SOP Glossary

Accuracy

The ability of a procedure to determine the "true" concentration of an analyte.

Adsorption

A physical phenomenon whereby molecules adhere to a surface with which they come into contact.

Affected Employee

An LLNL person whose job requires him/her to operate or use a machine or equipment on which service or maintenance is to be performed under lockout and tag, or whose job requires him/her to work in an area in which such service or maintenance is being performed.

In most cases this will be limited to the individual/s who normally use the machine. The required notification helps ensure that the individual/s know the machine is not operational so no attempt is made to use or start it.

Air Lifting Pumping

The process by which well water is hydraulically forced to the surface by lowering its specific gravity by pumping compressed air through an air line into a submerged eductor pipe (Driscoll, 1986).

Alkalinity

Alkalinity of a water is its acid-neutralizing capacity. Because the alkalinity of many waters is primarily a function of carbonate, bicarbonate, and hydroxide content, it is taken as an indication of the concentration of these constituents.

Analytical Laboratory Performance Evaluation/Check Samples

Performance evaluation samples are used to measure the performance of the laboratory on unknown samples. The results are compared to predetermined acceptance limits.

Analytical Result

Report of data obtained from analysis, observation, or measurement.

Annulus

The space between the drill string or casing and the wall of the borehole.

Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs are legally applicable or relevant and appropriate requirements, as used in Comprehensive Environmental Response, Compensation and Liability Act of 1980.

Aqueous Phase Carbon

Carbon used for adsorbing contaminants in water.

Archaeological Survey

For Site 300, a mandatory survey conducted by a trained archaeologist to inspect an undisturbed area for archaeological interest prior to conducting environmental activities.

ASCII

An acronym for American Standard Code for Information Interchange. ASCII defines the codes the computer uses internally to store letters, numbers, punctuation, and some control codes.

Authorized Employee

An LLNL person who locks out and tags machines or equipment to perform service or maintenance. An affected employee becomes an authorized employee when his/her duties include performing service or maintenance activities covered under the Lockout and Tag Program, and when he/she has completed the training requirements for this program.

Bailer

A bailer is used for grab sampling or for evacuating small diameter wells or larger diameter wells with low yields and/or small casing volumes. A bailer is a small-diameter cylindrical-shaped tube made from Teflon, stainless steel, polyvinyl chloride (PVC), or polyethylene materials. A check ball is housed in the bottom of the tube. The check-ball rises as the tube is lowered downhole allowing the tube to fill with water. As the tube is raised to the surface, the check-ball seats, preventing water loss. To collect a sample from the tube, a bottom-emptying device is inserted into the tube which expels the water. Appropriate sample containers are then filled.

Barcad

The Barcad system is a positive-displacement gas-drive sampler made of porous, chemically inert materials. High-purity nitrogen gas is used to displace the ground water and drive it to the surface for sample collection.

Base Station

Also called a reference station. A receiver that is set up at a known locations specifically to collect data for differentially correcting rover files. The base station calculates the error for each satellite and, through differential correction, improves the accuracy of GPS positions collected at unknown location by a roving GPS receiver. You can use a Trimble GPS Community Base Station or a Trimble GPS receiver in base station mode.

Batch

A group of 20 samples or less, of similar matrix type, prepared together or analyzed together if no sample preparation is required, under the same conditions and with the same reagents.

Beavertail Strap

This is a device used to deploy sensors between an IMT borehole liner and the side of a borehole. The name of this device is derived from its appearance in cross section. It is thick in the middle and tapers to the edges in the same way as a beavertail. The Beavertail Strap is lowered into a borehole before the IMT membrane is deployed.

Biological/Ecological/Archaeological Survey

For Site 300, a mandatory survey conducted by a trained biologist to inspect an undisturbed area for endangered species or sensitive habitats prior to conducting environmental activities.

Bladder Pump

A bladder pump, such as a Well Wizard, consists of a Teflon or PVC membrane bladder contained within a plastic or stainless steel or PVC housing. Well water fills the Well Wizard bladder through a one-way check valve at the bottom. Compressed air is forced between the pump housing and the bladder causing the bladder to compress, thus forcing water up the discharge tube and to the surface. These pumps are ideal for wells producing a sustainable yield of <1.0 gpm, where the casing depth does not exceed 150 feet, and where there is not a significant quantity of water to remove (>100 gals).

The nongas contact, positive displacement bladder pump has been found to cause the least amount of alteration to the sample when compared to a variety of retrieval methods (Nielsen and Yeates, 1985; Barcelona et al., 1984). Although no system can provide a true in situ sample, this method, if employed correctly, can yield a sample that is representative and valid for numerous field measurements and chemical analyses, including organics. However, due to relatively slow discharge rates (<0.5 gpm) the use of bladder pumps is not always practical.

Blind Collocated Samples

Blind collocated samples are samples that have their real identifications replaced with fictitious identifications prior to submittal to analytical laboratories.

Borehole

Any penetration of the ground surface created by drilling equipment.

Borehole Rugosity

Borehole wall roughness or irregularities in borehole diameter.

Borehole/Well Construction Log

A data collection form completed during drilling and well construction activities describing the lithology, well completion, and soil sampling details.

Breakthrough

A stage at which carbon (GAC) is unable to adsorb any more contaminants.

Bridging

An obstruction in the drill hole or annulus. A bridge is usually formed by caving of the wall of the borehole, by the intrusion of a large boulder, or by filter pack materials during well completion.

Calibration

The comparison of a measurement, standard, instrument, or item with a standard or instrument of higher accuracy to detect and quantify inaccuracies, and to report or eliminate those inaccuracies by adjustments.

"Capable of Being Locked Out"

An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to , or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device, or permanently alter its energy control capability.

Calibration Blanks

Calibration blanks are prepared and analyzed with standards to create a calibration curve. A calibration blank should differ from other standards only by the absence of an analyte and provide the "zero-point" for the curve.

Centralizer

A device used to keep the well casing centered within the borehole.

Chain-of-Custody (CoC)

A method and record used for documenting the history and sequential possession of a sample from the time of collection or generation through analysis and data reporting.

Chkchar

A program whose function is to scan an ASCII file looking for unprintable and illegal characters.

Christy Box

A cement or steel enclosure for below-grade completed monitor wells installed in areas of vehicular traffic.

Cleanwell Program

A program that produces a printout of pertinent information regarding "hits" in sampled locations where no hits should be observed.

Collocated Samples

Collocated samples are independent samples collected in such a manner that they are equally representative of the parameter(s) of interest at a given point in space and time.

