

TABLE OF CONTENTS

KeySpan LNG Facility Upgrade Project Final Environmental Impact Statement

VOLUME I

	<u>Page</u>
TABLE OF CONTENTS	i
LIST OF APPENDICES	v
LIST OF TABLES	vi
LIST OF FIGURES	viii
ACRONYMS AND ABBREVIATIONS	ix
EXECUTIVE SUMMARY	ES-1
SIGNIFICANT ISSUE	ES-2
PROJECT IMPACTS	ES-2
ALTERNATIVES CONSIDERED	ES-13
PUBLIC INVOLVEMENT AND AREAS OF CONCERN	ES-14
MAJOR CONCLUSION	ES-17
1.0 INTRODUCTION	1-1
1.1 PURPOSE AND SCOPE OF THIS STATEMENT	1-2
1.2 PROJECT PURPOSE AND NEED	1-3
1.3 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS	1-7
1.4 PUBLIC AND AGENCY OUTREACH CONDUCTED BY KEYSpan LNG AND ALGONQUIN	1-9
1.5 PUBLIC REVIEW AND COMMENT	1-9
1.6 NONJURISDICTIONAL FACILITIES	1-20
2.0 DESCRIPTION OF PROPOSED ACTION	2-1
2.1 EXISTING KEYSpan LNG STORAGE FACILITY	2-1
2.2 PROPOSED PROJECT	2-4
2.2.1 LNG Facilities	2-4
2.2.1.1 Marine Facilities and LNG Unloading Facilities	2-4
2.2.1.2 Vapor Handling	2-7
2.2.1.3 LNG Sendout System	2-8
2.2.1.4 Buildings and Control System	2-8
2.2.2 LNG Ships	2-9
2.2.3 Pipeline Facilities	2-13
2.3 LAND REQUIREMENTS	2-13
2.3.1 LNG Facilities	2-13
2.3.2 Pipeline Facilities	2-15
2.4 CONSTRUCTION PROCEDURES	2-16
2.4.1 LNG Facilities	2-17
2.4.2 Pipeline Facilities	2-19
2.4.2.1 General Construction Techniques	2-19
2.4.2.2 Special Construction Techniques	2-21
2.5 CONSTRUCTION SCHEDULE	2-23

TABLE OF CONTENTS (cont'd)

2.6	ENVIRONMENTAL COMPLIANCE, INSPECTION, AND MITIGATION MONITORING.....	2-23
2.7	OPERATION AND MAINTENANCE PROCEDURES	2-23
2.7.1	LNG Facilities.....	2-23
2.7.2	Pipeline Facilities.....	2-25
2.8	SAFETY CONTROLS	2-25
2.8.1	LNG Facilities.....	2-25
2.8.1.1	Spill Impoundment System.....	2-26
2.8.1.2	Fire and Hazard Detection System	2-26
2.8.1.3	Fire and Hazard Control System.....	2-27
2.8.1.4	Emergency Shutdown System	2-28
2.8.2	Pipeline Facilities.....	2-29
2.8.2.1	Corrosion Protection and Detection Systems	2-29
2.8.2.2	Emergency Response Procedures	2-29
2.9	FUTURE PLANS AND ABANDONMENT	2-29
3.0	ALTERNATIVES.....	3-1
3.1	NO ACTION OR POSTPONED ACTION	3-1
3.2	SYSTEM ALTERNATIVES.....	3-5
3.2.1	Existing and Proposed Onshore LNG Facilities in New England	3-6
3.2.1.1	Distrigas LNG Terminal – Everett, Massachusetts.....	3-6
3.2.1.2	Weaver's Cove LNG – Fall River, Massachusetts	3-9
3.2.1.3	Proposed LNG Projects in Maine	3-9
3.2.2	Proposed Offshore LNG Facilities in New England.....	3-10
3.2.2.1	Neptune LNG and Northeast Gateway Project – Gloucester, Massachusetts	3-12
3.2.2.2	Broadwater LNG Facility – Long Island Sound	3-20
3.2.3	Proposed or Existing Sources of Natural Gas Outside of New England	3-21
3.2.3.1	United States/Gulf Coast Sources of Natural Gas	3-23
3.2.3.2	Canadian Sources of Natural Gas	3-25
3.2.4	Existing or Proposed System Alternative Conclusions.....	3-26
3.3	LNG TERMINAL ALTERNATIVES.....	3-27
3.3.1	Regional Review	3-27
3.3.2	Onshore Port Review	3-27
3.3.3	Offshore Ports.....	3-34
3.4	MARINE BERTHING ALTERNATIVES.....	3-34
3.5	PIPELINE ALTERNATIVES	3-40
3.5.1	Pipeline System Alternatives	3-40
3.5.2	Major Route Alternatives.....	3-42
3.5.2.1	Alternative 1	3-42
3.5.2.2	Alternatives 2, 3, 4, and 5	3-44
3.5.2.3	Alternatives 6 and 7	3-46
4.0	ENVIRONMENTAL ANALYSIS	4-1
4.1	GEOLOGIC RESOURCES	4-1
4.1.1	Physiographic and Geologic Setting.....	4-1
4.1.2	Blasting	4-2
4.1.3	Mineral Resources	4-2
4.1.4	Geologic Hazards.....	4-3

