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Abbreviations and Acronyms

AACP	All American Coastal Pipeline
ACCM	Asbestos containing construction materials
AADT	Annual Average Daily Traffic
AAPL	All-American Pipeline
AAPLP	All-American Pipeline Limited Partnership
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos containing materials
ACOE	U.S. Army Corps of Engineers
ADL	Arthur D. Little, Inc.
ADT	Average Daily Traffic
ACTI	Advanced Cleanup Technologies Inc.
AFR	Air Fuel Ratio
AIChE	American Institute of Chemical Engineers
ANS	Alaska North Slope
ANSI	American National Standards Institute
Ann. Arith. Mean	Annual Arithmetic Mean
APCD	Air Pollution Control District
APE	Area of Potential Effect (National Historic Preservation Act)
API	American Petroleum Institute
AQ	Air Quality
AQMD	Air Quality Management District
ARB	Air Resources Board
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATC	Authority to Construct
AQAP	Air Quality Attainment Plan
AWOIS	Automated Wreck and Obstruction Information System
BACMs	Best Available Control Measures
BACT	Best Available Control Technology
bbls	barrels
BCF	Billion Cubic Feet
bcfd	billion cubic feet per day
bhp	brake horsepower
BIA	Bureau of Indian Affairs
BLEVE	boiling liquid expanding vapor explosion
BLM	Bureau of Land Management
BMPs	Best Management Practices
BO	Biological Opinion
bod	biological oxygen demand
BOP	Blowout prevention
BOPD	barrels of oil per day
BPD	barrels per day
BPHBSCF	barrels per hourBillon Standard Cubic Feet
BTEX	benzene, toluene, ethylbenzene, and xylene
Btu	British thermal unit
BWPD	Barrels of water per day

°C	degrees Celsius
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Air Quality Standards
CAER	Community Awareness and Emergency Response
CAIN	Carpinteria Inshore
CALARP	California Accidental Release Program
CALISO	California Independent Service Operator
CalCOFI	California Cooperative Oceanic Fisheries Investigations
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CaMP	California Monitoring Program
CAMP	California Offshore Monitoring Program
CAP	Clean Air Plan
CARB	California Air Resource Board
Carone	Carone Petroleum Corporation
CBC	California Building Code
CCA	California Coastal Act
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCC	California Coastal Commission
CCCCS	Central California Coastal Circulation Study
CCIC	Central Coastal Information Center
CCMP	California Coastal Management Program
CCPS	Center for Chemical Process Safety (American Institute of Chemical Engineers)
CCR	California Code of Regulations
CCW	Converse Consultants West
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDOGGR	California Department of Geology and Geological Resources
CEC	California Energy Commission
CEMS	Continuous Emissions Monitoring System
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHP	California Highway Patrol
CINMS	Channel Islands National Marine Sanctuary
CLUP	Coastal Land Use Plan
cm	centimeter(s)
CMP	Congestion Management Program
cm/sec	centimeters per second
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNG	compressed natural gas
C_nH_{2n+2}	alkane
CNPS	California Native Plant Society

CO	carbon monoxide
CO_2	carbon dioxide
COPR	Coal Oil Point Reserve
COOGER	California Offshore Oil and Gas Energy Resources
CPA	California Power Authority
CPF	Carpinteria Oil and Gas Processing Facility
CPFV	commercial passenger fishing vessel
CPU	Cavern Point Unit
CPUC	California Public Utilities Commission
CSFM	California State Fire Marshal
CSLC	California State Lands Commission
CSC	California Species of Concern
CUP	Conditional Use Permit
CV	check valve
CWA	U.S. Clean Water Act
CZARAA	Coastal Zone Act Reauthorization Amendments
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
dB	decibels
dBA	decibels on the A-weighted scale
DFG	Department of Fish and Game
DMRs	Discharge Monitoring Reports
DO	dissolved oxygen
DOCD	Development Operations Coordination Documents
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DOT	U.S. Department of Transportation
DPP	Development and Production Plan
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
EAP	Emergency Action Plan
EDL	elevated data levels
EFH	Essential Fish Habitat
EI	Environmental inspector
EIA	Emergency Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement/Study
EMR	Emergency Response
EMT	Ellwood Marine Terminal
EOF	Ellwood Onshore Oil and Gas Facility
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPNG	El Paso Natural Gas Company
ER	Energy Resources
ERC	emission-reduction credit(s)
ERD	extended-reach drilling
ERL	effects range-low
ERM	effects range-medium
ERNS	Emergency Response Notification System
ERP	Emergency Response Plan
ERPG	Emergency Response Planning Guidelines
ERW	electric resistance welded

