



## Compiled Acronym List

ITRC standard acronym list, compiled from all ITRC web-based documents. Acronyms may be used in all future team documents, to be customized for your specificity.

|                         |  |
|-------------------------|--|
| <b>1,1,1-TCA</b>        | 1,1,1-trichloroethane  |
| <b>1,1-DCE</b>          | 1,1, dichloroethene  |
| <b>1,2,4-TMB</b>        | 1,2,4-trimethyl benzene  |
| <b>1,4-D</b>            | 1,4-dioxane  |
| <b>2,3,7,8-TCDD</b>     | 2,3,7,8-tetrachlorodibenzo-p-dioxin  |
| <b>2D, 3D</b>           | two dimensional, three dimensional   |
| <b>3TMO</b>             | 3-Tiered Monitoring and Optimization Tool  |
| <b>AB</b>               | accreditation body   |
| <b>AC</b>               | activated carbon   |
| <b>ACF</b>              | autocorrelation coefficient or function  |
| <b>ACL</b>              | alternate compliance limit   |
| <b>ACS</b>              | American Chemical Society  |
| <b>ADAF</b>             | age-dependent adjustment factors   |
| <b>ADCP</b>             | acoustic Doppler current profiler  |
| <b>ADEC</b>             | Alaska Department of Environmental Conservation  |
| <b>ADEM</b>             | Alabama Department of Environmental Management   |
| <b>ADV</b>              | acoustic Doppler velocimeter   |
| <b>AE</b>               | analytical error   |
| <b>AET</b>              | apparent effects threshold   |
| <b>AF</b>               | attenuation factor   |
| <b>AFB</b>              | Air Force Base   |
| <b>AFCEC</b>            | Air Force Civil Engineer Center (formerly AFCEE)   |
| <b>AFCEE</b>            | Air Force Center for Engineering and the Environment (changed to AFCEC)  |
| <b>AGC-QAPP</b>         | Uniform Federal Policy for Quality Assurance Project Plans Template:<br>Advanced Geophysical Classification for Munitions Response |
| <b>AIC</b>              | Akaike information criterion   |
| <b>ALD</b>              | anoxic limestone drain   |
| <b>ALM</b>              | adult lead methodology   |
| <b>AM</b>               | arithmetic mean  |
| <b>AMD</b>              | acid mine drainage   |
| <b>amsl</b>             | above mean sea level   |
| <b>ANOVA</b>            | analysis of variance   |
| <b>ANSI/ASQ E4-2004</b> | Quality Systems for Environmental Data and Technology Programs—<br>Requirements with Guidance for Use                              |
| <b>AO</b>               | Acridine orange  |
| <b>AOC</b>              | area of concern  |

|                         |  |
|-------------------------|--|
| <b>APC</b>              | aerobic polishing cell   |
| <b>APG</b>              | Aberdeen Proving Ground  |
| <b>APH</b>              | air-phase petroleum hydrocarbon  |
| <b>API</b>              | American Petroleum Institute   |
| <b>ARAR</b>             | all relevant and appropriate regulations   |
| <b>ARCH</b>             | autoregressive conditional heteroscedasticity  |
| <b>ARD</b>              | acid rock drainage   |
| <b>ARIMA</b>            | autoregressive integrated moving average   |
| <b>AST</b>              | aboveground storage tank   |
| <b>AST</b>              | aboveground storage tank   |
| <b>ASTM</b>             | American Society for Testing and Materials<br>(now known just as ASTM International)       |
| <b>ASTSWMO</b>          | Association Of State And Territorial Solid Waste Management Officials                      |
| <b>ATCG</b>             | Adenine, Thymine, Cytosine, Guanine  |
| <b>ATSDR</b>            | Agency for Toxic Substances and Disease Registry   |
| <b><i>atzB</i> gene</b> | Hydroxyatrazine ethylaminohydrolase  |
| <b>AUL</b>              | alternate use limitations  |
| <b>AVS/SEM</b>          | acid volatile sulfide/simultaneously extracted metals                                      |
| <b>AWQC</b>             | ambient water quality criteria   |
| <b>BAF</b>              | bioaccumulation factor   |
| <b>BAP</b>              | benzo-a-pyrene   |
| <b>BAZ</b>              | biologically active zone   |
| <b>BCF</b>              | bioconcentration factor  |
| <b>BES</b>              | U.S. Department of Energy, Office of Basic Energy Sciences                                 |
| <b>BFA</b>              | background fluorescence analysis   |
| <b>bgs</b>              | below ground surface   |
| <b>BIC</b>              | Bayesian information criterion   |
| <b>BLL</b>              | blood lead level   |
| <b>BMD</b>              | benchmark dose   |
| <b>BMP</b>              | best management practice   |
| <b>BNC</b>              | Bremerton Proving Ground   |
| <b>BNL</b>              | Brookhaven National Laboratory   |
| <b>BOD</b>              | biological oxygen demand   |
| <b>bp, kbp, Mbp</b>     | Base pairs, kilobase pairs, megabase pairs   |
| <b>BRAC</b>             | Defense Base Realignment and Closure   |
| <b>BSAF</b>             | biota-sediment accumulation factor   |
| <b><i>bssA</i> gene</b> | benzylsuccinate synthase   |
| <b>BTEX</b>             | benzene, toluene, ethylbenzene, and xylene   |
| <b>BUD</b>              | Berkeley UXO Discriminator   |
| <b><i>bvcA</i> gene</b> | Reductive dehalogenase implicated in the vinyl chloride to ethene reductive dechlorination |
| <b>C</b>                | Carbon   |
| <b>CA</b>               | corrective action  |