Controlled Document

A document that is prepared, reviewed, approved, and distributed in accordance with established implementation procedures. Controlled documents are subject to controlled distribution and to a defined and controlled change process.

Contaminants

Chemicals or substances detrimental to human health.

Core

A continuous columnar sample of sediment or rock extracted from a borehole during air, mud-rotary, or hollow-stem auger drilling using a core barrel or split-barrel sampler.

Core Barrel Sampler

A reaming shell and length of tubing used during drilling to collect subsurface samples in unconsolidated or bedrock formations.

Core Run

An uninterrupted drilling sequence that results in the cutting (coring) of an interval of sediment or rock from a borehole. The length of a core run interval is determined by the driller and is based on the rig and drilling conditions.

Cost Effective Sampling (CES)

A methodology with supporting software, for estimating an appropriate frequency (and, as a result, lowest cost) of a sampling schedule for a given ground water monitoring location and still provide needed information for remedial and compliance-related decision making. The CES algorithm bases sampling frequency decisions on quantitative analyses of the trends and variability of important contaminants (e.g., volatile organic compounds) at a given monitoring location.

CSV

An ASCII file containing field values separated by commas.

Data Dictionary

Information that describes features that will be located in the field. This description includes feature names, data type classification (point , line or area), attribute names, attribute types, and attribute values. After being created on a PC, a data dictionary is downloaded to a data collector and used when collecting data in the field.

Data Logger

A data logger is used to acquire data from analog or digital sensors and to log these data in a digital format. These devices can use analog to digital converters to collect data from analog sensors such as thermistors, thermocouples, net radiometers, pressure transducers, soil moisture sensors, wind direction sensors and sonic anemometers. They can also acquire data from sensors that produce signals in the form of a pulse such as wind speed sensors, radiation sensors, motor speed sensors and flow meters. Once the data logger has acquired these data, they are stored in the data loggers' electronic memory along with other information, such as the time and date that they are collected. Periodically, these data are transferred from the data logger to a computer where they can be processed and stored for future use.

Data Reference Library (Division)

An area designated as ERD's center for easily accessible hard copy data storage.

Differential Correction (Differential GPS, DGPS)

The process of correcting GPS positions at an unknown location with data collected simultaneously at a known location (base station). Differential correction usually applies to receivers that use C/A code positioning techniques. The process of differentially correcting one receiver's location relative to another's can be done during postprocessing or in real-time, if radios are used.

Dip

The maximum angle of inclination from the horizontal of bedding or other planar features. The angle is measured in a vertical plane perpendicular to the strike.

Dissolved Oxygen (DO)

DO is the amount of oxygen dissolved in water at a given temperature. The dissolved oxygen content of a water sample at the time of collection is measured in milligrams per liter (mg/L).

Document

Any written, pictorial or electronically stored information describing, defining, specifying, reporting, or certifying activities, requirements, plans, procedures, or results. A document is not considered to be a QA record until it satisfies the definition of QA record.

Document Control

The process that provides for document adequacy review, approval for release by authorized personnel, and distribution for use at the prescribed work locations.

DOS

Operating system software commonly used in microcomputers.

Double Blind Samples

A double blind sample is a performance evaluation (PE) check sample, which is submitted to the laboratory. The sample is disguised to look like a routine sample; therefore, the laboratory does not know it is a PE.

Drill Cuttings/Laydown Area

The Drill Cuttings/Laydown Area is located at the Livermore Site. The entrance to the Drill Cuttings/Laydown Area can be accessed from Outer Loop Road, south of East Gate Drive. It consists of two separate bermed storage pits inside a larger bermed area used as a temporary storage for drilling derived soils and drilling fluid.

This area can be used to store drilling derived soil cuttings and used drilling fluid when their chemical concentrations are equal to or below the Livermore Site background concentrations for contaminants of concern.

The gravel road on the perimeter of these storage pits is also used as a laydown area by the drilling contractor for drilling supplies and drilling related equipment.

Drilling Workplan and Sampling Plan

A detailed document describing the procedures used to collect, handle, and analyze sediment or rock samples to ensure that data quality objectives are met.

Duplicates

Duplicates are additional aliquots of a sample that are subjected to the same preparation and analytical scheme as the sample. The duplicate measures the precision of a given analysis and is expressed as the relative percent difference (Section 4.14 of this SOP).

Edit Report

A printed report showing data from within a set of working tables. The printed report is used for proofreading and verification purposes.

Ephemeris

A list of predicted (accurate) positions or locations of satellites as a function of time. A set of numerical parameters that can be used to determine a satellite's position.

Electrical Conductivity (EC) or Specific Conductance

EC is a measure of the ability of a material to conduct a current under the influence of an applied electric field. It is the reciprocal of resistivity and is measured in micro-mhos/cm (μmhos/cm).

Electrical Resistivity

A physical property of materials which limits or opposes the flow of electrical current. Electrical resistivity is the inverse of conductivity and commonly measured in units of ohm-meter and is directional in nature.

Electric Submersible Pump

An electrical submersible pump is a motor driven device that forces water to the surface through centrifugal force. This action is accomplished by impellers housed in a stainless steel cylindrical casing that propels water up through the discharge tube and to the surface. In order to regulate flow, a sampling "T" is attached to the terminus of the wells discharge line. This "T" is equipped with a ball valve to adjust flow. Some electric submersible pumps, such as the Redi-Flo 2 is equipped with a rheostat mechanism allowing a much wider range of discharge rates to be achieved.

Submersible pumps are generally constructed of plastic, rubber, and metal parts that can affect the analyses of samples for certain trace organics and inorganics. As a consequence, care must be taken in choosing an appropriate submersible pump for wells that may contain trace concentrations of these constituents. Grundfos electrical pumps, which are constructed from stainless steel and NBR Nitril rubber, are acceptable in investigations involving trace constituents. However, the use of Grundfos pumps is limited to wells with an internal diameter >4 in. Electrical-powered submersible pumps can run off a 115-, 230-, or 460-volt AC power supply. The Redi-Flo 2 pump can be used in 2-in. diameter wells. Pumps with 115-volt vacuum motors are single phase, 230-volt vacuum motors may be either single or three phase, and 460-volt motors are three phase pumps.

Elevation Mask

The lowest elevation, in degrees, at which a receiver can track a satellite. Measured from the horizon, 0°to 90°. Normally set to 15° to avoid interference problems caused by building, trees, and multipath errors.