ES	Executive Summary
ESA	Endangered Species Act
ESD	emergency shutdown/Emergency Shutdown System
ESE	Entire Source Emissions
ESP	Electrical Submersible Pump
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FAR	Federal Air Regulation
FBE	Fusion Bonded Epoxy
FDP	Final Development Plan
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMC	Fishery Management Council
FMMP	Farmland Mapping and Monitoring Program
FMP	Fishery Management Plan
FN	frequency of fatalities
fps	feet per second
FRSB	Fast Response Spill Boat
FSC	Federal Species of Concern
FSRU	Floating storage and re-gasification unit
ft	feet
ft^2	square feet
ft^3	cubic feet
FT	flow transmitter
FWKO	Free Water Knock-Out
FWPCA	Federal Water Pollution Control Act
GCP	Goleta Community Plan
GHG	greenhouse gases
GIS	Geographic Information System
GNOME	General NOAA Oil Modeling Environment
GOIN	Goleta Inshore
GP/CLUP	General Plan/Coastal Land Use Plan
gpd	gallons per day
gpm	gallons per minute
GUL	guided ultrasonic
GW	Gigawatt
GWh	Gigawatt-hour
GWP	global warming potential
H_2S	hydrogen sulfide
ha	Hectares
HAPs	Hazardous Air Pollutants
HARP	Hotspots Analysis and Reporting Program
HAZMAT	Hazardous Materials Response Division of NOAA
HazOp	Hazard and Operability
HCM	Highway Capacity Manual
HDD	horizontal directional drilling
HI	hazard index

HLID	Hydrocarbon Leak and Ignition Database
HMTA	Hazardous Materials Transportation Act
Hp	Horsepower
HSAS	Homeland Security Advisory System
HSWA	Hazardous and Solid Waste Amendments
HWCL	Hazardous Waste Control Law
Hz	Hertz
I&M	Inspection and Maintenance Program
IC	Incident Commander
IC	internal combustion
ICE	internal combustion engine
ICS	Incident Command System
ID	inside diameter
IIRT	initial incident response team
IMO	International Maritime Organization
IMP	Integrity Management Plan
IR	Ingersol Rand
IRI	Industrial Risk Insurers
IVs	Indicator values
JRP	Joint Review Panel
kg	kilogram
kg/day	kilograms per day
kHz	kiloHertz
KLI	Kinetic Laboratories, Inc.
km	kilometers
$/km^2$	per square kilometer
km/h	kilometers per hour
kPa	kiloPascals
kts	Knots or Nautical miles per hour
kW	kilowatt
kWh	kilowatt-hour
kW/m^2	kilowatts per square meter
kV	kilovolt
L_{10}	sound level exceeded 10 percent of the time over a specified period
lbs	pounds
lbs/day	pounds per day
LACT	Lease Automatic Custody Transfer
LCP	Local Coastal Program
L_{dn}	day-night sound level
LED	limited exception determination
LEL	lower explosion level
L_{eq}	equivalent steady sound level that provides an equal amount of acoustical energy as the time-varying sound
$L_{eq(24)}$	24-hour equivalent sound level
LFC	Las Flores Canyon
LFL	lower flammability level
Line 96	common carrier ExxonMobil Pacific Line 96
LNG	Liquefied Natural Gas
LOS	Level of Service
LPG	liquefied petroleum gas
LRDP	Long Range Development Plan

