2.0 PROJECT DESCRIPTION

2.1 Project Objectives

RECLAIM is a market incentive regulatory program designed and adopted by SCAQMD to reduce NO_x and SO_x emissions from stationary sources in the Basin while lowering the cost of attaining clean air through the use of market incentives. The goals of RECLAIM are to give facilities added flexibility in meeting their emission reduction requirements, to lower the cost of compliance, and achieve clean air for the Basin. RECLAIM prescribes only total facility-wide emission reduction requirements and facility operators are free to choose control strategies that work best for their facility. The emission reduction requirements are established in the form of declining annual Allocations. Facilities comply with RECLAIM by installing control equipment that limits their annual NO_x and or SO_x emission to below or at their annual Allocations or purchase additional RTCs to account for any exceedances above their annual Allocations.

To help LADWP comply with its annual RECLAIM Allocations for future years, improve in-Basin power reliability, and participate in the Cal-ISO by supplying excess electrical power on a daily basis during the summer, thereby reducing the risk of blackouts for the state, LADWP is proposing modifications to three generating stations located in the Basin. It is envisioned that the proposed project, consistent with the intent of RECLAIM, will achieve an overall decrease in NO_x emissions at the three affected facilities.

To accomplish the aforementioned goals at the earliest possible time, LADWP has entered into a compliance agreement with the SCAQMD. The agreement requires that LADWP begin simultaneous equipment installation and modifications at three generating facilities starting early in 2001, such that affected power generating units will be in-use by summer 2001. The modifications that will be conducted at the three LADWP generating facilities, all of which are subject to the SCAQMD's RECLAIM program, are discussed briefly below.

2.2 Project Overview

For a full explanation of the modifications at each project site, see the following proposed project sections below.

2.2.1 Harbor Generating Station

LADWP is proposing to install five 47-MW CTs at the HGS, each with a SCR system that will use aqueous ammonia to reduce NO_x emissions in the presence of a catalyst. A pipeline will be installed to transport aqueous ammonia from existing aboveground storage tanks to the new

turbines. A 565 kilo-watt (kW) diesel fired generator will be installed to provide emergency power for "black start"[2] situations.

2.2.2 Scattergood Generating Station

LADWP is proposing to install SCR systems on three existing units at the SGS[3]. As there is currently no ammonia storage capacity at SGS, the project includes installation of three 30,000-gallon aqueous ammonia storage tanks.

2.2.3 Valley Generating Station

LADWP is proposing to install one 47-MW CT with a SCR system at the VGS. One 20,000-gallon aqueous ammonia storage tank will also be constructed.[4] A 565 kW diesel fired generator will be installed to provide emergency power for black start situations.

2.3 Project Location

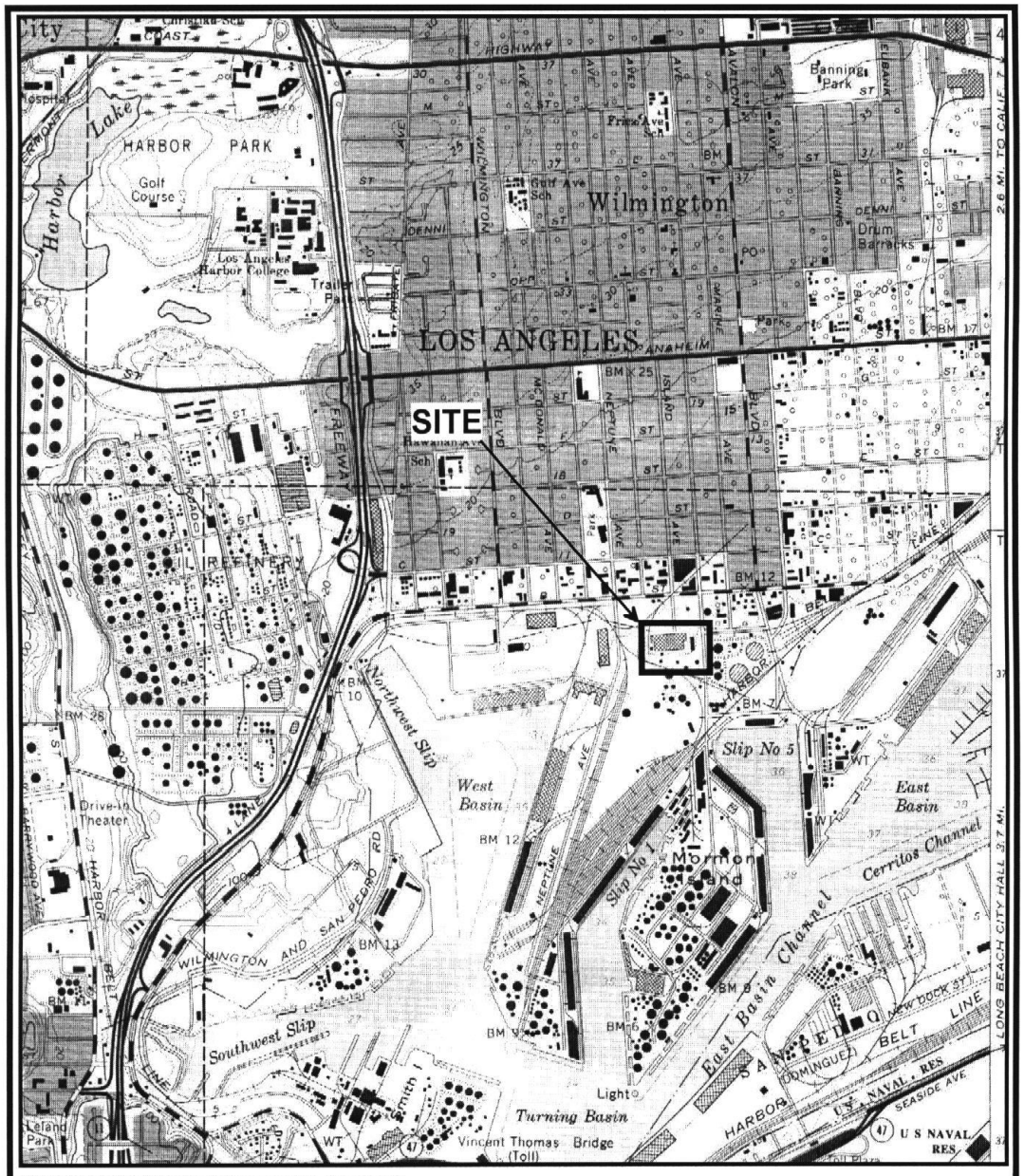
A regional map showing the locations of the three stations is shown on Figure 2.3-1. The locations of the three power generating stations are shown on Figures 2.3-2, 2.3-3 and 2.3-4. The HGS is located at 161 North Island Avenue, City of Los Angeles (Wilmington) adjacent to the Port of Los Angeles. A site plan of the HGS is shown on Figure 2.3-5. Land use in the area is primarily industrial. As shown in Figure 2.3-5, Fries Avenue separates the eastern and western portions of HGS. Due to this separation of the site, utilities and other necessary infrastructure are required to cross under and over Fries Avenue. The HGS occupies an irregularly shaped parcel of land bordered by Harry Bridges Boulevard (formerly B Street) to the north; Avalon Boulevard to the east; a container storage area which borders the Los Angeles Harbor to the south; and Neptune Avenue to the west. The nearest residential area is located approximately one-quarter mile to the north.

The SGS is located at 12700 Vista Del Mar in the City of Los Angeles (Playa Del Rey). A site plan of the SGS is shown on Figure 2.3-6. The facility is bounded to the west by the Pacific Ocean; to the east by a residential neighborhood of single-family dwellings, which are approximately 1,400 feet from the proposed project activities; to the south by Grand Avenue, beyond which is the Chevron El Segundo Refinery; and to the north by the Hyperion Wastewater Treatment Plant.

[2]A CT requires electrical power for start up for controls, fans, and the electric starter motor, etc. A black start occurs when no power is available due to a complete power failure.

[3] See footnote 1.

[4] See footnote 2.



