

Diné Language Translations of Tronox-Specific Terminologies



Diné College with USEPA 2018

Diné Language Translations of Tronox-Specific Terminologies

Developed under Cooperative Grant 99T54301o
Diné College/NSF-TCUP Grant

Under Contract by

Creative Projects Associates LLC,
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Printing of this book was made possible under Cooperative Grant 99T543010 NSF-TCUP Grant.

Acknowledgement Page

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Forewords:

The sacred language we were once forbidden to speak is the same sacred language that saved our Nation and now restores harmony and balance to the Diné and their lands.

Perry H. Charley

Yini dilyin idéé'niigo Diné bizaad nihizéé'déé'
diits'a'go choinil'í. Diné uses the language in a holy sacred way, our elders say, as sounds of our language come out of our mouths, we can destroy life. Use the newly developed translations carefully as you talk about the earth and the land we live on.

Martha Austin-Garrison

Long live Diné Bizaad

Elsa Johnson

Working with words and concepts involving two languages necessitates clear understanding of the details of a concept to the point of seeing with the mind's eye what the language describes. Hence it helps to see a visual and hear language that unpacks highly formalized words. Also the semantic fields of a word helps to focus on the specific aspect to be communicated. Science terminology is a straight forward expression of the nature and powers of the natural world.

Diné Scientist Perry H. Charley and Engineers Samantha Lapin and Dale Atkinson provided definitions that allowed me to choose Navajo words and phrases so necessary for the community to understand the dynamics of contamination and cleanup. Diane Schmidt provided valuable editorial and overall style direction and support.

Frank Morgan



Introduction

The concept of Healing from a Diné holistic experience is that the Diné lives interconnected with the natural environment and are guided by their ancestral teachings with the overarching philosophy of *Sa'ah Naaghái Bik'eh Hózhóón*. This is the foundation of teaching and learning, which explains the Diyin Dine'é life, the mistakes and struggles of hardship, the chaos and harmony (*Hashkééji doo Hózhóqji*). These are key principles to understand and recognize what is referred to as Naayéé' which are the disturbances/disorders of the natural world and the universe created by human misconduct. These key principles provide the method to seek restoration in the natural world and the universe.

As such, all life forms within the natural world must be treated with utmost reverence with the understanding of their natural order and properties. The ongoing Tronox assessment provides the mechanism to seek healing and restoration (*Hózhóqji*). In doing so, we propose to integrate the Diné approach with the Western approach to seek restoration through the Tronox settlement activities.

A critical component of the Cove Watershed Assessment Project was the development of Diné glossary of Tronox specific scientific terminologies. This guide contains Diné language translations of Tronox-specific scientific and technical terminology and is intended for Navajo translators, the affected communities, scientists, researchers, students and clinical practitioners.

Under the terms of the Tronox Settlement Agreement, all work, including this Contract, will be specific to the Agreement. USEPA – Region IX has provided the list of terminologies to be developed, attached. Since this is specialized field, DC will do a sole source contract with Creative Projects Associate, LLC.

The Navajo language is held sacred by the Diné. It must be used by non-Native specialists to understand and respect the Navajo language. In Diné culture and tradition, the spoken word is powerful and becomes a reality and therefore all must be mindful and careful of what is spoken. Dominant societal concepts and terminologies cannot be explained well by mere use of literal translations by referring to that society's perspectives.

The Diné developers and interpreters are familiar with the Navajo way of thinking and understanding. Very few people retain this degree of positive understanding of the Diné language. When terminologies and glossaries are developed with the context of positive kinship, thinking, hope and compassion, it fulfills the mission of harmony, healing and restoration. This is an integral part of the concept of the Diné concept integrated into the USEPA's concept of CERCLA remediation and cleanup of contaminated lands.

Perry H. Charley

5-Year Review: Five-year reviews (FYRs) generally are required by CERCLA or program policy when hazardous substances remain on site above levels that permit unrestricted use and unlimited exposure.

(NOTE: Five-year reviews provide an opportunity to evaluate the implementation and performance of a remedy to determine whether it remains protective of human health and the environment. Generally, reviews take place five years following the start of a CERCLA response action, and are repeated every succeeding five years so long as future uses remain restricted. Five-year reviews can be performed by EPA or the lead agency for a site. EPA retains responsibility for determining the protectiveness of the remedy.)

- Ashdla' nínáhahgo bááhádzidii ba'át'e' hóólchxq 'gi bááhádzidii t'áá bilááhgóó na'alkidgo ákwe'é hólónígíí nídanel'íh éí ákwe'é haz'ánígíí choo'ínígíí doo ni' ályaadago dóó béé'áldahígíí doo bich'ááh niki'dii'áadago óolzin.

95% Upper Confidence Limit on the Mean (UCL):

A level we are confident that will assure protection of human health when we calculate risks and hazards.

(NOTE: A number that one can be confident that the true mean (average exposure) concentration of the population is below that value.)

- Bíla'ashdla'ii haada néelt'e' kééhat'íinii bááhádzidii ba'át'e' atíbidoolíílii dóó bihodidool't'ihii haashíí néelt'e'go hólóqogo yénakahígíí baa nitsáhákeesgo náhást'édiin dóó bi'aa ashdla' lichíí', sindáo (95%) bííghahdi doo naaki nilííqóó, doo sha'shingóó doo átíbidoolíílda hwiinidzin.

Acceptable (as in, risk): Acceptable risk refers to the level of human and property loss that can be tolerated by an individual, household, group, organization, community, region, state, or nation.

(NOTE: The concept of acceptable risk evolved partly from the understanding that absolute safety is generally an unachievable goal, and that even very low exposures to certain toxic substances may confer some level of risk.)

- Bááhádzidii atí'doolíílii t'áá altsogóó dahóló éí biniinaa ihodidool't'ihígíí t'áá álahjji' ashja'ósin éí baa ákozhnízin. Bíla'ashdla'ii dóó kéyahda, bee da'iináaniida, dóó t'áá ha'át'ííshíí ilííqo baa nitsáhákeesii haghaiyídláago haashíí níftso ninázhdidoo'áałgo nitsídzíkees.

Accessible/Inaccessible: Easily approached or entered/ not easily approached or entered.

- Baa honít'i'/doo baa honít'i'da
- Biih hóót'i'/doo biih hóót'i'da

Accumulate: To gather or pile up; amass; increase.

- Ahą'áaniił; álah silíí'; yanáa'á silíí'; łá silíí'; ayóí ánéeláá' silíí'; ahaniní'éeł; bił niheeyol.

Action level: The numerical value that will cause the decision maker to choose one of the alternative actions.

(NOTE: It may be a regulatory threshold standard (e.g., Maximum Contaminant Level for drinking water), a dose- or risk-based concentration level (e.g., DCGL), or a reference-based standard.)

- T'áadoole'é bááhádzidii bini'doonish binahat'áago á'doolníł binahjji' baa nitsáhákeesígíí éí naat'áanii bił nahaz'áqgóó, nitsaa hadahwiisdzójída, báádahádzidii ba'át'e' atí'ál'í dóó doo atí'ál'ínigi bééhózingo ádaalyaa díi bik'ehgo bááhádzidii naalyé.

Accuracy/Accurate

- Díí éí ha'át'íida ájiléhgo ída'zhneel'aaqho da, námboo da naaltsoos bikáá' ádajile'go, math da bee nijilnishgo, nida'alcaah góne' laboratory góne' da nijilnishgo doo ni'jiisíh da. Bee ída'neel'aaqí da hazhó'ó hasht'e' naazgizgo bee nijilnish. T'áadoole'e' t'áadoo ałtaa nįjiniłi bee nijilnish doo.

Activity: Activity is a rate of decay or nuclear transformation: number of radioactive decays per second, or decays per minute, or decays per hour, etc.

