

**Vancouver Energy**  
**Application for Site Certification Agreement**  
**EFSEC Application No. 2013-01**  
**Revised May 2016**  
**Docket No. EF131590**

**Table of Contents**

- Part 1 General
- Part 2 Proposal
- Part 3 Natural Environment
- Part 4 Built Environment
- Part 5 Applications for Permits and Authorizations

**List of Appendices**

- Appendix A.1 Tribal Consultation Letters
- Appendix A.2 Cultural Resources Geoarcheological Investigation Report
- Appendix A.3 Cultural Resources Inadvertent Discovery Plan
- Appendix B.1 Northwest Region Contingency Planning Overview Memorandum
- Appendix B.2 Construction Spill Prevention, Control, and Countermeasure Plan
- Appendix B.3 Operations Spill Prevention, Control, and Countermeasure Plan
- Appendix B.4 Operations Facility Oil Spill Contingency Plan
- Appendix B.5 Operations Facility Oil Handling Manual
- Appendix B.6 Spill Response Exercise Report
- Appendix C.1 Construction Stormwater Pollution Prevention Plan (cSWPPP)
- Appendix C.2 Operations Stormwater Pollution Prevention Plan (oSWPPP)
- Appendix D.1 HSSE Execution, Construction and Commissioning Plan
- Appendix D.2 Construction Safety and Health Manual
- Appendix D.3 Operations Facility Safety Program
- Appendix D.4 Construction Security Plan
- Appendix E.1 Facility Site Legal Description
- Appendix E.2 Port of Vancouver Lease (excerpts)

Appendix F.1	Contaminated Media Management Plan, revised
Appendix F.2	Water Quality Protection and Management Plan, revised
Appendix G	Material Safety Data Sheets (MSDS)
Appendix H.1	Biological Resources Report
Appendix H.2	JARPA Form
Appendix H.3	Marine Mammal Monitoring Plan
Appendix H.4	Construction Wildlife Monitoring Plan
Appendix H.5	Wake Stranding in the Lower Columbia River Assessment
Appendix H.6	Technical Report - Lower Columbia River Morphology and Fish Stranding
Appendix I.1	Pre-application Submittal to City of Vancouver
Appendix I.2	Shoreline Management Program Compliance
Appendix J.1	Transportation Impact Analysis
Appendix J.2	Construction Transportation Management Plan
Appendix K	Socioeconomic Impact Report, revised
Appendix L.1	Geotechnical Investigation – Upland Facility
Appendix L.2	Geotechnical Investigation – Dock Facility
Appendix L.3	Ground Improvement Design – Areas 300 and 400
Appendix M	Response to EFSEC Plan Review
Appendix N.1	Fire Safety Design
Appendix N.2	Life Safety Design
Appendix O.1	Structural Design Drawings
Appendix O.2	Storage Tank Design Calculations
Appendix P.1	DNVGL Vessel Risk Study
Appendix P.2	DNVGL AIS Traffic Study
Appendix P.3	Baker Risk Assessment

## List of Acronyms, Initials, and Abbreviations

<b>A</b>	
AAR	American Association of Railroads
AC	Alternative connect
ACDP	Air Contaminant Discharge Permit
ACFM	Actual cubic feet per minute
ACI	American Concrete Institute

ACM	Asbestos-containing material
ACP	Area contingency plans
ADT	Average daily trips
af/year	Acre feet per year
AF&PA	American Forest and Paper Association
AGR	Acid gas removal system
AGS	Acid gas system
AINW	Archaeological Investigations Northwest, Inc.
AISC	American Institute of Steel Construction
Alcoa	Aluminum Company of America
ALS	Advanced life support
ANSI	American National Standards Institute
ANT	Advance notice of oil transfer
AQRV	Air quality related values
APE	Area of potential effects
Applicant	Tesoro Savage Petroleum Terminal LLC
Application	Site Certification Agreement
API	American Petroleum Institute
AREMA	American Railway Engineering and Maintenance-of-Way Association
ARM	Ambient ratio method
ASC	Application for Site Certification
ASCE	American Society of Civil Engineers
ASIL	Acceptable source impact level
AST	Aboveground storage tank
ASTM	American Standards Testing and Materials
ASU	Air separation unit
ATB	Articulated tug barges
AWS	American Welding Society