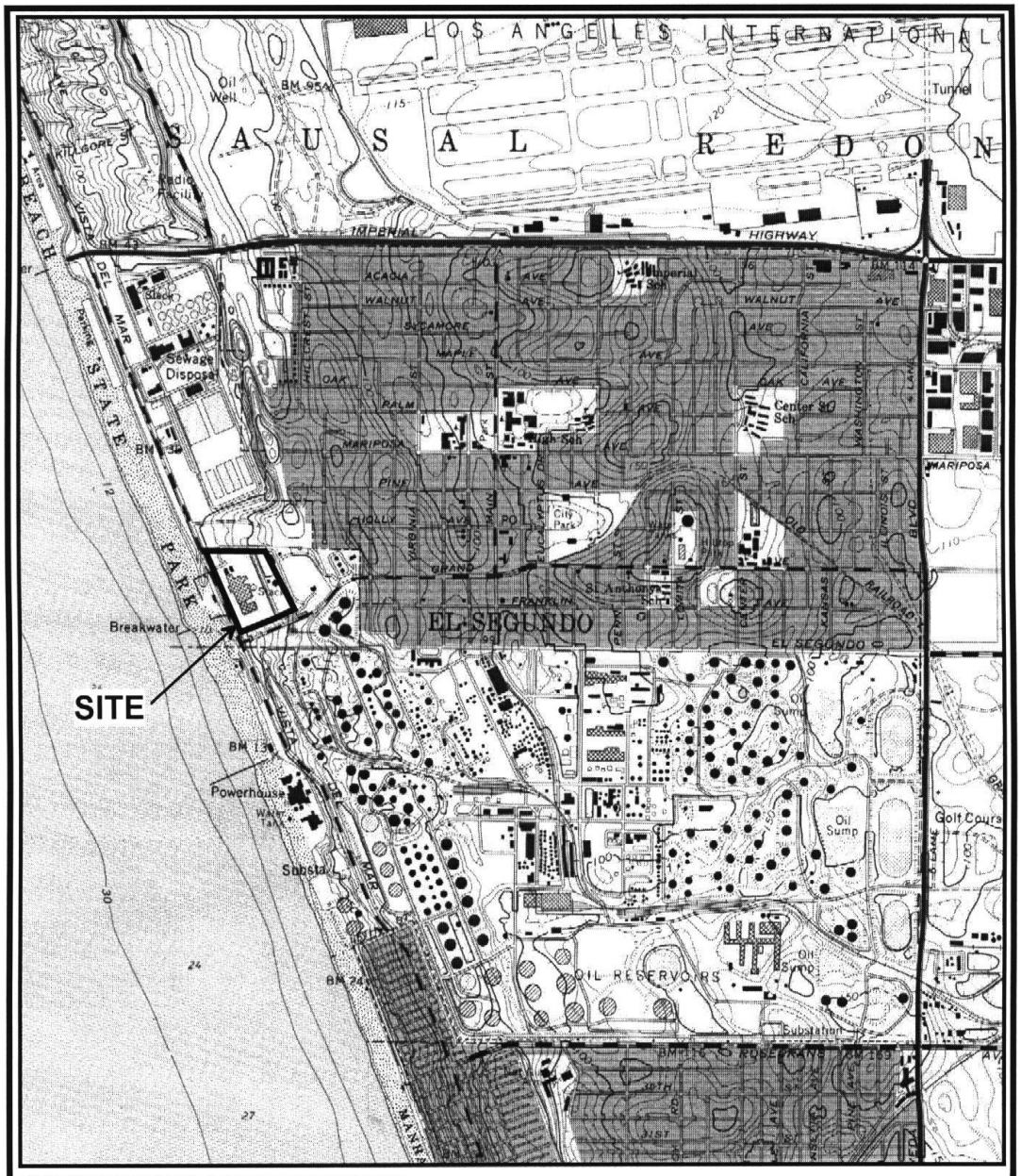
SOURCE: USGS 7.5 Minute Topographic Quadrangle, Torrance, CA, 1964, Photorevised 1981

FIGURE 2.3-1

SITE LOCATION MAP

Harbor Generating Station
161 North Island Avenue
Wilmington, CA

Drawn by: M. Scop	Date: 8/30/2000	Project Number 6190-026-100
Figure Name: 6190026C.dsf	Checked by:	



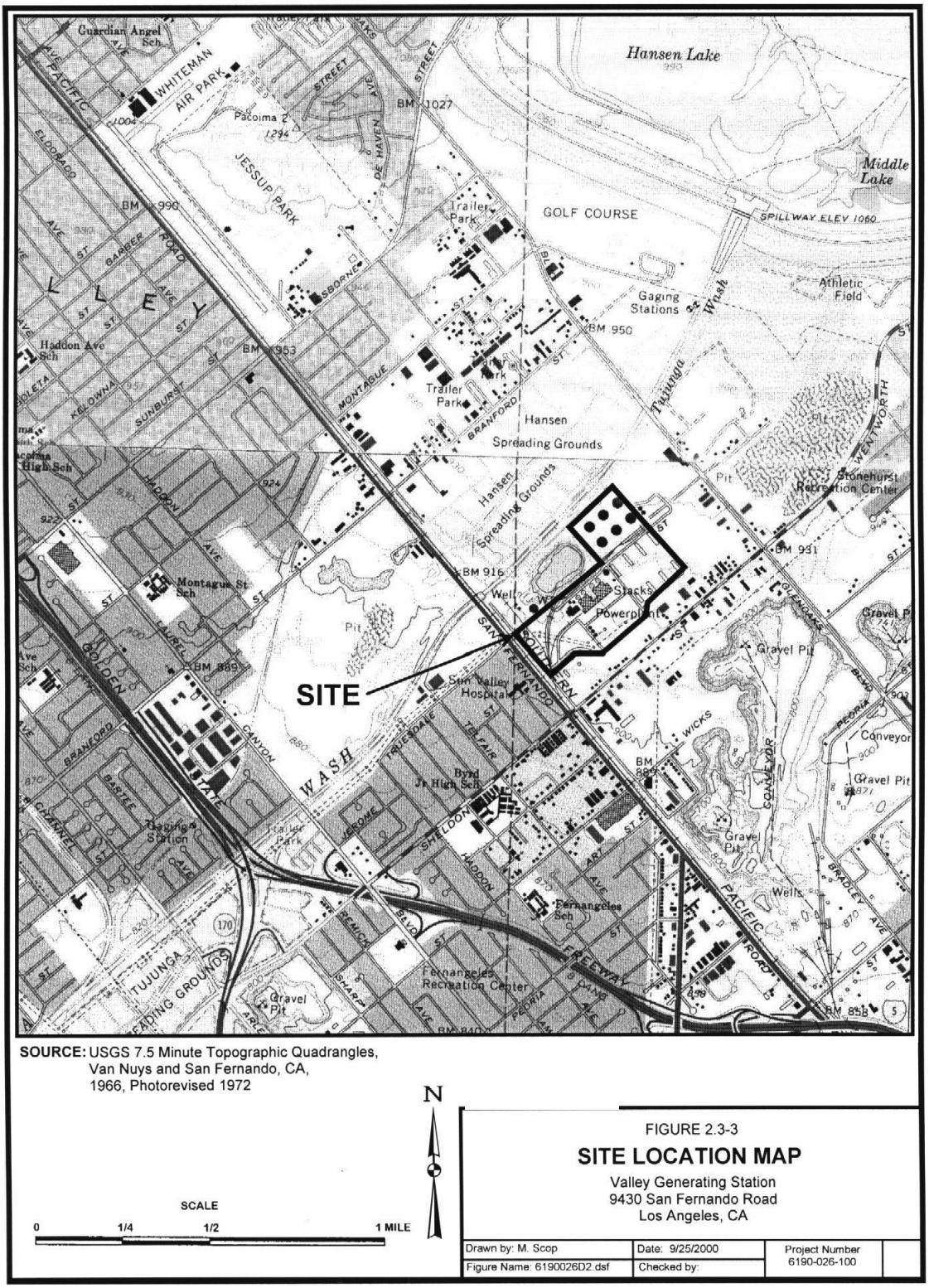
SOURCE: USGS 7.5 Minute Topographic Quadrangle, Venice, CA, 1964, Photorevised 1981