Energized

Connected to an energy source, or containing residual or stored energy.

Energy-isolating Device

A mechanical device that physically prevents the transmission or release of energy, including but not limited to a manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and no pole can be operated independently, a line valve, a block, and any similar device used to block or isolate energy. Push buttons, selector switches, interlocks, and other control circuit-type devices are not energy-isolating devices.

Energy Source

Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Equipment Supervisor

The person designated by management to be in charge of a piece of equipment. This person may be a building coordinator, principal investigator, room responsible person, Plant Engineering crafts person, or administrative specialist. The equipment supervisor is the responsible user or caretaker of the equipment. The equipment might be programmatic equipment or installed real property. The equipment supervisor would usually be the first person to notice (or have reported to him/her) that a piece of equipment was not working properly. An equipment supervisor may also be an authorized employee.

EPDBS

The logical name of a host computer maintained by ERD as part of a distributed computing domain. This computer serves the EPDData database.

EPDData

A relational database used to store and retrieve data generated in environmental sampling, analysis, measurement, characterization, and remediation activities.

EPGEM

The logical name of a host computer maintained by ERD as part of a distributed computing domain. This computer serves the Gemini databases.

Equipment Blank

A sample of analyte-free media which has been used to rinse the sampling equipment. It is collected after the completion of decontamination and prior to sampling. This blank is useful in documenting adequate decontamination of sampling equipment.

ES&H Deficiency

An ES&H deficiency is any identified activity, occurrence or condition which is not in compliance with the environmental, health and safety requirements of: Federal and State laws, DOE regulations, LLNL policies, and LLNL manuals.

Field

One basic independent element of a data record. For example, the sample log number is one of the fields of a sample record.

Field Blank

The field blank is deionized, analyte-free water which is poured into sample containers in the field at a predesignated sample location. This will indicate any contamination from the sampling container and/or the environment in which the primary sample was collected.

Field Logbook

Field logbooks are controlled documents that are bound notebooks with numbered pages.

Fixed GAC Canister

Large GAC canisters which are anchored to the supporting base and cannot be moved manually.

Flame Ionization Detector (FID) Meter

A portable field instrument used for the quantification of organic compounds ranging from methane to aromatic compounds such as benzene. The FID works by ionizing molecules by a hydrogen flame, and measuring the current generated. The measured current is directly proportional to the number of ionized molecules, and so the concentration of the compound(s) can be determined. As the organic compounds burn, positively charged, carbon-containing ions are produced and are collected by a negatively charged collecting electrode. The current produced is directly proportional to the compound concentration. Due to the use of the flame, this instrument is less sensitive to moisture in the vapor stream than the photoionization detector. The FID is usually calibrated against methane, but can also be calibrated using other compounds.

FLUTe

FLUTe is a brand name for some borehole liner systems used at LLNL. It stands for Flexible Liner Underground Technologies, Ltd. Co. FLUTe is located at 6 Easy Street Santa Fe, New Mexico 87501. This product fulfills the same functions as SEAMIST liners and has replaced them because SEAMIST in no longer available.

Flux Chamber

An emission isolation flux chamber is an enclosure of known volume with an open end of known area that is placed on soil surfaces to quantify fugitive soil emissions. The chamber contains several penetrations that are used to introduce "sweep-air", to allow chamber-air to exit and for temperature and pressure sensors. Attachment A shows a Flux Chamber schematic.

Freeboard

The amount of space left unfilled in a hole or depression.

Functional Supervisor

The person designated by management to be the day-to-day supervisor of an authorized employee. For an authorized employee assigned a specific, short-term assignment in an area, this may be the payroll supervisor. Authorized employees assigned duties in more than one area may have more than one functional supervisor. The functional supervisor shall ensure that the authorized employee is trained and qualified to perform assigned tasks. A functional supervisor may also be an authorized employee.

Galvanic Resistivity

Electrical resistivity that is a result of direct galvanic coupling of the measuring circuit to the material to be measured, and is measured using electrodes.

Gas-Sample Ports

Small diameter tubes installed on IMT membranes are used to collect soil-vapor or liquid-water from known depths in the borehole and to transport these materials to the surface where they can be sampled. When these tubes are not needed for sampling they can be connected to pressure transducers that log soil-pressures.

Gemini Database

Either of two read-only copies of EPDData, named Gemini1 and Gemini2. These are copied on a regular basis.

Geophysical Log

A geophysical log is a paper copy record of geophysical measurements made in a cased well or uncased borehole. Geophysical logs are plotted with amplitude on the horizontal scale and depth on the vertical axis. A common format in the American Petroleum Institute (API) format consists of four data display tracks; one log display track to the left of the depth track and two log display tracks to the right of the depth track.

Global Append Logbook

A controlled logbook used for documenting all append activity performed by ERD Data Management Team (DMT) personnel in the EPDData Database.

Global Tables

Tables within the EPDData database which are owned by the database administrator's account. Data within such tables may be accessed by authorized users of the database and are part of the globally accessible data in the database.

Grab Sample

A grab sample is one in which no well purging has been conducted prior to sample collection.

Granular Activated Carbon (GAC) Treatment Unit (GTU)

A treatment unit which treats ground water by adsorption of the contaminants by a GAC bed.

Greenwich Mean Time (GMT)

The time at the prime meridian (0° longitude) which runs through Greenwich, England (borough of Greater London). For every 15° traveled east of the prime meridian, the clock is advanced 1 hour. For every 15° traveled west of the prime meridian the clock is one hour earlier.

Ground Water Sampling Log

A data collection form which is completed in the field describing a ground water sampling event in detail.

Gypsum Block

A gypsum block is a device used to measure soil moisture by electrical resistance. It consists of two concentric stainless steel cylinders imbedded in gypsum and is deployed directly into soils. When properly deployed, the moisture content of the gypsum block will come to equilibrium with the moisture in the soil after a short time. Wires from each of the stainless steel cylinders in the gypsum block are connected to a data logger. The data logger measures and logs the electrical resistance between the cylinders. When moisture in the soil increases, the resistance of the gypsum blocks drops. Conversely, as the soils dry, the resistance across these wires increases. A fifth order polynomial equation is used to covert electrical resistance to bars of soil moisture tension.

Halocarbon

A carbon-based compound containing one or more halogen atoms (fluorine, chlorine or bromine).

HE Data

The results from analytical testing for high explosive compounds.

Headspace

The space within a container which is composed of air above a solid or liquid.

Hit

A reported chemical constituent concentration above the reporting limit of a particular analytical method.

