form prepared by the governor's Office of Planning and Research and was used in conjunction with the City's CEQA Thresholds Guide and other sources to screen and focus upon potential environmental impacts resulting from this project. Impacts are separated into the following categories:

- No Impact. This category applies when a project would not create an impact in the specific environmental issue area. A "No Impact" finding does not require an explanation when the finding is adequately supported by the cited information sources (e.g., exposure to a tsunami is clearly not a risk for projects not near the coast). A finding of "No Impact" is explained where the finding is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

- Less Than Significant Impact. This category is identified when the project would result in impacts below the threshold of significance, and would therefore be less than significant impacts.

- Less Than Significant After Mitigation. This category applies where the incorporation of mitigation measures would reduce a "Potentially Significant Impact" to a "Less Than Significant Impact." The mitigation measures are described briefly along with a brief explanation of how they would reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be incorporated by reference.

- Potentially Significant Impact. This category is applicable if there is substantial evidence that a significant adverse effect might occur, and no feasible mitigation measures could be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required. There are no such impacts for the Terminal Island Renewable Energy project.

Sources of information that adequately support findings of no impact are referenced in parentheses following each question. All sources so referenced are available for review at the location cited or at the offices of the Bureau of Engineering, 1149 South Broadway, Los Angeles, CA 90015. Answers to other questions (as well as answers of "no impact" that need further explanation) are discussed in Section 4 of this report.

2.0 PROJECT DESCRIPTION

This section describes the objectives of the proposed project and the location of the site. This information is the basis for the analysis of the environmental impacts included in Sections 3 and 4.

2.1 Location

The Terminal Island Renewable Energy Project (TIRE) is located at Terminal Island Wastewater Treatment Plant (TITP) at 445 Ferry Street, in the Port of Los Angeles Community Plan area of the City of Los Angeles (Figure 1). The proposed project will occupy an area of about one half acre on the eastside of the TITP property facing Earle Street, about two hundred feet southerly from the northeast corner. The proposed area is currently paved. A berm is located on the side adjacent to Earle Street. Any runoff from the project site will be directed to the in-plant sewer. The area is currently being used as a parking lot for cars and storage area for equipment. The TITP property is in a heavy industrial zone ([Q] M3-1) and is surrounded by oil storage tanks, coal storage facilities and cargo container handling equipment. Beyond Earle Street and a few blocks north of Terminal Way is a confluence of Union Pacific railroads. Except for the landscaping at the fence line of the plant and across Terminal Way, there are no other trees or plantings around the facility.

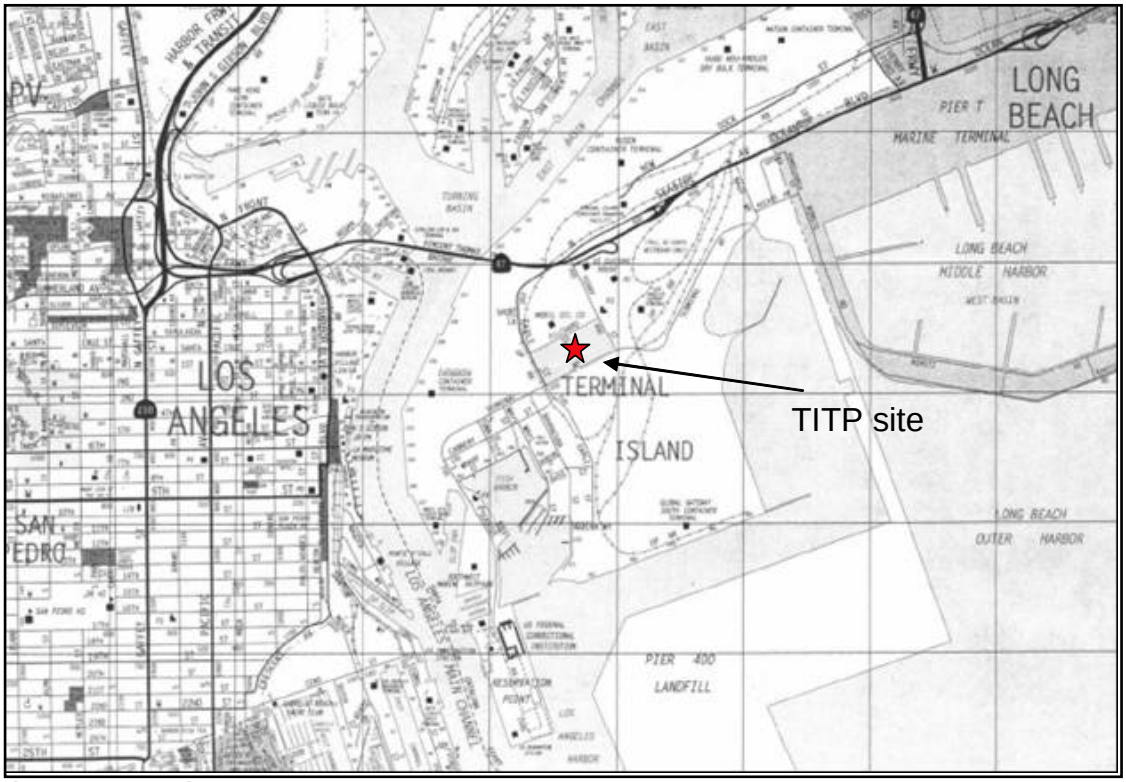


Figure 1: Location Map

Figure 2: Site Plan

Geologically, the well site lies in proximity to the Wilmington Oil Field. However, it is separated from the field by the THUMS Huntington Beach fault which runs northeasterly of the site. Three wells were previously drilled close to the site but these wells were "dry holes" and were, therefore, plugged and abandoned. Another fault, the Palos Verdes fault runs southwesterly of the site. A top lower Pliocene (drawn on Upper Repetto Unconformity) geologic map is shown in Figure 3. The proposed wells will reach 5,300 feet deep into Miocene sand and shale sequences in a non-producing fault block of the oil field. The targeted biosolids injection formations are the TAR, Ranger, and Upper Terminal zones of the Puente and Repetto Formations.

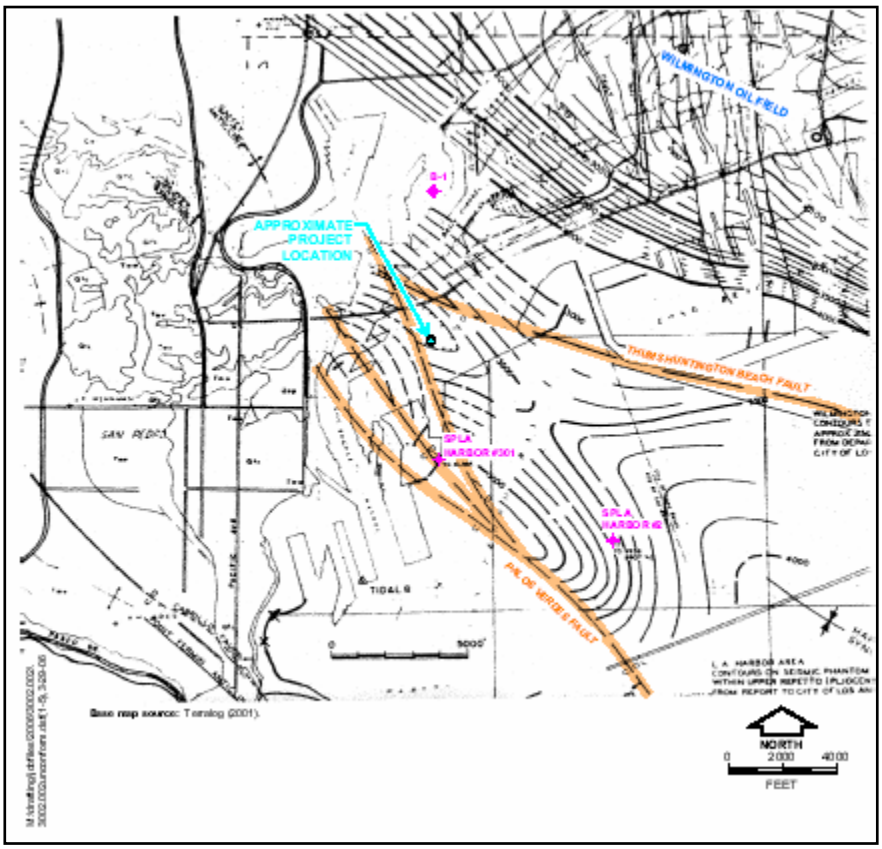


Figure 3: Upper Repetto Unconformity Geologic Structure Map

2.2 Purpose

The purpose of TIRE is to provide onsite treatment and reuse of biosolids and related fluids produced by TITP and possibly by HTP by injecting the material into deep geologic formations within the TITP premises. This process will take advantage of renewable geothermal energy (heat) in the subsurface to create another source of renewable energy (relatively pure methane from subsurface biodegradation of biosolids).

TIRE is initially a demonstration project to test the viability of injecting wastewater sludge (biosolids) deep beyond the water aquifers into deep geologic formations underground. If successful and proven to be economical and reliable, all biosolids will be managed through

the well onsite. This will replace or supplement current offsite disposal resulting in less truck traffic for hauling, and less use of land disposal sites. It will eliminate the need for dewatering, off-site trucking, and land spreading. The operation can potentially reduce or eliminate the energy requirements for surface digestion. In addition, it will provide an opportunity to capture methane gas generated by the biosolids decomposition which can be used as renewable fuel in “green power” generation. In the later phases of the project, a portion of the Hyperion Wastewater Treatment Plant (HTP) biosolids will be trucked to TITP for injection into the well. (Figure 4: Current and Proposed Operations)

When biosolids are land applied, it degrades and releases into the atmosphere significant amounts of methane and carbon dioxide each year. The methane in particular is a potent greenhouse gas with potential contribution to global warming. By injecting biosolids into the deep subsurface, methane release to the atmosphere is eliminated and carbon dioxide is sequestered in the saline formation. Emissions from land applied waste sludge is an often neglected, but significant, contributor to anthropogenic sources of greenhouse gas. While municipal waste sludge volumes are relatively small (about 10 million metro tons/yr.), waste sludge and manure generated from animal feedlots exceeds 1.5 billion tons per year. Assuming a volatile organic solids content of about 29%, this represents a contribution of 300 million tons per year of carbon dioxide and methane. Any process that can effectively capture this material has both economic and environmental benefits. Furthermore, by injecting biomass into an appropriate geologic formation with a known trapping mechanism, generated methane can be subsequently recovered or stored for future beneficial use. Gas recovery infrastructure at TITP is already in place.

The City, through the cooperative efforts of the Department of Public Works, the Department of Water and Power, and the Water Replenishment District of Southern California, is working towards total reuse of TITP’s effluent through the Harbor Water Recycling Project. The deep well injection is a beneficial reuse of TITP’s secondary and tertiary effluent and will reduce the volume of effluent discharged into the harbor.

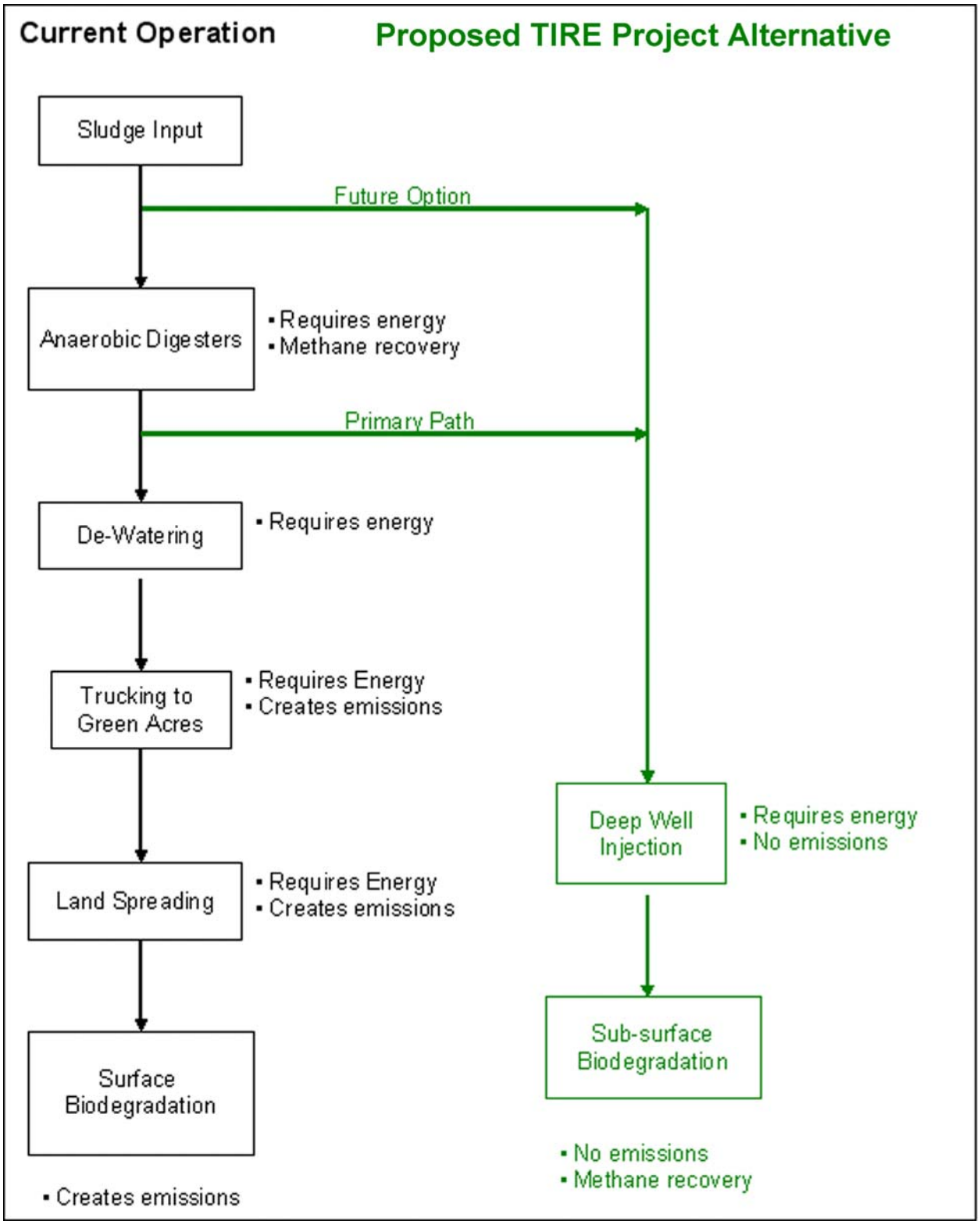


Figure 4: Current and Proposed Operations

Project objectives include:

- Enhancing thermal land pasteurization of biosolids in a natural environment of underground heat and pressure;
- Conversion of biosolids to clean renewable energy source on a cost-effective basis by bio-degradation and geothermal treatment;
- Usage of methane generated in fuel cells to produce green power;
- Reduction of greenhouse emissions by permanent sequestration of CO_2 in the formation brine;
- Provision of a better alternative to protect ground water resource and land usage; and,
- Reduction of traffic, vehicle emission, and odor by eliminating long distance trucking of biosolids.

