CHAPTER 2

PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 INTRODUCTION

Tesoro is proposing a project at its Refinery and SRP to improve the reliability of refinery operations and to comply with regulatory requirements. The Tesoro Reliability Improvement and Regulatory Compliance Project (proposed project) includes the following changes to the Refinery: 1) install a new fuel gas treatment unit; 2) replace an existing cogeneration system with a new cogeneration system; 3) replace multiple, existing steam boilers with new equipment; 4) modify the DCU, the HCU and the FCCU to increase recovery of LPG; 5) modify the existing coke handling, screening, and loading system; 6) modify the existing HTU No. 2 in order to comply with the revised California Air Resources Board's gasoline specifications (revised CARB Phase III); 7) upgrade the existing amine/sour water system to improve hydrocarbon removal efficiency; 8) connect certain existing atmospheric pressure relief devices (PRDs) to the existing flares to prevent direct atmospheric releases; 9) recover and treat sour gas from the spent acid storage tank and the LPG sulfur extraction unit; 10) modify the coke drum blowdown system; 11) modify heater number H-101 at the DCU; and, 12) install a new crude oil storage tank. The proposed project at the SRP will modify an existing Claus Unit to improve sulfur recovery. The proposed project will not increase or change the crude throughput capacity of the Tesoro Refinery.

2.2 PROJECT OBJECTIVES

The objectives of the proposed project at the Tesoro Refinery and SRP are to:

1. Reduce NOx and SOx emissions to assist in compliance with SCAQMD Regulation XX – RECLAIM requirements.

2. Replace existing equipment with new equipment to reduce overall Refinery emissions and improve operating efficiency.

3. Comply with future anticipated regulatory requirements that will limit sulfur emissions at the refinery.

4. Improve process efficiency and reliability at the Refinery and SRP.

5. Recover more liquid fuels and reduce the generation of process gas (reducing the potential for flaring events).

6. Increase the generation of electricity on-site to reduce the purchase of electricity from third-party electricity providers.

7. Comply with the revised CARB Phase III gasoline specifications.

8. Reduce the potential for atmospheric releases and related emissions from pressure relief valves in the FCCU.

The proposed project will not increase or decrease the overall Refinery crude throughput capabilities.

2.3 PROJECT LOCATION

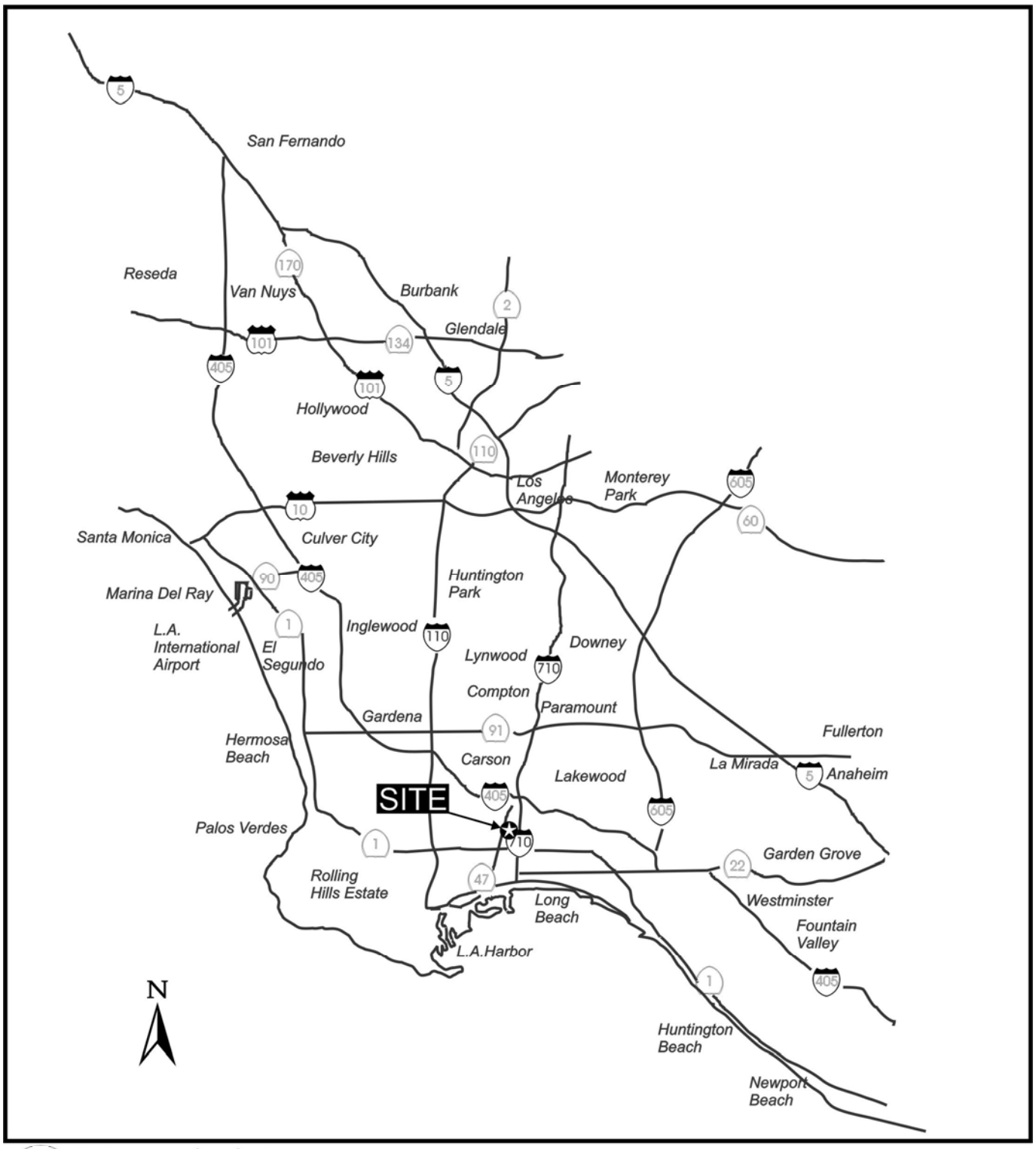
The proposed project will occur at Tesoro's Refinery and at a separate site where Tesoro operates their SRP. Tesoro is the owner and operator of both facilities operating at two locations: (1) the main refinery operations are located in Wilmington; and (2) the SRP is located in Carson.