Hydraulic Derrick

A hydraulic crane having a boom hinged near the base of the mast for lifting and moving heavy objects.

Hydraulic Test

A hydraulic test is a controlled field experiment performed to determine the hydraulic properties of water-bearing materials.

Hydrologic Unit

A group of one or more stratigraphic units that is considered a single hydraulic system.

Imhoff Cone

A graduated clear plastic cone used to measure the volume of silt and sand that is present in water.

Inductive Conductivity

Electrical conductivity is a result of inductive coupling of the measuring circuit to the material to be measured, and is measured using co-axial coils.

Installed Real Property

Equipment including building air conditioners, substations, and building power and distribution systems. Usually, installed real property equipment is maintained by Plant Engineering, and the cost of maintenance is charged to the Plant Engineering M&O accounts.

Instrumented Membrane Technology (IMT)

Instrumented Membrane Technology (IMT) uses a flexible, removable, plastic-coated membrane-tube to deploy various types of instruments and at least two different kinds of sampling

systems in uncased boreholes. The IMT membrane-tube is "blown" down the borehole from a spool within a pressurized canister by compressed air. Once in place, the membrane-tube is held against the sides of the borehole by filling the tube with compressed air, sand, water, or with a foam packer.

IMT is a generic term for the borehole liner system formerly known as SEAMIST. These systems have been produced by Science Engineering Associates (Santa Fe, NM), ECE Technologies (Houston, TX) and Flexible Liner Underground Technologies, Ltd. Co. (Santa Fe, NM).

Intake Shroud

A tube or pipe installed on the lower end of an electrical submersible pump that forces the ground water to run past the motor portion of the pump before entering the pump intake. This helps reduce or prevent the pump to over heat during low flow operation.

Internal Standards

Internal standards are measured amounts of a certain compound added after sample preparation or extraction. They may be used in an internal standard calibration method to correct sample results suffering from instrumentation problems such as capillary column injection losses, purging losses, or the effects of viscosity. Evaluation of internal standards performance ensures the stability of sensitivity and response during each analysis.

Interlaboratory Collocated Samples

Interlaboratory collocated samples are collocated samples which are collected and sent to different laboratories for analysis. Interlaboratory collocated samples provide interlaboratory precision information for the entire measurement system including sample acquisition, homogeneity, handling, shipping, storage, preparation, and analysis.

Intralaboratory Collocated Samples

Intralaboratory collocated samples are collocated samples which are collected and sent to the same laboratory for analysis; usually one is sent as a blind sample. Intralaboratory collocated samples provide intralaboratory precision information for the entire measurement system including sample acquisition, homogeneity, handling, shipping, storage, preparation, and analysis.

Investigation-Derived Wastes (IDW)

Investigation-Derived Wastes (IDW) are drill cuttings, core samples, drilling mud, initial development water, and/or purged ground water which are typically produced during field activities (i.e., the drilling of boreholes, installation/development of wells, and ground water sampling).

Isotherm Constants

Empirical constants of different VOCs, determined from their experimental graphs showing relationship between the amount of the VOC adsorbed and the concentration of the VOC in the water.

Item

An all-inclusive term used in place of any of the following: appurtenance, assembly, component, data, equipment, material, module, part, sample, structure, subassembly, subsystem, system, or unit.

Key Reviewers

Those persons responsible for reviewing and/or approving procedures for technical or administrative content.

Laboratory Control Standards (LCSs)

LCSs are aliquots of organic-free or deionized water to which known amounts of an analyte have been added. They are subjected to the same preparation/extraction procedure and analysis as samples. Stock solutions used for LCSs are purchased or prepared independently of calibration standards. LCS recovery indicates the accuracy of the analytical methods, equipment, and laboratory performance. For LCSs, the percent recovery is:

$$\frac{LC}{LT} \times 100$$

where:

LC = Laboratory LCS result.
LT = Expected result or true value of the LCS.

Lifetime QA Records

Records that provide baseline data for in-service inspection or records of significant value to demonstrate safe operation (i.e., maintain, repair, rework, replace, or modify) an item, or determine the cause of an accident or malfunction of an item, required to be maintained for the life of the facility by any applicable statute, regulation, or policy. Lifetime QA Records can also include any QA Record of activities affecting quality that is designated by Environmental Protection Department or ERD Data Management Team (DMT).

Linear Regression

A method for fitting a straight line through a set of data pairs. In the outlier algorithm, linear regression is used to model analyte concentrations as a function of time.

Lithology

A description of sediment or rock characteristics such as color, composition, grain size, bedding, sedimentary structures, sequences, and fossils.

Lithology (a database table)

A database working table in EPDData used while processing lithologic data in preparation for appending it to the global lithologic table.

Lithology Log

A detailed description of the method, technique, and chronology of drilling activities as well as sediment or rock characteristics such as color, composition, grain size, bedding, sedimentary structures, sequences, and fossils with depth. In addition, the lithologic log includes the length of core runs and the percentage of recovery. The sampling intervals and IDs are also listed on this form.

LLNL Environmental, Safety and Health Deficiency Tracking System (DefTrack)

The Deficiency Tracking System (DefTrack) is used to record and track the status of Environmental, Safety, and Health (ES&H) deficiencies from the time they are identified until they are closed and verified.

LLNL Personnel

The term includes all Laboratory personnel, including full-time employees (FTE), term (including students and post-doctoral researchers), and part time. It also includes Supplemental Labor Only (SLO), guests, and participating guests (See "outside subcontractor").

LLNL Single-Point lockout and tag

A specific procedure for a machine tool or other piece of equipment with only one energy-isolating device that can be readily identified and isolated. For some equipment with only one energy-isolating device, a detailed written lockout and tag procedure is not required. See SOP 4.16, "ERD Lockout/Tag Program," Section 4.2, for details.

LLNL Technical Representative for the University

An LLNL person, delineated in contracts, who is responsible for day-to-day supervision of a contractor or subcontractor doing work for the Laboratory. This person may be an equipment supervisor or a functional supervisor, or both (See the definitions of "equipment supervisor" and "functional supervisor").

Loc_id

Loc_id is the name of the field in EPDData tables which contains information about the sample location. For example, B-1001 is the loc_id code for the borehole in which monitor well W-1001 was installed.

Lockout and Tag

The placement of a lockout device and associated identifying tag on an energy-isolating device, in accordance with an established procedure, to ensure that this device and the equipment being controlled cannot be operated until the lockout device and associated tag is removed.