Air pollutant reductions and greenhouse gas emission reductions resulting from a successful project would be beneficial. The comparison charts shown below in Figure 5 and Figure 6 show air pollutants and carbon dioxide emissions for the current operations (land application) in comparison to the proposed TIRE project (deep well injection based on 400 tons per day of biosolids). Assuming full-scale operations for five years, the proposed TIRE project may reduce total CO emissions by about 13 tons, total NO_x emissions by about 82 tons, total PM emissions by about 2 tons, total ROG emissions by about 2 tons, and total SO_x emissions by about 1 ton. The CO, NO_x,, PM, ROG and SO_x emissions generated during the TIRE operational phase are all associated with trucking biosolids about 20 miles from HTP to TITP, which is a later phase of the proposed project.

The injection unit will be entirely operated by electric motor. The TIRE project will sequester over 85,000 tons of CO_2. This CO_2 would otherwise be emitted into the atmosphere through land application. The TIRE project will instead permanently sequester this CO_2 into deep, highly saline, formation beneath the site. The TIRE project will also eliminate CH_4 emissions associated with land application.

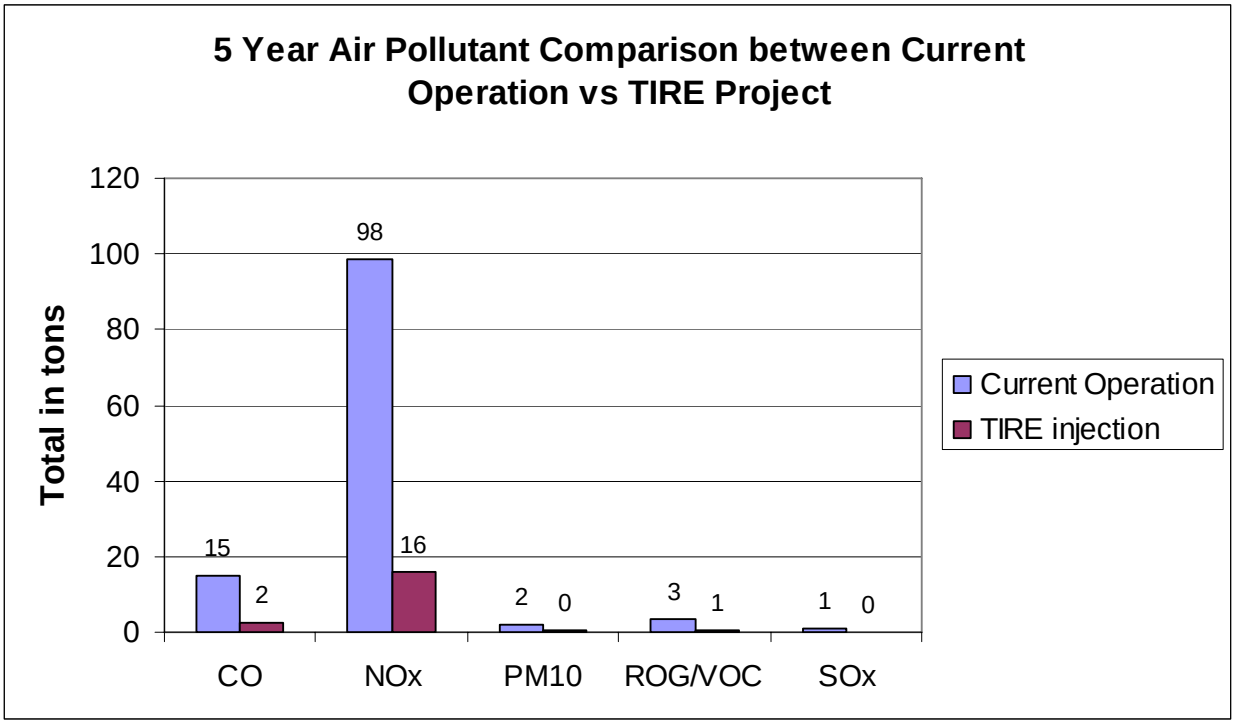


Figure 5: Air Pollution Comparison 5-Year Chart between Current and Proposed Operations

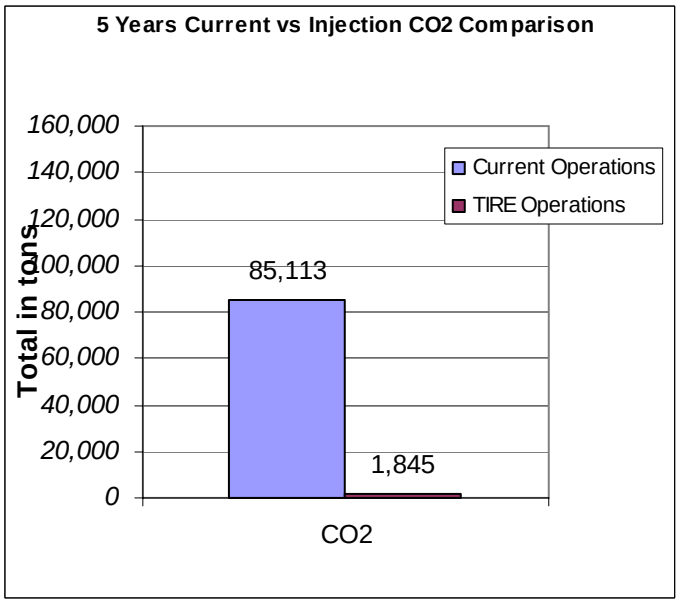


Figure 6: CO_2 Emissions 5-Year Comparison Chart between Current and Proposed Operations

2.3 Background

The City of Los Angeles (City) proposes an innovative technology for converting biosolids into clean energy by deep well injection and thermal biodegradation. Slurry mixtures of treated, non-hazardous, municipal sludge and water will be injected into a high permeability unconsolidated sandstone formation at the TITP operated by the City of Los Angeles. Three new injection and monitoring wells will be drilled and completed in weakly consolidated, high permeability, sand formations at depths from about 3,800 to 5,300 feet (1,100 to 1,600 meters). About 400 wet tons per day of biosolids OR 92 dry tons will be injected above parting pressure, using technology optimized for solid waste slurry injection, for a period of 3 to 5 years. At this depth the material will undergo a natural process of high-temperature anaerobic biodegradation, similar to the process of diagenesis naturally deposited organic layers undergo over time after deposition and burial. Retention in the high temperature (114^{O} - $159\ ^{O}$F, or 45^{O} – $70\ ^{O}$ C) saline environment of the deep geologic formation will sterilize the mixture within 24 hours and convert the biosolids into methane, carbon dioxide, and non-volatile, pathogen free residual solids within a few months. This has been demonstrated at the University of California, Los Angeles (UCLA) laboratory and in large-scale thermophillic digester tests at TITP (Ahring and Alatriste, 2001). The carbon dioxide will be preferentially dissolved and sequestered in the formation brine, while relatively high purity methane will migrate and become trapped in the existing gas zone of the reservoir to be recovered for beneficial use at the surface, or stored for subsequent use.

At these high temperatures and pressure conditions, CO_2 is ten times more soluble than CH_4 in water. Therefore, as the gas percolates through the formation water the CO_2 will be preferentially absorbed by the water, leaving a relatively methane-rich gas phase. Due to the density of segregation, the gas will percolate upwards through the brine filled porous sand formation until it reaches the impermeable capping shale formation, where it would mix with any native free gas in the formation. The difference in solubility will also be measured in the UCLA laboratory concurrently with the injection project.

Extensive field monitoring and sampling from the offset monitoring well will quantify slurry placement, bio-degradation rates, carbon dioxide and methane separation, carbon sequestration and saturation in formation brine, and free gas migration and production. UCLA is performing supporting laboratory experiments with biosolids slurry, reservoir core samples, and native formation fluids at reservoir temperature and pressure conditions to help quantify the biodegradation and capture process. The validation of temperature and salinity conditions in the laboratory will allow for more accurate interpretations of the field observations. The City will also compare field and laboratory results with bio-degradation experiments at reservoir temperature conditions in large-scale surface digestion vessels being conducted by the City of Los Angeles, Wastewater Engineering Services Applied Research Group.

Sanitation districts in Southern California are currently trucking much of their biosolids more than one hundred miles to remote rural sites, at a cost of more than $20,000 per day, for land application on agricultural fields, where it degrades and releases several hundred

thousand tons of methane and carbon dioxide into the atmosphere each year. This also presents a potential hazard to surface and groundwater and is generating severe public opposition. For example, Kern County has banned land application of biosolids after January 1, 2003, and sanitation districts throughout Southern California are searching for environmentally superior alternatives. In other areas, many sanitation districts are currently applying sewage sludge and biosolids in lagoons, which are periodically turned and allowed to degrade naturally. However, in some areas lagoon placement and surface remediation cannot continue due to more stringently applied groundwater protection measures and increasing costs.

Historical and current injection operations in the immediate area have not impacted usable groundwater over many years of operations on a much larger scale than currently proposed. The groundwater is protected through improved and higher quality well design. Groundwater is further protected through the selection of appropriate geologic formation. Last but not least, the project is monitored through extensive state-of-the-art continuous monitoring technology.

Deepwell injection of liquids and slurries has taken place in California for more than 50 years. Currently, there are about 25,000 injection wells operating in California, with more than 2,300 of these within the Wilmington Field alone. More than 3 million barrels of oil field brine, municipal effluent, oily sludge, drilling muds, and tank bottoms are injected daily in the Wilmington Field. The historical record for Southern California has clearly demonstrated that with properly designed wells, large volumes of fluids and sludges have been and can be placed into the subsurface by deep injection without impacting local groundwater.

As shown in Figure 7, the injection well will have several layers of protection. Waste material will be pumped down a steel tubing within the cased wellbore past a packer, located at a depth just above the permitted disposal zone. Outside the tubing is an annular region filled with fluid. This fluid annulus pressure will be constantly monitored to immediately detect any potential tubing/packer leak. If material were to leak out of the tubing, it would still be contained within the outer steel casing, which is in turn surrounded by a cement sheath. Outside the primary well casing and cement sheath, another casing and cement string will be placed from surface beyond the depth of usable groundwater to provide additional protection for shallow groundwater.

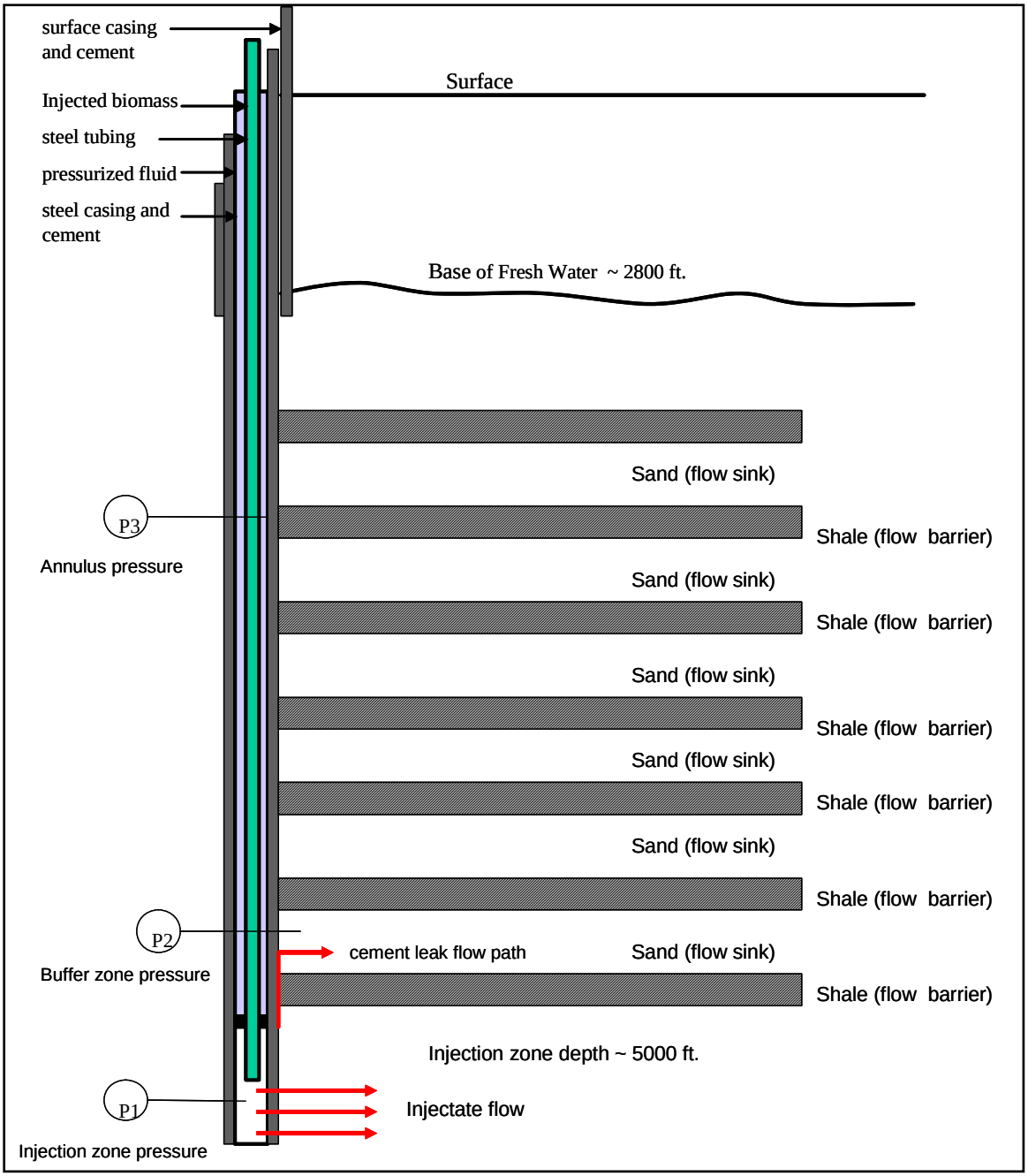


Figure 7: Well Design and Geologic Setting

A detailed geologic review of the site has been completed and submitted to the US Environmental Protection Agency during the design and permitting process. A large number of interbedded sand-shale sequences are deposited at depths from about 1,000 ft

to 5,000 ft (Figure 8), provide a good number of potential injection targets, with overlying shale barriers. The geology at the TIRE site is very comparable to that a couple miles distant, where successful oily sludge injection at rates on the order of 200 tons/day have been ongoing by THUMS for 10 years.