|   |   |
|---|---|
| <b>CAB</b>                                  | citizens advisory board   |
| <b>CAD</b>                                  | contained aquatic disposal  |
| <b>CAG</b>                                  | community advisory group  |
| <b>CAIT</b>                                 | Center for Advanced Infrastructure and Transportation                                     |
| <b>CAMU</b>                                 | Corrective Action Management Unit   |
| <b>CaPAH</b>                                | carcinogenic polynuclear aromatic hydrocarbons  |
| <b>CARD</b>                                 | Catalysed reported deposition   |
| <b>CARD-FISH</b>                            | Catalyzed reported deposition fluorescence in situ hybridization                          |
| <b>CASRN</b>                                | Chemical Abstract Service Registry Number   |
| <b>cc</b>                                   | cubic centimeter  |
| <b>CCF</b>                                  | cross-correlation function  |
| <b>CCL4</b>                                 | carbon tetrachloride  |
| <b>CDC</b>                                  | Center for Disease Control  |
| <b>cDCE</b>                                 | cis-1,2-dichloroethene  |
| <b>CDEP</b>                                 | Connecticut Department of Energy and Environmental Protection                             |
| <b>CDF</b>                                  | cumulative distribution function  |
| <b>CDF</b>                                  | confined disposal facility  |
| <b>cDNA</b>                                 | Complementary DNA   |
| <b>CE<sub>2</sub></b>                       | long-range heterogeneity fluctuation error  |
| <b>CE<sub>3</sub></b>                       | periodic heterogeneity fluctuation error  |
| <b>CEC</b>                                  | cation exchange capacity  |
| <b>CEP</b>                                  | Community Engagement Plan   |
| <b>CERCLA</b>                               | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (SuperFund) |
| <b>CES</b>                                  | cost-effective sampling   |
| <b>CF</b>                                   | chloroform  |
| <b>CFR</b>                                  | Code of Federal Regulations   |
| <b>CFree</b>                                | carbon free   |
| <b>CGI</b>                                  | combustible gas indicator   |
| <b>CH</b>                                   | compositional heterogeneity   |
| <b>CH<sub>4</sub></b>                       | methane   |
| <b>CIP</b>                                  | Community Involvement Plan  |
| <b><i>cis</i>-1,2-DCE or <i>cis</i>-DCE</b> | <i>cis</i> -1,2-dichloroethylene  |
| <b>Cl</b>                                   | Chlorine  |
| <b><i>cl</i>d gene</b>                      | Chlorite dismutase gene   |
| <b>CLP</b>                                  | Contract Laboratory Program   |
| <b>CLT</b>                                  | central limit theorem   |
| <b>CMS</b>                                  | corrective measures study   |
| <b>CO</b>                                   | Carbon monoxide   |
| <b>CO<sub>2</sub></b>                       | Carbon dioxide  |
| <b>COC</b>                                  | contaminant of concern  |
| <b>COD</b>                                  | chemical oxygen demand  |

|               |   |
|---------------|---|
| <b>COPC</b>   | contaminant of potential concern                              |
| <b>cpm</b>    | counts per minute   |
| <b>CPSi</b>   | cancer potency slope, inhalation                              |
| <b>CPT</b>    | cone penetrometer testing                                     |
| <b>CRA</b>    | comparative risk analysis                                     |
| <b>CRREL</b>  | U.S. Army Cold Regions Research and Engineering Laboratory    |
| <b>CSF</b>    | cancer slope factor   |
| <b>CSIA</b>   | Compound Specific Isotope Analysis                            |
| <b>CSM</b>    | conceptual site model   |
| <b>CSO</b>    | combined sewer outfall  |
| <b>CSV</b>    | comma separated values  |
| <b>CT</b>     | carbon tetrachloride  |
| <b>Cu</b>     | Copper  |
| <b>CUAA</b>   | ceded and usual and accustomed areas                          |
| <b>CUSUM</b>  | cumulative sum control chart                                  |
| <b>CV</b>     | coefficient of variation                                      |
| <b>CVI</b>    | chlorinated vapor intrusion                                   |
| <b>CVOC</b>   | chlorinated volatile organic compound                         |
| <b>CWA</b>    | Clean Water Act   |
| <b>CWA</b>    | Clean Water Act   |
| <b>DAGCAP</b> | DOD Advanced Geophysical Classification Accreditation Program |
| <b>DAPI</b>   | 4,6-diamindino-phenylindole                                   |
| <b>DAQ</b>    | data acquisition  |
| <b>DBMS</b>   | data base management system                                   |
| <b>DC</b>     | Dissimilarity Coefficient                                     |
| <b>DCA</b>    | Dichloroethane  |
| <b>DCE</b>    | dichloroethene  |
| <b>DD</b>     | Decision Document   |
| <b>DDD</b>    | dichlorodiphenyldichloroethane                                |
| <b>DDE</b>    | dichlorodiphenyltrichloroethylene                             |
| <b>DDT</b>    | dichlorodiphenyltrichloroethane                               |
| <b>DDX</b>    | dimethyl dioxane  |
| <b>DE</b>     | delimitation error  |
| <b>DEC</b>    | Department of Conservation                                    |
| <b>DEP</b>    | Department of Environmental Protection                        |
| <b>df</b>     | degrees of freedom  |
| <b>DGGE</b>   | denaturing gradient gel electrophoresis                       |
| <b>DGM</b>    | digital geophysical mapping                                   |
| <b>DH</b>     | distributional heterogeneity                                  |
| <b>Dhc</b>    | <i>Dehalococcoides mccarti</i>                                |
| <b>DIC</b>    | Dissolved inorganic carbon                                    |