Lockout Device

A device that utilizes a positive means such as a lock to hold an energy-isolating device in a safe position and prevent a machine or equipment from energizing. Included are blank flanges and bolted slip blinds.

Log File

An electronic file used for recording commands used and results obtained during execution of a procedure.

Log Number (log_no)

The number used as the unique identifier of a sample collected by LLNL, usually assigned by the analytical laboratory.

Logging Speed

The rate at which the logging tool is pulled up the borehole generally 10 to 20 ft/min.

Low-Yielding Monitoring Well

A ground water monitoring well completed in an aquifer having low hydraulic conductivity, and thus a limited capacity to transmit water. If the well is purged at a constant flow rate, either the screened interval or the pump intake will be exposed to the air prior to the removal of three well-casing volumes.

Lysimeter

A lysimeter is a water-permeable porcelain cup attached to a cylindrical polyethylene body fitted with two 0.25-in. metal tubes that permit surface access. Lysimeters are generally installed in the vadose zone at depths less than 40 ft. Application of a vacuum to the chamber of the lysimeter through the metal access tubes causes water from the surrounding soil (soil moisture) to flow from the soil pores through the porcelain cup into the lysimeter body. This water is then collected by applying positive air pressure to the chamber through one of the access tubes, forcing any collected water to the surface through the second access tube for sampling.

Master Logbook

The master logbook is a controlled document used for recording the creation, assignment, custody, and status of all field log books.

Matrix Spikes (MS)

MS are aliquots of samples to which known amounts of an analyte have been added. Stock solutions used for spiking should be purchased or prepared independently of calibration standards. Spikes are prepared and analyzed in each batch of samples and are subjected to the same preparation/extraction procedure and analysis as the samples in question. Spike recovery measures the effects of interferences from the sample matrix and reflects the accuracy of the determination. Spike recoveries are calculated as follows:

$$P = \frac{100(A - B)}{T},$$

where:

P = Percent spike recovery,
A = Concentration determined on spiked sample,
B = Concentration determined on original unspiked sample, and
T = True value of spike added.

Matrix Spike Duplicate (MSD)

An MSD measures the accuracy of the determination and the matrix effects as described in Sections 4.12 of this SOP, as well as repeatability or Relative Percent Difference of the measurements described in Section 4.19. The MS and MSD are aliquots of the same sample spiked with identical concentrations of target analytes. The MS and MSD are analyzed sequentially.

Measuring and Test Equipment (M&TE)

Devices or systems used to calibrate, measure, gauge, test, or inspect in order to control or acquire data to verify conformance to specified requirements.

Method Blanks

Method blanks consist of organic-free or deionized water (or clean sand for soil testing) carried through the analytical scheme like a sample. They serve to measure contamination associated with laboratory storage, preparation, or instrumentation.

monitor

A UNIX command that executes an application program providing convenient access and menu-selected functions for the monitor tables within the EPDData database.

Monitor Tables

A set of data tables in the relational database EPDDATA used by ERD for storage and retrieval of sampling location and analytical data results generated in environmental sampling and analysis activities.

MS Excel

The product name of a spreadsheet software application.

MS Word

The product name of a word-processing software application.

Multipath Error

A positioning error resulting from interference between radio waves that have traveled between the transmitter and the receiver by two paths of different electrical lengths.

New Data Log Table (new_data_log)

A data table where log numbers, CoC access numbers, and date of receipt for analytical results are recorded electronically.

Nonconformance

A deficiency in characteristic, documentation, or procedure that renders the quality of an item or activity unacceptable or indeterminate. Examples of nonconformance include: physical defects, test failures, incorrect or inadequate documentation, and deviation from prescribed procedures.

Ohm

The unit of electrical resistance one ampere of current will flow when the potential difference across the material is one volt.

Ohm-Meter

The standard unit of measurement for electrical resistivity logs. An ohm-meter is the resistivity of one cubic meter of material, which has a resistance of one ohm when electrical current flows through the material.

OpenIngres

The product name of the relational database management software package used to maintain EPDData and the Gemini databases.

ORAD

The Operations and Regulatory Affairs Division.

Organic Vapor Analyzer (OVA)

An OVA is used to measure total organic vapor concentration is a gas stream. Two different models were used in these studies. The first is a FID (flame ionization detector) and the second is a PID (photo ionization detector).

Organic Vapor Meter (OVM)

The OVM is a broad category of instruments which can determine total volatile organic compound concentrations in vapor. FID and PID meters are commonly referred to as OVMs.

Other Employees

Personnel other than authorized or affected employees whose work is or may be in an area where lockout and tag procedures may be used.

Outlier

In the context of environment sampling, an outlier is an analytical result that is substantially inconsistent with other associated results. For example, if nearly all of the TCE results at a particular location are between 30 and 50□g/L, then a single result of 250□g/L would be an outlier.

Outside Subcontractor

Service and maintenance contractors, construction contractors, salvage contractors, and labor-only contractors.

Parameter Code Designator

Person designated to create parameter codes. This person should have sufficient database and chemistry knowledge to distinguish between chemical names and possible duplicates

Payroll Supervisor

This person is administratively in charge of authorized employees assigned to perform maintenance, including lock out and tag of equipment. The payroll supervisor provides training and assigns activities to authorized employees, maintains a list of their names and has access to their training records, and is usually the person who writes the authorized employee's performance appraisal. A payroll supervisor may also be the functional supervisor or an authorized employee.

PDOP (Position Dilution of Precision) Mask

The highest PDOP value at which a receiver will compute position.

PDOP (Position Dilution of Precision) Switch

The PDOP value at which a receiver switches from computing 3D positions to computing 2D positions (used only in Auto 2D/3D mode).

Percent Relative Standard Deviation (%RSD)

A measure of precision.

$$\%RSD = \frac{100}{\sqrt{2}} * \frac{\sqrt{2}|R1 - R2|}{(R1 + R2)}$$

where:

R1 and R2 = The reported concentrations for each duplicate sample.

Permeability

The ability of a sediment or rock to transmit ground water or other fluids through pores, cracks, and/or fractures.

Personnel Protective Equipment (PPE)

PPE is used to protect the body against contact with known or anticipated environmental, chemical, electrical, radiological, or mechanical hazards. PPE has been divided into four categories (A, B, C, and D) according to the degree of protection needed, Level A being the highest degree of protection. PPE includes protective equipment for eyes, face, head, and extremities in the form of protective clothing, respiratory devices, protective shields, and barriers.