AGE	Million Years	FM.	THICK (feet)	ZONE	LITH.	SUBZONES	COMMENTS
Pleisto-cene	1.8	San Pedro	1800				
Upper Pliocene		Pico				JF,KF *Up Repetto unconf.*	Base of fresh water 2800’
Lower Pliocene	5.3	Repetto	300				
			300	Tar		So,S,T,U DU	Por.35-40%,perm.1000-8000 md,temp104-120°F 114°F
			300	Upper Ranger		F1,F_0,F,H,X	Por.30-40%,perm.1000-2500md,temp.114-164°F,100-200’sand,20-30’shale caps TITP 123°F
Miocene / Pliocene	16.4	Puente	300	Lower Ranger		G,G4,G5,G6	
			600	Upper Terminal		HX1,HX_0,HX,HXb,HXc,J,Y,Y4K,Z,WA	Por.30-40%,perm.500-1000 md,temp.132-175°F, 60’sd, sd/sh:60/40 TITP 144°F
			600	Lower Terminal		AA,AB,AC,AD ADI	Por.25-35%,perm.400-700md,temp.145-168°F,60’sd,sd/sh:60/40
			800	Union Pacific		AE,AF,AI,AK1 AK,AL1,AM	Por.20-25%,perm.40-200md,temp.183-211°F,30’sd,sd/sh:35/65
			1200	Ford		AO,AO1,AR,AR1,AU,AU2.AV,AX,AY,AY1,AZ	Por.20-25%,perm.10-100md,temp.183-211°F,30’sd,sd/sh:35/65
			1300	237		BA,BB,BC	Por.20-25%,perm.10-200md,temp.264-280°F
Middle Miocene		Monterey					
?		Catalina Schist			???? ????		

Figure 8: Strategic Column for Wilmington Field in TIRE Area

An active and continuous monitoring and analysis program has been developed. This is demonstrated in the monitoring, analysis and reporting process flow charts for both the injection and monitoring wells (Figure 9 and Figure 10).

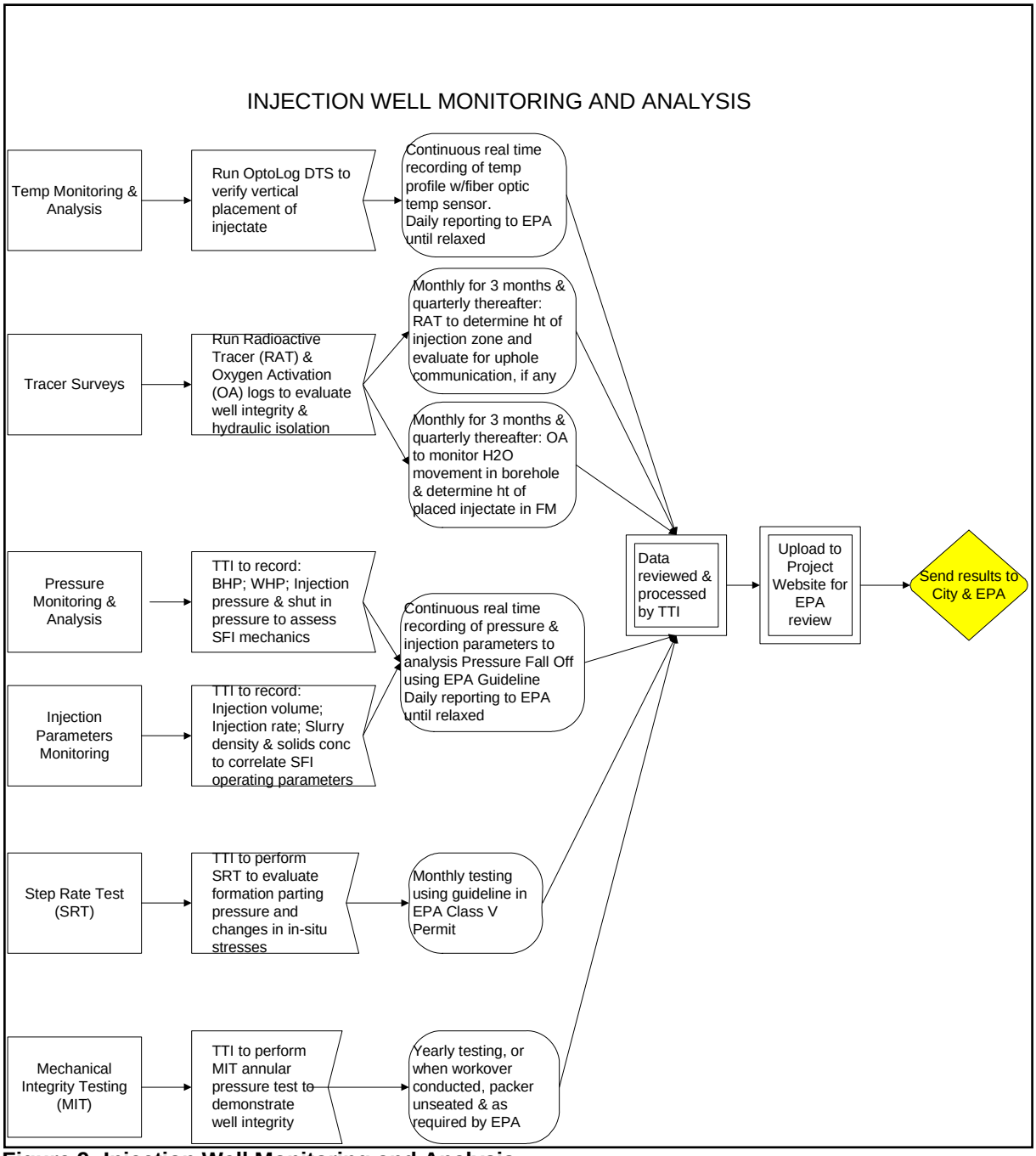


Figure 9: Injection Well Monitoring and Analysis

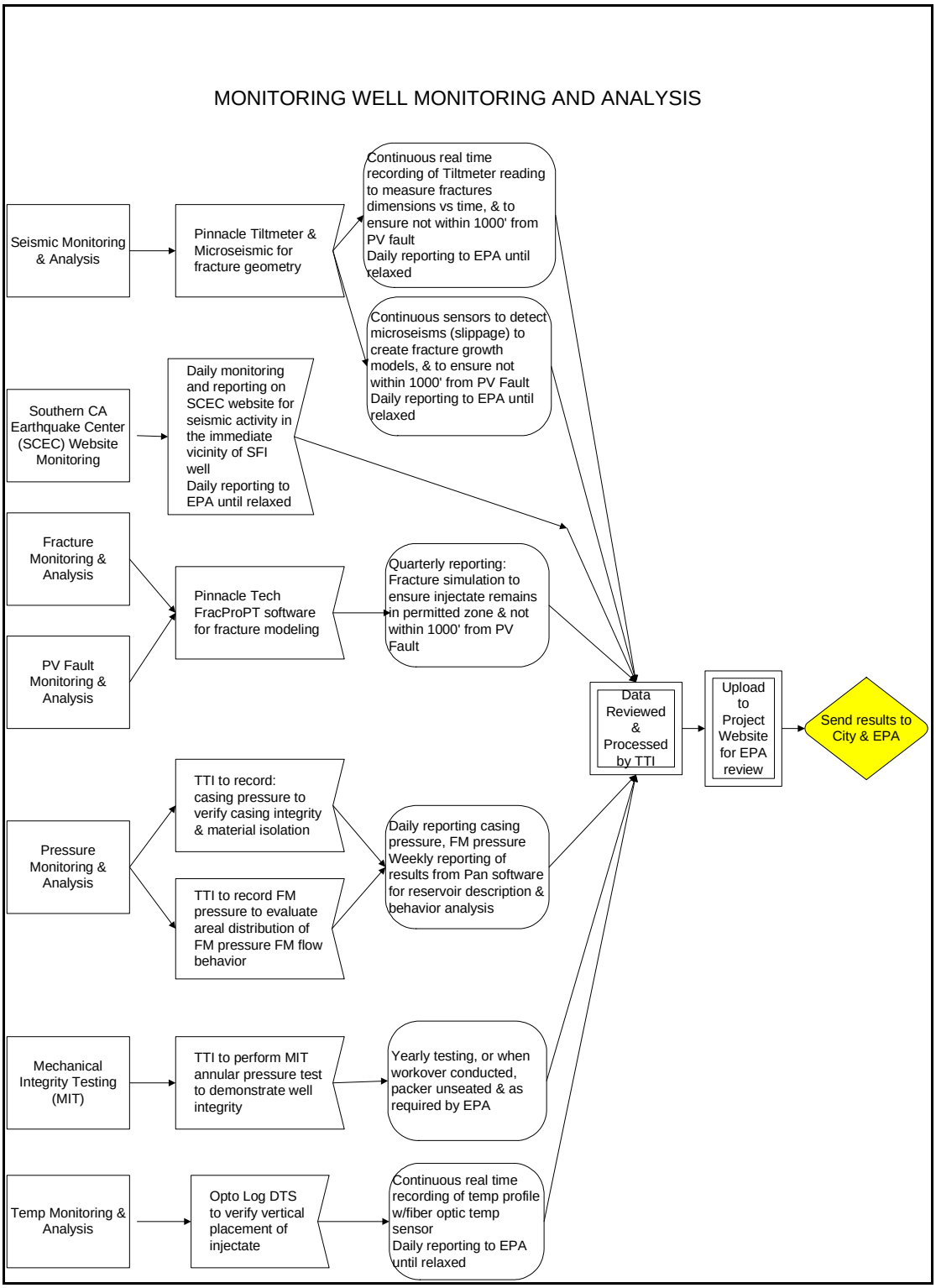


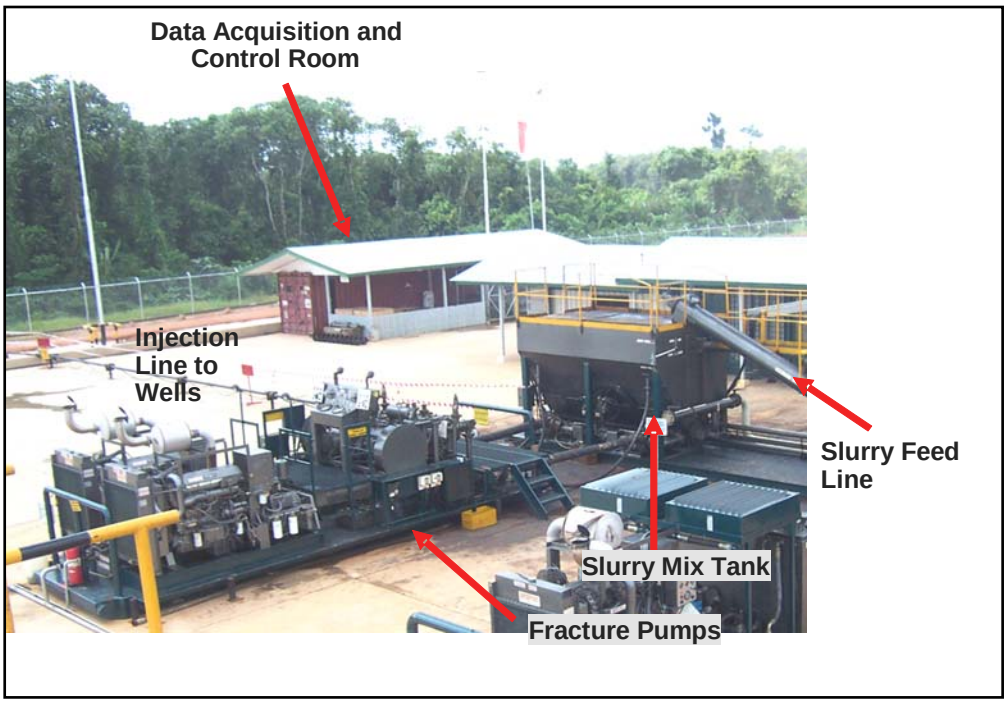
Figure 10: Monitoring Well Monitoring and Analysis

2.4 Description

The TITP is a city-owned wastewater treatment plant located on Terminal Island, south of the producing Wilmington Oil Field. TITP presently has a significant amount of processing equipment and facilities in place (pumps, compressors, gas pipelines, etc.). A 1000 hp electric pump will operate the slurried injection unit. The project will use recycled secondary and tertiary effluent for slurrification. Secondary effluent is water presently released into the harbor.

The facility will consist of three 5,300 foot deep wells, a train of surface injection equipment, and 500 feet of 5" diameter slurry delivery piping (Figure 11). The wells will have mainly a 9-5/8" injection casing and 3-1/2" steel injection tubing, both of which run through the entire depth of the well. At the lower end, the casing and tubing forms an injection chamber with perforations from where slurry is injected into the target formations. Of the three wells, one well is for the slurry injection; two wells will be for gas recovery and monitoring. To enhance groundwater protection, the wells have two more outer casings. The annular space between all the casings are filled with cement. Three wells were previously drilled close to the site. However, these wells were discovered to be "dry holes" and, therefore, unused.

