



**COMMONWEALTH OF MASSACHUSETTS
Board of Registration
of
Hazardous Waste Site Cleanup Professionals**

**ACRONYMS LIST FOR
LSP LICENSING EXAMINATION**

This list includes acronyms, abbreviations and initializations relevant to a broad range of environmental topics, although the primary focus is on the state and federal contamination cleanup programs. This list is published as an aide for the public, the regulated community and regulators who occasionally encounter unknown and unexplained terms. It should not be taken to be a comprehensive list.

21C - Massachusetts General Law Chapter 21C

21E - Massachusetts General Law Chapter 21E

A

AAL - Allowable Ambient Limit

ACEC - Area of Critical Environmental Concern

ACO - Administrative Consent Order

ADD - Average Daily Dose

ADE - Average Daily Exposure

ADSCR - Average Daily Soil Contact Rate

ADSIR - Average Daily Soil Intake Rate

AEPPM - Active Exposure Pathway Mitigation Measure

AF - Absorbed Fraction, the fraction of OHM in soil absorbed through the skin

AHERA - Asbestos Hazard Emergency Response Act (1986)

AP - Averaging Period

APH - Air-phase Petroleum Hydrocarbons

ARAR - Applicable or Relevant and Appropriate Requirement

AST - Above Ground Storage Tank

ASTM - American Society for Testing and Materials

ATC - Allowable Threshold Concentration

ATSDR - U.S. Agency for Toxic Substance and Disease Registry

AUL - Activity and Use Limitation

AWQC - Ambient Water Quality Criteria

B

BAW - MassDEP Bureau of Air and Waste

BDAT - Best Demonstrated Available Technology

BDL - Below Detection Limit

bgs - below ground surface

BMP - Best Management Practices

BNA - Base-Neutral and Acid-Extractable Organic Compounds

BOD - Biological Oxygen Demand

BOH - Board of Health

BOL - Bill of Lading

BPP - MassDEP Bureau of Policy and Planning

BTEX - Benzene, Toluene, Ethylbenzene and Xylenes

BW - Body Weight

BWP - MassDEP Bureau of Waste Prevention (now Bureau of Air and Waste)

BWR - MassDEP Bureau of Water Resources

BWSC - MassDEP Bureau of Waste Site Cleanup

C

C - either: (a) Celsius or Centigrade or (b) units Conversion factor

c.21E - Massachusetts General Law Chapter 21E

CAA – U.S. Clean Air Act

CAFE - Corporate Average Fuel Economy [standard]

CAG - U.S. EPA's Carcinogen Assessment Group

CAM - Compendium of Analytical Methods

CAS - Chemical Abstract Service

CDF - Confined Disposal Facility

CEP - Critical Exposure Pathway

CERCLA - U.S. Comprehensive Environmental Response, Compensation, and Liability Act of 1980

CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System

CERO - MassDEP Central Regional Office

CFC - chlorofluorocarbon

CFR - Code of Federal Regulations

CMR - Code of Massachusetts Regulations

CMO - Chief Municipal Officer

COC - Contaminant of Concern

COD - Chemical Oxygen Demand

CRA - Comprehensive Response Action

C_{res} - Residual Saturation

C_{sat} - Soil Saturation Concentration

CSF - Cancer Slope Factor

CSA – Comprehensive Site Assessment

CSM - Conceptual Site Model

CVOC - Chlorinated Volatile Organic Compound

CWA - U.S. Clean Water Act

D

DAQC - MassDEP Division of Air Quality Control (now Air and Climate Division)

dB - Decibel

DCE - Dichloroethylene

DDD - 2,2-bis(p-chlorophenyl)-1,1-dichloroethane

DDE - dichlorodiphenyldichloroethylene

DDT - 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane

DEIR - Draft Environmental Impact Report

DEQE - Massachusetts Department of Environmental Quality Engineering, which is the former name of the Massachusetts Department of Environmental Protection

DRGP - US EPA Dewatering and Remediation General Permit

DHM - MassDEP Division of Hazardous Materials (now Business Compliance Division)

DNAPL - Dense Non-Aqueous Phase Liquid

DO - Dissolved Oxygen

DOD - U.S. Department of Defense

DOE - U.S. Department of Energy

DOI - U.S. Department of the Interior

DOJ - U.S. Department of Justice

DOT - U.S. Department of Transportation

DPH - Massachusetts Department of Public Health

DPS - either: (a) Downgradient Property Status or (b) the Massachusetts Department of Public Safety

DQO - Data Quality Objectives

DRE - Destruction Removal Efficiency

DSWM - MassDEP Division of Solid Waste Management (now Business Compliance Division)

DWM - MassDEP Division of Watershed Management (includes Wetlands Program)

DWPC - MassDEP Division of Water Pollution Control (now Wastewater Management Program)

