

Appendix D – List of Abbreviations and Acronyms

List of Abbreviations and Acronyms	D-1
--	-----

List of Abbreviations and Acronyms

AADT	Annual Average Daily Traffic
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ac	acres
ACCM	Asbestos containing construction materials
ACF	Advanced Chemical Fingerprinting
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos containing materials
ACOE	U.S. Army Corps of Engineers
ACTI	Advanced Cleanup Technologies Inc.
ADL	Arthur D. Little, Inc.
ADT	Average Daily Traffic
AFFF	aqueous film-forming foam
AIChE	American Institute of Chemical Engineers
ANSI	American National Standards Institute
Ann. Arith. Mean	Annual Arithmetic Mean
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
APE	Area of Potential Effect (National Historic Preservation Act)
API	American Petroleum Institute
AQ	Air Quality
AQAP	Air Quality Attainment Plan
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
ARB	Air Resources Board
ARCS	Alternative Remedial Contracting System
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATC	Authority to Construct
atm	atmosphere
AWOIS	Automated Wreck and Obstruction Information System
BACT	Best Available Control Technology
bbl	barrel
bbls	barrels
bcf/d	billion cubic feet per day
BFPD	barrels of fluid per day
bgs	below ground surface
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	Blowout Prevention Device
BOPE	Blowout Prevention Equipment
bopd	barrels of oil per day
BPD	barrels per day
BPH	barrels per hour

BTEX	benzene, toluene, ethylbenzene, and xylene
Btu	British Thermal Unit
Btu/SCF	British Thermal Units Per Standard Cubic Feet
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
CalARP	California Accidental Release Prevention Program
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CaMP	California Monitoring Program
CAMP	California Offshore Monitoring Program
CAO	Cleanup and Abatement Order
CAP	Clean Air Plan
CARB	California Air Resource Board
CBC	California Building Code
CCD	Census County Division
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
CDWR	California Department of Water Resources
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability 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
CIWMB	California Integrated Waste Management Board
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 _n H _{2n+2}	alkane
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
COPR	Coal Oil Point Reserve
CPFV	commercial passenger fishing vessel
CPUC	California Public Utilities Commission
CSFM	California State Fire Marshal
CSC	California Species of Concern
CUP	Conditional Use Permit

CUPA	Certified Unified Program Agency
cu ft per bbl	Cubic feet per barrel
CV	check valve
CWA	U.S. Clean Water Act
CWRT	American Institute of Chemical Engineers Center for Waste Reduction Technologies
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
DRO	Diesel-Range Organics
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources (California)
EA	Environmental Assessment
EAP	Emergency Action Plan
EDL	elevated data levels
EI	Environmental inspector
EIR	Environmental Impact Report
EIS	Environmental Impact Statement/Study
EMR	Emergency Response
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EQAP	Environmental Quality Assurance Plan
ER	Energy Resources
ERC	emission-reduction credit(s)
ERD	extended-reach drilling
ERL	effects range-low
ERM	effects range-medium
ERNS	Emergency Response and 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 Device/Emergency Shutdown System
ESE	Entire Source Emissions
ESH	Environmentally Sensitive Habitat
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FAR	Federal Air Regulation
FBE	Fusion Bonded Epoxy
fc	foot candle
FDM	Fugitive Dust Model
FDP	Final Development Plan
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FMP	Fishery Management Plan

FN	frequency of fatalities
fps	feet per second
FPS	Fully Protected Species (California Department of Fish & Game)
FRP	Federal Response Plan
FS	Feasibility study
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
FTA	Federal Transit Administration
FVD	Fluorescence Versus Depth
FWKO	Free Water Knock-Out
FWPCA	Federal Water Pollution Control Act
g	gram
g/d	gallons per day
GC/FID	Gas Chromatography/Flame Ionization Detector
GC/MS	Gas Chromatography/Mass Spectrometry
g-hp/hr	grams per horsepower hour
GHG	greenhouse gases
GIS	Geographic Information System
GLCC	Gas Liquid Cyclone Cylinder
gpd	gallons per day
gpm	gallons per minute
GRO	Gasoline-Range Organics
GUL	guided ultrasonic
GWh	Gigawatt-hour
H ₂ S	hydrogen sulfide
HAPs	Hazardous Air Pollutants
HARP	Hotspots Analysis and Reporting Program
HAZMAT	Hazardous Materials
HAZOP	Hazard and Operability Study
HCM	Highway Capacity Manual
HI	health index
HLID	Hydrocarbon Leak and Ignition Database
HMTA	Hazardous Materials Transportation Act
hp	horsepower
HRA	Health Risk Analysis
HRO	Heavy-Range Organics
HS&P	Heating, Separating and Pumping Facilities
HSWA	Hazardous and Solid Waste Amendments
HV	heating value (of fuel)
HWCL	Hazardous Waste Control Law
Hz	Hertz
I&M Program	Inspection and Maintenance Program
IC	Incident Commander
IC	internal combustion
ICE	internal combustion engine
ICS	Incident Command System
ID	inside diameter
IDLH	Immediately Dangerous to Life or Health
IDW	Investigation-Derived Waste
IIRT	initial incident response team