Figure 11: Typical Facility and Equipment Layout (Terralog Duri, Indonesia)



The surface injection equipment will consist of slurry mixing and storage tanks, slurry fracture injection pumps, hoppers and conveyors. The facility will occupy a paved half acre of the 25 acre TITP property. The entire renewable energy facility will be enclosed except for any equipment and material process areas. However, all equipment and material process areas will be covered or misted to control emissions and spillage.

The facility will be operating with two shifts, from approximately 5:00 A.M. to 9:00 P.M., with

three workers. Initially, digester slurry from the plant digesters, having a three percent solids content, will be pumped to a mixing tank through a system of augers and tanks to achieve the desired slurry characteristics (density, solids concentration, viscosity) located near the well. From the mixing tank the slurry will be injected into the well by slurry fracture equipment. Eventually, the solid content of the slurry will be increased to about 10% solids by mixing it with 24% solids dewatered biosolids. Then it is transferred to high-pressure pumps and injected through a properly designed well into the deep, high porosity and high permeability sand formations. As mentioned above, slurry material passes through steel tubing, positioned inside an outer steel casing surrounded by a cement sheath, to an exit point at a depth of about 3,800 to 5,300 feet (1,100 to 1,600 meters). A control room for operations, and for controlling and logging process parameters will be located at the site.

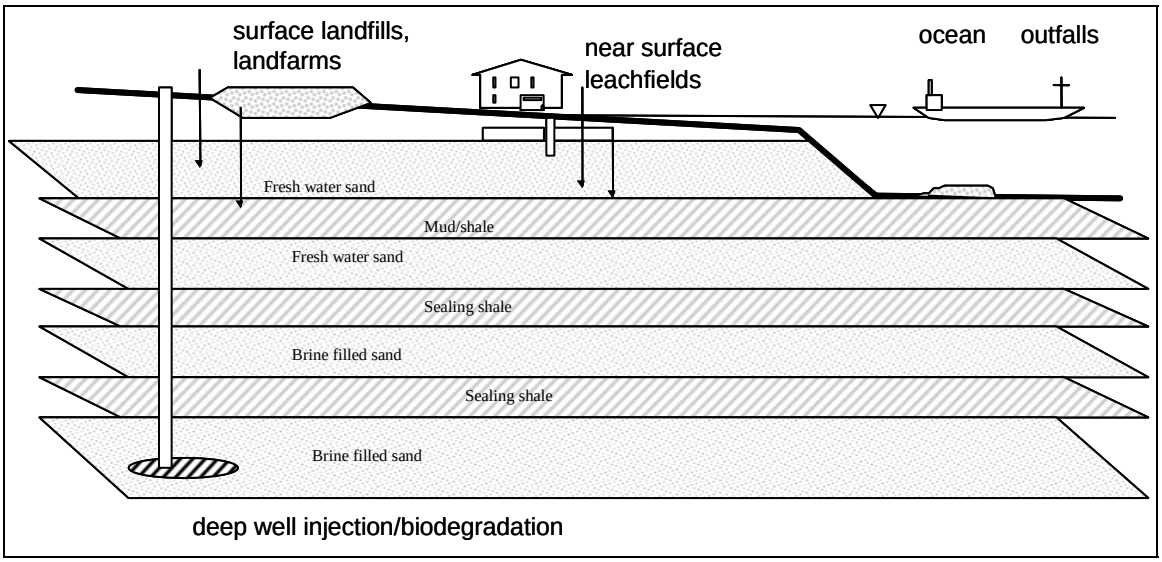


Figure 12: Deep Well Injection/Biodegradation

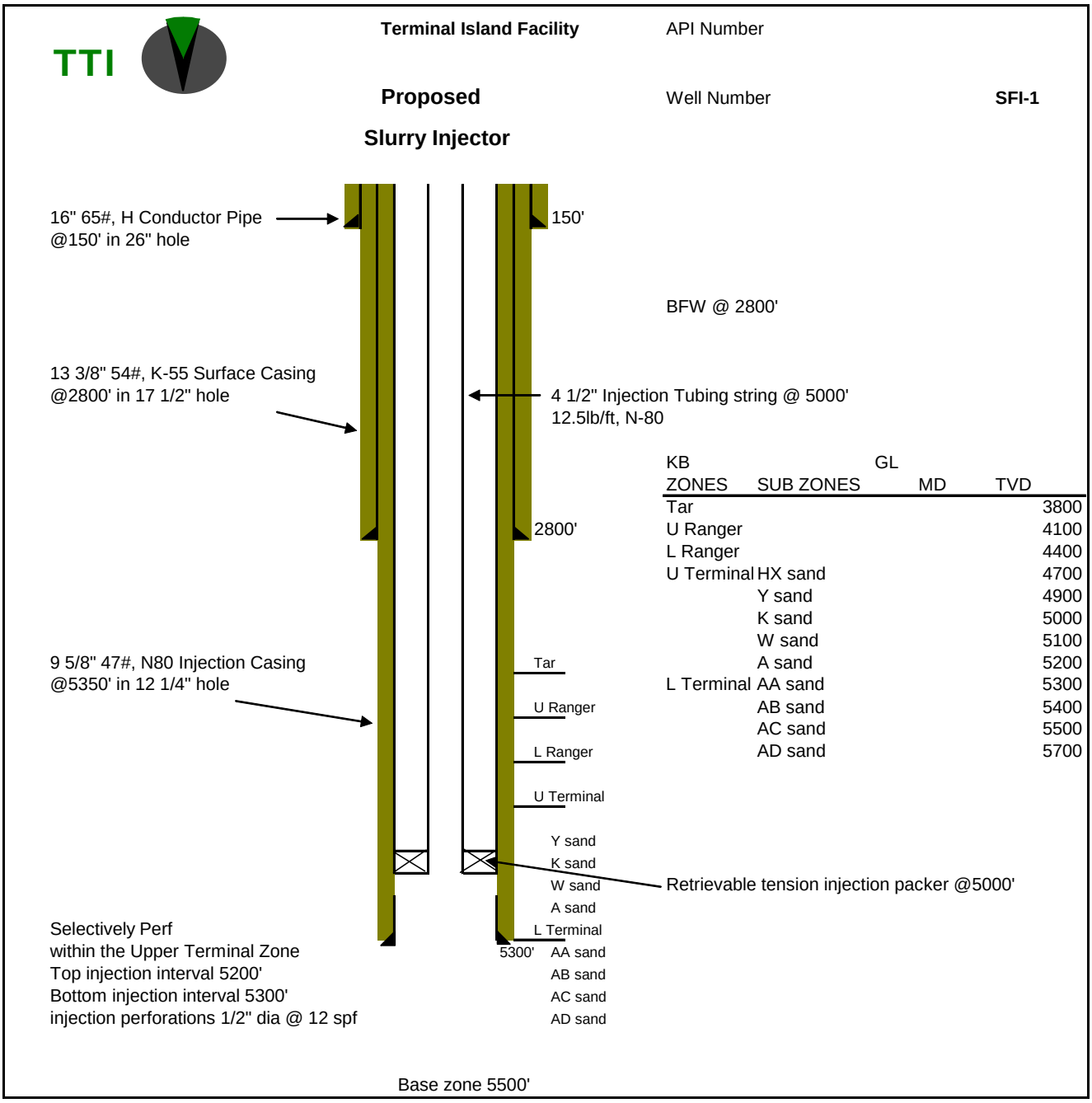


Figure 13: Schematic Design for Slurried Injection Well

The Slurry Disposal Unit (SDU) will be configured on a pad approximately 100 feet (30 meters) on each side. It will be located approximately 60 feet (20 meters) from the injection well. Field equipment components comprising the SDU for the biosolids include the following:

1) Approximately 2,000 barrel (bbl) tank capacity to store injection water;
2) A 14 ft x 7.5 ft x 12 ft high feed hopper with bottom conveyor to accept solid material;
3) A three-stage auger to transport material from the feed hopper to the mixing tank;
4) A 40 ft x 8 ft x 11 ft high mixing tank skid with dual bottom mounted mixing augers to

prepare the slurry to the proper consistency;
5) Two 20 hp rotors to drive the three-stage auger and the bottom mounted mixing augers in the mix tank;
6) An injection pump skid with one 1000 hp electric engine;
7) A control and monitoring room with data acquisition and remote system controls.

Pumping operations are planned for eight to ten hours per day, five days per week. Pumping is shut-in nightly and for extended periods over weekends to allow formation pressures to decline to natural conditions. Pressure is increased during pumping to the parting pressure of the sand formation, allowing solids entry. When pumping is stopped, the high porosity formation closes in on the solids and allows the fluid pressure to bleed off and return to natural conditions. Fluid is prevented from migrating upwards by multiple impermeable shale layers overlying the permeable injection formation.

There are three targeted zones with a total thickness of about 1,500 feet (500 meters) for biosolids disposal. They are the Tar Zone and the Ranger Zone within the Repetto Formation, and the Upper Terminal zone within the Puente Formation. Based on the nearby lithology (Wilmington Oil Field), the formation materials should be layered in fine to coarse grained, poorly sorted sandstones and siltstones with interbedded dark brown-gray shales and clays. This series of alternating shale (sealing zones) and low pressure sand sequences (absorption zones) present natural protection mechanisms for usable groundwater sources thousands of feet above. The different oil/water contacts found within the Wilmington oil field demonstrate that sands are non-continuous and the shales formed sealing caps to the underlying reservoirs.

Figure 14: Drill Rig at Offshore Long Beach (THUMS)

Construction will last for about three months. The first stage of construction will involve modifications to the facility area, including installation of a below grade concrete well cellar, modifications to the existing biosolids receiving/storage enclosure, improvements to the berm around the site, routing of material flow lines to the site, and routing of electricity to the site. This will require construction equipment such as an excavator and a frontloader. The first stage of construction may take two months.

The second stage of construction will involve drilling the first two wells. This will require a drilling rig, approved and permitted for operations in the Los Angeles Basin. Drilling operations will take about two weeks per well, or about one month total. Drill cuttings will be placed into steel tanks on site, and later transported offsite for disposal. A portable flare will be provided on standby to flare gas that may come from the drill hole during the drilling process. Dust will be controlled by sprinkling water manually.

The third stage of construction will involve installation of the slurry processing and operating equipment, including the mix tank, the water tanks, the injection pumps, and the control room, and all of the associated connections and flow line connections.

It is expected that some gases will be generated as a product of the biosolids biodegradation. The gases may eventually be recovered and conveyed at the surface to existing gas treatment and utilization facilities in the plant. The plant has a digester gas treatment, flaring equipment, and a fuel cell electric generating station.

On the average, forty wet tons per day of biosolids or equivalent digested sludge (3% solids) will be supplied initially by the TITP digester and dewatering processes using the new delivery pipelines installed within the plant. At the option of the City of Los Angeles (City), and incrementally, an additional three hundred sixty wet tons per day of biosolids from HTP will be trucked to TITP in the later phases of the project. HTP is twenty miles to the north of TITP. The trucks will travel through industrial and non-residential areas along the 105, 405 and 110 interstate freeways.

The analysis in this document assumes that , unless otherwise stated, the project will be designed, constructed and operated following all applicable laws, regulations, ordinances and formally adopted City standards (e.g., *Los Angeles Municipal Code* and Bureau of Engineering *Standard Plans*). Also, the analysis in this document assumes that construction will follow the uniform practices established by the Southern California Chapter of the American Public Works Association (e.g., *Standard Specifications for Public Works Construction* and the *Work Area Traffic Control Handbook*) as specifically adapted by the City of Los Angeles (e.g., The City of Los Angeles Department of Public Works *Additions and Amendments to the Standard Specifications for Public Works Construction* (AKA “The Brown Book,” formerly Standard Plans S-610)).

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services, and activities.

2.5 Intended Uses of this Document

This MND is required for the discretionary actions for the project by the following agencies:

- Environmental Protection Agency

- City of Los Angeles, Port of Los Angeles
- California Air Resources Board
- California Coastal Commission
- South Coast Air Quality Management District
- Advertisement and award of construction contracts by the City of Los Angeles Department of Public Works.
- Other governmental implementing actions or approvals (grading permits, building permits, OHSA permits, utility connection permits, fire code compliance, etc.)

3.0 INITIAL STUDY CHECKLIST

This section documents the screening process used to identify and focus upon environmental impacts that could result from this project. The following Initial Study Checklist form follows the recommendations of the Governor's Office of Planning and Research and was used in conjunction with the City's CEQA Thresholds Guide (Thresholds Guide) and other sources to screen and focus upon potential environmental impacts resulting from this project. Answers to other questions (as well as answers of "no impact" that need further explanation) are discussed in Section 4 of this report.