|                |   |
|----------------|---|
| <b>DL</b>      | detection level                                   |
| <b>DL</b>      | deficiency letter                                 |
| <b>DMM</b>     | discarded military munition                       |
| <b>DNA</b>     | Deoxyribonucleic acid                             |
| <b>DNAPL</b>   | dense non-aqueous phase liquid                    |
| <b>DO</b>      | dissolved oxygen                                  |
| <b>DOC</b>     | dissolved organic carbon                          |
| <b>DOD</b>     | U.S. Department of Defense                        |
| <b>DOE</b>     | U.S. Department of Energy                         |
| <b>DON</b>     | Department of the Navy                            |
| <b>DOT</b>     | Department of Transportation                      |
| <b>DPT</b>     | direct-push technology                            |
| <b>DQA</b>     | data quality assessment                           |
| <b>DQI</b>     | data quality indicator                            |
| <b>DQO</b>     | data quality objective                            |
| <b>DQOs</b>    | data quality objectives                           |
| <b>DRET</b>    | dredge residual elutriate test                    |
| <b>DRO</b>     | diesel-range organics                             |
| <b>DSITMS</b>  | direct sampling ion trap mass spectrometer        |
| <b>DTSC</b>    | California Department of Toxic Substances Control |
| <b>DU</b>      | decision unit                                     |
| <b>DUA</b>     | data usability assessment                         |
| <b>E&amp;P</b> | oil exploration & production                      |
| <b>EAB</b>     | enhanced anaerobic bioremediation                 |
| <b>EAP</b>     | enzyme activity probe                             |
| <b>EBCT</b>    | empty bed contact time                            |
| <b>EC</b>      | electrical conductivity                           |
| <b>EC</b>      | engineering control                               |
| <b>ECD</b>     | electron-capture dissociation                     |
| <b>ECMP</b>    | engineering control maintenance plan              |
| <b>ECOS</b>    | Environmental Council of the States               |
| <b>EDA</b>     | emergency declaration area                        |
| <b>EDA</b>     | exploratory data analysis                         |
| <b>EDB</b>     | 1,2-dibromoethane                                 |
| <b>EDLE</b>    | East Doane Lake Remediation                       |
| <b>EDQW</b>    | Environmental Data Quality Working Group          |
| <b>EE</b>      | extraction error                                  |
| <b>EE</b>      | environmental evaluation                          |
| <b>EE</b>      | environmental easement                            |
| <b>EE/CA</b>   | engineering evaluation/cost analysis              |
| <b>EGL</b>     | energy grade line                                 |
| <b>Eh</b>      | oxidation-reduction potential                     |

|               |   |
|---------------|---|
| <b>EHMP</b>   | environmental hazard management plan                          |
| <b>EJ</b>     | environmental justice   |
| <b>ELAP</b>   | Environmental Laboratory Accreditation Program                |
| <b>ELUR</b>   | environmental land use restrictions                           |
| <b>EM</b>     | environmental management                                      |
| <b>EMD</b>    | Environmental molecular diagnostics                           |
| <b>EMI</b>    | electromagnetic induction                                     |
| <b>EMNR</b>   | enhanced monitored natural recovery                           |
| <b>EMS</b>    | environmental management system                               |
| <b>ENA</b>    | Enhanced natural attenuation                                  |
| <b>EOD</b>    | explosive ordnance disposal                                   |
| <b>EPA</b>    | Environmental Protection Agency                               |
| <b>EPC</b>    | exposure point concentration                                  |
| <b>EPH</b>    | extractable petroleum hydrocarbon                             |
| <b>ERIS</b>   | Environmental Research Institute of the States                |
| <b>ERIS</b>   | Environmental Restoration Information System                  |
| <b>ERPIMS</b> | Environmental Resources Program Information Management System |
| <b>ESA</b>    | Endangered Species Act  |
| <b>ESD</b>    | explanation of significant difference                         |
| <b>ESTCP</b>  | Environmental Security Technology Certification Program       |
| <b>EtOH</b>   | ethanol, ethyl alcohol  |
| <b>EUC</b>    | environmental use control                                     |
| <b>EZ</b>     | exclusion zone  |
| <b>FA</b>     | financial assurance   |
| <b>FAMEs</b>  | Fatty acid methyl esters                                      |
| <b>FAQ</b>    | Frequently asked questions                                    |
| <b>FDA</b>    | U.S. Food and Drug Administration                             |
| <b>FDEP</b>   | Florida Department of Environmental Protection                |
| <b>FE</b>     | fundamental error   |
| <b>Fe</b>     | Iron  |
| <b>FFA</b>    | federal facilities agreement                                  |
| <b>FFS</b>    | focused feasibility study                                     |
| <b>FID</b>    | flame ionization detector                                     |
| <b>FISH</b>   | fluorescence in situ hybridization                            |
| <b>FMGP</b>   | Former manufactured gas plant                                 |
| <b>FMV</b>    | fair market value   |
| <b>Foc</b>    | fraction of organic carbon                                    |
| <b>FOT</b>    | fields of testing   |
| <b>FS</b>     | feasibility study   |
| <b>FUDS</b>   | formerly used defense sites                                   |
| <b>g</b>      | Gram  |
| <b>GAC</b>    | granular activated carbon                                     |