The Tesoro Refinery is located at 2101 East Pacific Coast Highway in the Wilmington district of the City of Los Angeles. Figures 2-1 and 2-2 show the regional and site locations of the Refinery, respectively. The Refinery occupies about 300 acres of land, with the larger portion located within the jurisdiction of the City of Los Angeles and the smaller portion located within the City of Carson. The Refinery is bounded to the north by Sepulveda Boulevard, to the west by Alameda Street, to the south by the Southern Pacific Railroad tracks, and to the east by the Dominguez Channel. The Refinery is bisected by Pacific Coast Highway, with the larger portion of the Refinery to the north of Pacific Coast Highway and the smaller portion to the south. The Refinery and all adjacent areas are zoned for heavy industrial use. The nearest residential areas near the Refinery include a residential area in the City of Long Beach, about one-half mile east of the Refinery and residential areas of Wilmington about 0.17 mile west of the southern portion of the Refinery and about 0.25 mile west of the Refinery.

The SRP is located at 23208 South Alameda Street in the City of Carson (see Figure 2), north of the Refinery. The closest residential area is about one-half mile east of the SRP in the City of Long Beach. A separate conditional use permit from the City of Carson is not expected to be required for modifications to the SRP.

2.4 LAND USE AND ZONING

Implementation of the proposed modifications at Tesoro Refinery will occur within existing property boundaries. The Refinery is zoned for heavy industrial uses (M3-1). The main operating portions of the Refinery are located within the Wilmington-Harbor City Planning Area (City of Los Angeles), which permits heavy industrial uses including petroleum refining on the Tesoro property (City of Los Angeles, 1999). A separate conditional use permit from the City of Los Angeles is not required for this proposed project. The Wilmington-Harbor City Plan places no additional restrictions on refineries, and specifically allows for construction without regard to height limitations. A portion of the Refinery is located in the City of Carson and includes the Refinery's tank farm and portions of the coke handling facilities.

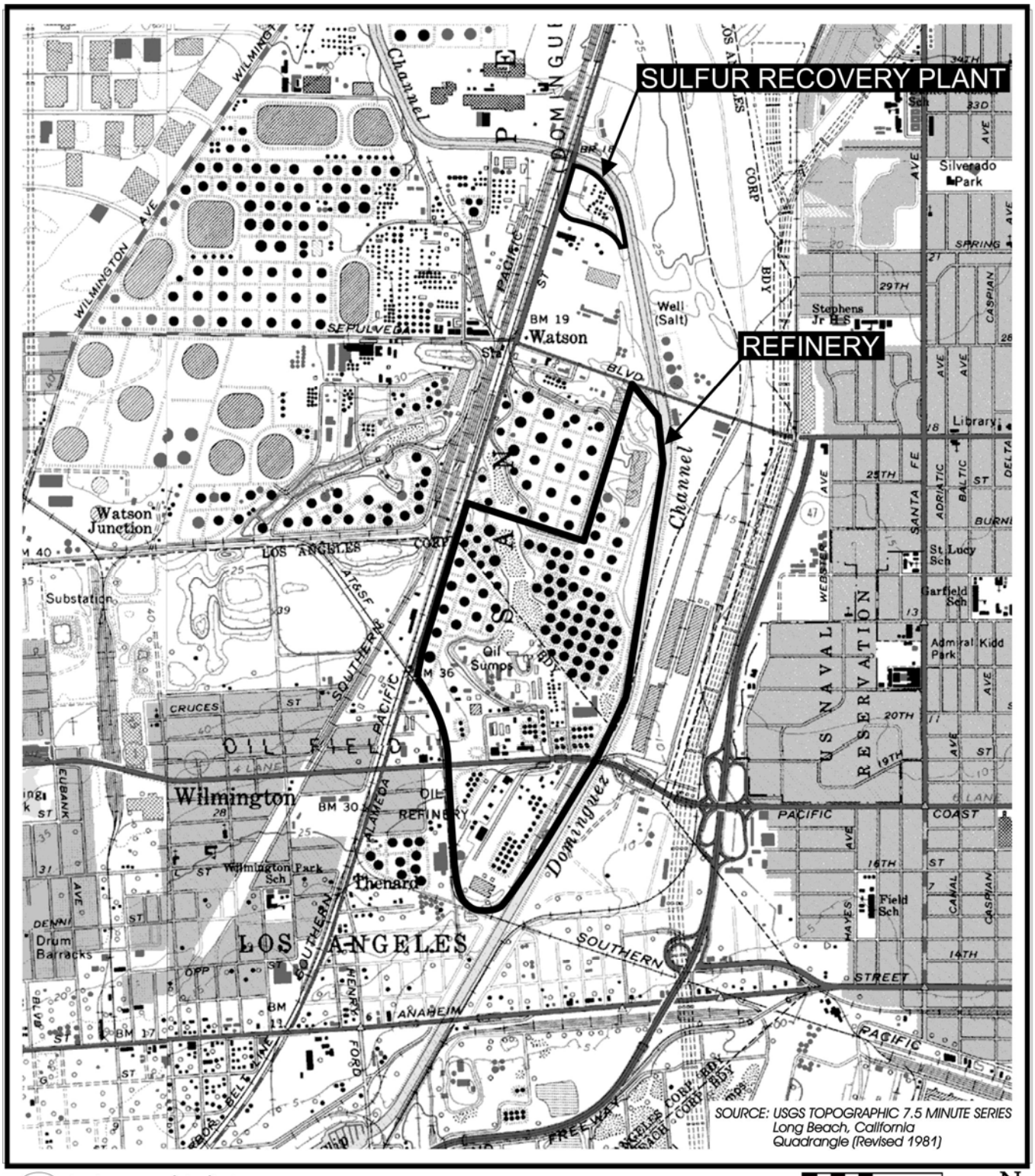


Environmental Audit, Inc.