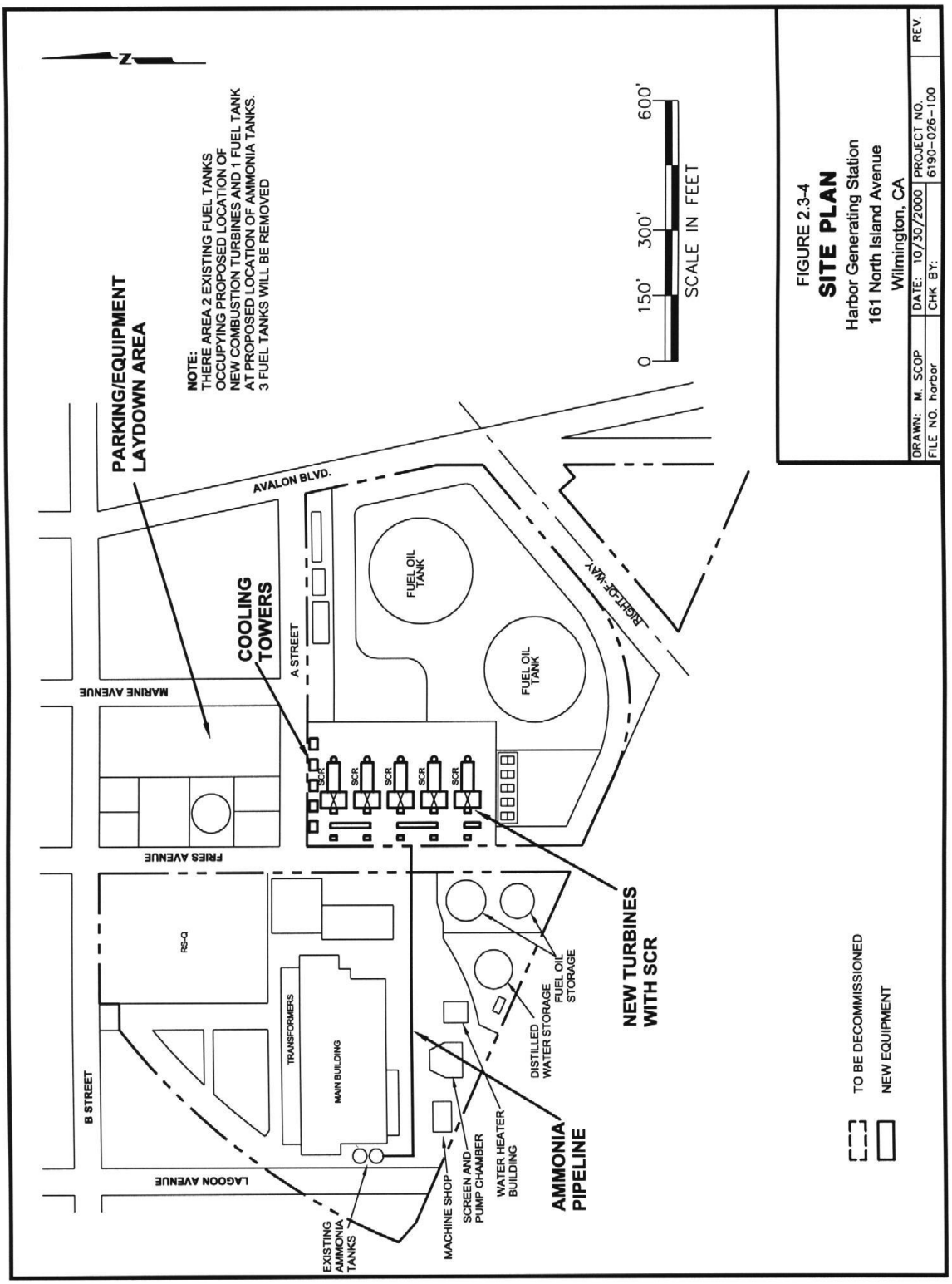
FIGURE 2.3-2

SITE LOCATION MAP

Scattergood Generating Station
12700 Vista Del Mar
Playa Del Rey, CA

Drawn by: M. Scop	Date: 8/30/2000	Project Number 6190-026-100
Figure Name: 6190026b.dsf	Checked by:	


Hansen Lake
Middle Lake
GOLF COURSE
SPILLWAY ELEV 1060
Athletic Field
Gaging Stations
Tujunga Wash
Trailer Park
Hansen Spreading Grounds
Stonehurst Recreation Center
Gravel Pit
Pit
Wells
Stacks
Powerplant
Sun Valley Hospital
SITE
WASH
Byrd Jr. High Sch
Fernangeles Sch
Fernangeles Recreation Center
Gaging Station
Trailer Park
Gravel Pit
Conveyor
Guardian Angel Sch
Haddon Ave Sch
Pacoima High Sch
Montague St Sch
JESSUP PARK
WHITEMAN AIR PARK
TUJUNGA SPREADING GROUNDS
SAN FERNANDO ROAD
PACIFIC FREEWAY
BM 1027
BM 990
BM 953
BM 950
BM 931
BM 916
BM 889
BM 840
BM 858
SOURCE: USGS 7.5 Minute Topographic Quadrangles, Van Nuys and San Fernando, CA, 1966, Photorevised 1972
N
SCALE
0 1/4 1/2 1 MILE
FIGURE 2.3-3
SITE LOCATION MAP
Valley Generating Station
9430 San Fernando Road
Los Angeles, CA
Drawn by: M. Scop
Date: 9/25/2000
Project Number 6190-026-100
Figure Name: 6190026D2.dsf
Checked by:


N
NOTE:
THERE AREA 2 EXISTING FUEL TANKS
OCCUPYING PROPOSED LOCATION OF
NEW COMBUSTION TURBINES AND 1 FUEL TANK
AT PROPOSED LOCATION OF AMMONIA TANKS.
3 FUEL TANKS WILL BE REMOVED
0 150' 300' 600'
SCALE IN FEET
PARKING/EQUIPMENT
LAYDOWN AREA
AVALON BLVD.
COOLING
TOWERS
A STREET
MARINE AVENUE
FRIES AVENUE
B STREET
LAGOON AVENUE
FUEL OIL
TANK
FUEL OIL
TANK
BISHOP CHAIR-WAY
SCR
SCR
SCR
SCR
SCR
RS-Q
TRANSFORMERS
MAIN BUILDING
NEW TURBINES
WITH SCR
DISTILLED
WATER STORAGE
FUEL OIL
STORAGE
AMMONIA
PIPELINE
WATER HEATER
BUILDING
SCREEN AND
PUMP CHAMBER
MACHINE SHOP
EXISTING
AMMONIA
TANKS
TO BE DECOMMISSIONED
NEW EQUIPMENT
FIGURE 2.3-4
SITE PLAN
Harbor Generating Station
161 North Island Avenue
Wilmington, CA
DRAWN: M. SCOP
FILE NO. harbor
DATE: 10/30/2000
CHK BY:
PROJECT NO.
6190-026-100
REV.