DWS - MassDEP Division of Water Supply (Now the Drinking Water Program, DWP)

E

E/P - Evaporation/percolation

ECD - Electron Capture Detector

ED - Exposure Duration

EDB - Ethylene Dibromide

EF - Exposure Frequency

EHS - Extremely Hazardous Substance

EIR - Environmental Impact Report

EIS - Environmental Impact Statement

ELCR - Excess Lifetime Cancer Risk

ENF - Environmental Notification Form

EOEEA - Massachusetts Executive Office of Energy and Environmental Affairs

EP - Exposure Period

EPA - U.S. Environmental Protection Agency

EPC - Exposure Point Concentration

EPCRA - Emergency Planning and Community Right-to-Know Act

EPH - Extractable Petroleum Hydrocarbons

ERL - Effects Range Low

ERM - Effects Range Median

ESP - Electrostatic Precipitator

eV - Electron Volt

F

FB - Field Blank

FEIR - Final Environmental Impact Report

FEIS - Final Environmental Impact Statement

FI - Food Intake

FID - Flame Ionization Detector

FIFRA - U.S. Insecticide, Fungicide and Rodenticide Act

FNSI - Finding of No Significant Impact

FOIA - Freedom of Information Act

FONSEI - Finding Of No Significant Environmental Impact

FP - Flash Point

FS - Feasibility Study

FSP - Field Sampling Plan

FY - Fiscal Year

G

GAC - Granular Activated Carbon

GAO - U.S. General Accounting Office

GC - Gas chromatography

GC/ECD - Gas Chromatography/Electron Capture Detector

GC/MS - Gas Chromatography/Mass Spectrometry

GC/FID - Gas Chromatography/Flame Ionization Detector

GC/PID - Gas Chromatography/Photoionization Detector

GEIR - Generic Environmental Impact Report

GIS - Geographic Information System

GPM - Gallons per Minute

GW - Ground Water

GW-1 - groundwater category GW-1

GW-2 - groundwater category GW-2

GW-3 - groundwater category GW-3

GWTP - Ground Water Treatment Plant

H

H&S - Health and Safety

HAP - Hazardous Air Pollutant

HASP - Health and Safety Plan

HAZWOPER - Hazardous Waste Operations and Emergency Response

HCFC - Hydrochlorofluorocarbons

HCS - Hazardous Communication Standard

HDPE - High-Density Polyethylene

HEAST - U.S. EPA's Health Effects Assessment Summary Tables

HI - Hazard Index

HMTA - Hazardous Material Transportation Act

HMTUSA - Hazardous Material Transportation Uniform Safety Act

HPLC - High-Performance Liquid Chromatography

HQ - Hazard Quotient

HRS - Hazard Ranking System

HSA - Hollow Stem Auger

HSWA - U.S. EPA's Hazardous and Solid Waste Amendments (1984)

HM - Hazardous Material

HW - Hazardous Waste

I

IARC - International Agency for Research on Cancer

ICAP - Inductively Coupled Argon Plasma emissions spectroscopy

ICP - Inductively Coupled Plasma atomic emission spectroscopy

IDL - Instrument Detection Limit

IDLH - Immediately Dangerous to Life or Health

IH - Imminent Hazard

IM - Interim Measure (eliminated from MCP in 1993)

IR - either: (a) Infrared or (b) Ingestion Rate

IRA - Immediate Response Action

IRAC - Immediate Response Action Completion [Report]

IRAP - Immediate Response Action Plan

IRIS - US EPA's Integrated Risk Information System

ISCO - In-Situ Chemical Oxidation

ISV - In-Situ Volatilization

IT - Innovative Technology

ITRC - Interstate Technology and Regulatory Council

IWPA - Interim Wellhead Protection Area

IWTP - Industrial Wastewater Treatment Plant

J

K

kg - kilogram

L

L - liter

LADD - Lifetime Average Daily Dose

LADSCR - Lifetime Average Daily Soil Contact Rate normalized to bodyweight

LADSIR - Lifetime Average Daily Soil Intake Rate normalized to bodyweight

LAER - Lowest Achievable Emission Rate

LC50 - Lethal Concentration at which 50% of the population dies

LD50 - Lethal Dose at which 50% of the population dies

LDR - Land Disposal Restrictions

LEL - Lower Explosive Limit

LEPC - Local Emergency Planning Committee

LIF - Laser Induced Fluorescence

LLRW - Low-Level Radioactive Waste

LNAPL - Light Non-Aqueous Phase Liquid

LOAEL - Lowest Observed Adverse Effects Level

LOEL - Lowest Observed Effects Level

LRA - Limited Removal Action

LSP - Licensed Site Professional

LTBI - Location to Be Investigated (eliminated from MCP in 1993)