(NOTE: Most atoms that make up elements like carbon for example, are stable. Some atoms that are in elements such as Uranium are unstable and spontaneously change into different types of atoms by emitting radiation. This process is called radioactive decay. The measure of the intensity of this radioactive decay measured in decays per unit of time is called Activity.)

- T'áadoole'e' báadahadziidii ba'át'e' bits'áziil dahóloonii biyi'di haashíłi néeláq'di łahgo ánat'įh haashíłi nízah nináhálzhishji' éi wólta'ígíi. Łahgo ánidoolniłígíi éi decay deiłni. Łeetso t'áa'át'e' hadaalt'éego si'áq nít'éé' łahgo áaniil yileeh, biyi'di yee hadít'éhígíi ła' nahgóó kót'įhgo łeetso łahgo át'éhígíi yileeh éi doodago béesh náána łahgo át'éhígíi nádleeh. Kót'iniłígíi éi decay deiłni.

Action Memo: A concise written record of the selection and approval of a removal action.

(NOTE: Describes the site's history, current activities, health & environmental threats; outlines the action, clean up levels and costs.)

- Hasht'ée hodoonlił bee lą azlıłi' dóó báahádzidii ba'át'e' nahgóó kódoonlił hodoo'niidígíi naaltsoos bikáá' ál'įh.

Audit: A systematic and independent examination to determine whether quality activities and related results

comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

- Naanish ádaalyaaígíi alkeé' honi'ąqgo t'óó'déé' há naalkaah dóó bii' adéest'įł' doo. Naanish binahast'ánigi át'éego alnééhígíi dóó biniiyé áhát'iniłígíi alłso ádoonliłígíi bik'eh áhodoonlił.

Administrative Order on Consent (AOC): A legal document that formalizes an agreement between USEPA and one or more Potential Responsible Parties (PRP) to address some or all of the parties' responsibility for a mined site.

(NOTE: This record also acts as a vehicle for public participation in selecting a response action. A legal agreement signed by EPA and an individual, business, or other entity through which the violator agrees to pay for correction of violations, take the required corrective or cleanup actions, or refrain from an activity. It describes the actions to be taken, may be subject to a comment period, applies to civil actions, and can be enforced in court.)

- Bee haz'ánii binahji' naaltsoos hadilyaago USEPA dóó dahóólchxq'ígíi yił ałha'deet'ánigiłi bikáa'go índa ilı yileeh éi binahji' ha'agéed nít'éé'gi báahádzidii ba'át'e' bee hóochxq' bídéet'i ii hasht'ée hodoonlił bąqah silá yileeh.

Administrative Record (AR): A document or collection of documents which form the basis for USEPA's decision, in this case the selection of a response action at a Superfund site.

(NOTE: The administrative record is not complete until it contains a decision document (e.g., Record of Decision (ROD) or Action Memorandum. All documents which EPA considered or relied on in selecting the response action

at a Superfund site, culminating in the record of decision for remedial action or, an action memorandum for removal actions.)

- Bááhádzidii ba'át'e' t'áá ałtsoní yihodiilt'i' silj'go bee hasht'ée hodoolníłii Superfund bibee haz'áanii íishjáán silj'go USEPA yee nihodoo'áál'ée náaltsoos Administrative Record (AR) wolyéego bee siltsoozgo áyíil'íh.

Administrative settlement: A special notice letter that invites a PRP to enter into good faith negotiations and gives the PRP 60 days to provide US EPA with a good faith offer to do site work or pay for cleanup.

(NOTE: If the PRP provide a good faith offer, there is generally another 60 days for negotiation. If the PRP does not submit a good faith offer at the end of 60 days, EPA may start the cleanup work or issue a unilateral administrative order, requiring the PRPs to do the work.)

- Bááhádzidii yee dahóólchxq'ígíí náaltsoos bich'i' ál'íh'ée hastáadiin yiskáajj' nihodoot'áałgo t'áadoo t'óó áhá'níní atah baa nídajit'íigo ałhadazh'didoot'áál'ée łahdóó binidazhdoolnish'ée doodago bik'ée nidazhdooléél kót'éego US EPA bee bił nídahozhdoolnih.

Adverse (as in adverse effects): Any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.

- Yá'áhoot'éehego haz'áagi t'áá át'ée nít'ée' yéego hodoochxqł. Nihookáá' dóó táyi' dahináanii dóó nanise' dóó hináanii baa dahóch'i'ii atíidoolíł.

Airborne: Carried by or through the air.

- Bił ních'i, Bił níyol.
- Níłch'i bitah.
- Hót'áahdi dah shoogish.

ALARA (Acronym for As Low As Reasonably Achievable): It means making every reasonable effort to maintain exposures to ionizing radiation as far below the dose limits as practical using time, distance and shielding.

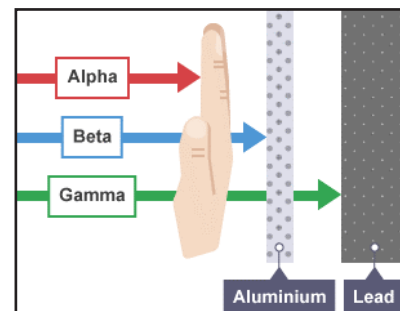
(NOTE: A basic concept of radiation protection which specifies that exposure to ionizing radiation and releases of radioactive materials should be managed to reduce collective doses as far below regulatory limits as is reasonably achievable.)

- Báádahádzidii ba'át'e' bits'áziil ni' óolzingo hóyahdi nida'alkidgo álnéhego bina'anish.
- Bááhádzidii ba'át'e' bits'áziil béé'áldahígíí t'áá bíhonéé'ąądigi t'áá át'ée ni' ádoolníł.

Alpha particle: Alpha (α) particle, is a heavy charged particle, that comes from the decay of the heaviest radioactive elements, such as uranium, radium and polonium.

(NOTE: Even though alpha particles are very energetic, they are so heavy that they use up their energy over short distances and are unable to travel very far from the atom.)

- T'áadoole'ée nahasdzaán biyi'déé' béesh danidaazii łetso ał'ąą'ée doolníłgo bits'áziil danidaaz dóó danitsaago bits'áshígish.



Alkalinity: A quantitative measurement of the ability of an aqueous solution to neutralize an acid.

- Tó t'áadoole'é bitah ályaago bee ha'át'iida da'dilidígíí haada níłtsogo néidooshqoł bí'neel'aqhígíí.
- Łeeyáán éi doodago táání' tó bitahgo da'dilidii tó náyooshqołgo bee tó yá'át'ééhígíí.
- Tsé łeeyáán (bicarbonate rock) dabitahígíí tó náyooshqołgo bee tó yá'át'ééhígíí.

Amplify/Amplifier: Something that expands, makes larger, greater, or stronger. It makes something more toxic to public health. Mine waste that exhibits more radioactivity that is introduced into a medium like water, air, soil can amplify public health impacts.

- Ha'át'iida t'áadoole'é nitsaago dóo náas dóo bilááh áníłtso iidoolíł éi doodago bidziilgo iidoolíłígíí. T'áadoole'é bideezla' t'ah náásidi bíla'ashdla'ii atiidoolíł. Łeetso da haageedgi tsé t'áa ákqó dahólónígíí ba'át'e' bits'áziil tó, níłch'i, łeezh bitahdi ayóo bidziil yileehgo bits'áádóo ats'íis bihodiyiit'ééh áyooolíł.

Analysis/Analyses: Detailed examination of the elements for the basis for discussion or interpretation

- T'áadoole'é naalkaahgo alts'ádaalts'i'go t'áała'í ní'ánigo danél'í dóo áadi ahił nidaalnishígíí, dóo hait'éego nidaalnishígíí, naalkaah. Díi binahj' nabik'iyáti'go áádóo náasj'í' ánáadoolnígíí bee bééhózin

Analyte: Items and material to be the subject of scientific study.

