

CHAPTER 8

ACRONYMS AND GLOSSARY

Acronyms and Abbreviations
Glossary

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8.0 ACRONYMS AND GLOSSARY

8.1 ACRONYMS AND ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AB	Assembly Bill
AB1807	California Toxic Air Contaminants Program (Tanner Bill)
AB2728	Revised Tanner Bill
AB2588	Air Toxic "Hot Spots" Information and Assessment Act
AB2595	California Clean Air Act
AB32	Global Warming Solutions Act of 2006
AB 939	California Solid Waste Management Act
ACTA	Alameda Corridor Transportation Authority
API	American Petroleum Institute
ANS	Alaska North Slope
AQMP	Air Quality Management Plan
ARM	ambient ratio method
BACT	Best Available Control Technology
Basin	South Coast Air Basin
bbl	barrel
bbl/day	barrels per day
bgs	below ground surface
Bike Route	Class III Bikeway
BLEVE	Boiling Liquid Expanding Vapor Explosion
BMP	Best Management Practices
BNSF	BNSF Railway
BP	BP West Coast Products LLC
C	Carbon atom
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
CalEPA	California Environmental Protection Agency
CalOSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
Cal Water	California Water Service Company
CAO	Cleanup and Abatement Orders
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CH ₄	Methane
CMP	Congestion Management Plan

ABBREVIATION	DESCRIPTION
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
Cogen	Cogeneration Unit
CPUC	California Public Utilities Commission
CRU	Catalytic Reformer Unit
CUPA	Certified Unified Permitting Agencies
CWA	Clean Water Act
CWM	Chemical Waste Management
CWS	California Water Service
C ₂ H ₆	Ethane
C ₃ H ₈	Propane
C ₃ olefins	Propylene
C ₄ H ₁₀	Butane
C ₄ olefins	Butylenes
C ₅ olefins	Amylenes
dB	decibel
dBA	A-weighted noise level measurement in decibels
DCU	Delayed Cracker Unit
DOGGR	Department of Oil, Gas, and Geothermal Resources
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
DWR	Department of Water Resources
EFSEC	Energy Facility Site Evaluation Council
EIR	Environmental Impact Report
EPCRA	U.S. EPA Emergency Planning and Community Right-to-Know
ERPGs	Emergency Response Planning Guidelines
ERC	emission reduction credit
ERT	Emergency Response Team
FCCU	Fluid Catalytic Cracking Unit
FFHDS	Fluid Feed Hydrodesulfurization Unit
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
g/bhp-hr	gram per brake horsepower - hour
gpm	gallons per minute
G/D	Gasoline to Distillate
GVWR	gross vehicle weight rating
H	Hydrogen atom
HAZOP	Hazards and Operation Process
HCM	Highway Capacity Manual
HCU	Hydrocracker Unit
HCU (C)	Carson Hydrocracker Unit
HCU (W)	Wilmington Hydrocracker Unit
HDD	Horizontal Direction Drilling

ABBREVIATION	DESCRIPTION
HMTA	Hazardous Materials Transportation Act
HRA	Health Risk Assessment
HTU	Hydrotreater Unit
Hz	Hertz
ICTF	Intermodal Container Transfer Facility
ICU	Intersection Capacity Utilization
IWDP	Industrial Wastewater Discharge Permits
kV	kilovolt
LACFCD	Los Angeles County Flood Control District
LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation Districts
LADPW	Los Angeles Department of Public Works
LAER	Lowest Achievable Emission Rate
lb/hr	pounds per hour
lb/day	pounds per day
lb/yr	pounds per year
Leq	energy equivalent sound level
LHU	Light Hydrotreating Unit
LOS	Level of Service
LP	Linear Program
LPG	Liquefied Petroleum Gas
L RTP	Long Range Transportation Plans
LST	Localized Significance Threshold
LSWPPP	Local Storm Water Pollution Prevention Plan
MATES	Multiple Air Toxic Exposure Study
MCL	Maximum Contaminant Level
MH	Manufacturing Heavy
mmBtu/hr	million British Thermal Units per hour
MMTCO ₂ e	million metric tons of CO ₂ equivalent
MTA	Metropolitan Transportation Authority
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NHDS	Naphtha Hydro Desulfurization
NOP/IS	Notice of Preparation/Initial Study
NO _x	nitrogen oxide
NO ₂	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
N ₂ O	Nitrous Oxide
OSHA	Occupational Safety and Health Administration
PHL	Pacific Harbor Line, Inc.
PHMSA	Pipeline and Hazardous Material Safety Administration