|                |   |
|----------------|---|
| <b>GARCH</b>   | generalized autoregressive conditional heteroscedasticity |
| <b>GC</b>      | gas chromatography/chromatograph                          |
| <b>GC/ECD</b>  | Gas chromatograph/electron capture detector               |
| <b>GC/MS</b>   | Gas chromatograph/mass spectrometer                       |
| <b>GC/MS</b>   | gas chromatography/mass spectrometry                      |
| <b>GCL</b>     | geosynthetic clay liner                                   |
| <b>GE</b>      | General Electric  |
| <b>GETS</b>    | Groundwater Extraction and Treatment System               |
| <b>GHG</b>     | greenhouse gas  |
| <b>GIS</b>     | geographic information systems                            |
| <b>GLLA</b>    | Great Lakes Legacy Act                                    |
| <b>GLNPO</b>   | Great Lakes National Program Office                       |
| <b>GOF</b>     | goodness-of-fit   |
| <b>GPR</b>     | ground penetrating radar                                  |
| <b>GPS</b>     | Global Positioning System                                 |
| <b>GRASS</b>   | Geographic Resources Analysis Support System              |
| <b>GRO</b>     | Geostatistics for Remediation Optimization                |
| <b>GSD</b>     | geometric standard deviation                              |
| <b>GSE</b>     | grouping and segregation error                            |
| <b>GSMC</b>    | Groundwater Statistics and Monitoring Compliance          |
| <b>GSR</b>     | green and sustainable remediation                         |
| <b>GTS</b>     | Geostatistical Temporal-Spatial optimization software     |
| <b>GUI</b>     | graphical user interface                                  |
| <b>GW</b>      | groundwater   |
| <b>GWSDAT</b>  | Groundwater Spatiotemporal Data Analysis Tool             |
| <b>GWTS</b>    | groundwater treatment and collection system               |
| <b>H</b>       | Hydrogen  |
| <b>HDOH</b>    | Hawaii Department of Health                               |
| <b>HDPE</b>    | high density polyethylene                                 |
| <b>Hg</b>      | mercury   |
| <b>HGL</b>     | hydraulic grade line                                      |
| <b>HMX</b>     | octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine          |
| <b>HNOPS</b>   | Hydrogen, Nitrogen, Oxygen, Potassium, Sulfur             |
| <b>HOA</b>     | home owners' association                                  |
| <b>HP TRIM</b> | Hewlett Packard TRIM                                      |
| <b>HPT</b>     | hydraulic profiling tool                                  |
| <b>HPT-GWS</b> | hydraulic profiling tool-groundwater sampler              |
| <b>HQ</b>      | hazard quotient   |
| <b>HRC</b>     | Hydrogen-Release Compound                                 |
| <b>HRT</b>     | hydraulic residence time                                  |
| <b>HTRW</b>    | Hazardous, Toxic and Radioactive Waste                    |
| <b>HVAC</b>    | heating, ventilation and air conditioning                 |

|                 |  |
|-----------------|--|
| <b>i.i.d.</b>   | independent and identically distributed                          |
| <b>IA</b>       | indoor air   |
| <b>IATA DGR</b> | International Air Transport Association Danger Goods Regulations |
| <b>IBT</b>      | internet-based training  |
| <b>IC</b>       | institutional control  |
| <b>ICIAP</b>    | institutional control implementation and assurance plan          |
| <b>ICL</b>      | informal correction letter                                       |
| <b>ICMP</b>     | institutional control management plan                            |
| <b>ICP-MS</b>   | Inductively Coupled Plasma–Mass Spectrometry                     |
| <b>ID</b>       | inner diameter   |
| <b>IDEM</b>     | Indiana Department of Environmental Management                   |
| <b>IDQTF</b>    | Intergovernmental Data Quality Task Force                        |
| <b>IDSS</b>     | integrated DNAPL site strategy                                   |
| <b>IDW</b>      | Inverse Distance Weighting                                       |
| <b>IEUBK</b>    | integrated exposure uptake biokinetic                            |
| <b>IMU</b>      | inertial measurement unit  |
| <b>IP</b>       | implementation plan  |
| <b>IR</b>       | Infrared   |
| <b>IRIS</b>     | Integrated Risk Information System                               |
| <b>IRM</b>      | interim remedial measure   |
| <b>IRMS</b>     | Isotope Ratio Mass Spectrometer                                  |
| <b>IS</b>       | incremental sample, incremental sampling                         |
| <b>ISB</b>      | in situ bioremediation   |
| <b>ISC</b>      | integrated site characterization                                 |
| <b>ISCO</b>     | in situ chemical oxidation                                       |
| <b>ISCR</b>     | in situ chemical reduction                                       |
| <b>ISM</b>      | Incremental Sampling Methodology                                 |
| <b>ISO</b>      | International Organization for Standardization                   |
| <b>ISO</b>      | industry standard object   |
| <b>ISS</b>      | in situ stabilization  |
| <b>IST</b>      | in situ treatment  |
| <b>ISTR</b>     | in situ thermal remediation                                      |
| <b>ITMS</b>     | ion trap mass spectrometer                                       |
| <b>ITRC</b>     | Interstate Technology and Regulatory Council                     |
| <b>IVS</b>      | instrument verification strip                                    |
| <b>J&amp;E</b>  | Johnson & Ettinger model   |
| <b>KBCRS</b>    | Knowledge Base Corporate Reporting System                        |
| <b>KDHE</b>     | Kansas Department of Health and Environment                      |
| <b>L</b>        | Liter  |
| <b>L108</b>     | Aquicola tertiaricarbonis L108                                   |
| <b>LADD</b>     | lifetime average daily dose                                      |
| <b>LBOS</b>     | limestone buffered organic substrate                             |