LTDD - Low Temperature Thermal Desorption

LUST - Leaking Underground Storage Tank

M

m – meter

M3CL- Method 3 Ceiling Limit

MACT - Maximum Available Control Technology

MassDEP - Massachusetts Department of Environmental Protection

MCL - Maximum Contaminant Level

MCP - Massachusetts Contingency Plan

MDL - Method Detection Limit

MEK - Methyl Ethyl Ketone

MEPA - Massachusetts Environmental Policy Act

MF - Modifying Factor

mg - milligram

MGL - Massachusetts General Laws

MMCL - Massachusetts Maximum Contaminant Level

MNA - Monitored Natural Attenuation

MOHML - Massachusetts Oil and Hazardous Material List

MOU - Memorandum of Understanding

MS - Mass Spectrometry

MS/MSD - Matrix Spike/Matrix Spike Duplicate

MSDS - Material Safety Data Sheet

MSL - Mean Sea Level

MSR - Material Shipment Record

MTBE - Methyl tertiary-Butyl Ether

MW - either: (a) Molecular Weight or (b) Monitoring Well

N

NAAQS - National Ambient Air Quality Standards

NAPL - Non-Aqueous Phase Liquid

NCP - National Contingency Plan

ND - either (a) Not Detected or (b) Non- Detect

NEPA - National Environmental Policy Act

NERO - MassDEP Northeast Regional Office

NESHAP - National Emission Standards for Hazardous Air Pollutants

NFA - No Further Action

ng – nanogram

NIOSH - National Institute of Occupational Safety and Health

NO_x - Nitrous Oxides

NOAA - National Oceanographic and Atmospheric Administration

NOAEL - No Observed Adverse Effects Level

NOEL - No Observed Effects Level

NOHSCP - National Oil and Hazardous Substance Contingency Plan

NOI - Notice of Intent

NON - Notice of Noncompliance

NOR - Notice of Responsibility

NORA - Notice of Response Action

NPDES - National Pollutant Discharge Elimination System

NPDWSA - Non-Potential Drinking Water Source Area

NPL - National Priorities List

NPOTW - Non-Publicly Owned Treatment Works

NRD - Natural Resource Damage

NRS - Numerical Ranking System (note: discontinued in 2014)

NRWQC - National Recommended Water Quality Criteria

NSPS - New Source Performance Standard

NSR - No Significant Risk

O

O&M - Operation and Maintenance

OHM - Oil and/or Hazardous Material

OMM - Operation, Maintenance and/or Monitoring

OP- Other Person

ORS - MassDEP Office of Research and Standards

ORSG - Office of Research and Standards Guideline (for drinking water)

ORW - Outstanding Resource Water

OSC - On-Scene Coordinator

OSHA - U.S. Occupational Safety and Health Administration

OTA - Massachusetts Office of Technology Assessment

OWM - Massachusetts Office of Watershed Management

P

PAHs - Polycyclic (or Polynuclear) Aromatic Hydrocarbons

PEPMM - Passive Exposure Pathway Mitigation Measure

PAN - Penalty Assessment Notice

PARCCS - Precision, Accuracy, Representativeness, Completeness, Comparability and Sensitivity

Pb - chemical symbol for lead

PCBs - Polychlorinated Biphenyls

PCDDs - Polychlorinated Dibenzo Dioxins

PCDFs - Polychlorinated Dibenzo Furans

PCE - Perchloroethylene (Tetrachloroethylene)

PDWSA - Potential Drinking Water Source Area

PEL - OSHA Permissible Exposure Limit

PFAS – Per-and polyfluoralkyl Substances

PFNA – Perfluorononanoic Acid

PFOA - Perfluorooctanoic Acid

PFDA - Perfluorodecanoic Acid

PFHpA - Perfluoroheptanoic Acid

PID - Photoionization Detector

PIP - Public Involvement Plan

PLM - Polarized Light Microscope/Microscopy

PM10 - Particulate Matter of 10 microns in diameter or smaller

POTW - Publicly Owned Treatment Works

PPA - either: (a) Potentially Productive Aquifer or (b) Pollution Prevention Act

ppb - parts per billion

ppbV - parts per billion by volume

PPE - Personal Protective Equipment

ppm - parts per million

ppmV - parts per million by volume

PPRTV - Provisional Peer-Reviewed Toxicity Value

ppt - parts per trillion

PQL - Practical Quantitation Limit

PRA - Preliminary Response Action

PRP - Potentially Responsible Party

PS - Permanent Solution

PSD - Prevention of Significant Deterioration

PSC - Permanent Solution with Conditions

PSNC - Permanent Solution with No Conditions

PTS - Permanent or Temporary Solution

PTFE- Polytetrafluoroethylene

PVC - Polyvinyl Chloride

Q

q1* - U.S. EPA's Cancer Assessment Group's published cancer slope value

QA - Quality Assurance

QC - Quality Control

R

RACT - Reasonably Available Control Technology

RAF - Relative Absorption Factor

RAM - Release Abatement Measure

RAO - Response Action Outcome (no longer used as of April 2014)