REGIONAL MAP
TESORO REFINERY / SULFUR RECOVERY PLANT

Project No. 2550 Figure 2-1

N:\2550\Regional Map (rev.1).cdr



SITE LOCATION MAP
TESORO REFINERY / SULFUR RECOVERY PLANT

Project No. 2550

Figure 2-2

N:\2550\SiteLocMap(rev.2).cdr

The land use in the vicinity of the Refinery includes oil production facilities, refineries, hydrogen plants, coke handling facilities, automobile wrecking/dismantling facilities, and other industrial facilities. Residential areas near the Refinery include a residential area in the City of Long Beach, about one-half mile east of the Refinery and east of the Terminal Island Freeway; in the City of Long Beach residential areas of Wilmington located about 0.17 mile west of the southern portion of the Refinery, and 0.25 mile west of the Refinery. The Alameda Corridor, a major port access arterial, is located west of the Refinery. Other industrial uses west of the Refinery include wrecking yards, storage tanks farms and container storage areas. Industrial facilities north of the Refinery include the BP Coke Barn, other refining activities, and storage tanks farms, and an ICTF. Land to the east of the Refinery includes a rail yard, the Terminal Island Freeway, a residential neighborhood and light manufacturing facilities. Land uses south of the Refinery are predominately heavy industrial with wrecking yards, a truck terminal and storage tank facilities. No schools are located within 0.25 mile of the Refinery.

A portion of the Refinery's tank farm and the SRP are located in the City of Carson. The SRP is located north of the Refinery at 23208 South Alameda Street in the City of Carson (see Figure 2-2). The SRP is zoned for heavy manufacturing uses (MH) by the City of Carson's Land Use element of its General Plan. Adjacent land uses to the SRP also are heavy industrial and include other refineries, a hydrogen plant, undeveloped lots, and container storage areas. No schools are located within 0.25 mile of the SRP.

2.5 EXISTING REFINERY CONFIGURATION AND OPERATION

Crude oils, used to produce gasoline and other petroleum products, are typically delivered to marine terminals in the Ports of Los Angeles and Long Beach by ship or barge, then transported to the Refinery by pipeline. Crude oil also is delivered to the Refinery by pipelines. Crude oil is processed in the crude unit and the delayed coking unit where it is heated and distilled into components, most of which are processed in downstream Refinery units. Most of the products leaving the crude unit and DCUs are hydrotreated to remove sulfur compounds prior to further processing in the FCCU, the HCU, the alkylation unit, and the catalytic reforming units. The crude oil, along with the intermediate products, are refined into the major Refinery products which include unleaded gasoline, diesel, aviation jet fuel, other distillate fuels, petroleum coke, and sulfur. Elemental sulfur and petroleum coke are produced as a by-product of the refining process. Major processing units at the Refinery include the crude unit, DCU, catalytic reforming unit, HTU, FCCU, alkylation unit, benzene saturation unit, hydrogen generation unit, SRP, cogeneration unit, and auxiliary systems. Finished products are distributed to the various terminals primarily via pipelines and trucks.

2.6 PROPOSED PROJECT MODIFICATIONS TO THE REFINERY

The proposed Refinery modifications are summarized in this section. The locations of the proposed new and modified units at the Refinery and SRP are shown in Figures 2-3 and 2-4, respectively. The new units are replacements for existing units and are located in the same vicinity as the unit that is being replaced. Several components of the proposed project are

related to replacement of existing equipment, while the balance is being proposed for modification or replacement to reduce emissions, comply with regulatory requirements, and improve process safety and reliability.