ABBREVIATION	DESCRIPTION
PM	Particulate Matter
PM2.5	particulate matter less than 2.5 microns equivalent aerodynamic diameter
PM10	particulate matter less than 10 microns equivalent aerodynamic diameter
POLB	Port of Long Beach
ppbv	parts per billion by volume
ppm	parts per million
ppmv	parts per million by volume
PRD	pressure relief devices
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
psig	pounds per square inch gauge
PSTU	Propane Sales Treating Unit
RECLAIM	Regional Clean Air Incentives Market
Refinery	Tesoro Los Angeles Refinery
RMP	Risk Management Plan
RTC	RECLAIM trading credit
RTP	Regional Transportation Plan
RVP	Reid Vapor Pressure
RWQCB	Regional Water Quality Control Board
SARP	Sulfuric Acid Regeneration Plant
SB1731	Senate Bill 1731
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCR	selective catalytic reduction
SHU	Selective Hydrotreating Unit
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO _x	sulfur oxide
SO ₂	sulfur dioxide
SPCC	Spill Prevention, Control and Countermeasure
SRP	Sulfur Recovery Plant
SUSMP	Standard Urban Storm Water Mitigation Plan
SWIRP	Solid Waste Integrated Resources Plan
SWPPP	Stormwater Pollution Prevention Plan
TACs	Toxic Air Contaminants
TAN	Total Acid Number
TDM	transportation demand management
Tesoro	Tesoro Refining & Marketing Company LLC
Tesoro Logistics	Tesoro Logistics Operations, LLC
T2	Marine Terminal 2
UPRR	Union Pacific railroad
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency

ABBREVIATION	DESCRIPTION
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ug/m ³	micrograms per cubic meter
V/C	volume to capacity ratio
VdB	vibration decibels
VOC	volatile organic compounds
WWECP	Wet Weather Erosion Control Plan

8.2 GLOSSARY

TERM	DEFINITION
Acid	Any of a class of compounds that form hydrogen ions when dissolved in water. Acidic solutions react with bases and certain metals to form salts. Acids have a pH of less than 7.
Alkylation	The process of combining light olefins (typically, propylene and butylenes) with isobutene in the presence of a catalyst to form branched isoparaffins.
Ambient Noise	The background sound of an environment in relation to which all additional sounds are heard
Aromatics	Hydrocarbons with a ring structure with the same number of carbon and hydrogen atoms (C_nH_n), such as benzene (C_6H_6).
Barrel	42 gallons.
Blending	One of the final operations in refining, in which two or more different components are mixed together to obtain the desired range of properties in the finished product.
Carbon Intensity	The amount of carbon by weight emitted per unit of energy consumed. A common measure of carbon intensity is weight of carbon per British thermal unit (Btu) of energy.
Catalyst	A substance that promotes a chemical reaction to take place but which is not itself chemically changed.
Caustic	A substance capable of burning or corroding by chemical action (e.g., sodium hydroxide or caustic soda). Caustics have a pH of greater than 7.
Cogeneration	A cogeneration unit is a unit that produces electricity and steam.
Condensate	A stream that has been condensed back into liquid by either raising its pressure or lowering its temperature
Cooling Tower	A cooling tower is a heat rejection device, which extracts waste heat to the atmosphere through the cooling of a water stream to a lower temperature. Common applications for cooling towers are providing cooled water for manufacturing and electric power generation.

TERM	DEFINITION
Cracking	The process of breaking down higher molecular weight hydrocarbons to components with smaller molecular weights by the application of heat; cracking in the presence of a suitable catalyst produces an improvement in product yield and quality over simple thermal cracking.
Crude Oil	Crude oil is "unprocessed" oil, which has been extracted from the subsurface. It is also known as petroleum and varies in color, from clear to tar-black, and in viscosity, from water to almost solid.
dBA	The decibel (dDB) is one tenth of a <i>bel</i> where one bel represents a difference in noise level between two intensities I_1 , I_0 where one is ten times greater than the other. (A) indicates the measurement is weighted to the human ear.
Delayed Coking Unit	The Delayed Coker Unit is a high temperature cracking unit where large hydrocarbon molecules are broken into small molecules (light hydrocarbons). The light hydrocarbons are sent to other units in the Refinery for the manufacture of products such as gasoline, diesel, and jet fuels. A tail gas stream is produced which is burned as fuel. The remaining material, called petroleum coke, is a solid and sold as a by-product.
Distillation	The process of heating a liquid to its boiling point and condensing and collecting the vapor.
Feedstock	Material used as a stream in the refining process.
Flares	Emergency equipment used to incinerate refinery gases during upset, startup, or shutdown conditions
Flue Gas	Gases produced by burning fuels in a furnace, heater or boiler.
Fluid Catalytic Cracking Unit	The primary function of a Fluid Catalytic Cracking Unit (FCCU) is to convert high boiling point gas oils to lighter gasoline blendstocks. In the presence of a catalyst larger hydrocarbons are "cracked" or broken into smaller hydrocarbons. A full range of hydrocarbons from methane to residue and coke are produced from the FCCU.
Heat exchanger	Process equipment used to transfer heat from one medium to another.