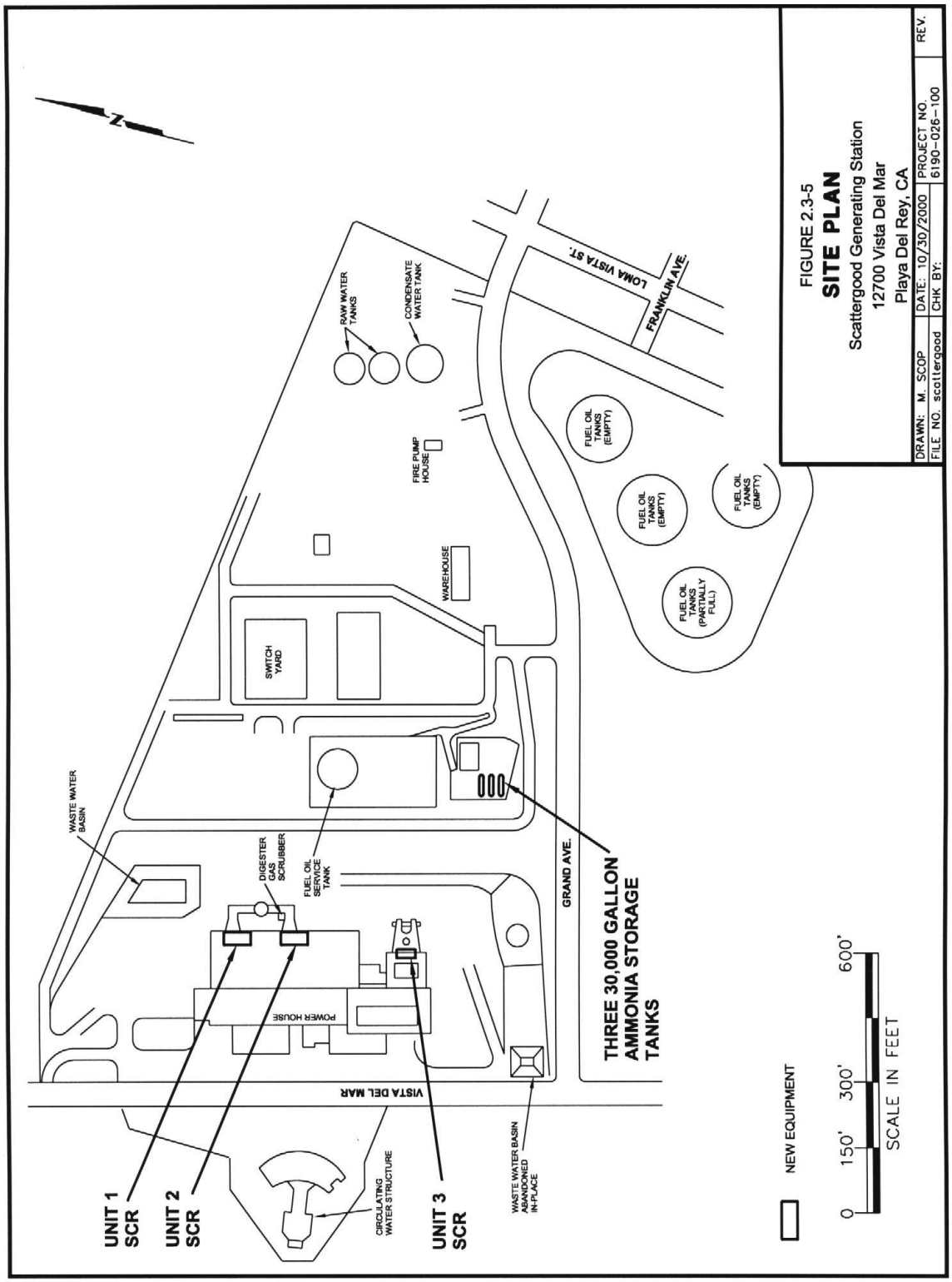
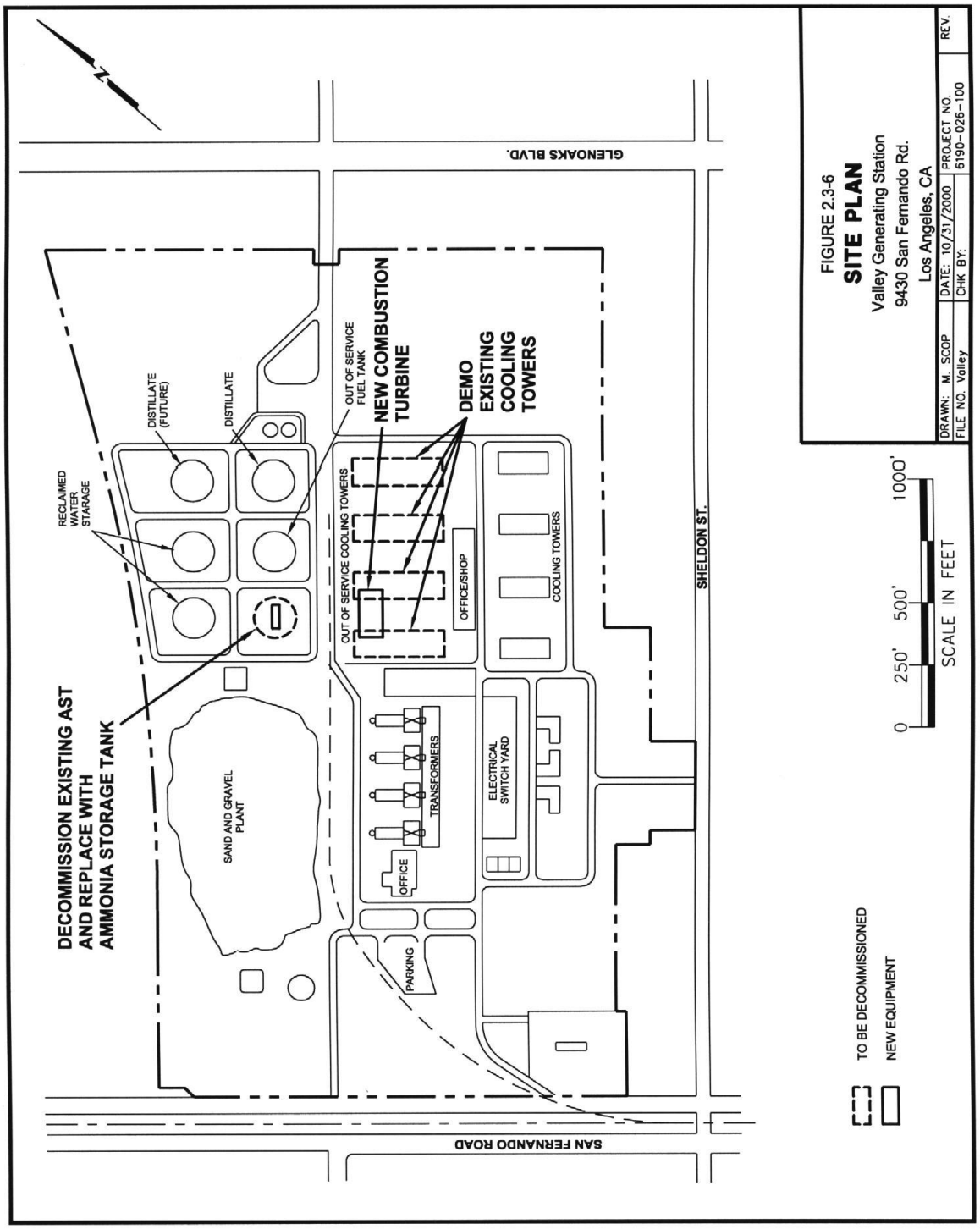


FIGURE 2.3-5
SITE PLAN
Scattergood Generating Station
12700 Vista Del Mar
Playa Del Rey, CA
DRAWN: M. SCOP
FILE NO. scattergood
DATE: 10/30/2000
CHK BY:
PROJECT NO. 6190-026-100
REV.
N
RAW WATER TANKS
CONDENSATE WATER TANK
FIRE PUMP HOUSE
WAREHOUSE
SWITCH YARD
FUEL OIL TANKS (EMPTY)
FUEL OIL TANKS (EMPTY)
FUEL OIL TANKS (EMPTY)
FUEL OIL TANKS (PARTIALLY FULL)
LOMA VISTA ST.
FRANKLIN AVE.
WASTE WATER BASIN
DIGESTER GAS SCRUBBER
FUEL OIL SERVICE TANK
POWER HOUSE
GRAND AVE.
THREE 30,000 GALLON AMMONIA STORAGE TANKS
VISTA DEL MAR
UNIT 1 SCR
UNIT 2 SCR
UNIT 3 SCR
CIRCULATING WATER STRUCTURE
WASTE WATER BASIN ABANDONED IN-PLACE
NEW EQUIPMENT
0 150' 300' 600'
SCALE IN FEET


GLENOAKS BLVD.
SHELDON ST.
SAN FERNANDO ROAD
DECOMMISSION EXISTING AST AND REPLACE WITH AMMONIA STORAGE TANK
RECLAIMED WATER STARAGE
DISTILLATE (FUTURE)
DISTILLATE
OUT OF SERVICE FUEL TANK
NEW COMBUSTION TURBINE
DEMO EXISTING COOLING TOWERS
OUT OF SERVICE COOLING TOWERS
OFFICE/SHOP
COOLING TOWERS
SAND AND GRAVEL PLANT
ELECTRICAL SWITCH YARD
TRANSFORMERS
OFFICE
PARKING
TO BE DECOMMISSIONED
NEW EQUIPMENT
0 250' 500' 1000'
SCALE IN FEET
FIGURE 2.3-6
SITE PLAN
Valley Generating Station
9430 San Fernando Rd.
Los Angeles, CA
DRAWN: M. SCOP
FILE NO. Valley
DATE: 10/31/2000
CHK BY:
PROJECT NO. 6190-026-100
REV.

The VGS is located at 9430 San Fernando Road in the City of Los Angeles (Sun Valley). A site plan of the VGS is shown on Figure 2.3-6. The VGS is bounded by Glenoaks Boulevard to the northeast; Sheldon Road to the southeast; San Fernando Road to the southwest; and Tujunga Wash, a Los Angeles County Flood Control Channel to the northwest, beyond which is Branford Road. The area surrounding the facility is primarily commercial/industrial; however, an emergency medical clinic, a hospital and two motels are present on San Fernando Road approximately 1,100 feet from the proposed project activities. A sand and gravel plant is located adjacent to the northwest of the site. There are no residences in the immediate vicinity of the VGS. The nearest residential properties are located approximately one-half mile to the north.