- T'áa ha'át'iida nidoolkah biniiyé shóozt'e'ígíí.
- T'áadoole'é nidoolkah biniiyé ha'át'iida biyi'déé' haalyáago.

Analyze: To examine methodically by separating into parts, constituent parts, and studying their interactions.

- Ha'át'iida t'áa si'áá nít'éé' yee hadít'éhígíí alts'ádaa'nilgo ahił nidaalnishígíí naalkaah.

Anomaly: Deviation or departure from the usual or common order, rule, or form.

(NOTE: One that is peculiar, irregular, abnormal, or difficult to classify.)

- Ha'át'iida yił ahedaalt'éego bił haz'ánée doo át'éhéegi át'éeda, łahgo ádzaa.

Anthropogenic: Environmental pollution originating from human activity.

- Nihinaagóo haz'ánígíí biyi'di dóo bikáa'góo hodoochxqołígíí bíla'ashdla'ii bits'áádéé' hazl'í'ígíí.

Approximate/Approximately: Almost exact or correct; very similar; closely resembling; to come close to be near; to bring near together.

- K'asdáá' t'áa ákót'é.


Aquatic: Taking place in or near the water.

(NOTE: Consisting of, relating to, or being in the water; living or growing in, on or near the water.)

- Tó bídéet'i' éi doodago táyi' hóló.

Aquifer: An aquifer is an underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

- Ni' bitl'áahdi séi dóo tsézéi bitahgóo tó dah dahidéyí.



Arbitrary: A decision based on random choice or personal whim, rather than any valid reason or system.

- Doo hazhó'ó baa nitsáháskéezda éi doodago bee haz'áanii doo bik'ehgo tshodeeskéezgo t'óó tsxííłgo hodeest'á.

Area: A portion of a larger site selected for a specific reason, i.e., assessment.

- Haashíí honíłtso kéyah bits'át'áago ákwe'é naanish ádoolníł.

Area of elevated activity: An area over which residual radioactivity exceeds a specified value $DCGL_{EMC}$

- Nohokáá' haz'áagi t'áadoole'é bits'áziil ba'át'e' doo atí'ál'ínigi bee bí'neel'áahí sigizígíí ($DCGL_{EMC}$) biláahdi na'alkid yileehgo.

Assessment: Multidimensional approach to assess, to evaluate, investigate to form a scientific opinion and summary.

- Haa'ída haz'áagi t'áa altso bikáa'gi hólónígíí dóo choyool'ínígíí naalkaah éi binahjí' éédidootíł.

Assume: To consider to be true without proof.

- Ha'át'íida t'áa aaníigo baa nitsídžíkeesgo binahjí' íiznínígíí t'áagééd.

Assumption: Something that is accepted as true or as certain to happen, without proof.

(NOTE: In science, an auxiliary hypothesis that is taken as true for the purposes of interpreting a particular test. All tests involve making assumptions. If an assumption of a

test turns out to be inaccurate, it can cause the test results to be incorrectly interpreted. However, assumptions can be independently tested to help establish their accuracy.)

- Ha'át'íida binahjí'ígíí t'áa ádingóó t'áadoole'é t'áa aaníí át'éego baa tsóhodeeskééz dóo nídiilyá.

Attributable Background: Area behind the area of interest. Man-made or natural source of radiation that attributes to overall exposure.

- Haa'ída anáhóót'i'go haz'áago binaagóó haz'ánígíí. Bááhádzidii bideezla' t'áa nihinaagóó hólónígíí dóo bíla'ashdla'ii bits'áádéé' bááhádzidii bits'áziil ákqó dahazlí'ígíí t'áa át'é alhii'jí' daaleehgo nidaalnishígíí.

Background radiation: Ionizing radiation from natural sources.

(NOTE: Such as terrestrial radiation due to radionuclides in the soil or cosmic radiation originating in outer space.)

- Kéyah bikáa'gi léétso bits'áziil ihodiyíłt'éhii t'áa álaháji' hólónígíí naalkaah.

Background candidate: The amount of a contaminant that is present in the soil that is not due to local man-made sources.

- T'áadoole'é báadahádzidii haada néelt'e'go łeezh bitahgóó t'áa bíł dahodeeyáhígíí, t'áa shiidáadii hólónígíí, bíla'ashdla'ii doo ákwe'é niiníláhígíí óolyé.

Background Threshold Value (BTV): The amount of chemicals in an uncontaminated soil in an area that any person might get in contact and is a health hazard.

(NOTE: Soil reference values (SRVs) derived based on exposure parameters and toxicity values resulted in SRVs that were estimated as being potentially below background soil concentrations (MPCA 2015) determine if the

health based SRV was below background concentrations and if necessary establish appropriate background values (Background Threshold Values or BTVs) that could be used instead of the health based SRV.)

- Haa'ída haz'áagi leezh t'áadoolé'é bąąh ádinígi ákwe'é báadahadzid ádaat'éhígíi haada néelt'e' leezh bitah silíi'go bíla'ashdla'ii yéedoogáálgíi bá baa hasti' dóo bihodidoołt'ih.

Becquerel (Bq): International system (SI) unit of activity equal to one nuclear transformation (disintegration) per second.

- Ná'oolkił tsxíi'go yilkiłgíi t'áálá'í eelkidji' (one secondji') leetso t'áálá'í si'ánígíi lahgo ánat'íhígíi wólta'go óolyé.

Bedrock: A layer of solid rock under the soil.

- Ni' bitł'áahdi tsé alk'i naazkaadígíi.

Below ground surface

- Ni' bitł'áahdi

Benchmark: A standard against which things may be compared. A point of reference; A guide.

- Bik'ehgo á'doolníłii éi doodago oonishgo bíká áhát'inií la' dooníłgíi bee bídi'nóol'ąąii.

Beneficial: Having benefit to the environment ultimately to the human.

- Kééhojit'íidóo hanaa áhoot'éhígíi yee bíla'ashdla'ii as'ah naagháagi.

Reduce, Reuse and Recycle: Three essential components of environmentally responsible human behavior.

- Kééhojit'íigi hanaagóo áhoot'éhígíi hazhó'ó chojool'íigo: a'ohgo óolzin, chonáot'í, dóo lahgo át'éego chonáánaot'í.

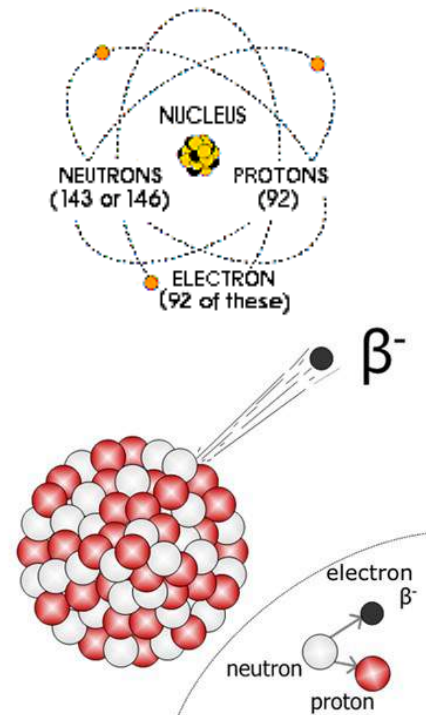
BET (Brunner Emmet Teller): Particle surface area measurement.

(NOTE: The measurement of physical absorption of gas molecule on a solid surface and is the basis of important analysis technique or measurement of a surface area)

- Hótl'izgi níłch'i bits'áádóo hólónígíi haa néelt'e'go binéshígizhígíi bí'neel'ąąh dóo naalkaahgo bee éé'deetíih.

