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ACRONYMS, ABBREVIATIONS, AND GLOSSARY

AAPA	American Association of Port Authorities
AAQS	Ambient Air Quality Standard
AB	Assembly Bill
ac	acre
ACGs	allisions, collisions, & groundings
ACM	Asbestos-containing Material
ACTI	Advanced Cleanup Technologies, Inc.
ADP	Application for Discretionary Project
ADT	Average Daily Traffic
AEI	Air Emissions Inventory
AER	Annual Emissions Report
AFFF	aqueous foam fire-fighting
AFRA	Average Freight Rate Assessment
AIChE	American Institute of Chemical Engineers
AIRFA	American Indian Religious Freedom Act
AMECS	Advanced Maritime Emissions Control System
AMI	Area Median Income
AMP	Alternative Maritime Power
ANS	Alaskan North Shore Slope
ANSI	American National Standards Institution
ANWR	Arctic National Wildlife Refuge
API	American Petroleum Institute
APL	American President Lines
APM	APM Terminals (Arnold Peter Møller)

AQAC	Air Quality Advisory Committee
AQAP	Air Quality Attainment Plan
AQMP	Air Quality Management Plan
ARPA	Architectural Resources Protection Act
ASME	American Society of Mechanical Engineers
AST	aboveground storage tank
AT&SF	Atchison, Topeka, and Santa Fe
ATC	Authority to Construct
BACMs	Best Available Control Measures
BACT	Best Available Control Technology
bbf	barrel
BEA	United States Bureau of Economic Analysis
BFI	Browning-Ferris Industries
bgs	below ground surface
BLM	Bureau of Land Management
BMP	Best Management Practice
Board	Port of Los Angeles Board of Harbor Commissioners
bpd	barrels per day
bph	barrels per hour
°C	degrees Celsius
CAA	Clean Air Act
CAAP	Clean Air Action Plan
CAAQS	California Ambient Air Quality Standards
CAC	California Administrative Code
CAFÉ	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
California Register	California Register of Historic Places
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CBE	Communities for a Better Environment
CCA	copper chromate arsenate
CCAA	California Clean Air Act
CCAR	California Climate Action Registry

CCC	California Coastal Commission
CCEEB	California Council for Environmental and Economic Balance
CCR	California Code of Regulations
CCW	Coastal Clean Water
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEFS	California Emissions Forecast System
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CH ₄	methane
CHE	Cargo Handling Equipment
CIWMB	California Integrated Waste Management Board
CLE	Contingency Level Earthquake
cm	centimeter
cm/sec	centimeter per second
CMA	Critical Movement Analysis
CMP	Congestion Management Program; Clean Marinas Program
CNA	Controlled Navigation Area
CNEL	community noise equivalent level
CNG	compressed natural gas
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COTP	Captain of the Port
CPUC	California Public Utilities Commission
C-R	Cancer-Risk
CRHP	California Register of Historic Places
CSC	California Species of Special Concern
CSFM	California State Fire Marshal
CSLC	California State Lands Commission
CSTF	Contaminated Sediment Task Force

CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWC	California Water Code
cy	cubic yards
CZMA	Coastal Zone Management Act of 1972
DA	Department of the Army
DAS	Distribution and Auto Services
dB	decibel
dB(A)	A-weighted decibel
<u>dB_{peak}</u>	<u>Peak sound pressure level measured in decibels</u>
<u>dB_{rms}</u>	<u>Root mean square sound pressure level measured in decibels</u>
<u>dB_{sel}</u>	<u>Sound exposure level measured in decibels</u>
D/C	demand-to-capacity ratio
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
DHS	Department of Health Services
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DOC	diesel oxidation catalyst
DoD	Department of Defense
DOF	California Department of Finance
DOGGR	California Department of Conservation Division of Oil, Gas, and Geothermal Resources
DOI	Department of Interior
DOT	Department of Transportation
DPF	Diesel Particulate Filter
DPM	diesel particulate matter
DSAW	double submerged arc welded
DSU	Dock Safety Unit
DTSC	Department of Toxic Substances Control
DWT	dead-weight tons
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
<u>EGS</u>	<u>Exhaust gas scrubber</u>