## **B**

BACT	Best available control technology
BAPE	Biological area of potential effect
BART	Best available retrofit technology
bbf	Barrel [and barrels]
bbf/hr	Barrels per hour
BCC	Bioaccumulative chemical of concern
BE	Biological evaluation
BENMAP	Benefits mapping and analysis program
BGS	Below ground surface
BMP	Best management practice
BO	Biological opinion
B&O	Business & occupation
BOD	Biological oxygen demand
B.P.	Before present
BPA	Bonneville Power Administration
bpd	Barrels per day

BPIP-Prime EPA's Building Parameter Input Program-Prime  
BTEX Benzene, toluene, ethylbenzene, and xylenes  
BTU British thermal unit

## **C**

CAA Clean Air Act  
CaCO<sub>3</sub> Calcium carbonate  
CAO Critical areas ordinance  
CARA Critical aquifer recharge area  
CASAC Clean Air Scientific Advisory Committee  
CCPI Clean coal power initiative  
CCTV closed-circuit television  
CD Criteria determinant  
CECSL Certified Erosion and Sediment Control Lead  
CEMS Continuous emissions monitoring  
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
CFB Circulating fluidized bed  
CFC Chlorofluorocarbons  
CFHMP Comprehensive flood hazard management plan  
CFR Code of Federal Regulations  
cfs Cubic feet per second  
CH<sub>4</sub> Methane  
CHSM Construction Health and Safety Manual  
City City of Vancouver  
CM Crustal Mass  
CMMP Contaminated media management plan  
CO Carbon monoxide  
CO<sub>2</sub> Carbon dioxide  
CO<sub>2e</sub> Carbon dioxide equivalent  
COCs Contaminants of Concern  
COD Chemical oxygen demand  
COE Cost of electricity  
Co-Op Electric cooperative utilities  
COMS Continuous opacity monitoring system  
COPT USCG Captain of the Port  
COS Carbonyl sulfide  
County Clark County  
CPC Casualty Prevention Circular  
CPT Cone penetration test  
CPU Clark Public Utilities  
CRBG Columbia River Basalt Group  
CRD Columbia River datum  
CRESA Clark Regional Emergency Services Agency  
CRIDP Cultural Resources Inadvertent Discovery Plan  
CRWMB Columbia River Wetland Mitigation Bank  
CSGP Construction stormwater general permit

CSHM	Construction Safety and Health Manual
cSPCCP	Construction Spill Prevention Control and Countermeasures Plan
cSWPPP	Construction Stormwater Pollution Prevention Plan
CSZ	Cascadia subduction zone
CTED	Community Trade and Economic Development, Washington State
CTG	Combustion Turbine Generator
CWA	Clean Water Act
CWMP	Construction Wildlife Monitoring Plan

## D

DAHP	Washington State Department of Archaeology and Historic Preservation
DAT	Depositional analysis threshold
dB	Decibel
dBA	A-weighted decibel
dBC	C-weighted decibel
dB <sub>RMS</sub>	Decibel mean root square
DC	Direct connect
DCS	Distributed control system
DEIS	Draft environmental impact statement
DGER	DNR Division of Geology and Earth Resources
DI	Ductile iron
DLC	Donation land claim
DLN	Dry lox-NOx
DNR	Washington State Department of Natural Resources
DO	Dissolved oxygen
DOE	U.S. Department of Energy
DMR	Discharge Monitoring Report
DNR	Washington State Department of Natural Resources
DPS	Distinct population segment
DSM	Deep soil mixing
DWT	Deadweight tonnage

## E

EA	Environmental assessment
Ecology	Washington State Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EEZ	Exclusive economic zone
EFH	Essential fish habitat
EFSEC	Washington State Energy Facility Site Evaluation Council
EGU	Electrical generating units
EIS	Environmental impact statement
EIV	Environmental information volume
EMD	Washington Military Department Emergency Management Division
ENR	Engineering News Record
EO	Executive Order
EOC	Emergency Operations Center