|                     |   |
|---------------------|---|
| <b>LC34</b>         | Launch Complex 34                                       |
| <b>LCARA</b>        | Love Canal Area Revitalization Area                     |
| <b>LCL</b>          | lower confidence level or limit                         |
| <b>LCS</b>          | laboratory control sample, laboratory control spike     |
| <b>LHD</b>          | local health department                                 |
| <b>LIF</b>          | laser induced fluorescence                              |
| <b>LLDPE</b>        | linear low density polyethylene                         |
| <b>LNAPL</b>        | Light non-aqueous phase liquid                          |
| <b>LOAEL</b>        | lowest observed adverse effect level                    |
| <b>LOD</b>          | limit of detection                                      |
| <b>LOQ</b>          | limit of quantitation                                   |
| <b>LTL</b>          | lower tolerance limit                                   |
| <b>LTM or LTMgt</b> | long-term management                                    |
| <b>LTMO</b>         | long-term monitoring optimization                       |
| <b>LTMP</b>         | long term management plan                               |
| <b>LTS</b>          | long term stewardship                                   |
| <b>LTS&amp;M</b>    | long term surveillance and maintenance                  |
| <b>LUC</b>          | land use control  |
| <b>LUCIP</b>        | land use control implementation plan                    |
| <b>LUCRAWP</b>      | land use control remedial action work plan              |
| <b>LUST</b>         | leaking underground storage tank                        |
| <b>LWF</b>          | lightweight fill  |
| <b>M</b>            | maps  |
| <b>M</b>            | molar   |
| <b>MANOVA</b>       | multivariate analysis of variance                       |
| <b>MAR-FISH</b>     | Microautoradiography Fluorescence in situ hybridization |
| <b>MAROS</b>        | Monitoring and Remediation Optimization Software        |
| <b>MassDEP</b>      | Massachusetts Department of Environmental Protection    |
| <b>MASW</b>         | multi-channel analyses of surface waves                 |
| <b>MBT</b>          | molecular biological tool                               |
| <b>MCA</b>          | Monte Carlo analysis                                    |
| <b>MCDA</b>         | multi-criteria decision analysis                        |
| <b>MCL</b>          | maximum contaminant level                               |
| <b>MDA</b>          | Multiple displacement amplification                     |
| <b>MDEQ</b>         | Michigan Department of Environmental Quality            |
| <b>MDEQ</b>         | Montana Department of Environmental Quality             |
| <b>MDI</b>          | method data indicator                                   |
| <b>MDL</b>          | method detection limit                                  |
| <b>MDNR</b>         | Missouri Department of Natural Resources                |
| <b>MEC</b>          | munitions and explosives of concern                     |
| <b>MEK</b>          | methyl ethyl ketone (2-butanone)                        |
| <b>mg</b>           | Milligrams  |

|                      |   |
|----------------------|---|
| <b>MGP</b>           | manufactured gas plant  |
| <b>MI</b>            | multiincrement  |
| <b>MIBK</b>          | 4-methyl-2-pentanone  |
| <b>MiHpt</b>         | membrane interface probe hydraulic profiling tool                             |
| <b>MIP</b>           | membrane interface probe  |
| <b>MIQE</b>          | Minimum Information for Publication of Quantitative Real-Time PCR Experiments |
| <b>MIS</b>           | multiincrement sampling   |
| <b>MIW</b>           | mining-influenced water   |
| <b>mL</b>            | Milliliter  |
| <b>MLE</b>           | maximum likelihood estimation   |
| <b>MLE</b>           | multiple lines of evidence  |
| <b>MLLW</b>          | mean low level water  |
| <b>MMRP</b>          | Military Munitions Response Program   |
| <b>MNA</b>           | monitored natural attenuation   |
| <b>MNR</b>           | monitored natural recovery  |
| <b>Mo</b>            | Molybdenum  |
| <b>MOA</b>           | mode of action  |
| <b>MPC</b>           | measurement performance criteria  |
| <b>MPE</b>           | multiphase extraction   |
| <b>MPN</b>           | Most probable number  |
| <b>MPV</b>           | man-portable vector   |
| <b>MQI</b>           | method quality indicator  |
| <b>MQO</b>           | measurement quality objective   |
| <b>mRNA</b>          | Messenger RNA   |
| <b>MRS</b>           | munitions response site   |
| <b>MRSOU</b>         | Milltown Reserve Sediment Operable Unit                                       |
| <b>M<sub>s</sub></b> | mass of the collected sample  |
| <b>MS</b>            | matrix spike  |
| <b>MS</b>            | mass spectrometry   |
| <b>MSD</b>           | matrix spike duplicate  |
| <b>MSD</b>           | municipal setting designations  |
| <b>MSE</b>           | mean squared error  |
| <b>MSMA</b>          | monosodium methanearsonate  |
| <b>MTBE</b>          | methyl tertiary butyl ether   |
| <b>MTCA</b>          | Model Toxics Control Act  |
| <b>MVS</b>           | mining visualization software   |
| <b>MW</b>            | monitoring well   |
| <b>N</b>             | Nitrogen  |
| <b>NAH</b>           | Naphthalene dioxygenase   |