Sources of information that adequately support findings of no impact are referenced in the parentheses following each question. All sources so referenced are available for review at the offices of the Bureau of Engineering, 1149 South Broadway, Suite 600, Los Angeles, California 90015. (For an appointment to view the reference sources, please call Irene Paul at (213) 485-5761)

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
1. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐
Reference*:* City of Los Angeles General Plan (San Pedro Community Plan; Port of Los Angeles Community Plan; Port of Los Angeles Master Plan);City of Los Angeles CEQA Thresholds Guide (Sections L1 and L2); California Department of Transportation.				
Comment:				
The project area is located on Terminal Island, a highly industrialized area within the Port of Los Angeles (Port). The City of Los Angeles Community Plan for San Pedro identifies 11 scenic view sites in the San Pedro area. Tanks at the proposed project site will be visible by the public at a distance of 0.9 to 3.0 miles from three of these viewpoints: Harbor Boulevard Bluff, Lookout Point, and New Bogdanovich Park. The site of old Bogdanovich Park is now converted to U.S. Air Force Housing and is not open to the general public. The project is not visible from the other listed scenic vista sites because of intervening topography and/or development. To the west, across the Main Channel of the Port of Los Angeles, lies the Palos Verdes Hill rising to a height of 1,200 feet above sea level.				
From any identified scenic viewpoint that provides visibility to the TITP premises, the principal observable structure are the three spherical digester tanks that rise about seventy feet from street				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
level. These tanks will dwarf the highest structure that the TIRE project add to the TITP which will be a fifteen foot high steel mixing tank and a thirteen foot high slurried injection system. The structures will be painted to match the plant's colors. Outside the is a 300 foot long cylindrical coal conveyor enclosure and a mobile oil storage complex that will further obscure the existence of the TIRE structures. TIRE will not be a prominent feature and will not change the nature of any viewshed surrounding the project area. Therefore, there would be no potential significant impacts to the scenic vistas.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
Reference: See references for Section 1 (a) above.				
Comment: The project area is located on Terminal Island, in a highly industrialized area within the Port. The project site is not located near an eligible or designated state scenic highway. The nearest officially designated state scenic highway is approximately 33 miles north of the project (State Highway 2, from approximately three miles north of Interstate 210 in La Canada to the San Bernardino County Line). The nearest eligible state scenic highway is approximately nine miles northeast of the project (State Highway 1, from State Highway 19 near Long Bach to Interstate 5 south of San Juan Capistrano)(California Department of Transportation, 2004). The project site is not visible from either of these locations. In addition to Caltrans' officially designated and eligible state scenic highways, the City of Los Angeles has city-designated scenic highways. These include several streets in San Pedro that are in the vicinity of the project (City of Los Angeles, 1999b). The project site is not observable from most of these highways. The one scenic highway where the site may be observed is Harbor Boulevard, near 6th Street. However, TIRE would not change the nature of the viewshed or damage any scenic resources.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
Reference: City of Los Angeles CEQA Thresholds Guide (Sections L1 and L3)				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: The project area is heavily industrialized and contains ship repair facilities, marine oil terminals, fishing related industries, a marine research facility, fire station, wastewater treatment plant and other heavy industry. Adjacent to the site are parking lots and oil storage tanks. TIRE would not degrade the visual character or quality of the site.				
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? Reference: City of Los Angeles CEQA Thresholds Guide (Section L4) Comment: The proposed project would not introduce significant sources of artificial light that could adversely affect day or nighttime views in the area. Any security light fixtures that would be installed would contain light within the facility area. Also, refer to Comment 1(c) above).	☐	☐	☒	☐
2. AGRICULTURE RESOURCES – Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? Reference: California Department of Conservation Farmland Mapping and Monitoring Program; City of Los Angeles General Plan (Port of Los Angeles Community Plan; Port of Los Angeles Master Plan) Comment: The California Department of Conservation Farmland Mapping and Monitoring Program identifies categories of agricultural resources that are significant and therefore require special consideration. The project site is not located in an area designated as Prime or Unique Farmland, or Farmland of Statewide Importance. The area is not considered nor zoned as farmland. No farmland or row crops currently exist on the project site. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use.	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? Reference: California Department of Conservation Williamson Act Program; City of Los Angeles General Plan (Port of Los Angeles Master Plan)	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: The project site is in Planning Area 7 of the Port of Los Angeles and is zoned for heavy industrial use, specifically commercial fishing, liquid bulk, recreational, industrial, general cargo and institutional uses. The Williamson Act applies to parcels consisting of at least 20 acres of Prime Farmland or at least 40 acres of land not designated as Prime Farmland. The project site is not located within a Prime Farmland designation, nor does it consist of more than 40 acres of farmland. No Williamson Act contracts apply to the proposed project. Refer to Comment 2 (a) above.				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use?	☐	☐	☐	☒
Reference: California Department of Conservation Mapping and Monitoring Program				
Comment: Refer to Comment 2 (a) above.				
3. AIR QUALITY – Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
Reference: South Coast Air Quality Management District; City of Los Angeles General Plan (Air Quality Element); City of Los Angeles CEQA Thresholds Guide (Section E1, E2, and E3)				
Comment: The proposed project would be constructed and operated in the South Coast Air Basin, currently a non-attainment area for ozone, carbon monoxide, nitrogen dioxide, and fine particulate matter (PM_{10}). The South Coast Air Quality Management District (SCAQMD) has adopted an Air Quality Management Plan (AQMP) which sets forth strategies for attaining all national air quality standards by certain deadline dates and for meeting state standards at the earliest feasible date. The AQMP also serves as the State Implementation Plan for bringing the air basin into attainment. A significant impact would occur if the project resulted in substantial emissions during construction or operation which would exceed the established thresholds. Construction activities would comply with applicable SCAQMD regulations, such as Rule 403, which is designed to minimize fugitive dust. As a standard practice, construction equipment would also be permitted, maintained, and operated to minimize emissions.				
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
Reference: See references to Section 3 (a) above.				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: Construction impacts would be temporary. Additionally, construction activities would comply with applicable SCAQMD regulations, such as Rule 403, which is designed to minimize fugitive dust. Construction equipment would also be permitted, maintained, and operated to minimize emissions.				
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative Thresholds for ozone precursors)? Reference: See references to Section 3 (a) above. Comment: Refer to Comments 3 (a) and 3 (b) above.	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations? Reference: See references to Section 3 (a) above. Comment: the project location is in a heavily industrialized area of the Port of Los Angeles. No sensitive land uses are in proximity to the project site. The nearest residences are located approximately 0.5 mile to the west, across the Main Channel of the Los Angeles Harbor. The nearest school is Fifteenth Street Elementary School, which is located approximately one mile to the west of the project site. In addition, construction impacts would be temporary. Additionally, construction activities would comply with applicable SCAQMD regulations, such as Rule 403, which is designed to minimize fugitive dust. Construction equipment would also be permitted, maintained, and operated to minimize emissions.	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people? Reference: City of Los Angeles CEQA Thresholds Guide (Section E2) Comment: The project is not expected to generate objectionable odors affecting a substantial number of people given the lack of residents near the project site. Vessels containing processed materials will be enclosed to minimize odors. Also, refer to Comment 3 (d) above.	☐	☒	☐	☐
4. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? Reference: California Natural Diversity Database; U. S. Fish and	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Wildlife Service (2004, 2005a, 2005b); City of Los Angeles CEQA Thresholds Guide (Section G); Keane (2004) Comment: The project site is currently developed and supports no wildlife or native plant species. The state and federally listed endangered California Least Tern nests within the Port of Los Angeles approximately 2.0 miles south of the project location. There is a Memorandum of Agreement (MOA) between the Los Angeles Harbor Department, CDFG, USFWS and the U.S. Army Corps of Engineers to protect the California Least Tern. The MOA requires that the 15-acre nesting site be protecting during the annual nesting season from May to October. The Least Tern forages in the shallow water areas of the Port of Los Angeles and has been reported to forage within Fish Harbor on occasion about a quarter mile from the project site. The project will not affect water quality. Runoff from the project site will be directed to the plant sewer.				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? Reference: See references for Section 4 (a) above. Comment: There is no riparian habitat on the project site or within a one mile radius of the project site. The Los Angeles Harbor is known to support population of benthic organisms and higher trophic-level species, such as fish and birds. Also, refer to Comment 4 (a) above.	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? Reference: U. S. Fish and Wildlife Service (2005a, 2005b); City of Los Angeles CEQA Thresholds Guide (Section G) Comment: The project site is currently developed and does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act. Additionally, the surrounding area does not contain any federally protected wetlands.	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? Reference: See references for section 4(a) above.	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: The project would not interfere with the movement of fish or wildlife, or with established wildlife corridors or nursery sites. The project site does not contain any wildlife migration corridors. There are no wildlife nursery sites on the proposed site or in the surrounding area. The project site is located within an existing wastewater treatment plant in an industrialized area within the Port of Los Angeles.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
Reference: City of Los Angeles Municipal Code; City of Los Angeles General Plan (Port of Los Angeles Community Plan; Port of Los Angeles Master Plan); City of Los Angeles CEQA Thresholds Guide (Section G); California Natural Diversity Database; U. S. Fish and Wildlife Service (2004, 2005 a, 2005B); Keane (2004); City of Los Angeles, Department of Public Works NavigateLA				
Comment: The County of Los Angeles has also established sixty-one Significant Ecological Areas (SEAs) (County of Los Angeles, 2001). Los Angeles County developed the concept of SEAs in the 1970's in conjunction with adopting the original General Plan for the County of Los Angeles. SEAs are defined and delineated in conjunction with the Land Use and Open Space Elements of the County General Plan. There is one proposed SEA within the Port of Los Angeles boundaries: The Pier 400 California Least Tern Nesting Site. The 15 acre site is protected during the annual nesting season from May to October. This proposed SEA is located approximately 2 miles south of the project site. Least Terns do not use the project area for nesting or foraging. There is a Memorandum of Agreement (MOA) between the Los Angeles Harbor Department, CDFG, USFWS and the U.S. Army Corps of Engineers to protect the California Least Tern. The MOA requires that the 15-acre nesting site be protecting during the annual nesting season from May to October.				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
Reference: See references for 4 (e) above.				
Comment: The project site is located in an industrialized area within the Port of Los Angeles. Neither the project site nor any adjacent area are included as part of an adopted Natural Communities Conservation Plan (NCCP) or Habitat Conservation Plan (HCP). The NCCP program, which began in 1991 under the State's Natural Community Conservation Planning Act, is administered by the State of California Department of Fish and Game (CDFG).				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact

It is a cooperative effort between the resource agencies and developers and takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity.

There is currently only one NCCP that is being considered near the Port of Los Angeles. The NCCP for the Palos Verdes Peninsula Sub-Regional Plan is currently under consideration. This plan intends to protect coastal sage scrub and does not include the Port of Los Angeles lands.

HCPs are administered by the U. S. Fish and Wildlife Service (USFWS) and are intended to identify how impacts would be mitigated when a project would impact endangered species (USFWS, 2005a). HCPs pertain to Incidental Take Permits for otherwise lawful activities that may harm listed species or their habitats. To obtain a permit, an applicant must submit an HCP outlining what would be done to "minimize and mitigate" the permitted take's impact on the listed species. There are no HCPs currently in place for the Port of Los Angeles.

The County of Los Angeles has also established sixty-one Significant Ecological Areas (SEAs) (County of Los Angeles, 2001). Los Angeles County developed the concept of SEAs in the 1970's in conjunction with adopting the original General Plan for the County of Los Angeles. SEAs are defined and delineated in conjunction with the Land Use and Open Space Elements of the County General Plan. There is one proposed SEA within the Port of Los Angeles boundaries: The Pier 400 California Least Tern Nesting Site. There is a Memorandum of Agreement (MOA) between the Los Angeles Harbor Department (LAHD), CDFG, USFWS and the U.S. Army Corps of Engineers (ACE) to protect the California Least Tern. The MOA requires that the 15-acre nesting site be protecting during the annual nesting season from May to October. This proposed SEA is located approximately 2 miles south of the project site. Least Terns do not use the project area for nesting or foraging.

Also, refer to Comments 4 (a) and 4 (e) above.

5. CULTURAL RESOURCES – Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5? ☐ ☐ ☐ ☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Reference: City of Los Angeles CEQA Thresholds Guide (Section M3) Comment: The construction and operation activity of the proposed project will not significantly affect historical resources.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5? Reference: See references for Section 5 (a) above. Comment: The project site is on a man-made fill related to the original construction in the early 20th century and subsequent developments at the TITP. The site would not be expected to yield significant archaeological resources. Therefore, the proposed project would not cause substantial adverse change in significance of archaeological resources in the area.	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? Reference: City of Los Angeles CEQA Thresholds Guide (Section M1); City of Los Angeles, Department of City Planning Environmental and Public Facilities Maps Comment: In the Los Angeles area, fossils may be found in the following rock formations: Chino Formation, Topanga Formation, Modelo Formation, Monterey Formation, Pico Formation, Late Pliocene Fernando Formation, Timms Point Silt, Loma Marl, San Pedro Sand , and Palos Verdes Sand (City of Los Angeles, 1996a). The surface geologic formation within the project area consists of man-made fill material constructed in the early 20th century and possesses no known paleontological resources.	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries? Reference: City of Los Angeles CEQA Thresholds Guide (Section M2) Comment: The proposed project is not expected to disturb any human remains, including those interred outside of formal cemeteries. The project site is on a man-made fill related to the original construction and subsequent developments at the TITP. Excavations and drillings done during the original and succeeding construction activities within the plant did not uncover any human remains.	☐	☐	☐	☒
6. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact

evidence of a known fault?

References: California Department of Conservation, Division of Mines and Geology Pub 42; City of Los Angeles General Plan (Safety Element); City of Los Angeles, Department of Public Works, Bureau of Sanitation Emergency Response Plan; City Of Los Angeles, Department of Building and Safety Parcel Profile Report (2006); Norris and Webb

Comment: Several earthquake faults are within the project vicinity and extend through the Port of Los Angeles, both on land and in the water channels. None of these faults are designated as a special study zone under the Alquist-Priolo Earthquake Zoning Act. Geologically, the proposed project well site lies in proximity to the Wilmington Oil Field. However, it is separated from the field by the THUMS Huntington Beach fault which runs northeasterly of the site. Another fault, the Palos Verdes fault runs southwesterly of the site.

The Palos Verdes Fault Zone, which runs approximately 0.25 miles to the east of the project site, is the closest active fault to the project site. This fault is designated as a Fault Rupture Study Area within the City of Los Angeles General Plan Safety Element.

Large earthquakes in the Los Angeles area typically occur at depths between 7km and 20 km, and occur primarily in hard basement rocks. The proposed TIRE project wells will penetrate only to a depth of about 5,000 feet (less than 2 km) into the soft sand and shale sequences. These wells will not penetrate deeper basement rocks, where major earthquakes are generated.

The TIRE project may require drilling up to three injection and monitoring/sampling wells in an area already containing more than 2,300 production and injection wells. These wells will target the same sand formations penetrated by other wells in the Wilmington Field. Maximum planned injection volume will be on the order of 4,000 barrels per day. Total water injection into the Wilmington field currently exceeds 1 million barrels per day, with daily variations up to 50,000 barrels or more.