PETREX

PETREX is a patented name used by the Northeast Research Institute for a passive soil vapor collector that utilizes a carbon adsorbent contained in a glass housing that is capable of detecting trace amounts of volatile organic compounds in soil vapor.

Photoionization Detector (PID) Meter

A portable field instrument used to quantify purgeable aromatic compounds such as benzene, toluene, and xylene in vapors, but is also useful for other organic compounds. It is most effective on unsaturated compounds containing double bonds. The PID works by directing UV light onto the molecules, ionizing them, and measuring the current generated. The measured current is directly

proportional to the number of ionized molecules, so the concentration of the compound(s) can be determined. It is usually calibrated against isobutylene, but can be calibrated using a compound of interest such as trichloroethene (TCE). However, this devise is not compound specific and its measurements represent an aggregate concentration of all compounds that are ionized and detected. Response factors can be changed to target specific compounds. This device is sensitive to moisture, therefore moist vapor streams should be analyzed using an alternate instrument such as an FID meter.

Piezometer

A small diameter monitor well (typically 2" or 4.5" in diameter) primarily used for the purpose of determining ground water elevation.

Portable GAC Canister

Carbon canisters of 55 gallon size or smaller which are not anchored to the base and which can be moved by a couple of technicians.

Position Dilution of Precision (PDOP)

A unitless figure that expresses the relationship between the error in user position and the error in satellite position. Good values are small, less than 3. Values greater than 7 are poor. A small PDOP indicates widely separated satellites, ensuring better accuracy.

Potential of Hydrogen (pH)

The hydrogen ion concentration of water is expressed as pH. The pH is measured on a scale from 0 to 14. It is a measure of the acidity or alkalinity of a solution, numerically equal to 7 for neutral solution. A pH less than 7 indicates an acid solution, whereas a pH greater than 7 indicates an alkaline solution. The pH is related to the hydrogen-ion concentration as follows:

$$pH = - \log [H^+]$$

ppb

Parts per billion (ppb) as used in this document is a unit of concentration in a gas based on a volume to volume ratio. Ppb refers to the volume of pollutant or compound per billion volumes of air (1 ppb = $1 \cdot 10^{-9}$ m^3 analyte/m^3 air).

ppm

Parts per million (ppm) as used in this document is a unit of concentration in a gas based on a volume to volume ratio. Ppm refers to the volume of pollutants or compound per million volumes of air (1 ppm = $1 \cdot 10^{-6}$ m^3 analyte/m^3 air).

Practical Quantitation Limit (PQL)

The PQL is approximately five times the method detection limit and represents a practical and routinely achievable detection limit with a relatively good certainty that any reported value is reliable.

Precision

The agreement among a set of replicate measurements without assumption of knowledge of the true value. Precision is estimated by means of duplicate/replicate analyses. The most commonly used estimates of precision are the percent relative standard deviation (RSD) 4.16 of this SOP, and relative percent difference (RPD) 4.19 of this SOP.

Pressure Transducers

Pressure transducers are devices to measure hydrostatic pressure, which can be converted to ground water elevations. A transducer is designed to measure pressures over a specific range of submergence. Outside this range, measurements will not be accurate, and the transducer can be damaged if submerged to depths exceeding the design range or subjected to negative pressures.

Procedure

A sequence of events described in an approved document which specifies how an activity is to be performed; the methods used; any specific equipment or material requirements; the sequence of operations; and how data is collected, recorded and reported.

Procedure Writer

A person assigned to develop a procedure that specifies or describes how an activity is to be performed.

Programmatic Equipment

Equipment used for programmatic purposes, including lasers, power supplies, vacuum pumps, and walk-in refrigerators. This type of equipment may be maintained by programmatic personnel, or the program may have an arrangement with Plant Engineering for maintenance.

Pseudorandom Code

A code that appears to be randomly distributed, but is a complicated repeating pattern of 1s and 0s.

QBF

Query By Forms. An INGRES utility used for retrieving data from an INGRES relational database.

Quality

The degree to which an item or process meets or exceeds the user's requirements.

Quality Affecting Activities

Activities that, if not performed properly, could compromise the validity of information or data, could result in unacceptable risk to the radiological or environmental health or safety of the public or the workers involved, or could have a detrimental effect on the achievement of the prime objectives of the Laboratory.

Quality Assurance (QA) Record

A completed record or any authenticated portion of a record that provides objective evidence of the quality of items or activities.

Quality Control (QC) Data

A report of data used to evaluate the validity of analytical results, determining the quality of the analytical data.

Quality Control Samples

Samples that are introduced during the different phases of the data collection process to monitor the performance of the system.

Radioactivity

Radiation, including alpha particles, beta particles or electrons, and/or gamma rays emitted as a consequence of spontaneous nuclear reactions and/or decay of unstable isotopes.

Rawhiding

The process of pulsing compressed air into formation ground water in the screened interval of a well to loosen trapped fine sediment in the filter pack. Air pressure is increased for several seconds, then decreased suddenly. This process causes the column of water in the well to rise and fall, breaking fine sediment and drilling mud free from the filter pack.

RCRA Characteristic Waste

A waste which exhibits ignitability, corrosivity, reactivity, or toxicity.

Records Center (Division)

A facility, or area within a facility, designated as ERD's storage site for QA Records.

Redox Potential (Eh)

The potential for water to either oxidize (loss of electrons) or reduce (gain of electrons) dissolved constituents. Readings are made in millivolts.

Redox Potential (Eh)

Eh is a measure of a chemical reaction in which an atom or molecule loses electrons to another atom or molecule. The reaction is also known as oxidation-reduction. Oxidation is the loss of electrons, while reduction is the gain in electrons. The redox potential of water is measured in millivolts (mV).

Relative Percent Difference (%RPD)

$$\frac{(R1 - R2)}{\left[\frac{R1 + R2}{2}\right]} \times 100$$

where R1 and R2 are the result of analyzing replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate.

Relative Response Factor (RRF)

RRF is the calibration factor calculating the response versus peak area as compared to a known internal standard.

$$RRF = \frac{(A_s C_{is})}{(A_{is} C_s)},$$

where:

A_s = Response for the analyte to be measured,
A_{is} = Response for the internal standard,
C_{is} = Concentration of the internal standard, μg/L, and
C_s = Concentration of the analyte to be measured, μg/L.

Repeat Section

A quality assurance/quality control (QA/QC) procedure to evaluate the repeatability of the geophysical measurement. Generally, an interval of 50 ft or greater is logged twice and compared for repeatability.