TABLE OF CONTENTS (cont'd)

4.1.4.1	Seismic-related Hazards	4-3
4.1.4.2	Load Bearing Capacity	4-5
4.1.4.3	Subsidence	4-6
4.1.4.4	Flooding	4-6
4.1.5	Paleontological Resources	4-7
4.2	SOILS AND SEDIMENTS	4-7
4.2.1	Soil Resources.....	4-7
4.2.2	Sediments.....	4-10
4.3	WATER RESOURCES	4-10
4.3.1	Groundwater	4-10
4.3.2	Surface Water	4-15
4.4	WETLANDS	4-19
4.5	VEGETATION	4-19
4.6	WILDLIFE AND AQUATIC RESOURCES	4-19
4.6.1	Wildlife Resources.....	4-19
4.6.2	Aquatic Resources	4-20
4.7	THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES	4-42
4.7.1	Federally Listed Threatened and Endangered Species	4-43
4.7.2	State-listed Species	4-44
4.8	LAND USE, RECREATION, AND VISUAL RESOURCES	4-45
4.8.1	Land Use.....	4-45
4.8.1.1	LNG Facilities	4-45
4.8.1.2	Pipeline Facilities.....	4-46
4.8.2	Consistency with Land Use Plans, Policies, and Guidelines	4-48
4.8.3	Existing Residences and Planned Developments	4-55
4.8.3.1	LNG Facilities	4-55
4.8.3.2	Pipeline Facilities.....	4-56
4.8.4	Coastal Zone Management	4-57
4.8.4.1	LNG Facilities	4-58
4.8.4.2	Pipeline Facilities.....	4-59
4.8.5	Special Use, Recreation, and Public Interest Areas	4-60
4.8.5.1	LNG Facilities	4-60
4.8.5.2	Pipeline Facilities.....	4-67
4.8.6	Visual Resources.....	4-68
4.8.6.1	LNG Facilities	4-68
4.8.6.2	Pipeline Facilities.....	4-69
4.9	SOCIOECONOMICS	4-69
4.9.1	Population, Economy, and Employment	4-69
4.9.2	Housing.....	4-72
4.9.3	Public Services.....	4-73
4.9.4	Transportation and Traffic	4-75
4.9.5	Tax Revenues.....	4-79
4.9.6	Property Values.....	4-80
4.9.7	Insurance Coverage.....	4-81
4.9.8	Environmental Justice	4-82
4.10	CULTURAL RESOURCES	4-87
4.10.1	Results of the Cultural Resources Surveys	4-87
4.10.2	Native American Consultation.....	4-89
4.10.3	Unanticipated Discoveries	4-89

TABLE OF CONTENTS (cont'd)