The gas recovery piping from the wells is analogous to the existing natural gas supply piping in the plant. It will have earthquake and shutoff valves, pressure monitoring devices, flame arrestors, and gas receivers. It will be connected both to the flare system and the reuse equipment. Compared to the

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact

existing natural gas system which has a supply pressure of 110 psi, the recovered gas should develop less than one psi.

The Terminal Island Treatment Plant is responsible for safeguarding its employees, facilities, the public, and the environment in the event of disaster (natural or manmade) and other emergencies. Natural hazards include earthquakes, floods, and severe weather conditions such as high winds. Emergency situations could also develop from a major explosion or fire, uncontrolled hazardous material spill or release, verified bomb threat, or civil disorder. The Terminal Island Treatment Plant Response Plan was prepared to meet the safety and public health requirements of the following regulations: 1) Emergency Action Plan [CCR, Title 8, section 3220]; 2) Fire Prevention Plan [CCR, Title 8, Section 3221]; 3) Hazardous Waste Operations and Emergency Response [CCR, Title 8, Section 5192]; 4) Preparedness and Prevention Plan [CCR, title 22, Section 66265.31, Section 66265.32 (c), and Section 66265.52 (c)]; and 5) Contingency Plan and Emergency Procedures [CCR, Title 22, Section 66265.52 (c)]

ii) Strong seismic ground shaking? ☐ ☐ ☐ ☒

Reference: CDC Seismic Hazard Zones; City of Los Angeles, Department of Public Works, Bureau of Sanitation Emergency Response Plan; Jones & Stokes (2003)

Comment: Several principal active faults lie within 25 miles of the proposed project. These include the Palos Verdes, Newport-Inglewood, Elysian Park, Whittier-Elsinore, and Santa Monica-Raymond faults. These faults are capable of producing ground movements of a maximum moment magnitude of 6.6 to 7.1. Faults such as these are typical of southern California and it is reasonable to expect a strong ground motion seismic event during the lifetime of any proposed project in the region. Risk of seismic hazards, such as seismic groundshaking, cannot be avoided in the southern California region. Similar deep well injection operations within the U. S. have experienced mild earthquakes. The operation portion of this project, the slurry fracture injection, may create some ground movement.

The Terminal Island Treatment Plant is responsible for safeguarding its employees, facilities, the public, and the environment in the event of disaster (natural or manmade) and other emergencies. Natural hazards include earthquakes, floods, and severe weather conditions such as high winds. Emergency situations could also develop from a major explosion or fire,

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
uncontrolled hazardous material spill or release, verified bomb threat, or civil disorder. The Terminal Island Treatment Plant Response Plan was prepared to meet the safety and public health requirements of the following regulations: 1) Emergency Action Plan [CCR, Title 8, section 3220]; 2) Fire Prevention Plan [CCR, Title 8, Section 3221]; 3) Hazardous Waste Operations and Emergency Response [CCR, Title 8, Section 5192]; 4) Preparedness and Prevention Plan [CCR, title 22, Section 66265.31, Section 66265.32 (c), and Section 66265.52 (c)]; and 5) Contingency Plan and Emergency Procedures [CCR, Title 22, Section 66265.52 (c)] Refer to comment 6 (a) (i) above.				
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
Reference: California Department of Conservation Seismic Hazard Zones; City of Los Angeles CEQA Thresholds Guide (Section C1); City of Los Angeles, Department of Public Works, Bureau of Sanitation Emergency Response Plan; City Of Los Angeles, City of Los Angeles Department of Building and Safety Parcel Profile Report (2006) Comment: The proposed project site is located within an area susceptible to liquefaction. However, as part of the City of Los Angeles Uniform Building Code and BOE Standard Project Specifications, construction measures are prescribed that enable safe and efficient project implementation within the liquefaction zone area; the City has managed construction within liquefaction zones for many years. Therefore, the proposed project is not expected to result in impacts related to ground failure from liquefaction. The proposed project is not expected to make the soil any more susceptible to liquefaction, landslide, lateral spreading or subsidence and would not expose people to any additional adverse effects.				
iv) Landslides?	☐	☐	☐	☒
Reference: See references for Section 6 (a)(iii) above. Comment: The proposed project is not located within a hillside area.				
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
Reference: City of Los Angeles CEQA Thresholds Guide (Section C2) Comment: The proposed project involves drilling wells and slurry injection. Part of the drilling activities includes removal of soils and mud from the project site. During drilling and injection operations, the site would be managed in accordance with a Storm Water Pollution Prevention Plan prepared in accordance				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
with the General Construction Activity Storm Water Permit adopted by the State Water Resources Control Board and to SCAQMD rules and regulations (i.e. Rule 403 – Fugitive Dust).				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
Reference: City of Los Angeles CEQA Thresholds Guide (Section C2); City of Los Angeles, Department of Building and Safety Parcel Profile Report (2006)				
Comment: Prior to construction and as a standard practice, a geotechnical evaluation would be prepared which would prescribe methods, techniques, and specifications for: site preparation, treatment of undocumented fill and/or alluvial soils, fill placement on sloping ground, fill characteristics, fill placement and compactions, temporary excavations and shoring, permanent slopes, treatment of expansive soils, and treatment of corrosive soils. Design and construction of the proposed project would conform to recommendations in the geotechnical evaluation; therefore, impacts from potentially expansive soil would not be significant.				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
Reference: Uniform Building Code, California Department of Conservation, Division of Mines and Geology				
Comment: Refer to Comment 6 (c) above.				
e) Are soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
Reference: City of Los Angeles, Department of Public Works NavigateLA				
Comment: The City of Los Angeles, Department of Public Works, Bureau of Sanitation provides sewer service to all areas within its jurisdiction, including the proposed project site.				
7. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
Reference: City of Los Angeles CEQA Thresholds Guide (Sections H1, H2)				
Comment: Biosolids are not classified as hazardous waste. Biosolids are currently routinely trucked from the TITP for disposal offsite. This practice will be minimized if the biosolids are disposed onsite.				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? Reference: City of Los Angeles CEQA Thresholds Guide (Section H1); City of Los Angeles Municipal Code; City of Los Angeles, Terminal Island Treatment Plant – Risk Management and Prevention Program; City of Los Angeles, Department of Public Works, Bureau of Sanitation, Terminal Island Treatment Plant Response Plan; Terminal Island Renewable Energy Project Spill Response Plan Comment: Article 2, Section 255 et seq. of the Health and Safety Code requires all facilities (public and private) which store acutely hazardous materials (AHM) in excess of a specified (threshold) amount to prepare and implement a Risk Management and Prevention Program (RMPP). The purpose of the program is to minimize AHM incident risks, particularly from contact with chlorine and sulfur dioxide. The RMPP is a mandatory assessment of the storage and handling of AHM at TITP. The program consists of: 1) preparing a RMPP; 2) conducting a seismic vulnerability assessment for an AHM incident at the TITP; 3) analyzing problematic external events, other than seismic activity, which could precipitate an AHM incident (i.e. terrorist attack, air plane crashes, etc.); 4) identifying and evaluating AHM process and operating hazards; 5) preparing offsite consequence analysis based on pessimistic assumptions regarding the release of acutely hazardous materials under adverse air dispersion conditions; and, 7) other analytical and reporting activities as required by law. The Terminal Island Treatment Plant is responsible for safeguarding its employees, facilities, the public, and the environment in the event of disaster (natural or manmade) and other emergencies. Natural hazards include earthquakes, floods, and severe weather conditions such as high winds. Emergency situations could also develop from a major explosion or fire, uncontrolled hazardous material spill or release, verified bomb threat, or civil disorder. The Terminal Island Treatment Plant Response Plan was prepared to meet the safety and public health requirements of the following regulations: 1) Emergency Action Plan [CCR, Title 8, section 3220]; 2) Fire Prevention Plan [CCR, Title 8, Section 3221]; 3) Hazardous Waste Operations and Emergency Response [CCR, Title 8, Section 5192]; 4) Preparedness and Prevention Plan [CCR, title 22, Section 66265.31, Section 66265.32 (c), and Section 66265.52 (c)]; and 5) Contingency Plan and Emergency Procedures [CCR, Title 22,	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Section 66265.52 (c)] The gas recovery piping from the wells is analogous to the existing natural gas supply piping in the plant. It will have earthquake and shutoff valves, pressure monitoring devices, flame arrestors, and gas receivers. It will be connected both to the flare system and the reuse equipment. Compared to the existing natural gas system which has a supply pressure of 110 psi, the recovered gas should develop less than one psi. Also, as part of the EPA Individual Well Permit Application, a Spill Response Plan was developed.				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? Reference: City of Los Angeles CEQA Thresholds Guide (Section H1); City of Los Angeles, Department of Public Works NavigateLA Comment: The Port of Los Angeles, including the project site, is adjacent to the Los Angeles Unified School District – Local District K. District K encompasses the cities of Carson, Gardena, Lomita, San Pedro, Wilmington and parts of Long Beach, Harbor City and Torrance. The nearest school is Fifteenth Street Elementary School, located over one mile to the west across the main channel of the Port of Los Angeles in San Pedro. The project site is not within one-quarter mile of an existing or proposed school.	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? Reference: California Regional Water Quality Control Board, Los Angeles Region; California State Water Resources Control Board; California Department of Toxic Substances Control (CalSites); California Department of Toxic Substances Control (Cortese List) Comment: An electronic database search of listings maintained by federal, state, and local agencies of sites with known or suspected hazardous material contamination, use of hazardous or toxic materials and regulated wastes, discharge or spillage incidents, discharge permits, landfills, and storage tanks was performed. The site is not included on any of the listings.	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
people residing or working in the project area? Reference: City of Los Angeles, Department of Public Works NavigateLA Comment: The proposed project is not within the vicinity of a public airstrip and is not within two miles of a public airport. The closest public airport, Long Beach Airport, is located approximately nine miles to the northeast of the project site.				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? Reference: City of Los Angeles General Plan (Port of Los Angeles Master Plan); City of Los Angeles, Department of Public Works NavigateLA Comment: Helicopter landing pads are currently located at Berth 93E, approximately one mile to the northwest of the site and at Berth 79 approximately 0.75 mile west of the site. Only small helicopters operate from these locations and transit primarily via the Main Channel of the Port of Los Angeles. Given the distance of the heliport from the project site, persons will not be exposed to significant risks from aircraft operations. Refer to Comment 7 (b) above.	☐	☐	☒	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? Reference: See references for Section 7 (b) above. Comment: Article 2, Section 255 et seq. of the Health and Safety Code requires all facilities (public and private) which store acutely hazardous materials (AHM) in excess of a specified (threshold) amount to prepare and implement a Risk management and Prevention Program (RMPP). The purpose of the program is to minimize AHM incident risks, particularly from contact with chlorine and sulfur dioxide. The RMPP is a mandatory assessment of the storage and handling of AHM at TITP. The program consists of: 1) preparing a RMPP; 2) conducting a seismic vulnerability assessment for an AHM incident at the TITP; 3) analyzing problematic external events, other than seismic activity, which could precipitate an AHM incident (i.e. terrorist attack, air plane crashes, etc.); 4) identifying and evaluating AHM process and operating hazards; 5) preparing offsite consequence analysis based on pessimistic assumptions regarding the release of acutely hazardous materials under adverse air dispersion conditions; and, 7) other analytical and reporting activities as required by law.	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
to urbanized areas or where residences are intermixed with wildlands? Reference: City of Los Angeles, Department of Public Works NavigateLA Comment. The project would be constructed in the highly industrialized area. There are no wildlands adjacent to the project site.				
8. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements? Reference: City of Los Angeles CEQA Thresholds Guide (Section D2); City of Los Angeles Municipal Code; California Regional Water Quality Control Board, Los Angeles Region; U.S. Environmental Protection Agency, Region 9 Comment: As required by the California Regional Water Quality Control Board, Los Angeles Region, the proposed project will be in compliance with the National Pollutant Discharge Elimination System (NPDES) program to control direct stormwater discharges. The project site's half acre area is paved, bermed and slopes toward a debris basin which discharges to the in-plant sewer. Any spills from drilling or injection activities are washed and diverted to the sanitary sewer. All in-plant run offs are collected and treated along the with the plant's influent. During emergencies or unusual conditions, runoff from the site will be directed to the plant's drainage system. There are three targeted zones with a total thickness of about 1,500 feet (500 meters) for biosolids disposal. They are the Tar Zone and the Ranger Zone within the Repetto Formation, and the Upper Terminal zone within the Puente Formation. Based on the nearby lithology (Wilmington Oil Field), the formation materials should be intercalated fine to coarse grained, poorly sorted sandstones and siltstones with interbedded dark brown-gray shales and clays. This series of alternating shale (sealing zones) and low pressure sand sequences (absorption zones) present natural protection mechanisms for usable groundwater sources thousands of feet above. The different oil/water contacts found within the Wilmington oil field demonstrate that sands are non-continuous and the shales formed sealing caps to the underlying reservoirs.	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a	☐	☒	☐	☐

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
level which would not support existing land uses or planned uses for which permits have been granted)? Reference: City of Los Angeles CEQA Thresholds Guide (Section D3); Environmental Data Resources (2004) Comment: The proposed project will not draw groundwater. Groundwater in the area has significant saltwater intrusion, and is therefore unsuitable for use as drinking water. There are no drinking water wells in the project area or within one mile of the project area. The project site is currently developed and most of the site consists of impermeable surfaces. The site does not support surface recharge of groundwater. The wells will be constructed with steel and several layers of concrete casings while penetrating through geological formations including the ones containing the water table. Isolation of the deep wells along with the monitoring instrumentations assure adequate safeguard for protection of groundwater. The slurry injection of biosolids will be performed in depths of several thousand feet. This is well below the local water table.				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? Reference: See references for Section 8 (a) above. Comment: No streams or rivers cross the proposed project site. The project would not substantially alter the existing drainage pattern of the site or area. As discussed in comment 8 (a), the project would be constructed in accordance with applicable requirements of the City of Los Angeles Municipal Code. A stormwater pollution prevention plan for the control of soil erosion and sediment runoff would be implemented and a set of mitigation measures would be implemented to ensure a less than significant impact during operation.	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site? Reference: See references for Section 8 (a) above. Comment: Refer to Comments for 8 (a) and 8 (c) above.	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Reference: See references for Section 8 (a) above. Comment: Refer to Comments 8 (a), 8 (c), and 8 (d) above.	☐	☒	☐	☐