Atom: A basic unit of matter that consists of a dense central nucleus surrounded by a cloud of negatively charged electron.

- T'áa ha'át'íishíi t'áadoole'é yee hadít'éhígíi biníi'di yéego dit'ingo bijéi si'áago bits'áshígishii bíł dah sikaad.



Beta particle: An electron emitted from the nucleus during radioactive decay.

- Atom wolyéhígíí łahgo ání' doolníłgo ba'át'e' bits'áziil bits'áshígishgo t'áadoole'é ászóólígo electron wolyéego bits'áshígishgo łá' dah diilwo'.
- Negative charge: Electron wolyéhígíí éi bitsinilt'ish shádáhjigo deiyjееhgo yee naalnish ákohgo electron t'áa' álch'ídi.
- Positive charge: Proton éi atom bijéi yee hadít'éego bitsinilt'ish shá bik'ehgo deiyjееhgo yee naalnish ákohgo proton éi łá'í.

Bias: The systematic or persistent distortion of a measurement process which causes errors in one direction. Reaching a conclusion that maybe incorrect and without scientific finding.

- T'áa' ha'át'íida t'áadoo hazhó'ó naaskaá'góo baa nitsáhaskéezgo binahji' doo ákót'éégóo nihát'ááh.

Bioavailability: Bioavailability is the measure by which various substances in the environment may enter into living organisms.

- Nihinaagóo áhoot'éhígíí bits'áádéé' t'áadoole'é ba'át'e' dahólqogo t'áa' ałtso hiinánígíí haashíí néelt'e' dóo haashíí nízahgo na'alkidgo bitahdi haleeh.

Bioavailable Boundary: The limits at which an amount of a contaminant absorbed into the body following skin contact, ingestion or inhalation can be established.

- Bááhádzidii ba'át'e' bééjyáago hakági bąąh silí'go, ajíłna'go, éi doodago bił ajíłzilgo bee haashíí néelt'e' hats'íis binishígizhígíí bee haz'áanii bá adoolníł bihónéedzá.

By product material: Any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material.

- Łeetso bits'áádóo béesh ba'át'e' choo'íigo bee na'anishgo bíghahgóo t'áa' ha'át'íida naaznilígíí bąąh hólq' nidahaleehgo áadi ba'át'e' bąąh yileeh dóo na'alkid yileehígíí.

Calculate: To ascertain by computation. To determine by reasoning, and common sense, and experience to estimate and evaluate.*

- Ha'át'íida ádanéelt'e'ígíí ahiiníizóóh dóo ałts'ádajizoh éi doodago ánéelt'e'ígíí ahąąh náhiniildeełgo bee na'anish.
- Ha'át'íida t'áa' íídąą' íishjání nilínígíí, dóo baa ákohwiinidzinígíí, dóo naanish bee éé'deetánígíí bee bí'neel'ąąh dóo naalkaah.

Calibration: 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.

- Í'neel'ąąh bibee haz'áanii bik'ehgo bee í'neel'ąąhí hasht'e' nináhagéés.
- Bááhádzidii ba'át'e' bee bída'neel'ąąhígíí choo'íigo t'áa' ahąąh hasht'e' nináhagéés áko doo ni'iidziłhda.

Cancer slope factor: Factors used to estimate the risk of cancer associated with exposure to a carcinogenic or potentially cancer causing substance.

- Ats'íis bitł'óól dah díníisééh áádóo ba'át'e' haleeh dóo bits'áádóo ihodiłt'ééhígíí béedahózinígíí choo'íigo bee ha'át'íida bits'áádóo hohodidoołt'ihii bééjyáago haidínóot'íłgo hoł naawólní.

Canyon: A narrow chasm with steep cliff walls cut into the earth by running water.

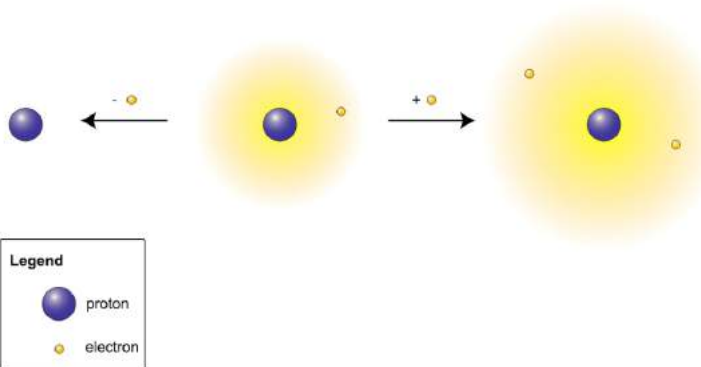
- Nahasdzaán bikáa'gi áhoołts'óózigo tó i'ígháazhgo, tó nílįgo cháshk'eh dóo ałch'ishjí nikhodii'áago.
- Tséyi'.
- Tsékooh.
- Bikooh.

Carnivore: Predatory flesh eating animals.

- Naaldlooshii nidaalzheehgo atsi' deilghałgíí.
- Naaldlooshii da'alghałgíí.

Cation/Anion: Positively or negatively charged molecules due to an unequal number of protons (+) and electrons (-), mostly one, two, or three. Cations having more protons than electrons are positively charged and anions have more electrons than protons are negatively charged.

- Atom díkwída ahidínídee'go bee tsé, éi doodago nılch'ihda nılįgo biyi'di doo hazh'ó ałch'į' naazláago, doo hadaakt'éégóó bits'áádóó bitsinilt'ish naaki ał'aa át'éego yee naalnish.
- Negative charge: Electron wolyéhígíí éi bitsinilt'ish shááahjigo deiyjjeehgo yee naalnish ákohgo electron t'áa ałch'įdí.
- Positive charge: Proton éi atom bijéi yee hadít'éego bitsinilt'ish shá bik'ehgo deiyjjeehgo yee naalnish ákohgo proton éi la'í.



CDE (committed dose equivalent) and CEDE

(committed effective dose equivalent): Dose quantities used in US systems of radiological protection for irradiation due to external source.

- Łeetso bits'áziil bich'ááh bila'ashdla'ii baa áháyanígíí dóo ats'áziil t'áa ałtso hanaadéé' hólónígíí haashíí néelt'e'go na'alkidgo béézhdoogáłgíí bee haz'áanii hólóqgo ádaalyaa.

Cell (as in, a cell in the body): The smallest structural part of living matter capable of functioning as an independent unit.

- Ats'ís bik'óq'
- Ats'ís bitł'óól

Cellular level: The level of cells that the human body is made of that combine to form tissues, organs and whole body.

- Ats'ís bitł'óól ahii' hááhinooséełgo bila'ashdla'ii bits'ís yee hadít'é.
- Ats'ís bik'óq'/ats'ís bitł'óól/iiná bitł'óól t'áała'í si'áádóó.

Chain of custody: In legal contexts, refers to the chronological documentation or paper trail, showing the seizure, custody, control, transfer, analysis, and disposition of physical or electronic evidence.

- Bee haz'áanii bik'ehgo bee éédahózinii binahji' aahwiinít'į aha'adaalyaii, t'áa yíłá bee naajaahii, dóo béésh bee ałch'į' é'él'íní, computer, bee naaltsoos ádaalyaii naajaah dóo baa áháýáago bee na'anish.
- Bee éédahózinii shódaozt'e'ígíí baa áháýáago náás yi'nił, nidaalkaah, dóo hasht'e' nidaha'níł.

Product sample Custodian: Product sample custodians are authorized through training to open shipping containers containing samples (including official samples and samples from sources other than official [inspector] collection, see 10.6), inspect a sample, place and remove samples from the sample storage area, record chain-of-custody information, prepare product dilutions, and return samples to the storage area.