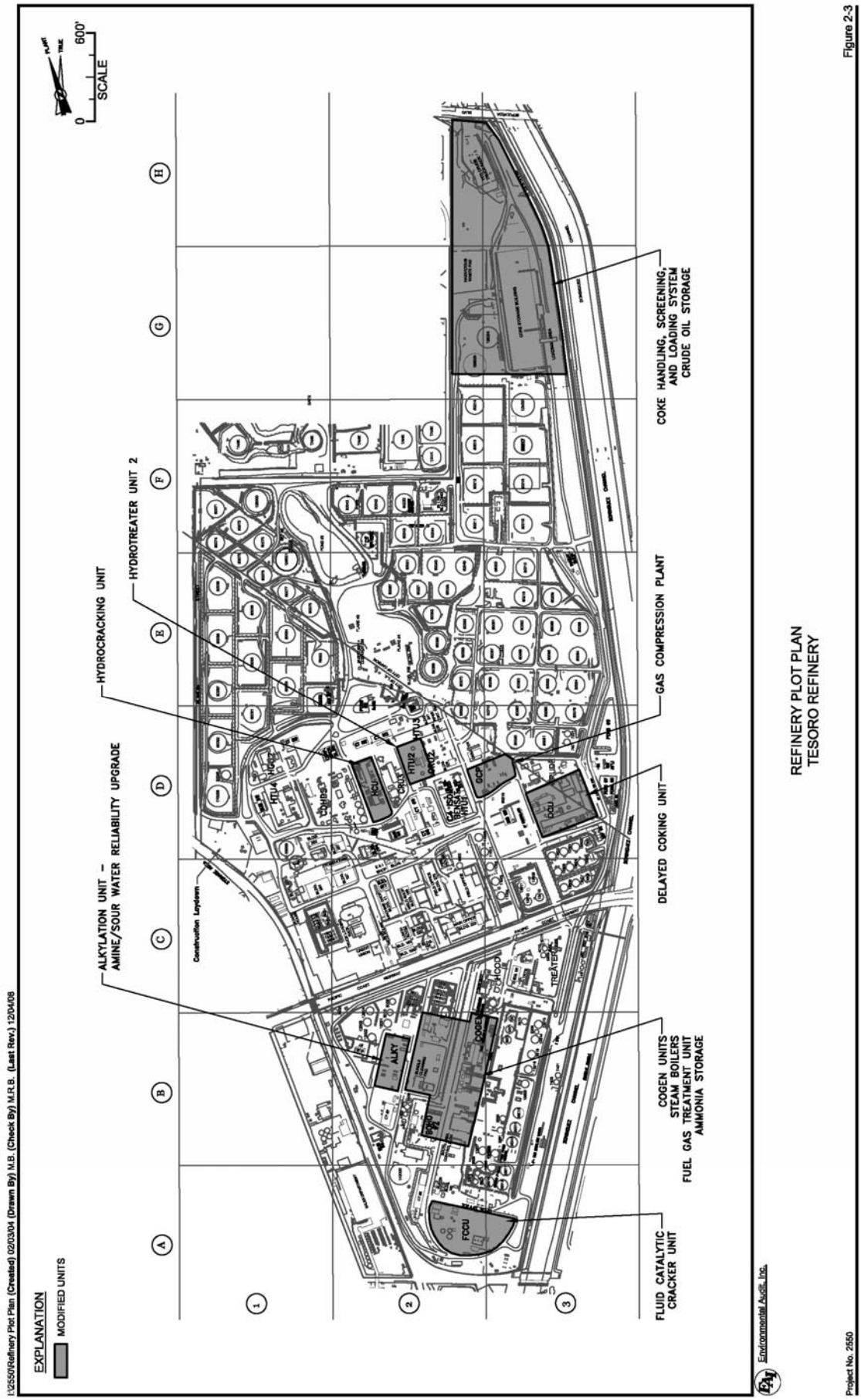
2.6.1 RECLAIM NOx and SOx Reduction

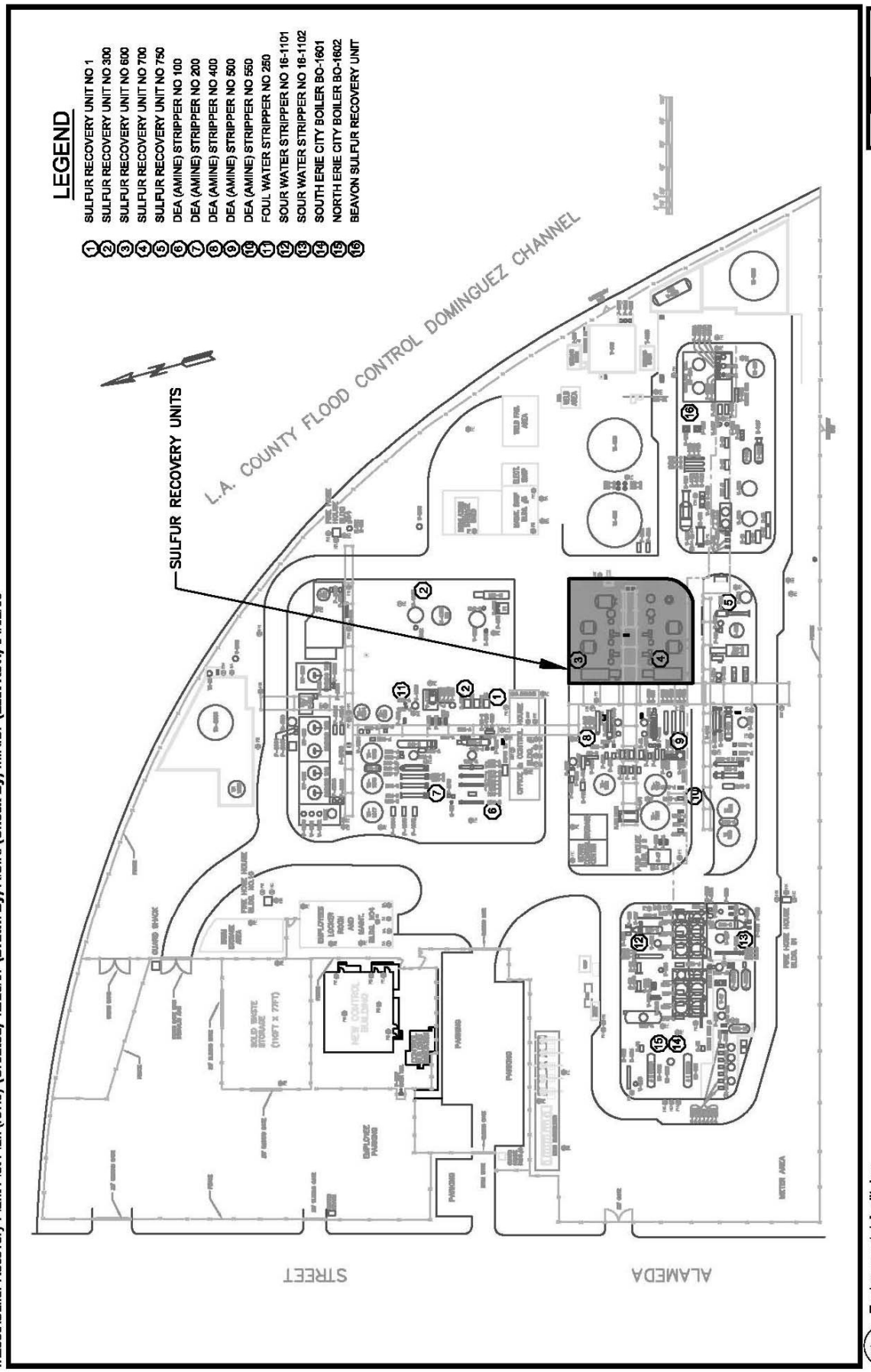
Emissions of NOx and SOx at the Refinery and SRP are subject to SCAQMD's Regulation XX - RECLAIM. Unlike the command-and-control regulations for which each NOx and SOx emitting equipment is subject to a concentration limit or an emission rate, RECLAIM limits total facility NOx and SOx emissions and offers the flexibility of purchasing or trading surplus emission reductions with other facilities and/or reducing NOx or SOx emissions within the facility. Currently, the actual annual NOx emissions at the Refinery exceed the annual NOx allocation. In order to comply with RECLAIM, Tesoro has been purchasing NOx RTCs from the market to comply with the facility's annual allocation requirement. During fiscal year 2006-2007, the total combined NOx emissions from the existing two cogeneration units and four steam boilers accounted for approximately 48 percent of the total NOx emissions from major combustion equipment at the Refinery. In lieu of continuing to purchase credits, Tesoro plans to reduce NOx emissions at the Refinery by replacing: (1) two existing 30 MW cogeneration units with one new 61.02 MW cogeneration system; and (2) four existing steam boilers with two new steam boilers. The new cogeneration system and boilers will be equipped with BACT and are expected to substantially reduce NOx emissions and minimize the need for Tesoro to purchase NOx RTCs.