EPA	U.S. Environmental Protection Agency
EPC	Engineering, procurement, and construction
EPCRA	Emergency Planning and Community Right-to-Know Act
EPRI	Electric Power Research Institute
ER	Engineering Report
ESA	Endangered Species Act
ESD	Emergency shutdown
ESP	Electrostatic precipitator
ESU	Evolutionarily significant unit
Evergreen	Evergreen Aluminum LLC

## **F**

Facility	Vancouver Energy Terminal
F	Fahrenheit
FEED	Front end engineering design
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGD	Fluid gas desulfurization
FHWA	Federal Highway Administration
FIRM	Flood insurance rate maps
FLAG	Federal Land Managers Air Quality-Related Values Workgroup
FLM	Federal land manager
FONSI	Finding of no significant impact
FOSC	Federal On-Scene Coordinator
F-PAAC	Fire Protection Agency Advisory Council
FRA	Federal Railroad Administration
FRP	Facility response plan
FSA	Facility Security Assessment
FSQ	Full slurry quench
FSP	Facility Security Plan
ft	Foot
FTA	Federal Transit Administration
FT-MSL	Feet above mean sea level
FWPCA	Federal Water Pollution Control Act

## **G**

GAC	Granulated activated carbon
GCP	Good combustion practice
GHG	Greenhouse gas
GI	Generator interconnection
GLO	General Land Office
GMA	Growth Management Act
GO	Generator outlet
gpd	Gallons per day
gpm	Gallons per minute

GRP	Geographic response plans
GW	Gigawatt
GW	Groundwater under the influence of surface water
<b>H</b>	
H	Hydrogen
HAP	Hazardous air pollutant
HAZWOPER	Hazardous waste operations and emergency response
HB	House Bill
HBC	Hudson's Bay Company
H <sub>2</sub> S	Hydrogen sulfide
HDD	Horizontal directional drilling
HDPE	High-density polyethylene
HGM	Hydrogeomorphic
HHV	High heating value
HG	Mercury
HMR	Hazardous materials regulations
HMTA	Hazardous Material Transportation Act
HP	High pressure
hp	Horsepower
HPA	Hydraulic Project Approval
hr	Hour
HRSG	Heat recovery steam generator
HSSE	Health, safety, security, and environment
HV	High voltage
HVAC	High voltage alternative current
HVDC	High voltage direct current
HVTL	High voltage transmission line
Hz	Hertz; unit of frequency
<b>I</b>	
I-5	Interstate 5
IBC	International Building Code
ICS	Incident Command System
ICT	Innovative control technology
IES	Illuminating Engineering Society
IFC	International Fire Code
IGCC	Integrated gasification combined cycle
IHA	Incidental Harassment Authorization
IMC	International Mechanical Code
IND	Industrial
IOU	Investor-owned utilities
IP	Intermediate pressure
IPP	Independent power producers
IRP	Integrated resource plan
ISBL	Inside the boundary limit

ISGP Industrial stormwater general permit  
 ISO International organization for standardization  
 ISPM Industrial safety program manual  
 ITE Institute of Transportation Engineers  
 IWAQM Interagency Workgroup on Air Quality Modeling

**J**

JARPA Joint Aquatic Resources Permit Application  
 JIC Joint Information Center  
 JWC Jail Work Center

**K**

KV Kilovolt  
 kW Kilowatt  
 kWh Kilowatt hour

**L**

L Liter  
 LAER Lowest achievable emission rate  
 L<sub>dn</sub> Day-night sound level  
 L<sub>eq</sub> Equivalent sound level  
 lbs Pounds  
 LED Light-emitting diode  
 LEPC Local Emergency Planning Committee  
 LEPPG Large electric power generating plant  
 LGIA Large generator interconnect agreement  
 LGIP Large generator interconnection procedure  
 LNB Low-NO<sub>x</sub> burners  
 LNG Liquefied natural gas  
 LOA Letter of authorization  
 LP Low pressure  
 LSTK Lump-sum turnkey