Replicate Samples

Replicate samples are samples that have been divided into two or more portions at some step in the measurement process. A sample may be replicated in the field or at different points in the analytical process.

Rover

Any mobile GPS receiver collecting data during a field session. The receiver's position can be computed relative to another, stationary GPS receiver.

Safety Watch

A person designated and assigned by the functional supervisor to assist an authorized employee in performing maintenance or service on equipment that has no lockout attachment. This person shall be posted at an unlocked energy-isolating device to ensure that the device is not operated for the duration of the operation. The safety watch shall have no other duties, nor shall he/she leave his/her station for any reason, except when formally relieved from duty or for personal safety.

Sample

A representative fraction of material tested or analyzed in order to determine the nature, composition, and percentage of specified constituents, and possibly their reactivity (e.g., environmental samples, blanks, etc.).

Sample Blanks

Sample blanks should be used when characteristics such as color or turbidity interfere with a determination. In a spectrophotometric method, for example, the natural absorbency of the sample is measured and subtracted from the absorbency of the developed sample.

Sample Port

Valves with outlet through which water or gas samples are collected.

Sample Ts

A device composed of PVC pipe and Teflon tubing. It is attached to the discharge line of a submersible pump that allows the majority of the discharge to flow in the direction of the collection container or ground surface, as applicable, but allows a less turbulent flow of ground water through Teflon tubing for sample collection.

SAS

The product name of the statistical analysis and graphics software package used to identify and review outliers.

Scintillation Detector

A device for counting and recording frequency and intensity of light flashes (scintillations) emitted in certain media by absorption of ionizing particles or photons.

SEAMIST

SEAMIST is a brand name for some borehole liner systems used at LLNL. It stands for Science Engineering Associates Membrane Instrumentation System Technology. Science Engineering Associates no longer supplies these systems. Some of the SEAMIST systems used at this site were made by ECE Technologies of Houston Texas.

Selective Availability

Artificial degradation of the satellite signal by the Department of Defense. A DoD program to control the accuracy of pseudorange measurements, where the user receives a false pseudorange in error by a controlled amount. The error in position caused by S/A can be up to 100 meters. Differential GPS techniques can reduce these effects for local applications.

Service or Maintenance

Workplace activities that may include constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining or servicing machines or equipment. These activities include lubricating, cleaning, or unjamming machines or equipment and making adjustments or tool changes where personnel may be exposed to the unexpected energization of the equipment or release of hazardous energy.

Shiner

A metal tag fixed to the monitor well's cement pad indicating the location that was officially surveyed, providing the coordinates and elevation of the location. The tag is stamped with the monitor well's ID.

Single Blind Samples

A single blind sample is a performance evaluation (PE) check sample submitted to the laboratory. The laboratory knows it is a PE but does not know the analyte concentrations.

Slug/Bail Test

A slug/bail test measures the recovery of the ground water level in a well due to an instantaneous change in pressure.

Soil Surface Flux

Soil surface flux is the rate of exchange of one or more gases between soils and the atmosphere. An emission isolation flux chamber is used to measure this rate by placing the chamber on a soil surface and purging the air inside the chamber with pure sweep-air at a known rate. Gases which diffuse from the soil surface enter the emission isolation flux chamber and mix with the sweep air. By measuring the concentration in the chamber of each target gas once the chamber is at equilibrium, the flux rate ($mg \cdot m^{-2} \cdot min^{-1}$), may be calculated with the following formula:

$$F = (SR*C) / A$$

where

F = Flux rate ($mg \cdot m^{-2} \cdot min^{-1}$),

SR = Sweep Rate ($m^3 \cdot min^{-1}$),

C = Concentration of analyte ($mg \cdot m^{-3}$), and

A = Basal area of the flux chamber (m^2).

Soil Vapor Survey

A technique for the collection and analysis of soil vapor conducted to determine the presence of subsurface contamination of volatile and semivolatile compounds.

Solar Treatment Unit (STU)

A ground water treatment unit which uses solar power to pump water for treatment through carbon beds.

Soluble Threshold Limit Concentration (STLC)

A State of California method and value that can be used to determine if a waste is hazardous. Specifically, the STLC is the concentration of a solubilized and extractable bioaccumulative or persistent toxic substance as determined by the California Assessment Manual, Waste Extraction Test (CAM WET), which if equaled or exceeded in a waste or waste extract, renders the waste hazardous.

Sonde

The borehole geophysical measurement device lowered into boreholes and/or cased wells for measuring the physical properties of the geological materials penetrated by the borehole.

Sorbant-pads

Sorbant-pads are affixed to the outside of an IMT membrane and are used to collect and retrieve soil pore-water samples for laboratory analysis. If the sorbant-pad membrane is equipped with electrode pairs under each sorbant-pad, the electronic resistance of each pad can be measured and logged. These resistance values can be used to may make estimates of soil moisture content.

Source-to-Detector (or Transmitter-to-Receiver) Spacing

The distance between an electrode, radioactive source, coil or acoustic transmitter, and the receiver or detector.

spact

A set of data tables in the relational database EPDData used by ERD to store and retrieve data generated in the sampling plan and chain-of-custody tracking activities.

Specific Capacity

Specific capacity is an expression of the productivity of a well obtained by dividing the rate of discharge (Q) by the drawdown (Δs) of water in the well. Specific capacity should be described based on the number of hours of pumping prior to the time the drawdown measurement is made.

Specific Conductance

A measurement of the electrical conductivity of water. Specific conductance is measured in microhmos per cm and is a function of ion concentration.

Specific-Depth Grab Sample

In instances where the task leader has indicated that a grab sample is adequate, a specific-depth grab sample may be substituted for the standard 3 casing volume pre-sample purge, or other low-volume techniques. These devices, such as the EasyPump are designed to capture a sample from a specific point within the screened interval of a well using low voltage pumps and disposable sample capture attachments.

Specific-Depth Grab Sampling Device

A specific-depth grab sampling device, such as the EasyPump, is commonly used in wells exhibiting characteristics that do not allow for significant pre-sample purging techniques (>90% of one casing volume), or where it is believed that a representative sample can be collected with minimal pre-sample purging. This device incorporates a disposable sample capture chamber (specially modified, double-check valve bailers). It is equipped with a low-voltage pump at the top of the bailer which pulls water through the sample capture chamber.

Split Samples

Split samples are replicate samples divided into two portions, sent to different laboratories, and subjected to the same environmental conditions and steps in the measurement process.