2.6.1.1 Cogeneration Units

Tesoro currently operates a cogeneration system that supplies a portion of electricity and steam used by the process equipment at the Refinery. Tesoro supplements onsite generation by purchasing electricity from the Los Angeles Department of Water and Power (LADWP) to meet remaining demands for the refining operation. The existing cogeneration system is a major source of NOx emissions at the Refinery. To reduce NOx emissions and remain within Tesoro's annual RECLAIM NOx allocations, Tesoro is proposing to replace the two existing 30 MW cogeneration units (Cogens A and B) and their associated SCR units with one new 61.02 MW cogeneration system (Cogen C), consisting of a gas turbine, a steam turbine, a heat recovery steam generator, and the associated air pollution control equipment (including NOx and CO control technology such as a SCR unit and catalyst, respectively). A new emergency diesel-powered I.C. engine will also be installed to supply power to the instruments and auxiliary equipment in the gas turbine, which will allow the boilers to continue to operate and provide sufficient steam as necessary, ~~and~~ *while* maintain*ing* a safe shutdown and start up of the Refinery during a power outage. *The new emergency I.C. Engine will only be constructed as part of the installation of Cogen C.*

The proposed new cogeneration system would increase the maximum electrical generating capacity at the Refinery by about one megawatt while reducing NOx emissions. The increased electrical generation capacity will allow the Refinery to rely mainly on onsite power generation under normal operating conditions as part of an effort to reduce the risk of process upset due to interruption of power supplied by any outside provider.


EXPLANATION
MODIFIED UNITS
SCALE
0
600'
ALKYLATION UNIT – AMINE/SOUR WATER RELIABILITY UPGRADE
HYDROCRACKING UNIT
HYDROTREATER UNIT 2
COKE HANDLING, SCREENING, AND LOADING SYSTEM CRUDE OIL STORAGE
GAS COMPRESSION PLANT
DELAYED COKING UNIT
COGEN UNITS
STEAM BOILERS
FUEL GAS TREATMENT UNIT
AMMONIA STORAGE
FLUID CATALYTIC CRACKER UNIT
REFINERY PLOT PLAN
TESORO REFINERY
Environmental Audit, Inc.
Project No. 2550
Figure 2-3


I:\2550\Sulfur Recovery Plant Plot Plan (rev.3) (Created) 12/20/07 (Drawn By) A.S.K. (Check By) M.R.B. (Last Rev.) 04/02/09
LEGEND
1 SULFUR RECOVERY UNIT NO 1
2 SULFUR RECOVERY UNIT NO 300
3 SULFUR RECOVERY UNIT NO 600
4 SULFUR RECOVERY UNIT NO 700
5 SULFUR RECOVERY UNIT NO 750
6 DEA (AMINE) STRIPPER NO 100
7 DEA (AMINE) STRIPPER NO 200
8 DEA (AMINE) STRIPPER NO 400
9 DEA (AMINE) STRIPPER NO 500
10 DEA (AMINE) STRIPPER NO 550
11 FOUL WATER STRIPPER NO 250
12 SOUR WATER STRIPPER NO 16-1101
13 SOUR WATER STRIPPER NO 16-1102
14 SOUTH ERIE CITY BOILER BO-1601
15 NORTH ERIE CITY BOILER BO-1602
16 BEAVON SULFUR RECOVERY UNIT
SULFUR RECOVERY UNITS
L.A. COUNTY FLOOD CONTROL DOMINGUEZ CHANNEL
STREET
ALAMEDA
0
120'
Environmental Audit, Inc.
EXPLANATION
MODIFIED UNITS
TESORO SULFUR RECOVERY PLANT
PLOT PLAN
Project No. 2550
Figure 2-4

2.6.1.2 Steam Boilers

Currently, the existing four steam boilers (Boilers 7, 8, 9, and 10) also generate steam for multiple processes at the Refinery. The total combined permitted heat input for the four boilers at the Refinery is 734.16 mmBtu/hr. Similar to the existing gas turbines, these existing steam boilers are major sources of NOx emissions at the Refinery. As part of the strategy to reduce existing NOx emissions to comply with the annual reductions to Tesoro's RECLAIM NOx Annual Allocation, Tesoro will replace the four existing boilers (Boilers 7, 8, 9, and 10) with two new boilers (Boilers 11 and 12), each with total heat input rating of no more than 400 mmBtu/hr. The new boilers will burn refinery fuel gas or natural gas and will be equipped with new SCR units to reduce NOx emissions.

2.6.1.3 Fuel Gas Treatment Unit

A new fuel gas treatment unit will be installed to remove sulfur in fuel gas to allow Tesoro to meet future regulatory requirements (BACT requirements for sulfur in fuel gas). The fuel gas treatment unit will be a custom design using hydrotreating technology to treat high sulfur fuel gas streams at the Refinery. Under this process, the fuel gas is compressed, heated and catalytically reacted with hydrogen in a bed of hydrotreater catalyst to convert sulfur compounds into H_2S. The carbonyl sulfide (COS) formed during the reaction will be hydrolyzed to H_2S in an additional downstream reactor. The gas will be cooled and the H_2S removed using amine scrubbing.

2.6.1.4 Ammonia Storage

Ammonia is an integral part of the SCR process for NOx control. The proposed project includes a total of three new SCR Units, one for the new cogeneration system, and one for each of the two new boilers. The existing SCR Units at the existing cogeneration units use anhydrous ammonia. The new SCR Units for the cogeneration unit and the boilers will use aqueous ammonia. The proposed project includes a new 12,000 gallon storage tank to provide an adequate supply of aqueous ammonia for the proposed new SCR Units and removing the connection to the existing anhydrous ammonia storage tank.

2.6.2 Liquefied Petroleum Gas (LPG) Recovery

Tesoro is planning to recover liquid products from light petroleum gases and replace older equipment at the DCU, the HCU and the FCCU as outlined in the following subsections.

2.6.2.1 Delayed Coking Unit (DCU) Modification

The DCU converts atmospheric residuum and heavy crude fraction into gases, light liquids, naphtha, distillate oils, and petroleum coke. The feed to the DCU is heated to a high temperature causing the light materials to boil off leaving behind solid materials called petroleum coke. Tesoro is proposing to remove water and recover more liquid products (i.e., LPG) from process gas in the DCU and existing equipment by: 1) replacing three existing fractionator overhead accumulators with three larger vessels, 2) adding a new fractionator

overhead wash water system; and 3) adding new pumps and piping as necessary. In addition, Tesoro plans to replace the deethanizer and depropanizer columns that are old and need to be replaced with identical columns.