|                      |   |
|----------------------|---|
| <b>NanoSIMS-FISH</b> | Nanoscale secondary-ion mass spectrometry -<br>Fluorescence in situ hybridization |
| <b>NAPL</b>          | non-aqueous phase liquid  |
| <b>NAS</b>           | Naval Air Station   |
| <b>NASA</b>          | National Aeronautics and Space Administration                                     |
| <b>NAVFAC</b>        | Naval Facilities Engineering Command  |
| <b>NCEA</b>          | National Center for Environmental Assessment                                      |
| <b>ND</b>            | nondetect   |
| <b>NDMA</b>          | nitrosodimethylamine  |
| <b>NELAC</b>         | National Environmental Laboratory Accreditation Conference                        |
| <b>NELAP</b>         | National Environmental Laboratory Accreditation Program                           |
| <b>NFA</b>           | no further action   |
| <b>NIRIS</b>         | Navy Installation Restoration Information Solution                                |
| <b>NJDEP</b>         | New Jersey Department of Environmental Protection                                 |
| <b>NJDOT</b>         | New Jersey Department of Transportation   |
| <b>NM</b>            | not measured  |
| <b>NMR</b>           | nuclear magnetic resonance  |
| <b>NOAA</b>          | National Oceanic and Atmospheric Administration                                   |
| <b>NOAEL</b>         | no observed adverse effect level  |
| <b>non-TOI</b>       | non-target of interest  |
| <b>NOV</b>           | notice of violation   |
| <b>NPDES</b>         | National Pollutant Discharge Elimination System                                   |
| <b>NPL</b>           | National Priority List  |
| <b>NR</b>            | not recorded  |
| <b>NRC</b>           | National Research Council   |
| <b>NSB</b>           | Naval Station Bremerton   |
| <b>NTC</b>           | No Template Controls  |
| <b>NYSDEC</b>        | New York State Department of Environmental Conservation                           |
| <b>O</b>             | Oxygen  |
| <b>O&amp;M</b>       | operation and maintenance   |
| <b>OC</b>            | organic carbon  |
| <b>OCC</b>           | Occidental Chemical Corp.   |
| <b>OCF</b>           | on-site contaminated facility   |
| <b>OD</b>            | outer diameter  |
| <b>OE</b>            | overall estimation error  |
| <b>OEHHA</b>         | California Office of Health Hazard Assessment                                     |
| <b>OLC</b>           | open limestone channel  |
| <b>OLD</b>           | open limestone drain  |
| <b>OM&amp;M</b>      | operation, maintenance and monitoring   |
| <b>OP</b>            | obligated party   |
| <b>ORP</b>           | oxidation reduction potential   |

|                         |   |
|-------------------------|---|
| <b>OSHA</b>             | Occupational Safety and Health Administration   |
| <b>OST</b>              | offline storage table   |
| <b>OSWER</b>            | USEPA Office of Solid Waste and Emergency Response  |
| <b>OU</b>               | operable unit   |
| <b>OUST</b>             | Office of Underground Storage Tanks (USEPA)   |
| <b>OVA</b>              | organic vapor analyzer  |
| <b>OXO</b>              | unexploded ordinance  |
| <b>PAH</b>              | polyaromatic hydrocarbon  |
| <b>PAH</b>              | Polycyclic aromatic hydrocarbon   |
| <b>PAH</b>              | polynuclear aromatic hydrocarbons   |
| <b>PAH</b>              | petroleum halogenated hydrocarbon   |
| <b>PARCC</b>            | precision, accuracy, representativeness, comparability, completeness, and sensitivity     |
| <b>Pb</b>               | Lead  |
| <b>PBA</b>              | tetrabromomethane   |
| <b>PC</b>               | proprietary control   |
| <b>PCA</b>              | tetrachloroethane   |
| <b>PC-ADP</b>           | pulse coherent acoustic Doppler profiler  |
| <b>PCBs</b>             | Polychlorinated biphenyls   |
| <b>PCDD</b>             | polychlorinated dibenzo-dioxins   |
| <b>PCDF</b>             | polychlorinated dibenzo-furans  |
| <b>PCE</b>              | perchloroethene (tetrachloroethylene)   |
| <b><i>pceA</i> gene</b> | tetrachloroethene reductive dehalogenase  |
| <b>PCP</b>              | pentachlorophenol   |
| <b>PCR</b>              | polymerase chain reaction   |
| <b>PD</b>               | probability distribution  |
| <b>PDB</b>              | polyethylene diffusion bag  |
| <b>PDBS</b>             | passive diffusion bag samplers  |
| <b>PDM</b>              | processed dredged material  |
| <b>PDS</b>              | phase distribution spreadsheet  |
| <b>PE</b>               | preparation error   |
| <b>PEC</b>              | probable effect concentration   |
| <b>PEEK</b>             | tubing made from polyetheretherketone   |
| <b>PEL</b>              | permissible exposure limit  |
| <b>PFM</b>              | passive flux meter  |
| <b>PHC</b>              | petroleum hydrocarbon   |
| <b>PHE</b>              | Phenol hydroxylase  |
| <b>PIANO</b>            | analytical list that includes paraffin, iso-paraffins, aromatics, naphthenes, and olefins |
| <b>PID</b>              | photoionization detector  |

|                |  |
|----------------|--|
| <b>PIG</b>     | pipeline inspection gauge              |
| <b>PITT</b>    | partitioning Interwell tracer test     |
| <b>PL</b>      | prediction limit                       |
| <b>PLC</b>     | programmable logic controller          |
| <b>PLFA</b>    | Phospholipid fatty acid                |
| <b>PM1</b>     | <i>Methylibium petroleiphilum</i>      |
| <b>POC</b>     | point of contact                       |
| <b>POC</b>     | point of compliance                    |
| <b>POC</b>     | particulate organic carbon             |
| <b>POTW</b>    | publicly owned treatment works         |
| <b>ppbv</b>    | parts per billion by volume            |
| <b>PQL</b>     | practical quantitation limit           |
| <b>PR</b>      | periodic review                        |
| <b>PRGs</b>    | preliminary remedial goals             |
| <b>PRP</b>     | potentially responsible party          |
| <b>PSF</b>     | pounds per square foot                 |
| <b>PSG</b>     | passive soil gas                       |
| <b>PVC</b>     | polyvinyl chloride                     |
| <b>PVI</b>     | petroleum vapor intrusion              |
| <b>Q</b>       | quantitative                           |
| <b>QA</b>      | quality assurance                      |
| <b>QA/QC</b>   | quality assurance/quality control      |
| <b>QAPP</b>    | Quality Assurance Project Plan         |
| <b>QASP</b>    | quality assurance surveillance plan    |
| <b>QC</b>      | quality control                        |
| <b>QL</b>      | qualitative                            |
| <b>qPCR</b>    | quantitative polymerase chain reaction |
| <b>Q-Q</b>     | quantile-quantile                      |
| <b>QSM</b>     | Quality Systems Manual                 |
| <b>R&amp;D</b> | research and development               |
| <b>RAB</b>     | restoration advisory board             |
| <b>RAO</b>     | remedial action objective              |
| <b>RAPS</b>    | reducing alkalinity producing systems  |
| <b>RBCA</b>    | risk-based corrective action           |
| <b>RBF</b>     | radial basis function                  |
| <b>RCA</b>     | root cause analysis                    |
| <b>RCA</b>     | request for corrective action          |
| <b>RCM</b>     | Reactive Core Mat                      |
| <b>RCRA</b>    | Resource Conservation and Recovery Act |
| <b>RDase</b>   | Reductive dehalogenase                 |