TERM	DEFINITION
Heater	Process equipment used to raise the temperature of refinery streams processing.
Hydrocarbon	Organic compound containing hydrogen and carbon, commonly occurring in petroleum, natural gas, and coal.
Hydrodesulfurization	See hydrotreating.
Hydrotreater	A process unit that performs hydrotreating (see hydrotreating).
Hydrotreating	A process to catalytically saturate unsaturated hydrocarbons such as olefins and aromatics and to remove impurities such as sulfur, nitrogen, and metals. In addition to the desired products, light hydrocarbon, hydrogen sulfide, and ammonia are formed. .
Isomerization	The rearrangement of straight-chain hydrocarbon molecules to form branch chain products; normal butane may be isomerized to provide a portion of the isobutane feed needed for the alkylation process.
L ₅₀	Sound level exceeded 50 percent of the time (average or mean level).
Liquefied Petroleum Gas (LPG)	Liquefied light end gases often used for home heating and cooking; this gas is usually 95 percent propane, the remainder being split between ethane and butane.
Mercaptans	Sulfur-containing compounds
Naphtha	A crude distillation unit cut in the range of C ₇ -420°; naphthas are subdivided – according to the actual crude distillation cuts - into light, intermediate, heavy, and very heavy virgin naphthas; a typical crude distillation operation would be: C ₇ -160° - light naphtha 160-280° - intermediate naphtha 280-330° - heavy naphtha 330-420° - very heavy naphtha
Naphthenes	A group of hydrocarbons containing five to six carbon atoms configured in a ring structure with twice the number of hydrogen atoms as carbon atoms (C _n H _{2n}).

TERM	DEFINITION
Natural Gas	A mixture of hydrocarbon gases that occurs with petroleum deposits, with at least 80 percent methane (by volume) together with varying quantities of ethane, propane, butane, and other gases and of pipeline quality, such as the gas sold or distributed by any utility company regulated by the California Public Utilities Commission
Octane Quality or Octane Number	Measurement of the burning quality of the gasoline; reflects the suitability of gasoline to perform in internal combustion engines smoothly without letting the engine knock or ping.
Olefins	Hydrocarbons that contain at least two carbons joined by double bonds; olefins have twice the number of hydrogen atoms than carbons (C_nH_{2n}) and do not naturally occur in crude oils but are formed during the processing. The primary olefins in petroleum refining are propylene (C_3H_6) and butylenes (C_4H_8).
Paraffins	Hydrocarbons that are straight or branched (iso-) that have a chemical formula of C_nH_{2n+2} . Methane (CH_4) is the smallest paraffin and the largest paraffins can have over 100 carbon atoms.
Peak Hour	This typically refers to the hour during the morning (typically 7 a.m. to 9 a.m.) or the evening (typically 4 p.m. to 6 p.m.) in which the greatest number of vehicles trips are generated by a given land use or are traveling on a given roadway.
Pentane	A straight chain paraffin hydrocarbon, which is a colorless, flammable isomeric hydrocarbon, derived from petroleum and used as a solvent.
Reactor	Vessels in which desired reactions take place.
Refinery fuel gas	Gas produced from refinery operations used primarily for fuel gas combustion in refinery heaters and boilers. In SCAQMD Rule 431.1, defined as any combustible gaseous by-product generated from a petroleum refinery process unit operation, with a gross heating value of 2670 kilocalories per cubic meter (300 BTU per cubic foot) or higher, at standard conditions.
Reformate	One of the products from a reformer; a reformed naphtha; the naphtha is then upgraded in octane by means of catalytic or thermal reforming process.

TERM	DEFINITION
Reformer	A process unit that in the presence of a catalyst converts lower octane number straight-run naphtha compounds (e.g., paraffins) to higher octane number compounds such as isoparaffins and naphthenes and naphthenes into aromatics.
Slop Oil	A collection of oil, oil/water mixtures, and off-specification products gathered from refining operations and recycled back into the refining process.
Sour	Refinery streams with more than 2.5 percent sulfur.
Spent Acid	An acidic solution that has become weakened or contaminated and is no longer useful. Spent sulfuric acid solutions can be regenerated to produce fresh sulfuric acid for reuse.
Spent Caustic	A caustic solution that has become exhausted and is no longer useful (or spent). Spent caustic streams are created during refining process steps for the removal of sulfur and other undesirable compounds.
Stripper or Splitter	Refinery equipment used to separate two components in a feed stream; examples include sour water strippers and naphtha splitters.
Sweet	Refinery streams with less than 0.5 percent sulfur.