2.6.2.2 Hydrocracking Unit (HCU) Modification

The HCU converts gas oil in the presence of hydrogen into gases, light liquids, light naphtha, heavy naphtha, and diesel streams. The HCU consists of a reaction section and a fractionation section. The proposed modifications will be made to the fractionation section and will include: 1) adding an amine scrubber feed knockout drum; and 2) adding booster pumps and piping. The purpose of the proposed modifications is to increase the amount of liquid recovered, reduce process gas by improving liquid/vapor separation, and reduce the potential for entrained liquids moving into the amine system.

2.6.2.3 Fluid Catalytic Cracking Unit (FCCU) Modification

The FCCU converts heavy oil into lighter hydrocarbon compounds. The FCCU produces a large quantity of gasoline blending components and feedstocks for the alkylation process. As part of an effort to recover more liquid fuel and reduce process gas generation, two heat exchangers in the FCCU Recovery section will be removed and replaced with more efficient heat exchangers to allow better heat transfer and better recovery of liquid fuel from process gas.

2.6.3 Coke Handling, Screening and Loading System

Petroleum coke generated at the DCU is transferred via conveyor belts to the coke storage and loading area for distribution to offsite facilities by either trucks or rail cars. The existing coke barn is scheduled for replacement as part of the proposed project. The existing coke storage facility will be replaced with a new coke storage facility. In addition to the new coke storage facility, Tesoro is proposing to build new coke loading facilities and make modifications to the associated coke transfer equipment as necessary.

2.6.4 Compliance with Revised CARB Phase III - Hydrotreating Unit (HTU) Modification

The proposed modifications to the HTU-2 are designed to increase throughput to desulfurize more naphtha in order to meet sulfur specifications for blending into revised CARB Phase III compliant gasoline products. In order to make cleaner gasoline meeting the revised CARB gasoline specifications, the proposed project will be completed solely by modifying existing heat exchangers or adding new heat exchangers. As a result of the modifications, the proposed HTU maximum capacity is expected to increase from 23,000 BPSD to 27,000 BPSD, which allows removal of sulfur from more of the existing product streams.

2.6.5 Amine/Sour Water Reliability Upgrades

The proposed reliability upgrades include the installation of a new larger amine flash drum to allow for the proper residence time of the amine solution to enhance removal of hydrocarbons and prevent the hydrocarbons from being inadvertently routed to the sulfur plants. Excess hydrocarbons in the sulfur plants can increase the operating temperatures, causing the plant to shut down and release exhaust gas with high sulfur concentrations to the atmosphere, potentially creating odors and nuisance situations. The existing flash drum will be modified for use primarily as a sour water flash drum and as a back up to the new amine flash drum. The existing vapor recovery heat exchanger and knock out drum will also be replaced with a larger system to increase reliability of the amine system.

2.6.6 Recovery/Treatment of Sour Gas from the Spent Acid Storage Tank and the LPG Sulfur Extraction Unit

Sour gas from the spent acid storage tank and the LPG Sulfur Extraction Unit at the Alkylation Unit will be modified to improve recovery and treatment. This proposed modification will reduce the sulfur emissions from a vent gas stream and help the Refinery improve compliance with the U.S. EPA MACT Standards for Petroleum Refineries (40 CFR Part 63, Subpart CC).

2.6.7 Connecting Atmospheric Pressure Relief Devices to Flare

Tesoro has a company policy to minimize the potential for atmospheric releases from PRDs associated with refinery equipment and will connect PRDs to the flare gas recovery system whenever feasible. Therefore, as part of the proposed project, Tesoro is proposing to connect all of the PRDs in the FCCU to the flare gas recovery system, except for the PRDs on the main fractionator due to design constraints. This modification will also assist Tesoro in complying with SCAQMD Rule 1173 - Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants.

2.6.8 Delayed Coker Unit (DCU) Modifications

The DCU converts residual oil into light hydrocarbons (i.e., propane and butane), naphthas, gas oils, and petroleum coke. The DCU thermally cracks the long chain hydrocarbon molecules in the residual oil into shorter chain molecules.

2.6.8.1 Coke Drum Blowdown System Modifications

The coke drum blowdown system processes steam and hydrocarbons from coke drum decoking (i.e., removing the built-up coke) and warm-up. This system recovers water, oil, and any non-condensable gas. The proposed modifications to this system include: 1) removing and replacing the blowdown contactor and blowdown accumulator with larger vessels; and 2) adding a new heat exchanger and condensers. These proposed modifications will allow better oil and water separation while reducing the amount of heavy hydrocarbons being carried over to the slop oil storage tank.

2.6.8.2 DCU Heater H-101 Modification

Heater H-101 is proposed to be modified to improve heat transfer efficiency by enlarging the fire box to increase the heat transfer area. Additionally, new low NOx burners will be installed to reduce NOx emissions.

2.6.9 Crude Oil Storage Tank

The proposed project includes the construction of one new 500,000 barrel crude oil storage tank in order to provide additional crude oil storage capacity and to provide operational flexibility.