**M**

MACT Maximum achievable control technology  
 MARSEC Maritime Security  
 MDEA Methyldiethanolamine (amine absorbent)  
 MDNS Mitigated Determination of Non-Significance  
 MDWT Thousand deadweight tons  
 MFR Memorandum for Record  
 MFSA Maritime Fire and Safety Association  
 mg Milligram  
 MGD Million gallons per day  
 MMBtu Million British thermal units  
 MMDT Million decatherms  
 mmhos Millimhos

MMMP	Marine mammal monitoring and protection plan
MMPA	Marine Mammal Protection Act
MMscf/yr	Million standard cubic feet of natural gas per year
MOU	Memorandum of understanding
MRSC	Marine Spill Response Corp
MSDS	Material safety data sheets
MSH	Mount St. Helens
MSL	Mean sea level
MTCA	Model Toxics Control Act
MTR	Marine transportation-related
MTSA	Maritime Transportation Security Act
MVCU	Marine vapor combustion unit
MW	Megawatt
MWh	Megawatt hour

## **N**

NAAQS	National ambient air quality standards
NATA	National-Scale Air Toxics Assessment
NAVD	North American Vertical Datum
NCEA	National Center for Environmental Assessment
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEC	National Electrical Code
NEPA	National Environmental Policy Act
NESHAP	National emissions standards for hazardous air pollutants
NETL	National Energy Technology Laboratory
NFPA	National Fire Protection Association
NGCC	Natural gas-fired combined cycle
NH <sub>3</sub>	Ammonia
NHPA	National Historic Preservation Act
NLCD	National Land Cover Dataset
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOC	Notice of construction
NOI	Notice of intent
NO <sub>x</sub>	Oxides of nitrogen
NNSR	non-attainment NSR
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRDA	Natural Resource Damage Assessment
NRIS	Network Resource Interconnection Service
NRT	National Response Team
NSR	New source review
NSPS	New source performance standards
NTP	Notice to proceed
NTU	Nephelometric turbidity unit

NWACP	Northwest Area Contingency Plan
NWI	National Wetlands Inventory
NWPCC	Northwest Power and Conservation Council
NWR	National Wildlife Refuge
NWS	National Weather Service
<b>O</b>	
O <sub>3</sub>	Ozone
OAQPS	EPA Office of Air Quality Planning and Standards
OC	Organic carbon
OCIMF	Oil Companies International Marine Forum
OEA	Oregon Office of Economic Analysis
OFA	Overfire air
OFM	Washington Office of Financial Management
OFSP	Operations Facility Safety Program
O&M	Operations and maintenance
OHWM	Ordinary high water mark
OMB	Office of Management and Budget
OPA 90	Oil Pollution Act of 1990
OSBL	Outside battery limits
OSCP	Oil Spill Contingency Plan
OSHA	U.S. Occupational Safety and Health Act
oSPCCP	Operation Spill Prevention Control and Countermeasures Plan
OSRA	Oil Spill Recovery Act
oSWPPP	Operation Stormwater Pollution Prevention Plan
<b>P</b>	
PAH	Polycyclic or polynuclear aromatic hydrocarbon
PATON	Private Aids to Navigation
PC	Pulverized coal
PCB	Polychlorinated biphenyls
PDEIS	Preliminary draft environmental impact statement
PDP	Process design package
PDX	Portland International Airport
PEP	Project execution plan
PFC	Perfluorocarbons
PG	Pollution generating
PGA	Peak ground acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
PHS	Priority Habitat and Species
PIC	Person in charge
PM	Particulate matter
PM <sub>10</sub>	Particulate matter of 10 microns in diameter or less
PM <sub>2.5</sub>	Particulate matter of 2.5 microns in diameter or less
POI	Point of interconnection
Port	Port of Vancouver USA