2.4 Proposed Project

The proposed modifications at each facility are described in the following subsections.

2.4.1 Harbor Generating Station

2.4.1.1 Project Site

The HGS, an 18.3-acre site, was constructed in the late 1940s and provides local in-basin generation, voltage and VAR (Volts Ampere Reactive) support, transmission support, southern system security, and emergency support for the LADWP electrical system. The basic power generation activities and corresponding facility areas are power generation units, electrical switching and receiving, and fuel storage tanks.

LADWP is proposing to install and operate five 47-MW dual-fired[5] simple cycle peaking CTs at the HGS. Peaking turbines are only used at times of peak demand when all other sources of supply are fully employed, during transmission system disturbances or emergencies, or when other units are forced off line. In addition to the CTs, associated SCR systems for emission control and ancillary equipment will be installed. The SCR process uses a catalyst to facilitate a reaction between NO_x and an injected reagent, aqueous ammonia, to reduce NO_x emissions from the CTs. A carbon monoxide (CO) catalyst will also be used.

[5] The CTs will fire on natural gas during normal start up and operation. However, the CTs are capable of firing on distillate fuel oil during emergency situations. The CTs will be periodically "readiness" tested on distillate fuel oil to ensure reliable operation in emergency situations.

Because the power generating capacity is not being significantly increased, adequate electric transmission capacity already exists and no offsite improvements are necessary. However, minimum separation distances are required between lines of differing voltages. Therefore, existing distribution lines along Fries Avenue and A Street will be buried and new aboveground distribution lines to transport electricity from the turbines to the switching station will be installed. At this time, it is assumed that the buried lines will be installed by trenching along Fries Avenue and A Street. New poles will be placed along Fries Avenue and A Street. These new lines will cross A Street one time and Fries Avenue twice.

The project also will include the construction of a pipeline to transport the ammonia from two existing onsite tanks to the new SCRs[6]. The CTs and ancillary equipment will be installed in the area of a former tank farm. Therefore, decommissioning activities will take place prior to the construction activities.

Four existing aboveground tanks will be decommissioned and removed. Because this activity will take place in a tank farm containing petroleum-based products, the potential exists for hydrocarbon-impacted (e.g., contaminated) soils to be encountered. Analytical testing of the soil and groundwater in this area by LADWP indicates minimal to no contaminated soil or groundwater around the existing tanks (Tetra Tech, 2000). However, no soil testing was conducted directly under the tanks, the possibility exists that contamination may exist under the tanks, therefore, a conservative assumption has been made that the proposed project includes the removal of 2,000 cubic yards of contaminated soil. The soils will be treated/disposed in accordance with applicable rules and regulations. After demolition activities are completed, clean fill material will be imported to raise the existing elevation from one to three feet to meet grade specifications.

As shown in Figure 2.3-5, it is expected that approximately eight acres onsite and four acres offsite will be affected by the construction and demolition activities. Offsite vacant land will be used for contractor parking and equipment laydown areas.

2.4.1.2 Power Generating Equipment

Most equipment manufacturers have not yet been selected. However, the CTs that will be installed are General Electric's (GE) LM6000. According to GE's product specifications, the LM6000 is a two-shaft gas turbine with an output speed of 3,600 revolutions per minute and a gross simple cycle heat rate of approximately 8,300 British thermal units (BTU) per kilowatt-hour (kWh). The net heat rate is approximately 10,200 BTU kWh.

The CTs produce thermal energy through the combustion of natural gas and the conversion of the thermal energy into mechanical energy required to drive the compressors and generators, which produce electricity. Atmospheric air is supplied to the CTs through the inlet air filters. The air is

[6] Installation of two new tanks will be analyzed as part of Alternative B. Pipeline construction will be analyzed as part of the proposed project.

compressed in the compressor section of the CT and then exits through the compressor discharge casing to the combustion chamber. Fuel (e.g., natural gas) is supplied to the combustion chambers where it is mixed with the compressed air and water and the mixture is ignited and burned. The high temperature pressurized gas produced by the compressor and combustion section expands through the turbine, thus driving the compressor and electric generator.

Each CT will include a weatherproof, acoustic (e.g., sound dampening) enclosure with separate compartments for turbine and generator. Each compartment will be ventilated with redundant fans. Lighting as well as fire and gas detection equipment will be provided in each compartment. The enclosure, turbine, generator, piping wiring, controls, fans, motors, and pumps are packaged at the factory and the unit is delivered to the site, where minimal reassembly will be required.

Five new cooling towers will be installed, one for each new CT. Chilled water will be used to cool the in-take air used by the emission control equipment. The cooling towers will recirculate the cooling water in a closed system. In this type of system, only a small amount of makeup water is required to offset the blowdown, which must be discharged periodically to control the buildup of solids. It is expected that the make-up water needed for the cooling system will be provided by the municipal water system.

The CTs will have built-in pollution controls that will preliminarily reduce NO_x emissions prior to add-on controls. The built-in control will consist of a water injection system that uses demineralized water. The water is injected into the combustor through ports in the fuel nozzles to suppress NO_x production. Water is supplied to the nozzles by a special water manifold or mixed with liquid fuel in secondary manifold. On exiting the CTs, the combustion gases are directed into the exhaust ductwork, and then to the SCR system described in Subsection 2.4.1.3. It is estimated that the water injection system will reduce NO_x emissions to a level of 30 parts per million by volume (ppmv) prior to entering the SCR. A Process Flow Diagram of the proposed HGS modifications/installations is included as Figure 2.4-1.