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
f) Otherwise substantially degrade water quality? Reference: See references for Section 8 (a) above. Comment: Refer to Comment (a) above.	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? Reference: City of Los Angeles CEQA Thresholds Guide (Section D1); City of Los Angeles, FEMA; Department of Building and Safety Parcel Profile Report (2006) Comment: The project does not propose the construction of houses. Also, the project site is not located in the 500-year designated flood zone or the 100-year designated flood zone.	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? Reference: See references for Section 8 (g) above. Comment: Refer to Comment 8 (g) above.	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? Reference: See references for Section 8 (g) above. Comment: Refer to Comment 8 (g)	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow? Reference: City of Los Angeles CEQA Thresholds Guide (Section D1); City of Los Angeles General Plan (Safety Element); City of Los Angeles, Department of Public Works Bureau of Sanitation Terminal Island Treatment Plant Response Plan	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: The project would not contribute to inundation by seiche, tsunami, or mudflow. The open harbor system would allow seismic forces to travel out to sea rather than contain them in a closed basin subject to increasing oscillations as is characteristic of seiche activity. The project site is located outside the areas "potentially impacted by a tsunami." The topography of the area, which is essentially flat, lacks sufficient relief to support a mudflow. In addition, The Terminal Island Treatment Plant Response Plan (Response Plan) provides an evacuation plan in the event of a tsunami. The Response Plan was prepared to meet the safety and public health requirements of the following regulations: 1) Emergency Action Plan [CCR, Title 8, section 3220]; 2) Fire Prevention Plan [CCR, Title 8, Section 3221]; 3) Hazardous Waste Operations and Emergency Response [CCR, Title 8, Section 5192]; 4) Preparedness and Prevention Plan [CCR, title 22, Section 66265.31, Section 66265.32 (c), and Section 66265.52 (c)]; and 5) Contingency Plan and Emergency Procedures [CCR, Title 22, Section 66265.52 (c)].				
9. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community? Reference: City of Los Angeles General Plan (Port of Los Angeles Community Plan; Port of Los Angeles Master Plan); City of Los Angeles CEQA Thresholds Guide (Section A2); City of Los Angeles, Department of Public Works NavigateLA Comment: Project is confined to a single parcel within an industrial area (see Comment 9 (b) below).	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Reference: See references for Section 4 (e) above. Comment: The project is consistent with the designated land use and the Port Plan certified by the California Coastal Commission.	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? Reference: See references in Section 4 (e) above. Comment: Refer to Comment 4 (f) above.	☐	☐	☐	☒
10. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
would be of value to the region and the residents of the state? Reference: City of Los Angeles CEQA Thresholds Guide (Section C4); California Department of Conservation, Division of Mines and Geology (2004); City of Los Angeles Environmental and Public Facilities Map (1996) Comment: The site is located in a Mineral Resource Zone (MRZ) area classified as "MRZ-1," which is defined as areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. The project site is not located within any known oil field. The project area is not located in an aggregate resource zone or oil field drilling area.				
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? Reference: See references to Section 10 (a) above. Comment: Refer to Comment 10 (a) above.	☐	☐	☐	☒
11. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? Reference: City of Los Angeles General Plan (Noise Element); City of Los Angeles CEQA Thresholds Guide (Section I1 and I2); City of Los Angeles Municipal Code Comment: The proposed project involves the construction of control buildings and drilling and operating wells. Construction of facilities and structures requires the use of equipment which may generate high noise levels. Stationary and mobile vehicular noise sources associated with the operation of a project may also increase existing noise levels. A significant impact would occur if the project resulted in or exposed people to noise levels in excess of standards established in the General Plan and/or Noise Ordinance of the Municipal Code. The proposed project would likely result in temporary higher-than-average noise levels in the project vicinity during construction. However, the Department of Public Works Bureau of Engineering Standard Project Specifications for public works construction are designed to comply with the City's General Plan Noise Element and related Municipal Code Noise Ordinance and, given that the proposed project would be implemented in accordance with these, significant adverse impacts to noise levels are not expected.	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
During construction, the drilling rig may produce noise in the range of 75 to 88 dBA. This noise level is lower than those produced by trucks, trains and cargo handling equipment in the vicinity. Noise levels will not be any more than the levels established for the plant. The dominant noise source in the area is due to cargo container truck traffic from a container handling lot operating adjacent to the plant. Within the plant itself, there are centrifuges, boilers, and pumps in current operation. Cargo trucks, which are continuous at Terminal Way have dBA's of 82 to 95, which is above the proposed project's anticipated noise levels. There are no known sensitive noise receptors for at least a quarter of a mile from the site. The nearest residences are located approximately 0.5 miles to the west of the project site, across the Main Channel of the Los Angeles Harbor.				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? Reference: See references for Section 11 (a) above. Comment: When operational, the facility will not generate excessive ground borne vibration and noise levels. The main injection equipment will be a short stroke positive displacement pump that produces 68 to 72 dBA. This is lower than the conditionally acceptable industrial noise level of 70 to 80 dBA. Equipment may be equipped with vibration or noise dampers. A significant impact would occur if the project resulted in or exposed people to excessive groundborne vibration or groundborne noise levels during construction or operation. This would include excessive groundborne vibration or noise which causes structural damage or displaces objects in nearby buildings. Construction of the project may generate groundborne vibration and noise; however, there are no nearby sensitive receptors and these effects would be temporary and short-term in nature. Construction and operation practices would comply with applicable noise standards of the Municipal Code.	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? Reference: See references for Section 11 (a) above. Comment: Refer to Comments 11 (a) and 11 (b) above.	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? Reference: See references for Section 11 (a) above.	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: Refer to Comments 11 (a) and 11 (b) above.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? Reference: City of Los Angeles General Plan (Noise Element) Comment: No public airport is located within the vicinity of the project area. Refer to 7 (e) above.	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? Reference: City of Los Angeles General Plan (Noise Element) Comment: Helicopter landing pads are currently located at Berth 93E, approximately one mile to the northwest of the site and at Berth 79 approximately 0.75 mile west of the site.	☐	☐	☐	☒
12. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? Reference: City of Los Angeles CEQA Thresholds Guide (Section B2) Comment: The proposed project requires only a few temporary workers for drilling and construction; and, may require three contract operators for the operation of the unit. Therefore, no substantial population growth or extension of roads or other infrastructure is required.	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? Reference: See reference for Section 12 (a) above. Comment: The proposed project is located within the TITP. There is no housing on or adjacent to the site. The nearest housing is located 0.5 miles to the west, across the Main Channel of the Los Angeles Harbor. Therefore, the project will not displace housing.	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? Reference: See reference for Section 12 (a) above. Comment: Refer to Comment 12 (b) above.	☐	☐	☐	☒
13. PUBLIC SERVICES –				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
Reference: City of Los Angeles CEQA Thresholds Guide (Section J2); City of Los Angeles Municipal Code, City of Los Angeles, Department Public Works, Bureau of Sanitation Emergency Response Plan				
Comment: The City of Los Angeles Fire Department (Fire Department) currently provides fire protection for the project area. The Fire Department has a response time of five minutes within its jurisdiction. The Fire Department facilities in the vicinity of the project site include land-based fire stations and fireboat companies. Two fire stations are located on Terminal Island near the project site. Station 111, at 954 South Seaside Avenue, has a staff of three fire fighters per shift (total of nine) and includes one fireboat and is located approximately 0.5 miles from the proposed project site. Station 40 at 330 Ferry Street, has a staff of four firefighters per shift (total 12) and includes one engine company and is located approximately 0.25 miles from the proposed site. The Fire Department will be able to provide services to the proposed project. Also, the Fire Department will review and approve plot plans for the proposed project. The Terminal Island Treatment Plant is responsible for safeguarding its employees, facilities, the public, and the environment in the event of disaster (natural or manmade) and other emergencies. Natural hazards include earthquakes, floods, and severe weather conditions such as high winds. Emergency situations could also develop from a major explosion or fire, uncontrolled hazardous material spill or release, verified bomb threat, or civil disorder. The Terminal Island Treatment Plant Response Plan was prepared to meet the safety and public health requirements of the following regulations: 1) Emergency Action Plan [CCR, Title 8, section 3220]; 2) Fire Prevention Plan [CCR, Title 8, Section 3221]; 3) Hazardous Waste Operations and Emergency Response [CCR, Title 8, Section 5192]; 4) Preparedness and Prevention Plan [CCR, title 22, Section 66265.31, Section 66265.32 (c), and Section 66265.52 (c)]; and 5) Contingency Plan and Emergency Procedures [CCR, Title 22, Section 66265.52 (c)]				
ii) Police protection?	☐	☐	☒	☐
Reference: City of Los Angeles CEQA Thresholds Guide (Section J1)				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: The Los Angeles Harbor Department Port Police (Port Police) and the Los Angeles Police Department both provide police services to the Port of Los Angeles. The Port Police is the primary response agency in the Port by jurisdictional responsibility and is responsible for operations within the Port's property boundaries. Port Police headquarters is located in the Los Angeles Harbor Department (LAHD) administration building at 425 South Palos Verdes Street in san Pedro and is located approximately three miles from the proposed site. The Port Police is authorized a staff of approximately 90 sworn officers who enforce municipal, state, and federal laws, as well as port tariff regulations. Port Police officers are currently located in the LAHD administration building, and maintain a 24-hour land and water patrol with a fleet of approximately 40 vehicles and five police boats. Response time for patrol vehicles is less than five minutes for all patrol areas. Although the Port Police are the first responders to an emergency, the Port is within the City of Los Angeles, and the primary responsibility for police services falls to the Los Angeles Police Department. The department's Harbor Division is at 2175 John S. Gibson Boulevard in San Pedro and is located approximately three miles from the proposed site, and has a staff of approximately 260 officers and 30 civilians. Patrols are divided into two watches (day/PM and PM/morning), and both radio-dispatched cars and traffic-control motorcycles are used to patrol the area. Average response time for the entire Harbor Division is approximately 10.6 minutes. The proposed project of drilling and operating deep well placement does not involve any subsequent development that would increase the needs for police services. Impacts on police service to the community would not occur as a result of the proposed project.				
iii) Schools?	☐	☐	☐	☒
Reference: City of Los Angeles CEQA Thresholds Guide (Section J3) Comment: The proposed project would not promote population growth, either directly or indirectly, because it would not include new residential or educational development.				
iv) Parks?	☐	☐	☐	☒
Reference: City of Los Angeles CEQA Thresholds Guide (Section J4) Comment: The proposed project does not involve parks, or any residential development that would increase the need for new parks.				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
v) Other public facilities?	☐	☐	☐	☒
Reference: City of Los Angeles CEQA Thresholds Guide (Section J5); City of Los Angeles, Department of Public Works NavigateLA Comment: The proposed project would not promote population growth, either directly or indirectly. It would not include new residential or educational development.				
14. RECREATION –				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? Reference: City of Los Angeles General Plan (Port of Los Angeles Community Plan; Port of Los Angeles Master Plan); City of Los Angeles CEQA Thresholds Guide (Section J4); City of Los Angeles, Department of Public Works NavigateLA Comment: The proposed project would not adversely affect existing recreational opportunities or increase the demand for neighborhood or regional parks or other recreational facilities. The project does not involve residential development.	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? Reference: See references for Section 14 (a) above. Comment: Refer to Comment 14 (a) above.	☐	☐	☐	☒
15. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? Reference: City of Los Angeles CEQA Thresholds Guide (Sections F1, F2, F3, F4, and F8) Comment: A maximum of 14 truck loads per day will be delivered from the Hyperion Treatment Plant to TITP. This will have a less than significant impact on the existing capacity of the street system. The nearest freeway is the Terminal Island Freeway which is located approximately 0.5 miles from the proposed project.	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? Reference: See references for Section 15 (a) Comment: Refer to Comment 15 (a) above.	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? Reference: City of Los Angeles CEQA Thresholds Guide (Sections F1, F2, F3, F4, and F8) Comment: The proposed project will not result in a change in air traffic patterns.	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Reference: See references for 15 (a) Comment: The project is compatible with the land use and would not include any design features that would result in a safety hazard to pedestrians, personnel, visitors, or nearby neighbors.	☐	☐	☐	☒
e) Result in inadequate emergency access? Reference: See references for Section 15 (a) Comment: The City of Los Angeles Fire Department will review and approve the project plot plans. Traffic control plans would be developed to maintain adequate emergency access to all surrounding facilities during construction.	☐	☐	☒	☐
f) Result in inadequate parking capacity? Reference: See references for Section 15 (a) Comment: There will be a reduction in biosolids trucks in and out of the plant because with the project, biosolids may now be disposed and confined onsite. In a later project phase, HTP biosolids will be trucked into the plant. Trucks will be scheduled to prevent the need for queuing or parking and will not use public parking. Therefore, there would be no change in the need for parking in the area.	☐	☐	☐	☒
g) Conflict with adopted policies plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? Reference: See references for Section 15 (a) above. Comment: The proposed project would not conflict with adopted policies or existing facilities related to alternative transportation. No barriers to pedestrian or bicycle circulation would occur. The project would comply with all policies regarding alternative transportation.	☐	☐	☐	☒
16. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? Reference: City of Los Angeles CEQA Thresholds Guide (Section K2)	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Comment: The operation of the project involves the mixing and placement of biosolids into deep wells. The project would not add flow to existing wastewater treatment systems and would not affect existing wastewater treatment equipment.				
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Reference: City of Los Angeles CEQA Thresholds Guide (Section K1 and K2) Comment: The City of Los Angeles, Department of Public Works Bureau of Sanitation provides sewer service to the project site. The Bureau of Sanitation maintains sewer lines in the project area, as well as a wastewater treatment plant on Terminal Island. The adequacy of wastewater disposal service is evaluated based on conveyance capacity (typically via a gravity-driven underground pipeline network) and treatment capacity prior to discharge. Potable water is provided to the project area by the City of Los Angeles Department of Water and Power (DWP). DWP is responsible for supplying, conserving, treating, and distributing water for domestic, industrial, agricultural, and firefighting purposes within the City of Los Angeles. The project does not require additional conventional wastewater treatment water facilities or processing. Plant effluent water will be used for washing and slurry mixing of biosolids for deep well placement.	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Reference: City of Los Angeles CEQA Thresholds Guide (Section K1) Comment: The project would not require or result in the construction of new or expanded stormwater drainage facilities. Stormwater from the project site would flow into the existing storm drains within the plant property. The site is currently developed with impermeable surfaces. Project-related increases in stormwater flow are not expected.	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? Reference: City of Los Angeles CEQA Thresholds Guide (Section K1) Comment: Potable water is provided to the project area by the City of Los Angeles Department of Water and Power (DWP). Plant effluent will be used for mixing, equipment cooling, dust control and wash down. Fresh water will be used only for personnel needs. The amount anticipated to be required is minimal and	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
can be supplied by the existing sources. e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Reference: City of Los Angeles CEQA Thresholds Guide (Section K2) Comment: Process water needs by the project when operational will be from plant effluent. Plant effluent will be used for mixing, equipment cooling, dust control and wash down. Fresh water will be used only for personnel needs.	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Reference: City of Los Angeles CEQA Thresholds Guide (Section K3) Comment: The City of Los Angeles Department of Public Works Bureau of Sanitation (Sanitation) and private waste management services provide solid waste collection and disposal services within the project area. Non-hazardous solid waste is transported to an approved Class III (non-hazardous waste) landfill. Hazardous materials are hauled to an appropriate Class I landfill. The closest Class I landfill is the Kettleman Hills facility in Kings County, which has capacity limitations since it is currently the only such facility operating in Southern California. Sanitation provides waste removal and disposal service to single family residents within the City of Los Angeles. Private waste disposal companies provide service to businesses and apartment complexes. Los Angeles County Ordinance prohibits solid waste from the City of Los Angeles from being handled by or disposed of in facilities and landfills operated by the Los Angeles County Sanitation District. Drill shaving and solid waste from the project site would be disposed of in facilities either within the City of Los Angeles or other non-Los Angeles County Sanitation District facilities. No substantial increases in landfill waste generation during installation and operation of the TIRE project area anticipated.	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste? Reference: City of Los Angeles CEQA Thresholds Guide (Section K3) Comment: The proposed project would comply with all federal, state, and local regulations pertaining to the disposal of solid waste, including Chapter VI, Article 6, Garbage, Refuse Collection, of the City of Los Angeles Municipal Code; Part 13, Title 42, Public	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact

Health and Welfare, of the California Health and Safety Code; and Chapter 39, Solid Waste Disposal. Any material containing hazardous material would be disposed of in landfills permitted to accept such waste. Because the proposed project would implement and be consistent with the procedures and policies detailed in these codes, impacts associated with consistency related to laws pertaining to solid waste disposal would result in no impact.

17. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ☐ ☒ ☐ ☐

Reference: California Department of Fish and Game NCCP Program; California Natural Diversity Database (CNNDB); U. S. Fish and Wildlife Service Habitat Conservation Plan (HCP) Program; County of Los Angeles General Plan; County of Los Angeles Sensitive Ecological Area (SEA) Program; City of Los Angeles General Plan (Port of Los Angeles Community Plan; Port of Los Angeles Master Plan); City of Los Angeles General Plan (Conservation Element); City of Los Angeles CEQA Thresholds Guide (Sections D, G and M); City of Los Angeles, Department of City Planning Environmental and Public Facilities Maps; City of Los Angeles, Department of Public Works NavigateLA; City of Los Angeles Municipal Code; California Regional Water Quality Control Board, Los Angeles Region; Environmental Data Resources (2004); Keane (2004)

Comment: The project site is located in an industrialized area within the Port of Los Angeles. Neither the project site nor any adjacent areas are included as part of an adopted Natural Communities Conservation Plan (NCCP) or Habitat Conservation Plan (HCP).

There is currently only one NCCP that is being considered near the Port of Los Angeles. The NCCP for the Palos Verdes Peninsula Sub-Regional Plan is currently under consideration (CDFG, 2005). This plan intends to protect coastal sage scrub and does not include the Port of Los Angeles lands. There are no HCPs currently in place for the Port of Los Angeles.

The County of Los Angeles has also established sixty-one Significant Ecological Areas (SEAs). There is one proposed SEA

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact

within the Port of Los Angeles boundaries: The Pier 400 California Least Tern Nesting Site. A Memorandum of Agreement (MOA) between the City of Los Angeles Harbor Department, California Department of Fish and Game, U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers protects the California Least Tern at the 15 acre site during the annual nesting season from May to October. This proposed SEA is located approximately 2 miles south of the project site. Least Terns do not use the project area for nesting or foraging. The proposed project would not reduce or threaten any fish or wildlife species (endangered or otherwise).

The project site is on a man-made fill related to the original construction in the early 20th century and subsequent developments at the TITP. The site would not be expected to yield significant archaeological or paleontological resources. Therefore, the proposed project would not cause substantial adverse change in significance of archaeological resources in the area. The proposed project would not eliminate important examples of the major periods of California history or prehistory.

As required by the California Regional Water Quality Control Board, Los Angeles Region, the proposed project will be in compliance with the National Pollutant Discharge Elimination System (NPDES) program to control direct stormwater discharges. The project site's half acre area is paved, bermed and slopes toward a debris basin which discharges to the in-plant sewer. Any spills from drilling or injection activities are washed and diverted to the sanitary sewer. All in-plant run offs are collected and treated along the with the plant's influent. During emergencies or unusual conditions, runoff from the site will be directed to the plant's drainage system.

The proposed project has the potential to slightly degrade the immediate environment during construction due to equipment emissions and noise from construction activity. In order to ensure that wildlife and habitat are not disturbed during the construction and operation of the proposed project a variety of mitigation measures are proposed to curb air, noise, and runoff that could have adverse effects on these resources. In general, since the proposed project would provide oversight and monitoring of the proposed facility, it is expected to result in a public benefit that further advances the policies and goals of the City of Los Angeles General Plan.

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact
Thus, the potential of the proposed project to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory are expected to be less than significant following implementation of the above-referenced mitigation measures.				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
Reference: City of Los Angeles, Bureau of Engineering Master Schedule of Projects (May 2006); City of Los Angeles, Department of Public Works NavigateLA				
Comment: A review of the City of Los Angeles Department of Public Works Bureau of Engineering Master Schedules of planned projects (including Accelerated Sewer Repair, Animal Facilities, Bridge Improvement, Fire Bond, Library Facilities, Municipal Facilities, Proposition K Facilities, Proposition Q Facilities, Seismic Bond Program, Stormwater Program, Street Program, Wastewater Cease and Desist Order, Wastewater Conveyance systems, Waster Treatment Plant, and Zoo Bond Program) indicates that no other projects are expected to interfere with construction and/or operation of the proposed project. A review of the City of Los Angeles NaviageLA database indicated no planned Los Angeles United School District project within the vicinity.				
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐
Reference: See subsequent "References" section of this document.				
Comment: The proposed project would not have significant air quality, biological resource, geology and soils, hazards and hazardous materials, hydrology, land use, noise, public service or traffic impacts that would cause substantial adverse effects on human beings, either directly or indirectly. The proposed project is intended as a public benefit project that would improve the environment by converting biosolids into clean energy by deep well injection and bio-degradation, while at the same time reducing greenhouse gas emissions through geologic sequestration. The process takes advantage of renewable geothermal energy (heat) in the subsurface to create another				

Issues	Potentially Significant Impact	Less Than Significant With	Less Than Significant	No Impact

source of renewable energy (relatively pure methane from subsurface biodegradation of biosolids).

4.0 MITIGATION MEASURES

The following mitigation measures would be implemented to ensure that potential adverse impacts of the proposed project would be reduced to a less than significant level. These mitigation measures reference the Initial Study Checklist above.

4.1 Aesthetics

According to the City of LA THRESHOLD: *views, shading, and nighttime illumination issues are related elements in the visual environment. Aesthetics generally refer to the identification of visual resources and the quality of what can be seen, or overall visual perception of the environment. Views refer to visual access and obstruction, or whether it is possible to see a focal point or panoramic view from an area. Shading issues are concerned with effects of shadows cast by existing or proposed structures on adjacent land uses. Nighttime illumination addresses the effect of a proposed project's exterior lighting upon adjoining uses.*

AES-1 Any nighttime security lighting will be designed and installed with shielding so that there will be no impact on adjacent residential properties and/or wildlife.

AES-2 Structures will be painted to match the TITP color palette.

4.2 Air Quality

The South Coast Air Quality Management District (SCAQMD) is the air pollution control district with jurisdiction over the South Coast Air Basin, which includes the proposed project site. The SCAQMD is responsible for the Air Quality Management Plan (AQMP) for the Basin, which is a comprehensive air pollution control program for attaining the state and federal ambient air quality standards. The proposed project is therefore subject to the AQMP. The City has an adopted Air Quality Element that is part of the General Plan. The Air Quality Element contains policies and goals for attaining state and federal air quality standards, while simultaneously facilitating local economic growth, and it includes implementation strategies for local programs contained in the AQMP or the Air Quality Element of the City's General Plan.

The South Coast Air Basin is a non –attainment area for ozone, carbon monoxide, and fine particulate matter. In determining attainment and maintenance of air quality standards, the SCAQMD has established thresholds of significance for these and other criteria pollutants. A significant impact would occur if the project resulted in substantial emissions during construction or operation which would exceed the established thresholds. Construction activities would comply with applicable SCAQMD regulations, such as Rule 403, which is designed to minimize fugitive dust. As a standard practice, construction equipment would also be permitted, maintained, and operated to minimize emissions.

Air emissions that may be generated from the proposed project include dust impacts during

construction as these may occur when soil disturbance occurs. Construction-related emissions are temporary emissions lasting only for the duration of the construction project and may also consist of exhaust from equipment. However, these impacts can be mitigated to a level of insignificance by the following mitigation measures:

AIR-1 All unpaved construction areas shall be wetted at least twice daily during construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403.

AIR-2: The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by grading, and at all times provide reasonable control of dust caused by wind.

AIR-3: All loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust.

AIR-4: All clearing, grading, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.

AIR-5: General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.

AIR-6: All mobile equipment shall be 1996 or new models.

AIR-7: All equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

AIR-8: General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall be parked with their engines off when not in use. Construction activities shall be discontinued during second-stage smog alerts.

4.3 Geology and Soils

The proposed project would involve grading and compaction of soil, as well as landscaping. During construction, Best Management Practices would be employed to minimize soil erosion and runoff. Consequently, the potential for substantial soil erosion or the loss of topsoil is considered minimal. With the implementation of the below mitigation measure, the impact will be reduced to a level of insignificance.

GEO-1 The project would result in temporary soil disturbance activities during construction during which time a stormwater pollution prevention plan for the control of soil erosion and sediment runoff

would be implemented.

4.4 Hydrology and Water Quality

Ground disturbance activities would only take place temporarily during construction. Throughout construction, the proposed project would comply with applicable stormwater management requirements for pollution prevention. Construction practices would include erosion control, spill prevention and control, solid and hazardous waste management, and dust control to reduce the discharge of pollutants from construction areas to the stormwater system. With the implementation of the below mitigation measure, the impact will be reduced to a level of insignificance.

HYD-1 The grading plan would conform to the City's Landform Grading Manual guidelines, and subject to the approval of the City's Department of Building and Safety's Grading Division.

HYD-2 The project would result in temporary soil disturbance activities during construction during which time a stormwater pollution prevention plan for the control of soil erosion and sediment runoff would be implemented.

HYD-3 All project landscaping will include native vegetation, requiring minimal irrigation and safe care (e.g., no harmful chemicals), designed to assist in filtering any runoff. In addition, all landscaping should be sensitive to (and compatible with) the adjacent residential properties. Native trees and plants present within the area would be primary constituents of the plant palette. Review of the landscaping plan for the project area would be performed by a qualified biologist to ensure that no invasive plants are included.

HYD-4 As required by the California Regional Water Quality Control Board, Los Angeles Region, the proposed project will be in compliance with the National Pollutant Discharge Elimination System (NPDES) program to control direct stormwater discharges. The project site's half acre area is paved, bermed and slopes toward a debris basin which discharges to the in-plant sewer. Any spills from drilling or injection activities are washed and diverted to the sanitary sewer. All in-plant run offs are collected and treated along the with the plant's influent. During emergencies or unusual conditions, runoff from the site will be directed to the plant's drainage system.

5. PREPARATION AND COORDINATION/CONSULTATION

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6.0 DETERMINATION - RECOMMENDED ENVIRONMENTAL DOCUMENTATION

6.1. SUMMARY

The facility will occupy one half acre of the 25 acre TITP. The area is a heavy industrial ([Q]M3-1) and non-residential zone. The plant is surrounded by oil storage tanks, cargo container lots, coal handling structures, rail tracks, and cargo roads. The project proposes to construct for a three to five year experiment three 5,300 foot deep wells at the TITP located at 445 Ferry Street in San Pedro. The wells will be used for the placement in non-producing oil formations of forty tons per day of biosolids generated by the plant as a means of disposal and beneficial reuse. Biosolids is an undesirable by-product of wastewater treatment which is currently being trucked for land application to Kern County, 135 miles away. With the project, biosolids trucking in and out of the plant may be stopped; eliminating a mobile source of emission and improving air quality in the basin. The project will, also, recover methane gas generated by the biodegradation of the biosolids. The gas will be reused as a renewable fuel for power co-generation using non-polluting fuel cells; further enhancing air quality. In addition, with biodegradation occurring deep underground, carbon dioxide, a by-product and a "greenhouse" gas, is sequestered safely in brine formations underground. In the later phases of the project, a portion of the Hyperion Wastewater Treatment Plant (HTP) biosolids will be trucked to TITP for injection into the well.

6.2 RECOMMENDED ENVIRONMENTAL DOCUMENTATION

On the basis of this initial evaluation, I find that the proposed project could not have a significant effect on the environment, and a **Mitigated Negative Declaration** should be adopted.

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