I&M	Inspection and Maintenance
IMO	International Maritime Organization
IMP	Integrity Management Plan
IRI	Industrial Risk Insurers
ISCST	Industrial Source Complex Short Term Model
K	Kelvin (absolute temperature)
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
kV	kilovolt
kVA	kilovolt-amperes
kW	kilowatt
kWh	kilowatt-hour
kW/m ²	kilowatts per square meter
L ₁₀	sound level exceeded 10 percent of the time over a specified period
lbs	pounds
lbs/day	pounds per day
lbs/yr	pounds per year
LACTION	Lease Automatic Custody Transfer
LBP	Lead-Based Paint
LCP	Lead-Containing Paint
L _{dn}	day-night sound level
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
LFL	lower flammability limit
LNG	Liquefied Natural Gas
LOD	Limit of Detection
LOS	Level of Service
LPG	liquefied petroleum gas
LTA	Local Transportation Authority
LTS	Low Temperature Separation
LTX	Low Temperature Separator Unit
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	thousand
μ	micron
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
MCE	Maximum Credible Earthquakes
MCC	Motor Control Center
MCF	Thousand Cubic Feet
MCFD	Thousand Cubic Feet per Day
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
MGD	million gallons per day
MGY	million gallons per year
mg/kg	milligrams per kilogram dry weight
mile ²	square miles
ml	milliliter(s)
MLLW	mean lower low water
mm	millimeter(s)
MM	million
MM	Mitigation measure
MMBtu/h	Million British Thermal Units per Hour
MMCF	Million Cubic Feet
MMCFD	Million Cubic Feet per Day
MMCRP	Mitigation Monitoring, Compliance, and Reporting Program
MMP	Mitigation Monitoring Program
MMS	Minerals Management Service
MMSCF	Million Standard Cubic Feet
MMSCFD	Million Standard Cubic Feet per Day
MMTCE	million metric tons of carbon equivalent
mol	mole
MOP	Maximum Operating Pressure
MOV	motor operated valve
MP	milepost
mph	miles per hour
MPN	Most Probable Number
MPO	Metropolitan Planning Organization
MRS	Marine Research Specialists
m/s	meter(s) per second
MSCF	Thousand Standard Cubic Feet
MSCFD	Thousand Standard Cubic Feet per Dy
MSDS	Material Safety Data Sheets
mt/yr	metric tons/year
MW	megawatt
MWh	megawatt hour
N ₂ O	nitrous oxide
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NAROC	non-alkaline reactive organic compounds
NCEL	U.S. Navy Civil Engineering Laboratory
NCP	National Contingency Plan
NDBC	National Data Buoy Center
NDDB	California Natural Diversity Database
NEC	National Electrical Code
NEI	Net Emissions Increase

NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NG	Natural Gas
NGA	Natural Gas Act
NGL	Natural Gas Liquids
NIST	National Institute of Standards & Technology
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NOD	Notice of Determination
NOI/P	Notice of Intent/Preparation
NOP	Notice of Preparation
NOV	Notice of Violation
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
NRDA	National Resource Damage Assessment
NRHP	National Register of Historic Places
NSA	noise sensitive area
NSCR	Non-selective catalytic reduction
NSO	Nitrogen, Sulphur and Oxygen containing
NSR	New Source Review
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
O ₃	Ozone
O&M	operation and maintenance
OD	outer diameter
OES	Office of Emergency Services
OOS	out of service
OPA 90	U.S. Oil Pollution Act of 1990
OPR	Office of Planning and Research
OPS	U.S. Office of Pipeline Safety
OSC	On-Scene Coordinator
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
P&ID	Process and Instrumentation Drawing
Pa	Pascals
PAECT	Pollution Abatement and Environmental Control Technology
PAH	Polynuclear Aromatic Hydrocarbons
Pb	Lead
PCA	Principle Component Analysis
PCBs	Polychlorinated Biphenyls
PDT	Pacific Daylight Time
PEL	Permissible Exposure Limit
PEL	Probable Effects Level
PFD	Process Flow Diagram