SQL

Structured Query Language. A language used for retrieving data from a relational database.

Stove Pipe

A lockable, steel enclosure that prevents unauthorized access to above-grade completed monitor wells. The well ID is painted on the stove pipe for easy identification.

Stratigraphic Unit

A discrete unit or section of sediment or rock identified primarily by material with similar characteristics.

Strike

The angle between true North and the horizontal line contained in any planar feature (inclined bed, dike, fault plane, etc.); also the geographic direction of this horizontal line.

Surface Soil

Surface soil is defined as the top six inches of soil.

Surge Block

A well development device composed of one or more round rubber seals attached to a rod. The rubber seals are similar to the diameter of the well casing. As the rod is lowered and raised, a suction is created which helps to loosen and pull the silt and clay fines into the well. The fines then can be removed by pumping or bailing.

Surrogates

Surrogates are measured amounts of certain compounds added before sample preparation or extraction. Analysts measure the recovery of the surrogate to determine systematic extraction problems.

Sweep Air

Sweep air is contaminant free air used to exchange or "sweep" the air inside the flux chamber at a known rate. Sweep air may be provided in the form of ultra-pure "zero air" pressurized gas cylinders with a pressure regulator, or in the form of pumped ambient air filtered through activated carbon and desiccant columns. Accurate measurement of the sweep flow rate is essential to calculate soil vapor flux.

Tag

An approved LLNL form that can be securely fastened to an energy-isolating device with a lock and in accordance with procedures established in the LLNL Lockout and Tag Program. This tag indicates that the energy-isolating device and the equipment being controlled shall not be operated until the lock and tag is removed.

TeachText

The product name of a text editor software application.

Telnet

The product name of a terminal emulation software application.

Temperature Blank

A temperature blank is a container of water placed in the sample shipping container that the receiving laboratory measures to determine the water temperature, which indicates sample integrity and preservation.

Testing

Determination that machinery, equipment, or equipment parts are de-energized. This involves the use of approved, properly operating test equipment designed for and capable of determining if any energized conditions exist.

Thermistor

A thermistor is a thermal resistance device. The electrical resistance across this device changes proportionally with changes in its temperature. A properly calibrated thermistor can report temperatures with resolutions of less that 0.1^{o} C. Thermistors were used in these studies because of their raggedness, ease of measurement and immunity to electrical noise.

Thermocouple

A thermocouple is an electronic device used to measure temperatures. These measurements are based on the premise that a small current will flow through the junction of two dissimilar metals that is proportional to the difference in temperature between the junction and the other end of the wires. The output from a thermocouple is only 1 or 2 millivolts. Signals with this magnitude are difficult to measure accurately and are subject to any type of electronic noise in the vicinity. When using these devices, extreme care must be taken to properly account for the temperature of the thermocouple wire pair at the data logger.

Time Constant

The time in seconds a gamma ray detector accumulates gamma ray emissions (counting time) to establish count rates.

Toxicity Characteristic Leaching Procedure (TCLP)

The TCLP is a U.S. Environmental Protection Agency (USEPA) analytical method designed to determine the mobility of both organics and inorganics in liquid, solid, and multiphase waste. It is used to determine applicability of Land Ban regulations to a waste.

Transducer

Transducers are devices used to measure some physical parameter, such as pressure or temperature, and convert these measurements to an electrical signal.

Tremie Pipe

A section of small diameter pipe, usually composed of polyvinyl chloride (PVC) tubing, which is used when adding sand, bentonite, or grout into the annulus of the borehole around the well casing so the annulus is filled from the bottom up. This helps to prevent bridging.

Trilateration

The process of determining a distance of an unknown location to four known reference points. This enables the 3D position of an unknown location to be computed.

Trip Blank

A trip blank consists of deionized (DI), nitrogen-purged or laboratory demonstrated analyte-free water prepared and provided by the contract analytical laboratory (CAL). Trip blanks are placed in the ice chest with the samples, transported to the field during sample collection, and then to the laboratory along with the samples. Trip blanks are not to be opened in the field; otherwise they are to be handled and analyzed for volatile organics in the same way as samples acquired that

day. Trip blanks act as an indicator of sample contamination through handling, preservation, and shipping.

Tritium

A radioisotope of hydrogen, hydrogen-3 (^3H). A tritium atom contains one proton and two neutrons. It emits low-energy beta radiation and is relatively short-lived, with a half-life of approximately 12.3 years.

Turbidity

A measurement of water clarity.

Turnaround Time

The time span between the submittal of samples to the analytical laboratory and the receipt of results.

Update Logbook

A controlled logbook used for documenting all update activity performed by EPD DMT personnel in the EPDData Database.

User

ERD or other designated programs.

Verification

The act of evaluating and documenting whether processes, items, services, or documents meet specified requirements.

Verify

Operating equipment controls for the purpose of determining that equipment cannot be restarted after an energy-isolating procedure has been performed and before maintenance or repair work is initiated.

Vertical Resolution

The minimum thickness of a geologic unit that can be resolved by a particular geophysical measurement. Vertical resolution is related to source-to-detector spacing, and the physics of the individual measurements.

Volatile Organic Compounds (VOCs)

A group of organic compounds characterized by their tendency to evaporate easily at room temperatures (e.g., gasoline, paint thinners, and nail polish remover).

Volatilization

The rapid loss of compounds through evaporation at ordinary temperatures.

Walk-about

A walk-about is an informal assessment used to help management better understand the work being done, and increase his or her visibility and availability in an informal work setting, hear first hand employee concerns and comments and receive input/feedback, observe working conditions and practices, and recognize accomplishments and acknowledge good work practices.

Well Disinfection

Each well that is designated as part of the network to be sampled for total and fecal coliform bacteria must be disinfected prior to sampling. These wells will be disinfected by using a disinfectant containing at least 100 mg/L of available chlorine.

Well Screen

The section of the completed well with perforations in the casing that allows water to flow into the casing.

Wlithologic

A personally owned working table in EPDData used while processing lithologic data in preparation for appending it to the global lithologic table.

Wonderland

The Wonderland domain is a distributed computing environment or netgroup sharing controlled access to hosts and resources such as disk space, printing and automated backup services.

Working Tables

Tables within the EPDData database which are owned by an individual's personal account.[1] All working table names begin with a "w," e.g., wsample, wanalysis. Data within such tables can only be accessed by the individual owner and is not yet part of the globally accessible data in the database.

[1]All working table names begin with a "w", e.g., wsample, wanalysis.