- Naalnishí nidaneestáá' dóo bee bá nahaz'áago t'áadoole'é nidaalkaahígíí dóo nooh nídadoolchííígíí nideijaah dóo tádadeidiyeeh. T'áa bí t'éiyá bee bá haz'áago ąą' ídoolííł dóo yidínóoł'ííł. Nidoolkah biniiyé hasht'e daalyaaígíí tádadínídeéhgóó bééhózingo áyósin.

Characterize: To study, evaluate and assess the distinguishing feature of an environment, its features and things that can affect these aspects.

- Nihookáa' haz'ánígíí t'áa át'éé nít'éé' áhoot'éhígíí nél'íígo, t'áa kóhoníshéejí' naalkaah íiyisíí ádaat'éhígíí baa hane' dóo biniinaa anáhóót'i'ii haada yit'éego t'áa át'é yaa nídóot'ííhígíí ííshjáán ádaalne'.

Characterization survey: A type of survey that includes facility or site sampling, monitoring, and analysis activities to determine the extent and nature of contamination. Characterization surveys provide the basis for acquiring necessary technical information to develop, analyze, and select appropriate cleanup techniques.

- Kin sinilgi éí doodago haa'ída haz'áagi naalkaahgo dóo haalzíidgo bee bááhádzidii dóo ba'át'e' dahólóonii haaníłtsogo t'áadoole'é baąh dóo bitah daazlıí' éí bééhodoozıíł biniiyé t'áadoole'é náhádłááh, haalzíid, dóo naalkaah.

Classification: The act or result of separating areas or survey units into one of three designated classes: Class 1 area, Class 2 area, or Class 3 area.

- Łahgo haz'á ní'diilkáa'gi ałts'ádaadzoh dóo Class á láa'ii haz'áą góne', Class ą naaki haz'áą góne', éí doodago Class á táa' haz'áą góne' bee dawójiigo ál'ííhígíí.

Cleanup: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The term is often used broadly to describe various Superfund response actions or phases of remedial responses, such as remedial investigation/feasibility study. Cleanup is sometimes used interchangeably with the terms remedial action, removal action, response action, or corrective action.

- T'áadoole'é ayóo ba'át'e' dóo bideezla' dahólóonii nikidashigizhgo bíla'ashdla'ii bits'íis dóo t'áa haz'áą nít'éé' yihodidooł'ih bits'ąą bina'anishgo hasht'éé hodoolníł.
- Díí saad éí ał'ąą át'éego choo'ł, báadahádzidígíí ba'át'e' bits'áziil hałchxqohgo ałkéé' honí'áago binahat'á dóo hasht'éé dahalne'.
- Díí saad éí ałdó' remedial action, dóo response action, dóo corrective action deilnínígíí t'áała'ígíí ááh deilnii łeh.

Cleanup standard: A series of federal laws designed to fund cleanup of contaminated sites.

- Wáashindoon bibee haz'ánii ał'ąą ádaat'éego ályaaígíí bik'ehgo béeso choo'ıı dóo éí bee dahóochxq'góo hasht'éé dahál'ı.

Cleanup (survey) unit: A geographical area of specified size and shape defined for the purpose of survey design and compliance testing.

- Bee haz'áanii bik'ehgo kéyah bikáa'gi haz'ánígíí áníłtso dóó bináhásdzo bééhózin ályaago ákóne' ni'doolkah.

Community Acceptance Comparability: To meet with the affected community to explain the benefits of cleanup of contaminated site. The community comprises of local people, health department, elected officials, and stakeholders to reach a common consensus.

- Łahgo haz'ąągi kéyah hóóchxq'go hasht'ée hodoolníhígíí bini'doonishgo yá'át'ée hgo náhwíidoot'aal biniiyé áłah ná'ádlee.
- Łahgo haz'ąągi ha'nínígíí éi bíla'ashdla'ii ákwe'é kéédahat'ínígíí, ats'íis yik'i dadéez'í'ígíí, naat'áanii danílingíí áádóó t'áa háishíí ákwe'é ádíidéelt'i'go binaanish hólónígíí yee t'ááłá'í yileeh.

Completeness: A measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under correct, normal conditions.

- Ha'át'íida doo yidzíí'góó yéelta'ígíí (valid data) haashíí néelt'e' bee ída'neel'ąąhí (measurement system) biyi'déé' shóozt'e'ígíí t'áa át'é aha'ályaago áádóó náána nahdée' haashíí néelt'e' nawólníigo t'áadoo át'éhégóó (normal) dóó doo nihedzífhgóó (correct) shódaozt'e'ígíí bił ach'í' sinilgo ádoolnííł.

Composite sample: A sample formed by collecting several samples and combining them (or selected portions of them) into a new sample which is then thoroughly mixed.

- Łeezh díkwíigoshíí haajaa'go dóó áłah yíjaa'go (éi doodago haanéelt'e'goda bits'ádaashjaa'go) dóó áadi áłtaa násdziidgo.

Concentration: The measure of the amount of a dissolved substance contained per unit of volume; usually in water, air, soil.

- Tó biyi'di, níłch'i bitahdi, dóó łeezh bitahdi (tó dóó níłch'i dóó łeezh ádanéelt'e'ígíí bída'néel'ąądgo) t'áadoole'é nídadée'éełgóó dahólónígíí.

Conceptual site model: A description of a site and its environs and presentation of hypotheses regarding the contaminants present, their routes of migration, and their potential impact on sensitive receptors.

- Haa'ída haz'ąągi t'áa át'ée ní't'ée' áhoot'éhígíí baa hane'go ha'át'íishíí bááhádzidii ákwe'é hólónígíí:
 - » baa nítáhákeesígíí baa hane'
 - » háádéé'go dóó hait'éego ákwe'é hazlíí'ígíí baa hane'
 - » áádóó t'áa áłtso yihodidoolt'ihígíí baa hane'

Conclude/Conclusion: The final process of the basic scientific method by which scientists reveal whether the hypothesis was proven correct.

- Áłtso na'askaa'go béédahoozinígíí.
- Nídiilkáa'ígíí éi doo ákót'éeda lá/doo t'áa aaníida lá éi doodago t'áash ákót'é/t'áash aaníi lá kót'éego bína'ídíkidgo na'alkaahgo binahjí' éédahoozinígíí.

Conductivity: In soil: The measure of the soluble salts in the soil, used as an overall indicator of the level of macro- and micronutrients in the soil.

In water: Measurement of the water's ability to conduct electricity, which provides a measure of what is dissolved in water.

(NOTE: This determines higher conductivity value which indicates that there are more chemicals dissolved in the water).

- Tó bitahdi t'áadoole'é béesh dóo dadík'ózhí ádaat'éii nídadéé'éeelgo atsinilt'ish yee naha'nánígíí hólóqgo.
- Leezh bitahdi áshjìh dóo dadík'ózhí bich'ì' ch'il nidanise' dóo dahinánígíí hólóqgo bee atsinilt'ish naha'ná.

Confidence level: The confidence level tells you how sure you can be. It is expressed as a percentage and represents how often the true percentage of the population who would pick an answer lies within the confidence interval. The 95% confidence level means you can be 95% certain; the 99% confidence level means you can be 99% certain.

- Confidence level éi ha'át'íida baa nitsídzíkeesgo 95% confidence level éi náhást'édiin dóo bi'aan ashdla' hichíí' bíighahdi t'áadoole'é ba'jólígo dóo doo hoł naaki nilíída doo, 99% confidence level éi náhást'édiin dóo bi'aan náhást'éi hichíí' (sindáo) bíighahdi t'áá iyisíí ba'jólígo dóo doo naaki nilíígoó át'é jinízin doo.

Confluence: A place where two bodies of water flow together show characteristic flow patterns of confluences and how they give rise to patterns of erosion, bars, and scour pools. Confluences are relevant to the distribution of living organisms as well. The general pattern [downstream of confluences] of increasing stream flow and decreasing slopes drives a corresponding shift in habitat characteristics.