pH	hydrogen ion concentration in terms of acidity or alkalinity
PHT	Peak Hour Trips
PID	Photoionization Detector
PIMA	Petroleum Industry Mutual Aid Agreement
PLC	Programmable Logic Controller
PLEM	pipeline end manifold
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
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
ppt	parts per trillion
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRD	pressure/vacuum relief device
PREP	Preparedness For Response Exercise Program
PRI	Petroleum and Refractory, Inc.
PSD	Prevention of Significant Deterioration
psf	pounds per square feet
psi	pounds per square inch
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge
PSM	Process Safety Management
PST	Pacific Standard Time
PSV	Pressure Safety Valve
Pt.	Point (geographical term)
PT	pressure transmitter
PTE	potential to emit
PTO	permit to operate
PVC	Polyvinyl chloride
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAP	Quality Assurance Program
QC	Quality Control
QRA	Quantitative Risk Analysis
QRB	Quality Review Board
RCRA	Resource Conservation and Recovery Act
RF	Response Factors
RMP	Risk Management Plan
RMPP	Risk Management and Prevention Program
rms	root mean square
ROC	Reactive Organic Compounds
ROG	Reactive Organic Gases (also see ROC)
ROP	Rate of Progress Plan
ROV	Remotely Operated Vehicle
ROW	right-of-way
rpm	revolutions per minute
RTPA	Regional Transportation Planning Agency
RTU	Remote Terminal Unit

RVP	Reid vapor pressure
RWQCB	Regional Water Quality Control Board
s	second
SAIC	Science Applications International Corporation
SARA	Superfund Amendments and Reauthorization Act
SCADA	Supervisory Control And Data Acquisition
scf	standard cubic foot
scf/bbl	standard cubic feet per barrel
scfd	standard cubic feet per day
SCGC	Southern California Gas Company
SCR	Selective Catalytic Reduction
SCS	Soil Conservation Service
SDV	shutdown valve
SEA	Significant Ecological Area
SEIR	Supplemental Environmental Impact Report
SEL	Sound Exposure Level
SEMS	Standardized Emergency Management System
SHPO	State Historic Preservation Office
SIM	Selected Ion Monitoring Mode
SIMQAP	Safety, Inspection, Maintenance and Quality Assurance Program
SIRT	sustained incident response team
SLAMS	State and Local Air Monitoring Stations
SLO	San Luis Obispo County
SLOAPCD	San Luis Obispo County Air Pollution Control District
SO ₂	Sulfur Dioxide
SOC	Statement of Overriding Considerations
SOLAS	Safety of Life at Sea
SOO	Suspension of Operation
SOP	Suspension of Production
SOP	Standard Operation Procedure
SO _x	oxides of sulfur
SPCC	Spill Prevention Control and Countermeasure
SPCCP	Spill Prevention Control and Countermeasure Plan
SPCP	Spill Prevention and Cleanup Plan
SPMD	Semipermeable Membrane Devices
sq. ft.	square foot (feet)
SRM	Standard Reference Material
ss	seldom seen
STC	Sound Transmission Class
SUPSALV	Supervisor of Salvage
SSRRC	Systems Safety and Reliability Review Committee
SVP	Society of Vertebrate Paleontologists
sweet gas	Gas that does not contain hydrogen sulfide
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWQCB	State Water Quality Control Board
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TDS	total dissolved solids
TEG	Triethylene Glycol
TEL	Threshold Effects Level
TEMA	Tubular Exchanger Manufacturers Association
TIWCA	Toxic Injection Well Control Act
TMDL	Total Maximum Daily Load

TOC	Total Organic Carbon
TOC	Total Oxygen Content
TOG	Total Organic Gases
TPH	Total Petroleum Hydrocarbons
TRB	Transportation Research Board
TSP	Total Suspended Particulate
UBC	Uniform Building Code
UCM	Unresolved Complex Mixtures
UFC	Uniform Fire Code
UFL	Upper Flammability Limit
UNOCAP	Unocal California Pipeline Company
UPS	Uninterrupted power Supply
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of Interior
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UV	ultra-violet
UVCE	Unconfirmed Vapor Cloud Explosion
V/C	volume to capacity ratio
VCE	vapor cloud fire/explosion
VdB	Velocity decibels
VRGC	vapor recovery/gas collection
VMC	Visual Modification Classes
VOC	Volatile Organic Compound
VdB	Velocity decibels
VPD	Vehicles per day
VRU	Vapor Recovery Unit
WCD	Worst-case discharge
WDP	Waste Discharge Permit
WDRs	Waste discharge requirements
WIS	Wave Information Study
WTM	Wavelength-Time Matirx
XS Gas	excess gas
YOY	young of the year