|                 |  |
|-----------------|--|
| <b>RDX</b>      | 1,3,5-trinitroperhydro-1,3,5-triazine        |
| <b>RDX</b>      | Hexahydro-1,3,5-trinitro-1,3,5-triazine      |
| <b>REV</b>      | representative elementary volume             |
| <b>RfC</b>      | reference concentration                      |
| <b>RfD</b>      | reference dose                               |
| <b>RfDi</b>     | reference dose, inhalation                   |
| <b>RFI</b>      | request for information                      |
| <b>RFU</b>      | Relative fluorescence units                  |
| <b>RG</b>       | remediation goal                             |
| <b>RI</b>       | Remedial Investigation                       |
| <b>RI/FS</b>    | remedial investigation/feasibility study     |
| <b>RL</b>       | reporting limit                              |
| <b>RMDs</b>     | Retrievable media devices                    |
| <b>RME</b>      | reasonable maximum exposure                  |
| <b>RMO</b>      | Ring-hydroxylating toluene monooxygenase     |
| <b>RMSE</b>     | root mean square error                       |
| <b>RNA</b>      | Ribonucleic acid                             |
| <b>ROD</b>      | record of decision                           |
| <b>ROI</b>      | return on investigation                      |
| <b>ROS</b>      | regression on order statistics               |
| <b>RP</b>       | responsible party                            |
| <b>RPD</b>      | relative percent difference                  |
| <b>RPF</b>      | relative potency factor                      |
| <b>RPM</b>      | remedial project manager                     |
| <b>RPP</b>      | rigid porous polyethylene                    |
| <b>RR&amp;R</b> | release, resuspension and residuals          |
| <b>rRNA</b>     | Ribosomal ribonucleic acid (ribosomal RNA)   |
| <b>RRO</b>      | residual-range organic                       |
| <b>RRT</b>      | relative retention time                      |
| <b>RSD</b>      | relative standard deviation                  |
| <b>RSL</b>      | Regional Screening Level                     |
| <b>RTD</b>      | residence time distribution                  |
| <b>RTK</b>      | real-time kinematic                          |
| <b>RT-qPCR</b>  | Reverse transcriptase qPCR                   |
| <b>S</b>        | Sulfur                                       |
| <b>SADA</b>     | Spatial Analysis and Decision Assistance     |
| <b>SAP</b>      | sampling and analysis plan                   |
| <b>SAPS</b>     | successive alkalinity producing system       |
| <b>SARA</b>     | Superfund Amendments and Reauthorization Act |

|              |  |
|--------------|--|
| <b>SAS</b>   | Statistical Analysis System  |
| <b>SAV</b>   | submerged aquatic vegetation   |
| <b>SC</b>    | site closeout  |
| <b>SCAN</b>  | continuous scanning mode   |
| <b>SCL</b>   | single control limit   |
| <b>SD</b>    | standard deviation   |
| <b>SDWA</b>  | Safe Drinking Water Act  |
| <b>SE</b>    | sampling error, standard error   |
| <b>SED</b>   | survey of earned doctorates  |
| <b>SEDA</b>  | sediment erosion and deposition assessment                                   |
| <b>SEDD</b>  | staged electronic data deliverable   |
| <b>SEM</b>   | Superfund enterprise system  |
| <b>SEP</b>   | supplemental environmental project   |
| <b>SERDP</b> | Strategic Environmental Research and Development Program                     |
| <b>SETAC</b> | Society of Environmental Toxicology and Chemistry                            |
| <b>SG</b>    | specific gravity   |
| <b>SIM</b>   | selective ion monitoring   |
| <b>SIMS</b>  | Secondary-ion mass spectrometry  |
| <b>SIP</b>   | stable isotope probe   |
| <b>SMARS</b> | site management and reporting system   |
| <b>SMART</b> | specific, measureable, attainable, relevant, time-bound (referring to goals) |
| <b>SMC</b>   | spent mushroom compost   |
| <b>SMCRA</b> | Surface Mining Control and Reclamation Act                                   |
| <b>SMD</b>   | submembrane depressurization   |
| <b>sMMO</b>  | Soluble methane monooxygenase  |
| <b>SMP</b>   | site management plan   |
| <b>SNR</b>   | Signal to noise ratio  |
| <b>SOP</b>   | standard operating procedure   |
| <b>SP</b>    | sample port  |
| <b>SPI</b>   | sediment profiling imaging   |
| <b>SPL</b>   | site pollution liability   |
| <b>SPT</b>   | standard penetration test  |
| <b>SQ</b>    | Semiquantitative   |
| <b>SRB</b>   | sulfate-reducing bacteria  |
| <b>SROI</b>  | sustainable return of investigation  |
| <b>SRP</b>   | site remediation program   |
| <b>SRS</b>   | simple random sampling   |
| <b>SS</b>    | sample support   |
| <b>SSCC</b>  | site specific cleanup criteria   |
| <b>SSD</b>   | subslab depressurization   |