EIA	Energy Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
EJ	Environmental Justice
EMD	Environmental Management Division
EMS	emergency medical service; Environmental Management System
EO	Executive Order
ERC	Emission Reduction Credit
ERP	Emergency Response Plan
ERW	electronic restrain welded
ESA	Endangered Species Act
ESD	emergency shutdown device
ESL	Environmental Screening Level
°F	degrees Fahrenheit
FBE	fusion bonded epoxy
FC	foot candles
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	frequency modulation
FMP	Fishery Management Plan
FMR	Fair Market Rent
FONSI	Finding Of No Significant Impact
FPPP	Fire Protection and Prevention Plan
fps	feet per second
FRB	fast response boat
FSO	Facility Security Officer
FSP	Facility Security Plan
ft	feet
FTA	Federal Transit Authority
FTE	full-time equivalent
FWCA	Fish and Wildlife Coordination Act

FY	fiscal year
g	gram
Gal	gallon
GCASP	General Construction Activity Storm Water Permit
GHG	greenhouse gas
gpd	gallon per day
GMP	Growth Management Plan
gpm	gallons per minute
GVWR	Gross Vehicular Weight Rating
GWP	global warming potential
ha	hectare
Hz	hertz (frequency)
HazMat	Hazardous Material
HCM	Highway Capacity Manual
HDD	horizontal directional drilling
HDPE	high density polyethylene
HDV	Heavy Duty Vehicle
HFC	hydrofluorocarbon
HFO	heavy fuel oil
HHS	United States Department of Health and Human Services
HHW	higher high water
HI	Hazard Index
HLW	higher low water
hp	horsepower
HRA	Health Risk Assessment
HSAA	Hazardous Substances Account Act
HSP	Harbor Safety Plan
HUD	United States Department of Housing and Urban Development
HVAC	heating, ventilating, & air conditioning
Hz	Hertz
I	Interstate
I-110	Harbor Freeway
I-710	Long Beach Freeway
I&M	Installation & Maintenance

ICTF	Intermodal Container Transfer Facility
IEPR	Integrated Energy Policy Report
IES	Illuminating Engineering Society of North America
IMO	International Maritime Organization
I-O	Input-Output
IPCC	Intergovernmental Panel on Climate Change
IRC	International Response Corporation
IS	Initial Study
ISGOTT	International Safety Guide for Oil Tankers and Terminals
ISPS	International Ship and Port Facility Security
ITOL	Industry Taskforce on Offshore Lightering
ITOPF	International Tanker Owners Pollution Federation, Ltd.
IWG	Interagency Working Group
JCIF	Joint Container Inspection Facility
kg	kilogram
KGal	thousand gallons
km	kilometer
KMEP	Kinder Morgan Energy Partners
kHz	kilohertz
kPa	kilopascals
kts	knots
KW	kilowatt
kV	kilovolt
L ₀₁	A-weighted noise levels that are exceeded 1 percent of the time
L ₁₀	A-weighted noise levels that are exceeded 10 percent of the time
L ₅₀	A-weighted noise levels that are exceeded 50 percent of the time
L ₉₀	A-weighted noise levels that are exceeded 90 percent of the time
L _{d/n}	Day/Night Noise Level
L _{eq}	Equivalent Sound Level
L.A.	City of Los Angeles
LABSD	City of Los Angeles Building and Safety Department
LACD	Los Angeles Customs District
LACFD	Los Angeles County Fire Department
LACMTA	Los Angeles County Metropolitan Transportation Authority