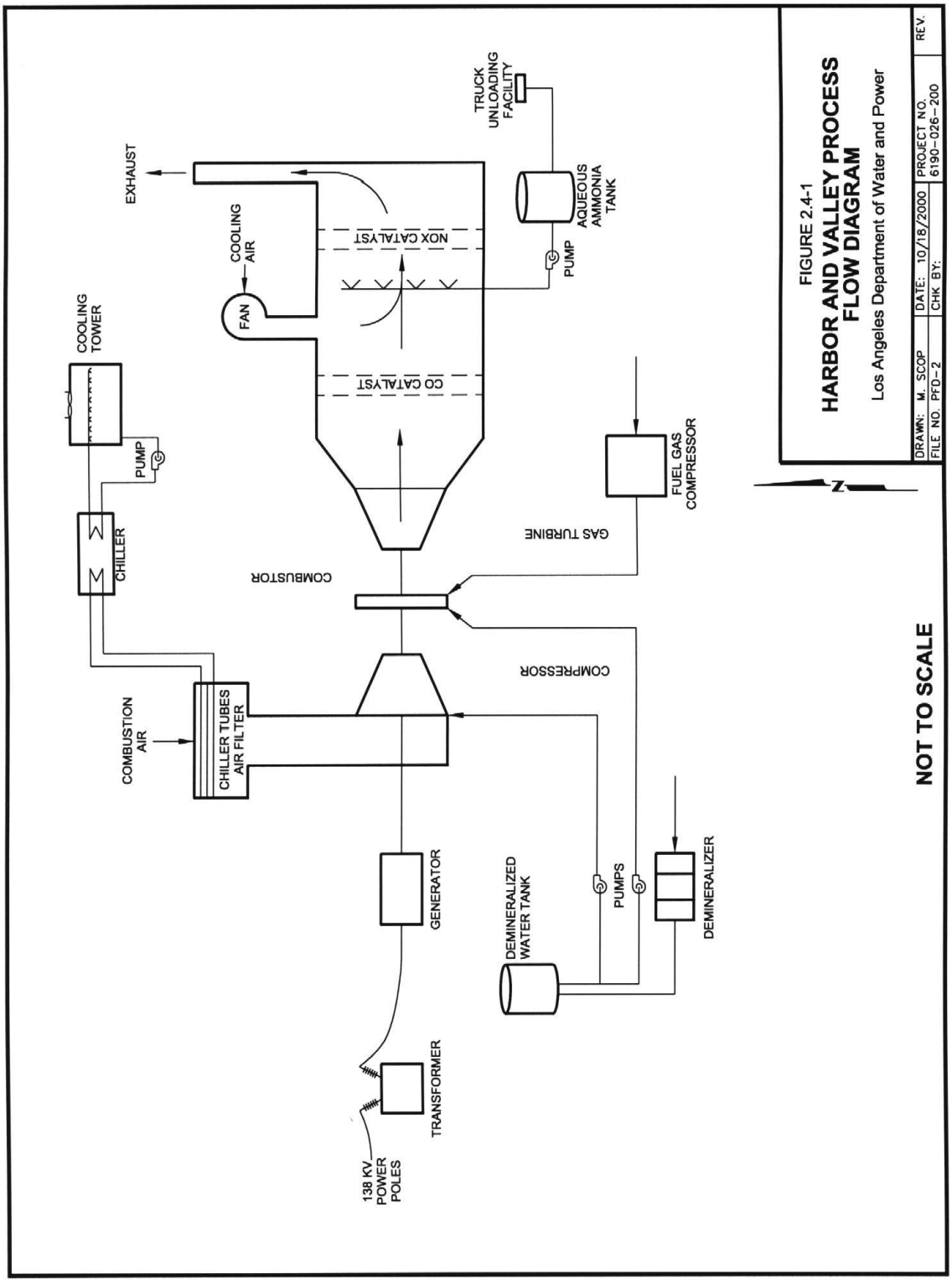


FIGURE 2.4-1
HARBOR AND VALLEY PROCESS FLOW DIAGRAM
Los Angeles Department of Water and Power
DRAWN: M. SCOP
DATE: 10/18/2000
PROJECT NO. 6190-026-200
REV.
FILE NO. PFD-2
CHK BY:
NOT TO SCALE
TRUCK UNLOADING FACILITY
AQUEOUS AMMONIA TANK
PUMP
EXHAUST
COOLING AIR
FAN
NOX CATALYST
CO CATALYST
COOLING TOWER
PUMP
CHILLER
FUEL GAS COMPRESSOR
GAS TURBINE
COMBUSTOR
COMPRESSOR
COMBUSTION AIR
CHILLER TUBES AIR FILTER
GENERATOR
DEMINERALIZED WATER TANK
PUMPS
DEMINERALIZER
TRANSFORMER
138 KV POWER POLES

2.4.1.3 Selective Catalytic Reduction (SCR)

SCR is a post-combustion control technology capable of reducing inlet NO_x emissions by 90 percent or more. SCR systems reduce NO_x in flue gas by combining ammonia and oxygen with NO_x in the presence of a catalyst to form nitrogen molecules and water vapor. A typical SCR system is comprised of an ammonia storage tank, vaporization and injection equipment for ammonia, a booster fan for the flue gas, an SCR reactor with catalyst, and instrumentation and control equipment.

Ammonia is diluted with air and injected into the gas stream through a matrix of nozzles. The amount of ammonia introduced into the system varies based on NO_x reduction requirements, but is approximately a 1:1 molar ratio of ammonia to NO_x.

For this project site, the type of ammonia that will be used is aqueous ammonia. The use of aqueous ammonia requires the vaporization of the ammonia solution. Vaporization of the ammonia and water is done prior to injection of the ammonia into the flue gas stream and an injection grid ensures proper distribution of the ammonia in the flue gas flow.

The mixture of ammonia and flue gas then passes into the catalytic reactor. The SCR process anticipated to be used at the HGS will use a catalyst with an optimal temperature window of approximately 350º to 400º Centigrade to facilitate a heterogeneous reaction between NO_x and ammonia.

The SCR systems associated with the CTs must be designed to meet the following emission limits to comply with the SCAQMD's permitting requirements.

- 5 ppmv or less for NO_x
- 5 ppmv dry or less for ammonia slip

The catalyst planned for use in the SCRs associated with the five new CTs will be vanadium based on a titanium support matrix (e.g., V_2O_5, WO_3). Vanadium catalysts are preferred for their high activity, insensitivity to sulfur in the exhaust, and useful life span.

2.4.1.4 Ammonia Handling and Storage

As mentioned previously, the proposed project will use aqueous ammonia (ammonium hydroxide at 29.5 percent concentration by weight) as the SCR reductant. Aqueous ammonia has been selected primarily for its ease of use and its ability to be safely transported and handled onsite at the HGS. The aqueous ammonia used in the SCRs associated with the new CTs will be transported via pipeline from an existing onsite ammonia tank (see Figure 2.3-5).

It is expected that an incremental increase in the quantity of ammonia will be delivered to the site via one 5,000-gallon tanker truck per week. For the SCRs associated with the new CTs, each truck will pump aqueous ammonia into the storage tanks through a liquid fill line while extracting ammonia vapor from the tank through a vapor recovery system. Truck routes for hauling aqueous

ammonia will depend on the selection of an ammonia supplier and the supplier's location. Further information on ammonia tanker truck routes may be found in the Transportation/Traffic and Hazards Sections in Chapter 3 of this ~~Draft~~Final EIR.

2.4.2 Scattergood Generating Station

The SGS is a generating facility designed to generate and supply electric power to the LADWP's system. SGS consists of two 179-MW units and a 460-MW unit that have the capacity to operate 24 hours a day, 365 days a year[7]. The 56-acre SGS was constructed in approximately 1960. The basic power generation activities and corresponding facility areas are fuel storage tanks, fuel unloading area, electrical switching and receiving, and power generation units.

LADWP proposes to install SCR systems to reduce NO_x emissions on the three existing utility boilers at the SGS. The SCR systems will be designed to meet the following emission limits:

- 7 ppmv or less for NO_x
- 10 ppmv dry or less for ammonia slip

The fuel source includes digestor gas, which will be pre-scrubbed at the Hyperion Wastewater Treatment Plant (Hyperion) prior to transport via existing pipeline to SGS. To prevent catalyst fouling in the SCR systems in the two 179-MW units, Hyperion will use sodium hydroxide scrubbers to reduce the concentration of hydrogen sulfide in the digester gas. The scrubbing system at SGS will consist of two activated carbon tanks, each holding 5,000 pounds of activated carbon. This system, which will be installed to protect the catalyst in the SCR units, will reduce the concentration of siloxanes to less than five parts per billion. The concentrations of other organic gases will also be reduced.

The modifications to retrofit the existing units with SCR at the SGS will be confined to two small areas as shown in Figure 2.3-6. Construction activities will take place in areas where asbestos-containing materials (ACM) may be present, which if encountered, will be removed in accordance with local, state, and federal regulations.

As there is no existing storage of aqueous ammonia at SGS, the proposed project will include the installation of three 30,000-gallon steel aboveground storage tanks. Each tank will be constructed within secondary containment and will be housed in a partial enclosure (e.g., a roof with partial sidewalls). Each containment area will be equipped with a sump and submersible sump pump to pump out rainwater. The containment area will be designed to hold the contents of each tank as well as account for a 25-year flood scenario. The aqueous ammonia will be delivered two times per week to the site via a 5,000-gallon tanker.

[7] All three units predominantly burn natural gas to provide the thermal heat to produce electricity. However, the three units do have the ability to fire distillate fuel oil in the case natural gas is not available in an emergency situation. It should be noted that the two 179-MW units at SGS fire a mixture of natural gas and digester gas. The digester gas is supplied from the Hyperion Wastewater Treatment Plant (Hyperion), which is located to the north of SGS.

It is expected that approximately 2,500 square feet of the site will be affected by project activities. For more information concerning the SCR system to be installed at SGS, see Subsection 2.4.1.3. A Process Flow Diagram for the proposed SGS modifications is included as Figure 2.4-2.

2.4.3 Valley Generating Station

The VGS is a 150-acre electric power generating facility designed to supply electrical power to the LADWP electrical grid. The facility was constructed in approximately 1951 and consists of four utility boilers and steam turbines with generating capacities ranging from 100 MW to 170 MW[8]. Steam from the boilers is supplied to turbines, which turn the generators. From the generators, electricity flows through transformers to the transmission lines. Two of the four units are currently out-of-service.

The proposed project includes the installation of one dual-fired 47-MW CT with SCR and associated auxiliary equipment at the VGS. The turbine will be similar in design and operation to the turbines described above in Subsection 2.4.1.2. The SCR system associated with the CT must be designed to meet the following emission limits to comply with the SCAQMD's permitting requirements.

- 5 ppmv or less for NO_x
- 5 ppmv dry or less for ammonia slip

Four existing cooling towers will be removed at the VGS and a new cooling tower will be installed to support the new CT. Cooling tower operations are described above in Subsection 2.4.1.2.

[8] The units burn predominantly natural gas to provide the thermal heat to produce electricity. However, each unit is capable of firing on distillate fuel oil when natural gas is unavailable in emergency situations.