4.11	AIR QUALITY AND NOISE	4-89
4.11.1	Air Quality	4-89
4.11.2	Noise	4-99
4.12	RELIABILITY AND SAFETY	4-105
4.12.1	LNG Hazards	4-106
4.12.2	Cryogenic Design and Technical Review	4-107
4.12.3	Storage and Retention Systems.....	4-113
4.12.4	Current Federal Siting Requirements - Thermal and Dispersion Exclusion Zones for New Facilities	4-116
4.12.5	Marine Safety.....	4-122
4.12.5.1	Narragansett Bay and the Port of Providence	4-130
4.12.5.2	Requirements for LNG Ship Operations	4-136
4.12.5.3	LNG Ship Safety.....	4-144
4.12.6	LNG Truck Safety	4-151
4.12.7	Terrorism and Security Issues.....	4-154
4.12.8	Pipeline Facilities.....	4-156
4.12.8.1	Safety Standards	4-156
4.12.8.2	Pipeline Accident Data	4-160
4.12.8.3	Impact on Public Safety.....	4-162
4.12.9	Additional Safety Issues Identified in Scoping.....	4-164
4.12.10	Conclusions on Safety Issues.....	4-165
4.13	CUMULATIVE IMPACTS.....	4-167
4.13.1	Aquatic Resources	4-167
4.13.2	Vegetation and Wildlife.....	4-172
4.13.3	Infrastructure and Public Services	4-173
4.13.4	Vehicular Traffic.....	4-174
4.13.5	Ship Traffic	4-175
4.13.6	Land Use	4-177
4.13.7	Air Quality/Noise.....	4-178
4.13.8	Natural Gas Infrastructure	4-180
5.0	CONCLUSIONS AND RECOMMENDATIONS	5-1
5.1	SUMMARY OF THE STAFF'S ENVIRONMENTAL ANALYSIS	5-1
5.2	FERC STAFF'S RECOMMENDED MITIGATION.....	5-15

TABLE OF CONTENTS (cont'd)

VOLUME II - APPENDICES

APPENDIX A FINAL EIS DISTRIBUTION LIST FOR THE KEYSPAN LNG FACILITY
UPGRADE PROJECT |

APPENDIX B ALGONQUIN EROSION AND SEDIMENTATION CONTROL PLAN

APPENDIX C REFERENCES AND CONTACTS

APPENDIX D LIST OF PREPARERS

APPENDIX E SUBJECT INDEX |

APPENDIX F COMMENTS ON THE DRAFT EIS AND RESPONSES |

TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1.3-1	Major Permits, Approvals, and Consultations for the KeySpan LNG Facility Upgrade Project.....	1-10
1.5-1	Issues Identified and Comments Received During the Public Scoping Process for the KeySpan LNG Project.....	1-14
2.3.2-1	Summary of Land Requirements Associated with Construction and Operation of the Pipeline Facilities for the KeySpan LNG Project	2-15
2.8.1-1	Major Applicable Federal Siting and Design Requirements for LNG Facilities.....	2-25
2.8.1-2	Proposed Locations of Smoke, Combustible Gas, and UV/IR Flame Detectors at the LNG Terminal	2-27
2.8.1-3	Proposed Locations of Fire Protection Equipment for LNG Facility Upgrades	2-28
3.1-1	Comparison of Air Emissions from Burning Fossil Fuels	3-5
3.2.2-1	Estimated Air Emissions from LNG Vessel Operations During Offshore Cargo Unloading	3-18
3.2.3-1	Recently Approved LNG Import Terminals.....	3-22
3.2.3-2	Comparison of Air Emissions Associated With Transporting Natural Gas Via Pipeline From the Gulf of Mexico Versus Vaporizing LNG in New England	3-24
3.2.4-1	Existing and Proposed System Alternatives Compared to KeySpan LNG Project	3-28
3.5.2-1	Environmental Comparison of Alternative Routes to the Preferred Route	3-45
4.3.1-1	Known and Potentially Contaminated Properties Along the Proposed Pipeline Route	4-13
4.6.2-1	Ichthyoplankton, Juveniles, and Adults of Selected Taxa Collected in 1999 and 2003.....	4-23
4.6.2-2	Mean Abundance of Northern Quahog in the Providence River Reaches, December 1999.....	4-27
4.6.2-3	Estimated Numbers of Fish Eggs and Larvae, Equivalent Age 1 Fish, and Equivalent Adults Potentially Entrained by LNG Ship Ballast Water Intakes Annually	4-30
4.6.2-4	Summary of Essential Fish Habitat and General Habitat Parameters for the Providence River, Rhode Island	4-36
4.6.2-5	Summary of Potential Impacts on Specific Life Stages of Federally Managed Fish Species.....	4-40
4.8.3-1	Schools and Health Care Facilities Located within Approximately 1 Mile of the KeySpan LNG Facility	4-56
4.9.1-1	Existing Socioeconomic Conditions for the KeySpan LNG Project.....	4-71
4.9.2-1	Temporary Housing Characteristics for the Project Area	4-72
4.9.5-1	KeySpan LNG Estimated Income, Payroll, and Property Taxes	4-79
4.9.8-1	Racial/Ethnic Statistics for the Project Area	4-83
4.9.8-2	Economic Statistics for the Project Area.....	4-84
4.11.1-1	Ambient Air Quality Standards and Existing Air Quality.....	4-91
4.11.1-2	Emission Source Information.....	4-91
4.11.1-3	Potential to Emit for Existing KeySpan LNG Terminal.....	4-92
4.11.1-4	Operating Air Emissions Summary for Proposed LNG Terminal	4-93
4.11.1-5	KeySpan LNG Project Construction Emissions	4-96
4.11.1-6	KeySpan LNG Project Operational Emissions.....	4-97
4.11.2-1	Existing Noise Levels at the Closest Noise Sensitive Areas	4-101
4.11.2-2	Noise Levels from Various Construction Equipment/Activities	4-102
4.11.2-3	Noise Level and Noise Reduction for Proposed LNG Terminal Upgrades.....	4-103
4.11.2-4	Estimated Noise Impact from Proposed LNG Terminal	4-104
4.12.4-1	Impoundment Areas	4-119
4.12.5-1	Impact of LNG Traffic on Shipping Operations	4-141