- Tó naakidéé' éi doodago díkwíddéé'shíí ahidadiilígo haz'áagi éi t'áá íshjání tsézéi dóo séi t'áá sahdii át'éego niheez'éeł dóo daní'áa leh.

Consent Decree (CD): Court decree to which all agree.

- Aadahwiinít'íidi nihoot'áago yee t'áá ałtso ałch'ì' lá da'asłíí'ígíí.

Constituent of concern: Chemicals of concern that poses serious environmental or health concerns and in some cases may present an unreasonable risk of injury to health and the environment.

- T'áadoole'é ádaalne' chemicals deiłniigo ła' yéego báadahadzid nihinaagóo nahaz'ánígíí hináanii dóo bíla'ashdla'ii bits'íis t'áadoo át'éegi át'éégóo atíidoolííłígíí.

Contaminated/Contamination: The presence of residual radioactivity in excess of levels which are acceptable for release of a site or facility for unrestricted use.

- Báadahadzidii ba'át'e' bee hóochxó'gi biláahgo na'ałkid nidi kéyah éi doodago t'áá ałtsoní choo'í t'áá bíighah ha'níigo chodayool'íinii baa nídeet'áá dóo t'áá bínízínígi át'éego choyool'í.

Contribute: To give or supply in common with others; to help bring about a result

- T'áadoole'é łahdóo áká anáłwo'.
- Haada hoot'éego łahdóo yéeda'ditsihgo.

Core sample: A core sample is cylindrical section that has been pulled from the earth usually through a drilling method.

- Nahasdzáan biyi'góyaa béesh iilgoogo éi doodago béesh bee e'e'nił áádéé' leezh éi doodago tsé hahadleehgo naalkaah.

Corrective action: An action taken to eliminate the causes of an existing nonconformance, deficiency, or other undesirable situation in order to prevent recurrence.

- Ha'át'iida biniinaa t'áadoole'é doo ákót'éégóó silj'i'go, lahgo bi'oh nidinidle'go, dóo bik'ehgo áda'al'í yéé nihedziihgo hasht'éé doolnííł dóo doo ákónáádoonííłda biniiyé bina'azhnishgo.

Cost: An amount that has to be spent to perform something, assessment, cleanup, etc.

- Ha'át'iida ádajiléehego, na'alcaahgo da, hasht'éé hálnéehgo da, dóo t'áa ha'át'íishjii álnéehgo béeso bááh adooleelígíí.

Criterion/Criteria: Descriptive factors taken into account by EPA in setting standards for various pollutants. These factors are used to determine limits on allowable concentration levels, and to limit the number of violations per year.

- T'áadoole'é t'áa íídáá' béédahózinii, factors, binahji' t'áadoole'é báadahadziidii hodoolchxqółígíí bee haz'áanii bá ádaalne'go bik'ehgo t'áa áłtso baa áháya. Bááhádzidgo ba'át'e' dahóloonii bilááhgóó ánéelt'e'go na'alکیدgo bee haz'áanii bił ni'iidziíhgií ni' óolzin.

Critical group: The group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

- Bíla'ashdla'ii díkwíida yilt'éego t'áadoole'é ba'át'e' bits'áziil t'áa áłtsoní binídashideezhgiíhgií aláahgo yéedookah bił nawólní éi ákodahoonííłgóó baa nitsáhákeesgo.

Curie: The customary unit of radioactivity. One curie (Ci) is equal to 37 billion disintegrations per second (3.7×10^{10} dps = 3.7×10^{10} Bq), which is approximately equal to the decay rate of one gram of ²²⁶Ra. Fractions of a curie, e.g. picocurie (pCi) or 10⁻¹² Ci and microcurie (μCi) or 10⁻⁶Ci, are levels typically encountered in decommissioning.

- T'áadoole'é báadahadziidgo ba'át'e' bits'áziil náhoodleelígíí, curie wolyéego na'alکیدígíí.
- Curie t'áálá'í neikidgo éi t'áa áłtsoní bee ályaii, atom wolyéhígíí bijéi biyi'di táanoodéehgo lahgo áaniihígíí, tádiin dóo bi'aan tsosts'id dimíłdi dimíł nitsaa (37 billion)

Data: Factual information organized for analysis; numerical or other information suitable for computer processing.

- Ha'át'iida naaskáa'go bits'áádóó t'áa aaníí ádaat'éego béédahoozinii aha'ályaago t'áálá'í ní'ánigo naalkaahgo binahji' t'áa át'é t'áa lahji' ahił nidaalnishígíí bééhooziijh.
- Náambo aha'ádaalyaago éi doodago t'áa aaníí béédahoozinígíí bee na'anishí computer wolyéhígíí biih yi'niłgo bee bina'anish dóo naalkaah leh.

Data Quality Objectives Process (DQAP): Qualitative and quantitative statements derived from the DQO process that clarify study technical and quality objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions.

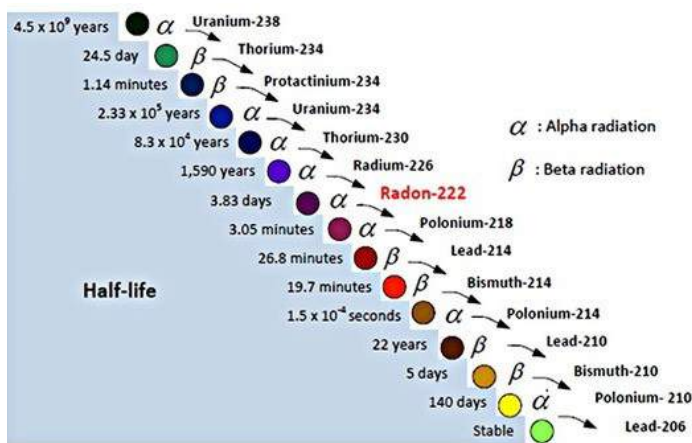
- Biniinaanii dóo biniiyéii dahólóogo t'áa ha'át'íishjii dayéelta', bída'néel'áad, nidaaskáa' dóo nídaask'áazgo bik'ehgo nitsáhákees dóo nahat'á bee adoonishígíí bee doo ajósiih át'éégóó hadidilyaaígíí.

Debris: Waste from remedial activities or waste from any activity.

- Bááhádzidii hóolchxq'gi hasht'éé hálnéehgo ts'iilzéi
- Doo chonáanéidoot'ijii
- Hasht'éé hálnéehgi ts'iilzéi nahgóó niheleehígíí.

Decay—as in, radioactive decay: The disintegration of the nucleus of an unstable nuclide by the spontaneous emission of charged particles, protons, or both. (beta rays, gamma rays, alpha particles)

- Atom wolyéhígíí, biyi'di bijéi si'ánígíí bitsinilt'ish doo áhídaneel'áada yileehgo doo bidziilda yileeh doo łahgo áni'doolníł yileeh. Ákót'íigo bijéi biyi'di bitsinilt'ish ahínídaneel'aaahgo bits'áshígishgo ba'át'e' łáago bits'áziil haleeh éi yee atí'ál'ł.



Decision maker: The person, team, board, or committee responsible for the final decision regarding proposed actions.

- Naalnishí, ahił nidaalnishí, naanish binanit'a'í, éi doodago dine bik'i dahodiinii'go nihodiit'aah bee bhólníhígíí naanish ádoolníłígíí yee nidahodoo'áál.

Decision rule: A statement that describes a logical basis for choosing among alternative actions.

- Á'doolníł díkwíshíł' al'aa ádaat'éego t'áálá'í hazhó'ó baa nitsáháskeezgo naaltsoos bee hadilyaa.