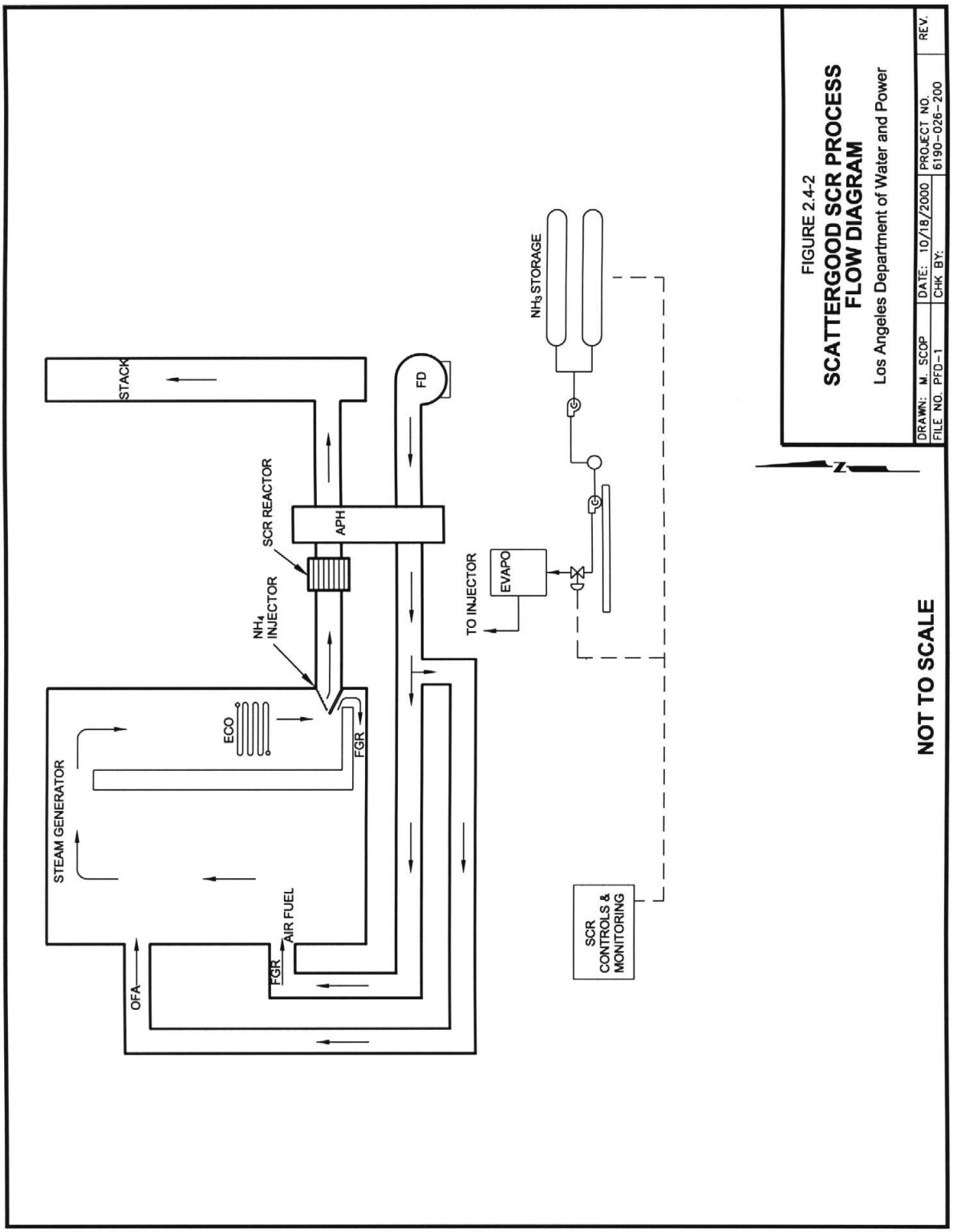


FIGURE 2.4-2
SCATTERGOOD SCR PROCESS
FLOW DIAGRAM
Los Angeles Department of Water and Power
DRAWN: M. SCOP
DATE: 10/18/2000
PROJECT NO. 6190-026-200
REV.
FILE NO. PFD-1
CHK BY:
NOT TO SCALE
STACK
FD
SCR REACTOR
APH
NH3 STORAGE
TO INJECTOR
EVAPO
NH3 INJECTOR
ECO
FGR
STEAM GENERATOR
AIR FUEL
FGR
OFA
SCR CONTROLS & MONITORING

As there is currently no onsite ammonia storage at the facility, the proposed project includes the installation of one 20,000-gallon aqueous ammonia aboveground storage tank. The aqueous ammonia will be delivered to the site via a 5,000-gallon tanker truck approximately once per month. For more information concerning the SCR system and ammonia handling and storage to be installed at the VGS, see Subsection 2.4.1.3. A Process Flow Diagram for the proposed VGS modifications/installations has been included as Figure 2.4-1.

Prior to construction activities, four existing cooling towers will be decommissioned and removed. Because this activity will take place in a former process area, the potential exists for soils to be encountered that have been impacted by site operations. However, analytical testing of the soil in this area by LADWP indicates minimal to no contaminated soil from past operations (Tetra Tech 2000). In the event that contaminated soils are encountered during project activities, the soils will be treated/disposed in accordance with applicable local, state, and federal rules and regulations. It is expected that approximately 10 acres onsite will be affected by project activities (see Figure 2.3-7).

2.5 Permits and Approvals

The proposed project will require a number of permits and approvals before construction can commence. As all three locations are existing operating stations, minimal land use approvals will be required and the major permits will include SCAQMD air permits (e.g., permits for the new CTs, SCRs, and ammonia tanks at HGS and VGS, and permit modifications to existing units to install SCRs at SGS). While no changes in land use are proposed, Coastal Development permits will be required from the City of Los Angeles and the California Coastal Commission. These public agencies are responsible agencies for the proposed project[9]. Table 2.5-1 outlines the various federal, state, and local permits and approvals required by each regulatory agency. The table also includes a listing of other regulations and requirements that must be met during construction and/or operation. Table 2.5-1 identifies permits, approvals and other requirements for the proposed project.

[9] " ('Responsible Agency' means a public agency which proposes to approve a project for which a lead agency is preparing an EIR. . ." (CEQA Guidelines §15381).)

Table 2.5-1
List of Federal, State, and Local Agency Permits, Approvals, and Other Requirements

Agency Permit or Approval	Requirement	Applicability to Project	Action Taken
Federal			
Environmental Protection Agency (USEPA)	New Source Performance Standards (NSPS) 40 CFR Part 60 General Provisions (Subpart GG)	Requires facilities subject to an NSPS to provide notification, maintain and submit records, and in some cases undertake performance tests	Will comply as required
	Accidental Release Prevention Risk Management Program, 40 CFR 68 (and California Accidental Release Program, Title 19, Div. 2, Chapter 4.5)	Offsite consequence analysis required for pentane, ethanol, and butane	Will conduct analysis, if required
	Protection of Stratospheric Ozone, 40 CFR 82 Subpart F	Requires use of certified servicing equipment and personnel and recordkeeping for equipment containing ozone depleting refrigerants	Will use certified equipment, if required
	Superfund Amendment and Reauthorization Act (SARA) Title III	Requires reporting offsite releases of hazardous materials	Will report if materials are released
	Emergency Planning and Community Right-to-Know (EPCRA), Section 302	Requires disclosure of hazardous substances being used	Will disclose hazardous substances located onsite
	40 CFR 403	General standards for pretreatment of wastewater discharges to POTWs	Will meet standard
	Resource Conservation and Recovery Act (RCRA)	Requires proper handling of hazardous waste material	Will meet standard
	National Pollutant Discharge Elimination System	Requires compliance with Clean Water Act standards for discharges to Waters of the U.S.	Will meet standard
Occupational Safety and Health Administration	Process Safety Management OSHA 29 CFR 1910	Worker process safety standards	Will implement standard
State			
California Coastal Commission (CCC)	CCC Administrative Regulations	Requires coastal development permit for proposal projects in the Coastal Zone	Working with CCC to obtain appropriate permit
Caltrans	Transportation permit	Application to transport overweight, oversize, and wide loads on state highways	Will meet standard, if applicable

Table 2.5-1 (cont'd)
List of Federal, State, and Local Agency Permits, Approvals, and Other Requirements