TABLES (cont'd)

<u>Number</u>	<u>Title</u>	<u>Page</u>
4.12.5-2	Minimum Striking Speed to Penetrate LNG Cargo Tanks.....	4-147
4.12.5-3	LNG Spills on Water.....	4-149
4.12.6-1	LNG Truck Loadings at the Distrigas LNG Terminal	4-152
4.12.6-2	LNG Truck Accident Summary	4-154
4.12.8-1	Natural Gas Service Incidents by Cause	4-161
4.12.8-2	Outside Forces Incidents by Cause (1970-1984).....	4-162
4.12.8-3	External Corrosion by Level of Control (1970-1984).....	4-162
4.12.8-4	Annual Average Fatalities - Natural Gas Transmission and Gathering Systems	4-163
4.12.8-5	Nationwide Accidental Deaths	4-163
4.13-1	Past, Present, and Future Projects That Could Cumulatively Impact Resources of Concern Near the KeySpan LNG Project.....	4-168

FIGURES

<u>Number</u>	<u>Title</u>	<u>Page</u>
2.1-1	Existing LNG Facility Site	2-2
2.1-2	General Project Location	2-3
2.2.1-1	Proposed LNG Facilities Site Plan	2-5
2.2.1-2	Proposed LNG Ship Berth.....	2-6
2.2.3-1	Proposed Pipeline Facilities	2-14
3.2.1-1	New England Pipeline Systems and Existing/Proposed/Planned Regional LNG Facilities	3-7
3.2.2-1	Proposed Northeast Gateway and Neptune LNG Project.....	3-13
3.3.2-1	Southern New England Pipeline Systems and Coastal Ports	3-29
3.3.2-2	Southern New England Port Areas With Existing LNG Facilities.....	3-33
3.4-1	Proposed Eastern Waterfront Berth Location.....	3-35
3.4-2	Eastern Bulkhead Alternative.....	3-36
3.4-3	Northern Waterfront Alternative	3-37
3.5.1-1	Pipeline Systems Alternatives Map.....	3-41
3.5.2-1	Pipeline Route Alternatives Map.....	3-43
4.8.2-1	Schools and Healthcare Facilities Located within Approximately 1 Mile of the Project Area	4-52
4.8.2-2	Revitalization Areas Planned for Providence and East Providence	4-53
4.8.5-1	Shellfish Management Areas within Narragansett Bay.....	4-63
4.8.5-2	Closed Shellfish Grounds along the Proposed LNG Ship Route	4-64
4.9.1-1	Neighborhoods Adjacent to the Keyspan LNG Facility Site and the Proposed Pipeline Route	4-70
4.9.8-1	Environmental Justice Map	4-85
4.11.2-1	Noise Sensitive Areas.....	4-100
4.12.5-1	Proposed LNG Ship Route	4-126