LADOT	City of Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAEDC	Los Angeles Economic Development Corp
LAF	Sound level with 'A' Frequency weighting and Fast Time (short duration) weighting
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Harbor Department
LAPD	Los Angeles Police Department
LARWQCB	California Regional Water Quality Control Board, Los Angeles Region
LA&SP	Los Angeles and San Pedro Railroad
LAXT	Los Angeles Export Terminal, Inc.
LBE	Long Beach Energy
LBHD	Long Beach Harbor Department
LCFS	Low Carbon Fuel Standard
LCP	Local Coastal Plan
Ldn	day/night noise level
LEDPA	least environmentally damaging practicable alternative
LEED	Leadership in Energy and Environmental Design
Leq	equivalent sound level
LEV	Low Emissions Vehicle
LH&A	Lawrence Headley & Associates
LHW	lower high water
LLW	lower low water
LNAPL	light non-aqueous phase liquid
LNG	liquefied natural gas
LORS	Laws, Ordinances, Regulations, and Standards
LOS	Level of Service
LPG	liquid propane gas
LSFO	low sulfur fuel oil
LU	Land Use
m	meter
m ²	square meters
m ³	cubic meters
m/s	meters per second

MAOP	maximum allowable operating pressure
MARAD	United States Maritime Administration
MARPOL	International Convention for the Prevention of Pollution from Ships
MARSEC	Maritime Security
MATES II	Multiple Air Toxics Exposure Study II
MATES III	Multiple Air Toxics Exposure Study III
MAX	Municipal Area Express
mby	million barrels per year
MCE	Maximum Credible Earthquake
MCL	maximum contaminant level
MDO	marine distillate oil or marine diesel oil
µg/L	micrograms per liter
µg/m ³	micrograms per cubic meter
µm	micrometers
mcy	million cubic yards
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
mgd	million gallons per day
MICR	maximum individual cancer risk
MGO	marine gas oil
MLLW	mean lower low water
msl	mean sea level
MM	Mitigation Measure
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Plan
mmscf	million standard cubic feet
MOA	Memorandum of Agreement
MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards
MOU	Memorandum of Understanding
MPA	Marine Protected Area or Maritime and Port Authority or Marine Preservation Association
MPE	maximum probable earthquake
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone

MSL	mean sea level
MSRC	Marine Spill Response Corporation
MTA	Metropolitan Transportation Authority
MTBE	methyl tertiary butyl ether
MTSA	Maritime Transportation Security Act
MVCS	Marine Vapor Control System
MVCU	Marine Vapor Combustion Unit
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NA	not applicable
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAPL	non-aqueous phase liquids
NAS	National Academy of Sciences
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Act
NHPA	National Historic Preservation Act
<u>NIS</u>	<u>nonindigenous species</u>
nm	nautical mile
NMFS	National Marine Fisheries Service
NNI	No Net Increase
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOI/NOP	Notice of Intent/Notice of Preparation
NOP	Notice of Preparation
NOP/IS	Notice of Preparation/Initial Study
NOS	National Ocean Service
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	non-point source
NRC	National Response Center
NRHP	National Register of Historic Places

NTU	nephelometric turbidity units
NYK	Nippon Yusen Kaisha
O ₃	ozone
OCC	Operations Control Center
OCIMF	Oil Companies International Marine Forum
OEHHA	Office of Environmental Health Hazard Assessment
OGV	ocean going vessel
OHP	Office of Historic Preservation
OFI	Operations, Facilities and Infrastructure
OLE	Operational Level Earthquake
OPA	Oil Pollution Act
OPR	Governor's Office of Planning and Research
OPS	Office of Public Safety
OSC	On-Scene Coordinator
OSCP	Oil Spill Contingency Plan
OSHA	Office Health & Safety Administration
OSPR	Office of Spill Prevention and Response
OSRO	Oil Spill Removal Organization
OSRP	Oil Spill Response Plan
OSRV	oil spill response vessel
PAH	polynuclear aromatic hydrocarbon
PCAC	Port Community Advisory Committee
PCBs	polychlorinated biphenyls
PCE	passenger car equivalent
PCH	Pacific Coast Highway
PCP	pentachlorophenol
PE	Pacific Energy Partners, L.P.
PERP	Portable Equipment Registration Program
PF	public facility
PFC	perfluorocarbon
pH	hydrogen ion concentration
PHGA	peak horizontal ground acceleration
PIANC	Port International Navigation Association
Plains	Plains All American Pipeline, L.P.