POTW	Publicly owned treatment works
PPA	Power purchase agreement
ppb	Parts per billion
PPE	Personal protective equipment
ppm	Parts per million
PPMVD	Parts per million (dry basis)
PPMW	Parts per million by weight
PPSA	Power Plant Siting Act
PRC	Primary response contractor
PSD	Prevention of significant deterioration
psi	pounds per square inch
PSIA	Pounds per square inch absolute
PSIG	Pounds per square inch gauge
PTE	Potential-to-emit
PUD	Public utility district
PVC	Polyvinyl chloride
 <b>Q</b>	
QPD	Qualified public developer
QA	Quality assurance
QC	Quality control
 <b>R</b>	
RACT	Reasonably achievable control technology
RCP	Regional contingency plan
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RDA	Resource damage assessment
RECB	Regional expansion criteria and benefits
REMSAD	Regional modeling system for aerosols and deposition
RFP	Request for proposal
RM	River mile
ROW	Right-of-way
RRIF	Railroad Rehabilitation and Improvement Financing
RRT	Regional Response Team
 <b>S</b>	
SACTI	Seasonal cooling tower impact
SARA	Superfund Amendments and Reauthorization Act
SCA	Site certification agreement
SCR	Selective catalytic reduction
SCPC	Supercritical pulverized coal plant
SDP	Shoreline Development Permit
SEPA	State Environmental Policy Act
SF <sub>6</sub>	Sulfur hexafluoride
SGCN	Species of greatest conservation need

SHAPS	Savage Hazard Analysis and Prevention System
SHE&Q	Safety, Security, Health Environment & Quality
SIL	Significant Impact Levels
SIP	State implementation plan
SIS	System impact study
SLM	Sound level measurements
SMA	Shoreline Management Act
SMP	Shoreline Management Program
SMMP	Shorelines Management Master Program
SNCR	Selective non-catalytic reduction
SNG	Substitute natural gas
SO <sub>2</sub>	Sulfur dioxide
SOPEP	Shipboard oil pollution emergency plan
SOSC	State On-Scene Coordinator
SPCC	Spill prevention control and countermeasures
SPL	Spent Pot Liner
SQER	Small quantity emission rate
SR	State Route
SRU	Sulfur recovery unit
SSHE&Q	Safety, Security, Health, Environment & Quality
SSI	Security Sensitive Information
STG	Steam turbine generator
Superfund	Common name for CERCLA
SWCAA	Southwest Clean Air Agency
SWDA	Solid Waste Disposal Act
SWH	Shallow water habitat
SWL	Sound power level
SWPPP	Stormwater pollution prevention plan
SYNGAS	Synthesis gas

## **T**

TAP	Toxic air pollutant
TCE	Trichloroethylene
TDS	Total dissolved solids
TEP	Transmission expansion planning
TESC	Temporary erosion and sediment control
TOC	Total organic carbon
TPD	Tons per day
TPIC	Terminal Person in Charge
TPQ	Threshold planning quantity
TSA	Transportation Security Administration
TSS	Total suspended solids
TTRA	Taconite Tax Relief Area
TWIC	Transportation Worker Identification Credential

## **U**

UGA	Urban growth area
ULSD	Ultra-low sulfur diesel
UPPR	Union Pacific Railroad
UPC	Uniform Plumbing Code
UPS	Uninterrupted power system
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
USLE	Universal soil loss equation
UTM	Universal Transverse Mercator

## **V**

VCPRD	Vancouver-Clark Parks and Recreation Department
VGP	Vessel general permit
VMC	Vancouver Municipal Code
VOC	Volatile organic compounds
VPD	Vancouver Police Department
VPIC	Vessel Person in Charge

## **W**

WAAQS	Washington ambient air quality standards
WAC	Washington Administrative Code
WBS	Work breakdown structure
WCD	Worst-case discharge
WDFW	Washington Department of Fish and Wildlife
WISHA	Washington Industrial Safety and Health Act
WNHP	Washington Natural Heritage Program
WOFM	Washington Office of Financial Management
WQPMP	Water quality protection and monitoring plan
WRRL	Western Response Resource List
WSDOT	Washington State Department of Transportation
WSP	Washington State Patrol
WUTC	Washington Utilities and Transportation Commission
WVFA	West Vancouver Freight Access
WWHM	Western Washington Hydrology Model
WWTP	Westside Wastewater Treatment Plant

## **Z**

ZLD	Zero liquid discharge
-----	-----------------------