LTA	Local Transportation Authority
LTD	long tons per day
LTS	low temperature separation
m	meter(s)
m/s	meters per second
/m	per meter
$/m^2$	per square meter
$/m^3$	per cubic meter
m^3	cubic meters
m^3/day	cubic meters per day
m^3/hr	cubic meters per hour
m^3/yr	cubic meters per year
M	Million (as a prefix)
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
mg/l	milligrams per liter
MAOP	maximum allowable operating pressure
MARSEC	Maritime Security
MAWP	maximum allowable water pressure
Mbd	thousand barrels per day
MBNMS	Monterey Bay National Marine Sanctuary
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquakes
MCFD	thousand cubic foot per day
MGD	million gallons per day
MGY	million gallons per year
mg/kg	milligrams per kilogram dry weight
$mile^2$	square miles
ml	milliliters
MLLW	mean lower low water
mm	millimeter(s)
MM	Mitigation measure
mmcfd	million cubic feet per day
MMCRP	Mitigation Monitoring, Compliance, and Reporting Program
MMP	Mitigation Monitoring Program
MMPA	Marine Mammals Protection Act
MMS	Minerals Management Service
MMSCFD	million standard cubic feet per day
MMSTB	million
MMTCE	million metric tons of carbon equivalent
MODU	mobile offshore drilling unit
MOT	Marine Oil Terminal
MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards
MOU	Memorandum of Understanding
MOV	motor operated valve
MP	Milepost
MPa-g	Mega Pascal, gauge
mph	miles per hour
MPN	most probable number
MPO	Metropolitan Planning Organization
MRS	Marine Research Specialists

MSDS	Material Safety Data Sheets
m/s	meter(s) per second
MSCFD	thousand standard cubic feet per day
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSL	mean sea level
mt/yr	metric tons/year
MW	megawatt
MWh	megawatt hour
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NAROC	non-alkaline reactive organic compounds
NDBC	NOAA Data Buoy Center
NDT	non-destructive testing
NEC	National Electric Code
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NG	natural gas
NGA	Natural Gas Act
NGL	natural gas liquids
nm	nautical miles
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOD	Notice of Determination
NOI/P	Notice of Intent/Preparation
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPREP	National Preparedness for Response Exercise Program
NRC	National Response Center
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSA	noise sensitive area
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
O_3	ozone
O&M	operation and maintenance
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OD	outer diameter
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OPA	U.S. Oil Pollution Act
OPR	Office of Planning and Research
OPS	U.S. Office of Pipeline Safety
OPUS	Organization of Persistent Upwelling Structures
OSCP	Oil Spill Contingency Plan
OSHA	Occupational Safety and Health Administration

OSPR	Oil Spill Prevention and Response
OSRA	Oil Spill Risk Analysis
OSRO	Oil Spill Response Organization
OSRP	Oil Spill Response Plan
OSRV	Oil Spill Response Vessel
OVA	organic vapor analyzer
PADD	Petroleum Administration for Defense District
PAH	poly-aromatic hydrocarbons
Pb	Lead
PEL	probable effects level
PLC	Programmable Logic Controller
PLEM	pipeline end manifold
PLG	Pickard, Lowe and Garrick, Inc
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
POD	plan of development
POOI	Pacific Operators Offshore Incorporated
POPCO	Pacific Offshore Pipeline Company
POSVCM	Pipeline Oil Spill Volume Computer Model
PPA	Pressure Point Analysis
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
ppmv	parts per million by volume
PRC	Public Resources Code
PRCI	Pipeline Research Council International, Inc.
PRD	pressure/vacuum relief device
PREP	Preparedness For Response Exercise Program
PRI	Petroleum and Refractory, Inc.
PSA	Pressure Swing Adsorber
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
psia	pounds per square inch, absolute
Psig	pounds per square inch, gauge
PSM	Process Safety Management
PSV	Pressure safety valve
Pt.	Point (geographical term)
PT	pressure transmitter
PTE	potential to emit
PTO	permit to operate
QRA	Quantitative Risk Analysis
RCRA	Resource Conservation and Recovery Act
RECRP	Restoration Erosion Control and Restoration Program
RILP	Rincon Island Limited Partnership
RI-ISI	risk informed in service inspection
RMP	Risk Management Plan
RMPP	Risk Management and Prevention Program
ROC	reactive organic compounds
ROG	reactive organic gases (also see ROC)
ROSF	Rincon Onshore Separation Facility