PLAMT	Pacific Los Angeles Marine Terminal LLC
PLC	programmable logic controller
PM	particulate matter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
PMP	Port of Los Angeles Master Plan
POLB	Port of Long Beach
Port	Port of Los Angeles
Port Plan	Port of Los Angeles Plan
Port Police	Los Angeles Harbor Department Police
PORTS	Physical Oceanographic Real Time System
ppm	parts per million
ppmv	parts per million by volume
ppt	parts per thousand
PRC	Public Resources Code
PRG	Preliminary Remediation Goal
Proposed Project	Proposed Pacific Los Angeles Marine Terminal Crude Oil Marine Terminal, Tank Farm Facilities, and Pipelines Project
psi	pounds per square inch
psia	pounds per square inch at atmospheric pressure
PTC	Permit to Construct
PTO	Permit to Operate
QC/QDs	Quick Connect/Disconnect Couplers
[Q]M3	Qualified Industrial Zone
<u>QV</u>	<u>qualifying voyages</u>
RCP	Regional Comprehensive Plan
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act
REL	reference exposure level
RFP	Request for Proposals
RHA	Rivers and Harbors Act
RIMS II	Regional Input-Output Modeling System
RMP	Risk Management Plan
RNA	Regulated Navigation Area
ROC	reactive organic compound

ROD	Record of Decision
ROG	reactive organic gas
ROI	region of influence
rpm	revolutions per minute
RSPA	Research and Special Programs Administration
RTG	rubber-tired gantry
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAIC	Science Applications International Corporation
SAR	Service Advisory Request
SB	Senate Bill
SCAB	South Coast Air Basin
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coast Information Center
scf	standard cubic foot
SCGC	Southern California Gas Company
SCP	Source Control Program
SCR	Selective Catalytic Reduction
SEA	Significant Ecological Area
SEDAB	Southeast Desert Air Basin
SEIS/SEIR	Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report
<u>SEL</u>	<u>sound exposure level</u>
SES	Sound Energy Solutions
sf	square feet
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIOSC	State Interagency Oil Spill Committee
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act of 1975
SO ₂	sulfur dioxide
SO _x	sulfur oxides
SOLAS	Safety of Life at Sea

SPB	San Pedro Bay
SPBP CAAP	San Pedro Bay Ports Clean Air Action Plan
SPCC	Spill Prevention, Control, and Countermeasures
SPRR	South Pacific Railroad
SPTC	Southern Pacific Transport Company
Sq ft	square foot
Sq m	square meter
Sq mi	square mile
Sq mi/acre	square mile per acre
SR	State Route
SR 47	Terminal Island Freeway
SRA	Source Receptor Areas
SSA	Stevedoring Services of America
SSO	Ship Security Officer
STARS	Spill Response Team Area Responders
SVOC	semivolatile organic compound
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TBT	tributyltin
TCY	Temporary Construction Yard
TDML	Total Daily Maximum Load
TEU	twenty-foot equivalent unit (intermodal shipping container)
THUMS	Texaco, Humble, Union, Mobil, and Shell
TIA	Traffic Impact Analysis
TICTF	Terminal Island Container Transfer Facility
TITP	Terminal Island Treatment Plant
TMDL	Total Maximum Daily Load
TMA	transportation management association
TMP	Traffic Management Plan
TNAP	Traffic Noise Analysis Protocol
TPH	total petroleum hydrocarbons
TPHd	total petroleum hydrocarbons as diesel

TRB	Transportation Research Board
TSS	Traffic Separation Scheme
TTS	Temporary Threshold Shift
TWIC	Transportation Worker Identification Credential
UBC	Uniform Building Code
UFP	ultrafine particles
ULCC	Ultra Large Crude Carrier
ULSD	Ultra Low Sulfur Diesel
UPS	uninterruptible power system
U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USCIS	United States Citizenship and Immigration Service
USDA	United States Department of Agriculture
USDLA	United States Department of Land Conservation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGBC	United States Green Building Council
USGBC – LEED	United States Green Building Council – Leadership in Energy and Environmental Design
USGS	United States Geologic Survey
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
VDEC	verified diesel emissions control
VDU	Vapor Destruction Unit
VGP	Vessel General Permit
VHF	very high frequency
VLCC	Very Large Crude Carrier
VMC	Visual Modification Classes
VMT	Vehicle Miles Traveled
VOC	volatile organic compounds
VP	viewing position
VSP	Vessel Security Plan
VSR	Vessel Speed Reduction