ACRONYMS AND ABBREVIATIONS

A.D. Little	Arthur D. Little, Inc.
ACEEE	American Council for an Energy Efficient Economy
ACHP	Advisory Council on Historic Preservation
Algonquin	Algonquin Gas Transmission L.L.C.
ALNG	Algonquin LNG, Inc.
API	American Petroleum Institute
ATWS	additional temporary workspace
BACT	Best Available Control Technology
Bcf/d	billion cubic feet per day
BG LNG	BG LNG Services, L.L.C.
BOG	boil off gas
Btu	British thermal unit
Building Code Committee	State of Rhode Island and Providence Plantations, Department of Administration, Building Code Standards Committee
C	carbon
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAD	Confined Aquatic Disposal
CDF	controlled density fill
CEII	Critical Energy Information Infrastructure
CEQ	Council on Environmental Quality
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
cfs	cubic feet per second
ChevronTexaco	ChevronTexaco Corporation
CIA	Massachusetts Commission on Indian Affairs
Class I	Mandatory Federal Class I
CO	carbon monoxide
CO ₂	carbon dioxide
Coast Guard	U.S. Coast Guard
COE	U.S. Army Corps of Engineers
Commission	Federal Energy Regulatory Commission
Coordination Team	<i>Rhode Island Bays, Rivers and Watersheds Coordination Team</i>
CPT	cone penetrometer test
CRMC	Rhode Island Coastal Resources Management Council
CSO	Combined Sewer Overflow
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972
dBA	decibels of the A-weighted scale
DEGT	Duke Energy Gas Transmission
DEM	Rhode Island Department of Environmental Management
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
Dth/day	decatherms per day
EFH	Essential Fish Habitat
EFSB	Rhode Island Energy Facility Siting Board
EIA	Energy Information Administration
EIR	Environmental Impact Report

ACRONYMS AND ABBREVIATIONS (cont'd)

EIS	Environmental Impact Statement
El Paso	El Paso Global LNG
Energy Bridge Project	El Paso Energy Bridge Gulf of Mexico L.L.C. Deepwater Port Project
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973
ESCP	Erosion and Sedimentation Control Plan
ESD	emergency shutdown
Excelerate	Excelerate Energy L.L.C.
F	Fahrenheit
FERC	Federal Energy Regulatory Commission
FERC Plan	FERC's Upland Erosion Control, Revegetation and Maintenance Plan
FERC Procedures	FERC's Wetland and Waterbody Construction and Mitigation Procedures
FPC	Federal Power Commission
FSO	Facility Security Officer
FSRU	Floating, storage, and regasification unit
ft ²	square feet
ft ³	cubic feet
FWS	U.S. Fish and Wildlife Service
Gas Tanker Code	<i>International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk</i>
GBS	gravity-based structure
Governors Conference Report	New England Governors by the Power Planning Committee of the New England Governors' Conference, Inc.
gpm	gallons per minute
HAP	hazardous air pollutant
HCAs	high consequence areas
HDD	horizontal direction drill
IMO	International Maritime Organization
Iroquois	Iroquois Gas Transmission Company
KeySpan LNG	KeySpan LNG, L.P.
KeySpan LNG Project	KeySpan LNG Facility Upgrade Project
L _{day}	daytime sound level
L _{dn}	day-night sound level
L _{eq(24)}	24-hour equivalent sound level
LEP	Limited English Proficiency
LNAPL	light non-aqueous phase liquid
LNG	liquefied natural gas
L _{night}	nighttime sound level
LOI	Letter of Intent
LUST	Leaking Underground Storage Tank
M-2	<i>Heavy Industrial District</i>
m ³	cubic meters
MACT	Maximum Achievable Control Technology
Maritimes & Northeast	Maritimes & Northeast Pipeline, L.L.C.
MARSEC	Maritime Security
MCC	Motor Control Center
MCE	Maximum Considered Earthquake
MCP	Massachusetts Contingency Plan