|                         |   |
|-------------------------|---|
| <b>SSP</b>              | subslab pressurization                                |
| <b>SSV</b>              | subslab ventilation                                   |
| <b>STE</b>              | sediment transport evaluation                         |
| <b>STSC</b>             | Superfund Health Risk Technical Support Center        |
| <b>SU</b>               | sampling unit   |
| <b>SVE</b>              | soil vapor extraction                                 |
| <b>SVOC</b>             | semivolatile organic compound                         |
| <b>SWAC</b>             | surface weighted actions concentrations               |
| <b>SWFPR</b>            | site-wide false positive rate                         |
| <b>T</b>                | Time  |
| <b>TAGA</b>             | trace atmospheric gas analyzer                        |
| <b>TAME</b>             | tert-amyl-methyl-ether, an oxygenate                  |
| <b>TAN</b>              | Test Area North site at the Idaho National Laboratory |
| <b>TBA</b>              | tert-butyl alcohol, an oxygenate                      |
| <b>TBEE</b>             | tert-butyl-ethyl ether, an oxygenate                  |
| <b>TBT</b>              | tributyltin   |
| <b>TCA</b>              | trichloroethane                                       |
| <b>TCD</b>              | thermal conductivity detector                         |
| <b>TCE</b>              | trichloroethylene                                     |
| <b>TCE</b>              | trichloroethene                                       |
| <b><i>tceA</i> gene</b> | trichloroethene reductive dehalogenase                |
| <b>TCFE</b>             | Trichlorofluoroethylene                               |
| <b>TCLP</b>             | Toxicity Characteristic Leaching Procedure            |
| <b>TE</b>               | total sampling error                                  |
| <b>TEF</b>              | toxicity equivalence factor                           |
| <b>TEL</b>              | Tetra-ethyl Lead                                      |
| <b>TEQ</b>              | toxic equivalent                                      |
| <b>THPO</b>             | Tribal Historic Preservation Officer                  |
| <b>TIC</b>              | tentatively identified compound                       |
| <b>TIN</b>              | triangular irregular network                          |
| <b>TL</b>               | tolerance limit                                       |
| <b>TMB</b>              | trimethylbenzene                                      |
| <b>TMDL</b>             | total maximum daily load                              |
| <b>TMO</b>              | Toluene monooxygenase                                 |
| <b>TNT</b>              | 2,4,6-trinitrotoluene                                 |
| <b>TOC</b>              | total organic carbon                                  |
| <b>TOD</b>              | Toluene 2,3-dioxygenase                               |
| <b>TOI</b>              | target of interest                                    |
| <b>TPH</b>              | total petroleum hydrocarbons                          |
| <b>TPP</b>              | technical project planning                            |



|                 |   |
|-----------------|---|
| <b>T-RFLP</b>   | Terminal restriction fragment length polymorphism                     |
| <b>TSCA</b>     | Toxic Substances Control Act  |
| <b>TSD</b>      | treatment, storage and disposal facility                              |
| <b>TSS</b>      | total suspended solids  |
| <b>TVOC</b>     | total volatile organic compounds                                      |
| <b>TW</b>       | Tarone-Ware statistic   |
| <b>U(IV)</b>    | Uranium, +4 oxidation state   |
| <b>U(VI)</b>    | Uranium, +6 oxidation state   |
| <b>UCL</b>      | upper confidence limit  |
| <b>UECA</b>     | Uniform Environmental Covenant Act                                    |
| <b>UFP-QAPP</b> | Uniform Federal Policy for Quality Assurance Project Plans            |
| <b>UFP-QS</b>   | Uniform Federal Policy for Implementing Environmental Quality Systems |
| <b>ug</b>       | Micrograms  |
| <b>UMTRCA</b>   | Uranium Mill Tailings Radiation Control Act                           |
| <b>UPL</b>      | upper prediction limit  |
| <b>URF</b>      | unit risk factor  |
| <b>USACE</b>    | U.S. Army Corps of Engineers  |
| <b>USCG</b>     | U.S. Coast Guard  |
| <b>USCS</b>     | Unified Soil Classification System                                    |
| <b>USDA</b>     | United States Department of Agriculture                               |
| <b>USDOE</b>    | U.S. Department of Energy   |
| <b>USEPA</b>    | United States Environmental Protection Agency                         |
| <b>USGS</b>     | United States Geological Survey                                       |
| <b>UST</b>      | underground storage tank  |
| <b>UTL</b>      | upper tolerance limit   |
| <b>UU/UE</b>    | unlimited use/unrestricted exposure                                   |
| <b>UV</b>       | ultraviolet   |
| <b>UXO</b>      | unexploded ordnance   |
| <b>VBA</b>      | Visual Basic for Applications   |
| <b>VC</b>       | Vinyl Chloride  |
| <b>vcrA</b>     | Vinyl chloride reductase (varietal A), a reductive dehalogenase gene  |
| <b>VFAs</b>     | Volatile Fatty Acids  |
| <b>VFP</b>      | vertical flow pond  |
| <b>VI</b>       | vapor intrusion   |
| <b>VOC</b>      | volatile organic compound   |
| <b>VSP</b>      | Visual Sampling Plan  |
| <b>w/w</b>      | wet weight  |
| <b>WET</b>      | whole effluent toxicity   |
| <b>WRS</b>      | Wilcoxon rank sum   |
| <b>XML</b>      | extensible markup language  |
| <b>XRF</b>      | X-ray fluorescence  |
| <b>XSD</b>      | halogen specific detector   |

|                         |                                       |
|-------------------------|---------------------------------------|
| <b>X-VOC</b>            | chlorinated volatile organic compound |
| <b>Zn</b>               | Zinc                                  |
| <b>ZVI</b>              | zero-valent iron                      |
| <b>µg/m<sup>3</sup></b> | microgram per cubic meter             |