VSRP	Vessel Speed Reduction Program
VTIS	Vessel Traffic Information System
VTS	vessel traffic service
WDR	Waste Discharge Requirement
WEFA	Wharton Economic Forecasting Associates
WPA	Works Progress Administration
WQS	water quality standards
WRDA	Water Resources Development Act
ZEV	Zero Emissions Vehicle
ZIP Code	Zoning Improvement Plan Code

Glossary of Frequently Used Technical Terms

<i>Term</i>	<i>Definition</i>
Aframax	A class of vessels built to maximize shipping rates under the Average Freight Rate Assessment. Aframax tanker vessels carry about 700,000 bbl on average and draft 38-57 feet.
AMP	Alternative Maritime Power, also called shoreside power or cold ironing. The use of shoreside electrical generators, rather than auxiliary ship engines, to provide power for hoteling functions and other functions while the ship is at berth.
Barrel (bbl)	42 gallons.
Crude oil	“Unprocessed” oil that has been extracted from the subsurface. Also known as petroleum, crude oil varies in color from clear to black, and in viscosity from like water to almost solid. Note that the proposed Project would receive crude oil and partially refined crude oil; throughout the SEIS/SEIR these are referred to collectively as “crude oil” (as stated in Section 1.1.2).
HFO	Heavy Fuel Oil, the prevalent fuel used in nearly all marine vessels today. HFO has a worldwide average sulfur content of 2.7 percent by mass, but can range as high as 6 percent sulfur. Effective May 2005, an international convention limits the sulfur content of HFO to 4.5 percent.
Hoteling	The process in which vessels stay docked at the berth while cargo is offloaded and the ship is refueled. Typically involves the continued operation of auxiliary ship engines that are used to generate power to run lights, heating, air conditioning, and hot water for the ship and crew.
Lightering	A process consisting of transferring a portion of cargo from a large vessel (“lightered vessel”) to a smaller vessel (“lightering vessel”). Typically lightering occurs when a large vessel can not come into port due to the limited bottom depth at the port. Thus the lightering vessel travels between the lightered vessel and the port to offload cargo.
MDO	Marine Distillate Oil, a marine vessel fuel with a worldwide average sulfur content of approximately 0.5 percent; also known as Marine Diesel Oil
MGO	Marine Gas Oil, a marine vessel fuel averaging 0.05 percent sulfur content.

Glossary of Frequently Used Technical Terms

<i>Term</i>	<i>Definition</i>
MOTEMS	The Marine Oil Terminal Engineering and Maintenance Standards (Chapter 31F, Title 24, Part 2 California Code of Regulations), promulgated by the California State Lands Commission (CSLC) in 2004. MOTEMS are comprehensive standards for the design, construction, maintenance, inspection, and repair of petroleum marine terminals.
Panamax	A class of vessels that are the largest that can navigate through the locks of the Panama Canal. Panamax tankers carry about 350,000 bbl on average and draft 38-45 feet. In the Draft SEIS/SEIR, Panamax is usually used to denote oil or petroleum product tankers, although Panamax also applies to other types of vessels.
Pigging	A process that involves inserting a scraper or “pig” into a pipeline at a pig launcher point and retrieving it at a receiving point called a pig receiver or scraper trap; used to clean and inspect pipelines.
Suezmax	A class of vessels that are the largest that can navigate through the Suez Canal. Suezmax tankers carry about 1,000,000 bbl on average and draft 48-61 feet.
VLCC	Very Large Crude Carriers, a class of tanker vessels; carries about 2,000,000 bbl on average and drafts 62-75 feet.

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