ROP	Rate of Progress Plan
ROV	remotely operated vehicle
ROW	right-of-way
RPM	revolutions per minute
RSPA	Research and Special Programs Administration
RTPA	Regional Transportation Planning Agency
RTU	Remote Terminal Unit
RVP	Reid vapor pressure
RWQCB	Regional Water Quality Control Board
SAIC	Science Applications International Corporation
SARA	Superfund Amendments and Reauthorization Act
SB	Santa Barbara
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SBCFD	Santa Barbara County Fire Department
SBCP&D	Santa Barbara County Planning & Development Department
SBMMC	Santa Barbara Marine Mammal Center
SCADA	supervisory control and data acquisition system
SCB	Southern California Bight
SCCAB	South Central Coast Air Basin
SCCPA	South Coast Consolidation Planning Area
SCE	Southern California Edison
scf	standard cubic foot
scfd	standard cubic feet per day
SCGC	Southern California Gas Company
SCR	Selective Catalytic Reduction
SCS	Soil Conservation Service
SCUBA	Self-Contained Underwater Breathing Apparatus
SDV	shutdown valve
SEIR	Supplemental Environmental Impact Report
SFA	Sustainable Fisheries Act
SHPO	State Historic Preservation Office
SIMQAP	Safety Inspection, Maintenance and Quality Assurance Program
SIO	Scripps Institution of Oceanography
SIRT	sustained incident response team
SLOB	San Luis Obispo Bay
SMB	Santa Maria Basin
SMW	State Mussel Watch
SO_2	sulfur dioxide
SOC	Statement of Overriding Considerations
SOLAS	Safety of Life at Sea
SOO	Suspension of Operation
SOP	Suspension of Production
SO_x	oxides of sulfur
SPCC	Spill Prevention Control and Countermeasure
SPCCP	Spill Prevention Control and Countermeasure Plan
SPCP	Spill Prevention and Cleanup Plan
SRU	Sulfur Removal Unit
SSLO	South San Luis Obispo
SUPSALV	Supervisor of Salvage
SSRRC	System Safety and Reliability Review Committee

SSSV	subsurface safety valve
SSV	surface safety valve
SVP	Society of Vertebrate Paleontologists
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SYU	Santa Ynez Unit
TAC	Toxic Air Contaminants
TDS	total dissolved solids
TEL	Threshold Effects Level
TOC	total oxygen content
TPIC	Terminal Person in Charge
TRB	Transportation Research Board
TRMPP	Transportation Risk Management Prevention Program
TSSs	Traffic Separation Schemes
UBC	Uniform Building Code
UCSB	University of California, Santa Barbara
UFC	Uniform Fire Code
UNOCAP	Unocal California Pipeline Company
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of Interior
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UV	ultra-violet
UVCE	Unconfirmed Vapor Cloud Explosion
V/C	volume to capacity ratio
VC	Ventura County
VCAPCD	Ventura County Air Pollution Control District
VCE	vapor cloud fire/explosion
VFCs	Variable Frequency Drives
VMC	Visual Modification Classes
VOC	Volatile Organic Compound
VRU	Vapor Recovery Unit
WCD	Worst-case discharge
WDP	Waste Discharge Permit
WDRs	Waste discharge requirements
WIS	Wave Information Study
YOY	young of the year