2.6.10 Sulfur Recovery Plant (SRP) Claus Units 600/700 Modification

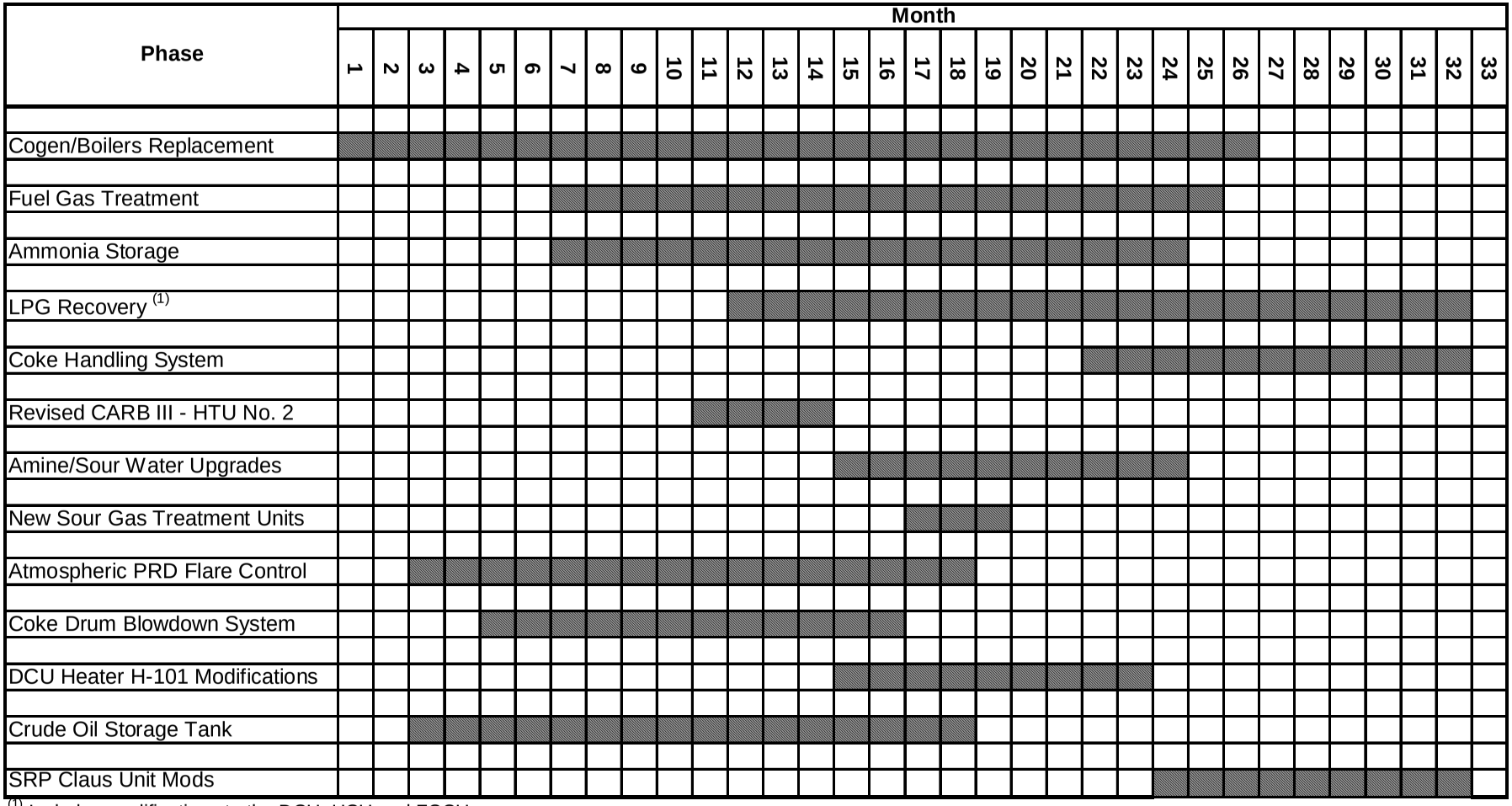
One objective of the proposed project is to increase sulfur removal capacity of the SRP Claus Units 600 and 700 by adding oxygen to the inlet air. Liquid oxygen will be purchased from a local production facility and delivered by truck to the SRP where it will be stored in a new pressurized oxygen tank. The proposed project also includes the removal and replacement of the existing reaction furnace burners, modification of the existing Safety Instrumented System, and upgrades to modernize the Waste Heat Boilers, and installation of one new oxygen tank (at least 4,500 cubic-foot capacity).

2.7 CONSTRUCTION OF THE PROPOSED PROJECT

Construction activities for the proposed project are expected to begin in the first quarter of 2009 and are expected to be completed by late 2011. As shown in Figure 2-5, the construction schedule for each component of the proposed project varies. The construction activities for most of the components are expected to overlap from about month ten to month 13. Construction work shifts are expected to last about ten hours per day during most portions of the construction schedule. During normal construction periods, one work shift per day is expected. During Refinery unit turnaround periods (when the unit is shutdown), two work shifts are expected.

2.8 OPERATION OF THE PROPOSED PROJECT

The permanent work force at the Refinery and SRP are not expected to increase as a result of the proposed project. The proposed project is expected to increase truck traffic by a maximum of one truck per day and is not expected to increase railcar traffic or ship traffic following completion of project construction at either the Refinery or SRP.



(1) Includes modifications to the DCU, HCU and FCCU

Tesoro Reliability Improvement and Regulatory Compliance Project
Construction Schedule

FIGURE 2-5

2.9 PERMITS AND APPROVALS

Tesoro requires environmental permits to operate its facilities from a variety of federal state, and local agencies (see Table 2-1). Tesoro has secured the appropriate permits to operate the existing Refinery and SRP. However, Tesoro has applied for and must obtain air quality permits related to the proposed project. The environmental permits generally required by Tesoro are discussed below. The Refinery and SRP currently have operating permits but some of these may require modifications associated with the proposed project revisions. A summary of major permitting and regulatory compliance requirements for existing equipment is provided in Table 2-1.

2.9.1 Federal Approvals

Direct federal approvals for the proposed project are not expected because many of the U.S. EPA regulations and requirements are implemented by state or local agencies. However, the Spill Prevention Control and Countermeasure (SPCC) Plan will require modifications to assure that all new and modified Refinery units and storage tanks are included in the SPCC Plan. Further, the Refinery and SRP will have to comply with the applicable provisions of the Superfund Amendments and Reauthorization Act (SARA) Title III and Occupational Safety and Health Act (OSHA). Nonetheless, no direct federal approval is expected to be required prior to commencing the proposed project.

2.9.2 State Approvals

Construction-related permits may be required from the California Occupational Safety and Health Administration (CalOSHA) for activities associated with demolition, construction, excavation, and tower crane erection. Any deliveries of heavy construction equipment which require the use of oversized transport vehicles on state highways will require a Caltrans transportation permit.

2.9.3 Local Approvals

The SCAQMD has responsibility as lead agency for the CEQA process and for certification of the EIR. Permits to Construct/Operate for various combustion sources such as new units and modifications to existing units will be required. Permits or plan approvals also may be required for construction, soil remediation, and demolition activities. The SCAQMD requires a permit for any equipment or process, which emits an air contaminant or controls the issuance of an air contaminant.