Decommission/Decommissioning: To remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property and termination of the license and other authorization for site operation.

- T'áadoole'é báadahadzidii ba'át'e' kin sinilgi éi doodago łahgo haz'áagi bee hóochxq'go ákwe'é haz'ánigi doo choo'íigoo ál'íh doo hasht'éé hool'íh báahádzidii ba'át'e' doo atí'ál'ínigi silkid ál'íhgo índa t'áa altso choo'íigo ánidoolníł doo da'iniíshígíí binaaltsoos bits'áá' náadiiltsoos.

Decontamination: The removal of radiological contaminants from a person, object or area to within levels established by governing regulatory agencies.

(NOTE: Decontamination is sometimes used interchangeably with remediation, remedial action, and cleanup.)

- Bíla'ashdla'ii baah silí'ígíí, t'áa ha'át'íida ákwe'é hólónígíí, éi doodago ákwe'é haz'áagi báahádzidii ba'át'e' nahgóo kól'íh. T'áa díí aldo' remediation, remedial action, doo cleanup ha'níigo bee baa hane'.

Delineate: To identify an area that is determined to exhibit contamination.

- Łahgo haz'ánigi haashíł níłtsogo hóochxq' béehoozłh doo bił hahadzo.

Detectable/Detect: To discover the presence of a contaminate

- Ha'át'íida t'áa aaní ba'át'e' hólóqgo éi doodago t'áa aaní át'éego hoł béehoozin.

Detection limit: The lowest concentration of a contaminate that can reliably be distinguished from a zero concentration.

- T'áadoole'é há'déest'íí'ígíí ts'ídá ayáhádi báadahadzidii baḡḡ hólóq lágo béehooziḡḡ.

Detection sensitivity: The minimum level of ability to identify the presence of radiation or radioactivity.

- Báadahadzidígíí ba'át'e' bits'áziil ts'ídá ayáhádi hólóqgo bee nidaalkaahii neiłkid béehooziḡḡgo.

Determine: To figure out, find out, or conclude by analyzing, calculating, or investigating.

- Ha'át'íida nidanees'áají' dahólónígíí íshjáán ájilééh.
- Béézhdeetiḡḡ, bééhózingo ájilééh.
- Al'aan nidajizogo dóo nijiłkaahgo áádóo jółta'go bee binijishnishgo t'áadoole'é át'éegi altsó béehoozin.
- Altsó éédahoozin dóo hasht'eelyaa.

Direct measurement: Radioactivity measurement obtained by placing the detector near the surface or media being surveyed. An indication of the resulting radioactivity level is read out directly.

- Bááhádzidii ba'át'e' bits'áziil bee bíneel'aaḡí t'áadoole'é bídí'nóol'aałígíí bíghahgi éí doodago bikáa'gi si'áago í'néel'aaḡ dóo t'áá ákóq wólta'.

Dissolved metals: Total metals analysis for water samples include the metals content both dissolved in the water and present in the particulates in the water. Typically a dissolved metals analysis of a water sample is performed by removing the particulates with a filter, then analyzing the filtered water for metals.

- Béésh al'aa ádaat'éhígíí tó dabitahígíí naalkaahgo tó haakáahgo bitahdi dahólónígíí t'áá át'é baḡḡ haal'oł dóo bee baḡḡ haal'olígíí nél'íigo béésh nídadéé'ééłígíí dóo t'áá ha'át'íshíí baḡḡ háá'ééłígíí béehooziḡḡ.

Dissolved solids: Disintegrated organic and inorganic material in water. Excessive amounts make water unfit to drink or use in industrial processes.

- Hináanii dóo doo hináanii bits'áádóo t'áá ha'át'íshíí tó biyi'jii' altsó nídadéé'éelgo. Ayóí anéelaa'go tó bitahgo éí tó yiłchxqoḡgo yidlá éí doodago tó choo'íigo da'íníshígíí doo bá yá'át'éehda.

Dose commitment: The dose that an organ or tissue would receive during a specified period of time (e.g., 50 or 70 years) as a result of intake (as by ingestion or inhalation) of one or more radionuclides from a given release.

- T'áadoole'é bááhádzidíí ba'át'e' bits'áziil dahólónígíí ajíłna'go éí doodago bił ajoodzií'go hats'íistahdi hatsásiléí éí doodago hats'íis haa'ída yeinít'íigo haada nízahgóo nihoolzhiizhgo (ashdladiin éí doodago tseebídiin náahaigo).

Dose equivalent: A quantity that expresses all radiations on a common scale for calculating the effective absorbed dose. Dose is measured in Sv or rem. Another term is the RBE (Relative biological effectiveness) which is a measure that gives the relative biological damage produced by equal dosages (in rads) of different kinds of ionizing radiation.

- Bááhádzidii ba'át'e' bits'áziil t'áá altsodéé' dahólónígíí ba'át'e' t'áá át'é ahíłtsoodgo bíneel'aaḡgo haashíí néelt'e' ats'íis biyi'di silí'ígíí baa hasti'di niłkidgo bééhózin doo biniiyé bídí'nóol'aał.

- Bááhádzidii ba'át'e' bits'áziil haashíí bódziil ats'íís bii' yileeh éí Sv éí doodago rem wolyéego bí'neel'ąąh. Sv dóó rem éí haashíí néelt'e' bááhádzidii ba'át'e' bits'áziil bééjyáá dóó ąąh silíí'ígíí bee bééhózin.

Dose-Response: Shifts in toxicological responses of an individual (such as alterations in severity) or populations (such as alterations in incidence) that are related to changes in the dose of any given substance. This describes the change in an organism due to receiving a dose (in this case, a dose of radiation). It is often used in reference to a tumor's response to radiation in an effort to remove the tumor.

- Bááhádzidii ba'át'e' dóó bideezla' ał'ąą ánéelt'e'go bíla'ashdla'ii ła' bits'íís ąąh yileehgo bits'íís áyósinígíí.
- Bááhádzidii ba'át'e' dóó bideezla' bééjyáago áłts'íísigo éí doodago yéego haada hósin doo.
- Bááhádzidii ba'át'e' dóó bideezla' béé'asdee'go bits'ąádóó haashíí néeląą' bidahodii't'ih.

Downstream/Upstream: In the direction of the flow of a stream's current/in the direction opposite to the current of a stream.

- Tó nílínjigo/tó nílínidéé'
- Tó yaago nílínjigo/tó dáahji'

Duplicate/Replicate (as in, field duplicate):

Consisting of two identical samples, i.e. water and soil.

(NOTE: A duplicate sample taken in the field from the same location as the original sample to ascertain sampling precision.)

- Na'alkaahgo tó naakigo t'áálá'í haz'ánidóó ályaago éí doodago ąezh t'áálá'í haz'ánigi haakąągo.



Ecosystem: The study of relationship of living things to one another and their environment.

- Nahasdzáán bikáa'gi dahináanii dóó binaagóó hahodít'éego haz'ánigíí ałch'í' siláago bee ááhoo'níilgo bił haz'ánigíí naalkaah.

Effect(s): A change that is the result or the consequence of an action.

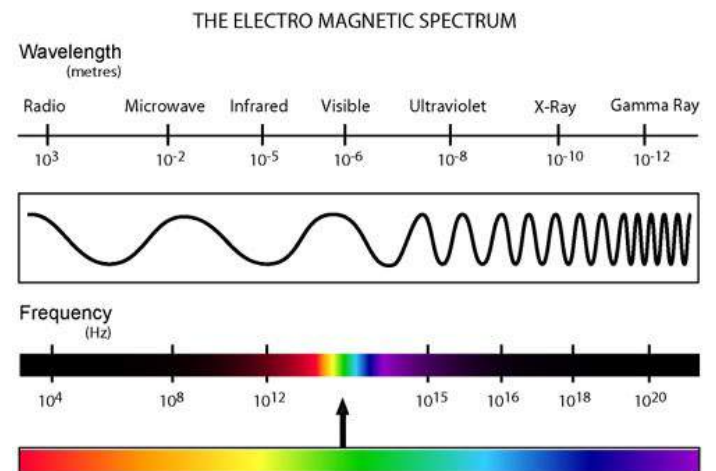
- Naanish ályaaígíí éí doodago na'aská'ígíí binahji' ąahgo áhoot'éego ánáhoolyaa.