ACRONYMS AND ABBREVIATIONS (cont'd)

Memorandum	Memorandum of Understanding on Natural Gas Transportation Facilities
mg/L	milligrams per liter
MHC	Massachusetts Historical Commission
MLLW	mean lower low water
MMcfd	million cubic feet per day
MMI	Modified Mercalli Intensity
MMS	Minerals Management Service
MNI	Moffatt & Nichol International
Motiva	Motiva Enterprises, L.L.C.
MP	milepost
MPAQCR	Metropolitan Providence Interstate Air Quality Control Region
MRI	Marine Research, Inc.
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSI	Marine Safety International
Museum Foundation	USS Saratoga Museum Foundation, Inc.
NAAQS	National Ambient Air Quality Standards
NBC	Narragansett Bay Commission
NE Report	New England Gas Infrastructure Report
NEGC	New England Gas Company
NEPA	National Environmental Policy Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NFPA 59A	Standards for the Production, Storage, and Handling of Liquefied Natural Gas
NGA	Natural Gas Act
NHPA	National Historic Preservation Act
NOA	<i>Notice of Availability of the Draft Environmental Impact Statement for the Proposed KeySpan LNG Facility Upgrade Project</i>
NOAA	National Oceanic and Atmospheric Administration
NOI	<i>Notice of Intent to Prepare an Environmental Impact Statement for the Proposed KeySpan LNG Facility Upgrade Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meeting</i>
NO _x	nitrogen oxides
NPC	National Petroleum Council
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSA	noise sensitive area
NSPS	New Source Performance Standards
NSR	New Source Review
NWI	National Wetland Inventory
OCIMF	Oil Companies International Marine Forum
OCRM	Office of Coast and Ocean Resource Management
OCZM	Office of Coastal Zone Management
Parkway	Veterans Memorial Parkway
PCB	polychlorinated biphenyl
PGA	peak ground acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
Planning Department	City of Providence Planning Department
PLEMs	pipeline end manifolds
PM _{2.5}	particulate matter less than 2.5 microns in diameter

ACRONYMS AND ABBREVIATIONS (cont'd)

PM ₁₀	particulate matter less than 10 microns in diameter
ppb	parts per billion
ppt	parts per thousand
ProvPort	Port of Providence or ProvPort, Inc.
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTE	potential to emit
PWR	Providence & Worcester Railroad
Quest	Quest Consultants, Inc.
RAWP	Remedial Action Work Plan
RICRMP	Rhode Island Coastal Resources Management Program
RIDOT	Rhode Island Department of Transportation
RIGIS	Rhode Island Geographic Information System
RIHPHC	Rhode Island Historic Preservation and Heritage Commission
RIPDES	Rhode Island Pollution Discharge Elimination System
RMP	risk management plan
RPT	rapid phase transition
Sasaki	Sasaki Associates, Inc
SERs	significant emission rates
SGMP	Soil and Groundwater Management Plan
SIGGTO	Society of International Gas Tanker and Terminal Operators
SIP	state implementation plan
SO ₂	sulfur dioxide
SOLAS	<i>International Convention for the Safety of Life at Sea</i>
Somerset LNG	Somerset LNG, L.L.C.
SPCC Plan	Spill Prevention, Containment and Countermeasure Plan
SPT	standard penetration test
SVOC	semi-volatile organic compound
Tennessee Gas	Tennessee Gas Pipeline Company
TNT	trinitrotoluene
TPH	total petroleum hydrocarbons
tpy	tons per year
Tractabel	Tractabel LNG North America, L.L.C.
USC	United States Code
U.S. Generating	U.S. Generating New England, Inc.
USGS	U.S. Geological Survey
UV/IR	ultraviolet/infrared
VMP	Veterans Memorial Parkway
VOC	volatile organic compound
VOL	volatile organic liquid
W3	<i>Waterfront: Port/Maritime Industrial District</i>
Waterfront District	East Providence Waterfront Special Development District
Waterfront District Plan	East Providence Waterfront Special Development District Plan
WEG	water/ethylene-glycol
yd ³	cubic yards