The project may require revisions to the National Pollutant Discharge Elimination System (NPDES) permit, including storm water runoff, from the RWQCB.

The Los Angeles County Sanitation Districts (LACSD) has responsibility for issuance of industrial wastewater discharge permits which are required for sewer discharge.

The local city fire departments are responsible for issuing permits for storage tanks and for review and approval of Risk Management Plans which will be required as part of the proposed project. The Fire Department also is responsible for assuring that the City fire codes are implemented.

Building and grading permits for the proposed project will be required from the Cities of Los Angeles and Carson to assure that the project complies with the Uniform Building Code.

TABLE 2-1

FEDERAL, STATE AND LOCAL AGENCY PERMITS AND APPLICATIONS

Agency Permit or Approval	Requirement	Applicability to Project
Federal		
U.S. EPA	Spill Prevention Control and Countermeasure Plan (40 CFR Part 112)	Modifications to Refinery and terminal facilities that affect the potential for oil or flammable materials discharge into navigable waters.
	Title III of the federal Clean Air Act Amendments of 1990, including development of an Accidental Release Program	Modifications to Refinery and SRP operations involving use of listed regulated substances.
	Title III of the Superfund Amendments and Reauthorization Act of 1986, including §313 – Annual Release Reporting (Form R)	Modifications to Refinery and SRP operations involving use or storage of extremely hazardous substances (EHSs) or other regulated hazardous materials.
Occupational Safety and Health Administration (OSHA)	Compliance with 29 CFR 1920, including preparation of an Emergency Response Plan, a Fire Prevention Plan, Process Hazards Safety Review, and employee training	Modifications to Refinery and SRP operations involving materials that are acutely toxic, flammable or explosive.
U.S. Department of Transportation (U.S. DOT)	Compliance with U.S. DOT regulations regarding transportation of hazardous substances (40 CFR Part 172)	Project-related transportation (import/export of hazardous substances).

TABLE 2-1 Cont'd

Agency Permit or Approval	Requirement	Applicability to Project
State		
California Environmental Protection Agency, Dept. of Toxic Substances Control (DTSC)	On-site hazardous waste generation	Project-related modifications to applicable hazardous materials and hazardous waste generation handling at the Refinery and SRP.
	Proposition 65 – California's Safe Drinking Water and Toxic Enforcement Act of 1986	Project-related exposure of the public to listed carcinogens or reproductive toxins due to proposed modifications. Public notification is required under certain specified conditions.
Caltrans	Transportation Permit (CCR 21 Division 2, et.seq.)	Project-related application to transport overweight, oversize, and wide loads on state highway
CalOSHA	Process Safety Management (PSM) Program (40 CFR Part 1910)	PSM program may require updating due to the proposed project including written process safety information, hazard and operability (hazop) analysis, development of operating procedures, training procedures, and pre-start safety review.
	Construction-related permits (CCR Title 8, Division 1, and crane Chapter 4)	Excavation, construction, demolition and tower crane erection permit.
	Written Hazard Communication Standard Compliance Program	Project-related modifications to Refinery and SRP operations involving hazardous materials (including needed modifications to employee training programs).
Local		
South Coast Air Quality Management District (SCAQMD)	Permits to Construct	SCAQMD Rule 201 and Regulation XXX: Permit to construct and operate. Applications are required to construct, operate or modify stationary emission sources.
	Permits to Operate	SCAQMD Rule 203: Permit to Operate. Applications are required to operate stationary emissions sources.

TABLE 2-1 Cont'd

Agency Permit or approval	Requirement	Applicability to Project
SCAQMD (cont.)	CEQA	The SCAQMD is the lead agency for preparation of the environmental document (CEQA Guidelines, Chapter 2.5, §21069).
	Title V of the 1990 Clean Air Act	SCAQMD Regulation XXX: Permit to construct and operate. Applications are required to construct, operate or modify stationary emission sources.
	Prevention of Significant Deterioration (PSD)	SCAQMD Regulation XVII: Requirements for modifications to stationary sources in attainment areas. The Permit to Construct issued by the SCAQMD will be evaluated for PSD applicability. CO, NOx, and SOx net emissions from the project will be determined. If net emissions form the project are less than PSD thresholds (i.e., 40 tons/year for NOx and SOx and 100 tons/year for CO), PSD will not be triggered. However, BACT will be installed for all pollutants.
	Standards for Approving Permits	SCAQMD Rule 212: Permits cannot be issued unless the equipment can operate in compliance with the California Health and Safety Code and provisions of Rule 212. Also requires public notification of significant project.
	BACT and Modeling	SCAQMD Rule 2005, Regulation XIII,, or Regulation XVII: New or modified permit units must installed with BACT, obtain offsets and perform modeling of new emissions increases.
	Toxics Best Available Control Technology (T-BACT) and Risk Assessment	SCAQMD Rule 1401: NSR of Carcinogenic Air Contaminants. New or modified permit units must comply with maximum allowed risk levels.
Regional Water Quality Control Board (RWQCB)	National Pollutant Discharge Elimination System (NPDES) Permit/Waste Discharge requirement.	Project-related modifications to applicable storm water runoff plans.

TABLE 2-1 Concluded

Agency Permit or approval	Requirement	Applicability to Project
Local Cont'd		
Cities of Los Angeles and Carson, and Fire Departments	Building Permit	Required for project-related foundations and buildings to assure compliance with Uniform Building Code
	Grading Permit	Required prior to grading.
	Plumbing and Electrical Permit	General construction permit.
	Hazardous Materials Business Plan	Storage of project-related hazardous materials.
	Acutely Hazardous Material Registration/Risk Management Plan	Project-related use/storage of acutely hazardous materials.
	Above Ground Storage of Hazardous/Flammable Materials (Uniform Fire Code, Article 80)	Project-related storage of regulated materials.
City of Los Angeles, Bureau of Sanitation	Industrial Wastewater Discharge Permit (California Health & Safety Code, Division 6, Chapter 4, Article 1, §6521)	Project-related modifications to the Refinery's and SRP's industrial wastewater discharge to the sewer if it affects the quantity, quality or method of industrial wastewater disposal.

M:\DBS\2550 Tesoro Optimization\DEIR\2550 DEIR2.doc