RAO-P - Response Action Outcome-Partial (no longer used as of April 2014)

RAPS - Response Action Performance Standard

RC - Reportable Concentration

RCGW-1 - groundwater Reporting Category RCGW-1

RCGW-2 - groundwater Reporting Category RCGW-2

RCRA - Resource Conservation and Recovery Act

RCS-1 - soil Reporting Category RCS-1

RCS-2 - soil Reporting Category RCS-2

RfC - Reference Concentration

RfD - Reference Dose

RFI - either: (a) Request for Information or (b) RCRA Facility Investigation

RFP - Request for Proposals

RGP - US EPA Remediation General Permit

RI/FS - Remedial Investigation and Feasibility Study

RIP - Remedy Implementation Plan

RLF - Release Log Form

RLFA - Release Log Form Amendment

RNF - Release Notification Form

ROD - Record of Decision

ROS - Remedy Operation Status

RP - either: (a) Responsible Party or (b) Respirable Particulates

RQ - Reportable Quantity

RQD - Rock Quality Designation

RRT - Regional Response Team

RTECS - Registry of Toxic Effects of Chemical Substances

RTN - Release Tracking Number

S

S-1 - soil category S-1

S-2 - soil category S-2

S-3 - soil category S-3

SA - Skin Surface Area

SARA - Superfund Amendments and Reauthorization Act

SCBA - Self-Contained Breathing Apparatus

SDWA – U.S. Safe Drinking Water Act

SERO - MassDEP Southeast Regional Office

SIC - Standard Industrial Classification

SIP - State Implementation Plan

SITE - Superfund Innovative Technology Evaluation

SO₂ - Sulfur Dioxide

SOP - Standard Operating Procedure

SOW - Scope of Work

SPCCP - Spill Prevention Control and Countermeasures Plan

SPD - Special Project Designation

SRM - Substantial Release Migration

SSDS - Sub-slab Depressurization System

SSGSV- Sub-slab Soil Gas Screening Value

STEL - Short-Term Exposure Limit

SVE - Soil Vapor Extraction

SVOC - Semi-volatile Organic Compound

SW - either: (a) Surface Water or (b) Solid Waste

T

TAG - Technical Assistance Grant

TCA - Trichloroethane

TCDD - Tetrachlorinated Dibenzo Dioxin

TCDF - Tetrachlorinated Dibenzo Furan

TCE - Trichloroethylene

TCLP - Toxicity Characteristic Leaching Procedure

TEF - Toxicity Equivalency Factor

TEL - Threshold Effects Level

TEQ - Toxicity Equivalent

TICs - Tentatively Identified Compounds

TIC – Total Ion Chromatogram

TMPS - Temporary Solution

TLV - OSHA Threshold Limit Value

T_n - LNAPL Transmissivity

TO-15 - Analytical Method used to analyze Volatile Organic Compounds in Air

TOR - Threat of Release

TOV - Total Organic Vapors

TPH/IR - Total Petroleum Hydrocarbons measured using Infrared Analysis

TPH/GC/PID - Total Petroleum Hydrocarbons measured using Gas Chromatography and a Photo-Ionization Detector

TPH/GC/FID - Total Petroleum Hydrocarbons measured using Gas Chromatography and a Flame Ionization Detector

TPH - Total Petroleum Hydrocarbons

TQ - Threshold Quantity

TRC - Technical Review Criteria

TRI - Toxic Release Inventory

TSCA - U.S. Toxic Substances Control Act

TSDF - Treatment, Storage and Disposal Facility

TV- Threshold Value

TV_r- Threshold Value-Residence

TV_{c/i}- Threshold Value-Commercial/Industrial

TWA - Time Weighted Average

U

UCL - Upper Confidence Limit

UF - Uncertainty Factor

µg - microgram

UIC - Underground Injection Control

UR - Unit Risk value

URAM - Utility-related Abatement Measure

US EPA - United States Environmental Protection Agency

USACE - United States Army Corps of Engineers

USCG - United States Coast Guard

USGS - United States Geological Survey

UST - Underground Storage Tank

UTM - Universal Transverse Mercator

UV - Ultraviolet

V

VC - Vinyl Chloride

VI - either: (a) Vapor Intrusion or (b) Volume Ingested

VOC - Volatile Organic Compound

VPH - Volatile Petroleum Hydrocarbons

VR - Volume Respired

W

WERO - MassDEP Western Regional Office

WES - Wall Experiment Station

WQC - [Ambient] Water Quality Criteria

WWTP - Waste Water Treatment Plant

X

XRF - X-Ray Fluorescence

Y

Z