Agency Permit or Approval	Requirement	Applicability to Project	Action Taken
Health and Safety Code Chapter 6.95	California Business Plans	Modify/update plan to reflect changes to quantities/types of hazardous materials	Will modify plan
Cal-OSHA	Construction-related permits	Excavation, construction, demolition, and tower and crane erection permit	Will obtain permit
Office of Environmental Health Hazard Assessment	Proposition 65 warnings for known exposures to listed chemicals	Required if significant risk identified exceeds regulatory limit	Will provide warnings if required
Local			
Regional Water Quality Control Board (RWQCB)	NPDES permit for stormwater runoff and point sources associated with construction and industrial activities	Required for stormwater runoff from construction activities involving 5 acres or more and point source discharges from industrial activities	Will obtain appropriate permit/plan
	Remedial action plan	Required if contaminated soil is found and remediated	Will develop plan, if required
SCAQMD	CEQA Review/EIR	SCAQMD is the lead agency for certification of the proposed project EIR	Will not receive permits unless compliance demonstrated
	SCAQMD Rule 201: Permit to Construct	Applications are required to construct or modify stationary emissions sources	Will submit application
	AB2588: Air Toxics Hot Spots Information and Assessment Act reporting	Periodic updating of air toxic emissions inventories and health risk assessment	Will modify inventory if required
	SCAQMD Rule 203: Permit to Operate	Applications are required to operate stationary emissions sources	Will submit application
	SCAQMD Rule 212: Standards for Approving Permits	Requires public notification under specific circumstances	Will provide notification if required
	SCAQMD Rule 401: Visible Emissions	Provides limitations to visible emissions from single emission sources	Will limit visible emissions
	SCAQMD Rule 402: Nuisance	Discharges which cause a nuisance to the public are prohibited	Will not cause public nuisance
	SCAQMD Rule 403: Fugitive Dust	Contains control requirements for operations or activities that cause or allow emission of fugitive dust	Will provide appropriate controls

Table 2.5-1 (cont'd)
List of Federal, State, and Local Agency Permits, Approvals, and Other Requirements

Agency Permit or Approval	Requirement	Applicability to Project	Action Taken
SCAQMD (continued)	SCAQMD Rule 409: Combustion Contaminants	Provides a limitation on total combustion contaminants	Will not receive permits unless demonstrate compliance
	SCAQMD Rule 431.1: Sulfur Content of Gaseous Fuels	Restricts sulfur content of gaseous fuels	Will use compliant fuel
	SCAQMD Rule 475: Electric Power Generating Equipment	Places limit on combustion contaminants from electric power generating equipment	Will limit combustion contaminants
	SCAQMD Rule 1113: Architectural Coatings	Specifies allowable VOC content of coatings for structures	Will use compliant coatings
	Rule 1166: Excavation of Volatile Organic Compound Contaminated Soils	Required if soils to be excavated are impacted by hydrocarbons	Will provide controls for excavated hydrocarbon-impacted soils
	SCAQMD Regulation XIII: New Source Review, All Rules	Requires BACT on all new emission sources, requires offsets, modeling for criteria pollutants other than NOx and SOx	BACT will be installed
	Rule 1401: New Source Review of Toxic Air Contaminants	Specifies limits for cancer risk, cancer burden, and noncancer acute and chronic hazard index; new or modified permit units must apply T-BACT if over maximum allowed risk levels	Will not exceed risk thresholds, and will apply T-BACT if required
	SCAQMD Rule 1415: Reduction of Refrigerant Emissions from Stationary Refrigeration and air conditioning Systems.	Certain requirements for installation operation of refrigerant systems.	Will reduce refrigerant emissions, if required
	SCAQMD Regulation XVII: Prevention of Significant Deterioration, All Rules	Requires BACT on all new emission sources, establishes limits for maximum allowable increase in pollutant concentrations	Will install BACT, will not exceed pollutant concentration limits
	SCAQMD Regulation XX, Regional Clean Air Incentives Market (RECLAIM), All Rules	Requires facilities to manage NOx and SOx emission levels to facility allocations; requires monitoring, reporting and recordkeeping of emissions; requires BACT on emission sources	Will not exceed NOx or SOx allocations, will perform required monitoring, reporting and recordkeeping, will install BACT as required

Table 2.5-1 (cont'd)
List of Federal, State, and Local Agency Permits, Approvals, and Other Requirements

Agency Permit or Approval	Requirement	Applicability to Project	Action Taken
SCAQMD (continued)	SCAQMD Regulation XXX: Title V Operating Permits	Title V air pollution control permit system implemented to comply with the federal Clean Air Act (CAA) as amended in 1990	Will apply for amended Title V permit, will meet requirements of CAA
County of Los Angeles, Fire Planning and Prevention Division	Permit for aboveground storage tanks (AST) and storage of flammable materials; business disclosure form, building plan check	Required for ASTs and areas where storage of flammable materials occur; required for storage of hazardous materials; required to review plans for construction	Submission of appropriate AST permit
	Risk Management Program (RMP) revision approval	Required to revise the RMPP (combined with federal RMP)	Develop/ modify RMP if required
Los Angeles City Dept. of Public Works	Industrial wastewater discharge approval	Required when discharging into sewer	Will modify permits if required
City of Los Angeles	Coastal Development Permit	Required for projects located in the coastal zone	Will obtain permit

2.6 Construction

2.6.1 Schedule

The compliance agreement between the SCAQMD and LADWP specifies the timeframe for the proposed project. Simultaneous construction activities at HGS, SGS, and VGS are scheduled to begin early 2001 and be completed at HGS and VGS by the summer of 2001. Construction at the SGS is not scheduled to be complete until early 2002. Due to this aggressive schedule, simultaneous construction activities at all three project sites are anticipated to take place seven days per week and 24 hours per day for up to six months at HGS and VGS and 12 months at SGS.

2.6.2 Construction Plan

Prior to initiating construction, a detailed construction plan will be developed for each site to identify necessary resources and to define the construction supervisory and technical field organization and staffing levels required for the project. The methods and procedures for sequencing and implementing construction operations will also be detailed in the construction plan. In addition, a project safety program will be developed consistent with federal and state requirements.

However, due to the aggressive schedule of this proposed project, some of the construction plans will not be available in time for inclusion in this ~~Draft~~Final EIR. Therefore, as a worst-case approach to analyzing the construction-related impacts associated with the proposed project, the SCAQMD will use as a template the construction impact analysis that LADWP undertook in its EIR for the Harbor Repowering Project (LADWP, 1993). In this analysis, LADWP analyzed the impacts associated with removing two steam boilers and associated steam turbine generators and installing two combustion turbines along with several small tanks.

2.6.2.1 Harbor Generating Station

Project activities, including demolition, site preparation and construction, are expected to take approximately six months, from approximately January 2001 to June 2001. During this time, there will be a maximum of 400 workers onsite per day working two 10-hour shifts[10]. Most workers will be local prevailing wage. However, personnel needed for specialty crafts may be nonlocal.

2.6.2.2 Scattergood Generating Station

Project activities, including site preparation and construction, are expected to take approximately one year. Construction is scheduled to be complete for Units 1 and 2 by June 2001. Modifications to Unit 3 are scheduled to be finalized in January of 2002. During this time, there will be a maximum of 100 workers onsite per day working two 10-hour shifts[11]. Most workers will be local. However, personnel needed for specialty crafts may be nonlocal.

2.6.2.3 Valley Generating Station

Project activities, including demolition, site preparation and construction, are expected to take approximately six months, from approximately January 2001 to June 2001. During this time, there will be a maximum of 100 workers onsite per day working two 10-hour shifts[12]. Most workers will be local. However, personnel needed for specialty crafts may be nonlocal.

2.7 Operation of the Project

The proposed project will require no additional workers for operations. The project will operate whenever the new CTs generate electric power, up to 24 hours per day for 365 days per year at HGS and VGS, and the SCRs full-time at SGS.

[10] This is scaled from the 400 figure used for 1993 HGS project. This is based on the fact that only SCRs and ammonia tanks are being installed.

[11] This is scaled from the 400-workers used for 1993 HGS project. This is based on the fact that only one CT, SCR, ammonia tanks, and auxiliary equipment will be installed at VGS.

[12] The 1993 LADWP EIR for the HGS project assumed as a worst-case and peak at 400 workers during construction-related activities.

2.8 Project Termination and Decommissioning

The estimated life of the proposed project additions and modifications is over 30 years. The appropriate equipment may then be shut down and/or decommissioned, modified, and/or expanded in accordance with applicable regulations and market conditions prevailing at the time of termination. The form of decommissioning would likely involve a combination of salvage or disposal at an approved landfill, as well as site restoration.