Electronic

- Díí éí t'áá ha'át'íishíí atsinilt'ish yee deiyjeehígíí éí doodago yee nidaalnishígíí óolyé. ąetso bee naalkaahígíí, tó bee naalkaahígíí, níłch'i dóó ąezh bee naalkaahígíí.

Electromagnetic spectrum: Electromagnetic field is measured by the entire range of wavelengths or frequency of radiation. Radiation extending from gamma rays to the longest radio waves including visible light causes cancer.

- Adinídín doo yit'finii dóó ąetso bideezla' naalkaahgo haashíí nízáadgóó bits'áshígish éí doodago haashíí néeląą' bits'áshígish éí bí'neel'ąąh.



Element: Man's interaction with his natural environment and natural occurring chemical elements that affects his lifestyle.

- Bíla'ashdla'ii binaagóó áhoot'éhígíí dóó binaadéé' báadahadzidii be'iina' yihodidookt'ihígíí.



Elevated area: A measure of the amount and the concentration of contamination in a specified area.

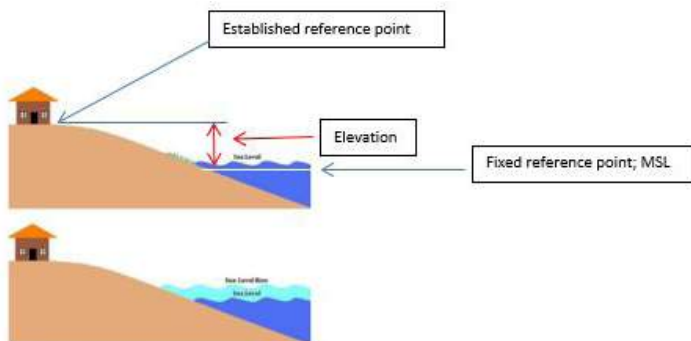
- Na'askáa'go lahgo haz'ánigi bééhóziní ályaago báahádzidii ánéelt'e' dóó ábóodziilígíí binéél'ąą dóó bééhoozin.

Elevated measurement: A measurement that exceeds a specified value or reading.

- Bí'néél'ąądgo bibeehaz'áanii biláahdi na'afkid.

Elevation: The height above or below mean sea level using an established point.

- Tó niteel áhodéeszée'go binahjí' kéyah dego éí doodago hóyahdi bí'neel'ąąh.



Energy: Power that results in physical movement from chemical or physical resources.

- Chemical wolyéii dóó nihinaagóó dahólónígíí bibee'adziilii bee adiyoo'naahii, t'áá atsoni yee naha'nánii.
- Bee iinéi dóó bee adziilii.

Engineering: The technical application of knowledge dealing with designs, buildings, structures, and research to find solutions for improvements.

- Bóhoo'ąą'ii dóó béé'deetáanii choo'įigo t'áá ha'át'íshíį yá'át'éhgo naach'ąąhgo niłzilgo hadidoolníł dóó nidoolkah.

Engineering Evaluation/Cost Analysis (EE/CA): An engineering evaluation of environmental site features, the site's history, cultural and biological assessment, and identification of previous investigations that will determine clean-up costs.

- Na'askáa' dóó bee éé'deetáanii kéyah bikáa'gi haz'ánígíí dóó t'ah nahdée' chooz'įidgi dóó Diné choyos'įidii dóó hináanii yikáa' hólónígíí dóó áłtséédąą' na'askáa' yęę t'áá át'é ahíidzogo éí binahjí' hasht'éé hodoolníł béeso báąh adooleełígíí bééhooziįh.

Ephemeral: Lasting only for a short time.

- T'óó hóníghánjí'/hónishghánjí' hazłíį' éí doodago díinaad.

Erosion: The wearing away of land surface and buried contaminants by wind or water.

- Kéyah bikáa'góó náhodíneesdzáago dóó báadahadzidii noo' nídaashchínée bił háadahwiioół dóó báada'di'eel.

Estimate: To calculate almost exactly the amount, extent, magnitude, position, or value of something.

- Ha'át'íida hajisíidgo baa ákoznízinígíí bik'ehgo baa nitsídzikeesgo hoł sha'shinígíí bee ha'át'íida ánéelt'e', ánizahjí', ánítsojí', bááhílinígíí, éí doodago haa'íshíí si'á/sizí nít'éé' bik'eh áhojilééh.
- T'áadoole'é bik'eh áhojilééh.

Evaluate: To examine and judge carefully.

(NOTE: To ascertain the worth or value of something.)

- Ha'át'íida hazhó'ó jidínóoł'ííł dóo nizhdoolkah.

Exceedance: Violation of the pollutant levels permitted by environmental protection standards.

- Nahasdzáan bee baa áháyánígíí bibeehaz'áanii k'éti'go t'áadoole'é ba'át'e' bilááh néés'ąąd.

Explanation of Significant Differences (ESD): A document that explains the significant difference between a remedial action of a site that is different from the Record of Decision (ROD).

- Haa'íida haz'ąągi kéyah hasht'ée hodoolniił bee naaltsoos hadilyaago éí hazhó'ó nánéel'íí'go naaltsoos bee nihoot'ánée (ROD) yéego łahgo ánáhóót'i'go bééhoozin. Éí baa hwiinít'ííhdi hazhó'ó nabik'íyáti'.

Exposure: Exposure to contamination or toxin can cause varying degrees of effects in the human body ranging from no observable bad effects to severely damaging and sometimes fatal effects.

- Bááhádzidii ba'át'e' bits'áziil ats'íis yeinít'íigo lahda doo bééhózin da łeh éí doodago yéego atí'iił'ííh. Łahda hwe'iina' haanéidiidlééh.

Exposure Pathway: Refers to the way a person can come into contact with a hazardous substance which can be through inhalation, ingestion, or direct contact.

- T'áa ha'át'íida bááhádzidígíí bíla'ashdla'ii yéedoogáál doodaii yił adoozhił doodai' iidoolmah.

Exposure rate: A method used to calculate human risk exposure from a specific toxin-like radiation.

- Bíla'ashdla'ii t'áadoole'é báadahádzidii ba'át'e' bideezla' yénáyáago haashíí yit'éego bóhodidooł'ihígíí bééhoozíh.

Exposure Point Concentration (EPC): A conservative estimate of the concentration from a particular toxic medium and the route of exposure that poses human health threats.

- T'áadoole'é bááhádzidii dahólónígíí bí'néel'ąądgo hait'éegoshíí ats'íis yihodiłt'ih.

Exposure scenario: Exposure scenarios are a tool to help the assessor develop estimates of exposure, dose, and risk.

(NOTE: An exposure scenario generally includes facts, data, assumptions, inferences, and sometimes professional judgment about how the exposure takes place.)

- Bááhádzidii ba'át'e' ał'ąą at'éii hólónígi haanéelt'e' béé'doodáál dóo haanéelt'e' hwii' dooleel' dóo hohodidooł'ih. Kwe'é haz'ánigi éí na'alkaahígíí yinahjí' bił bééhózin doo.

Extent: Range, magnitude, or distance over which a thing extends.

- T'áa ha'át'íida haada nízáądgóo dóo haa néeláą' hóló.

Factor (not the mathematical term): Something that contributes to an accomplishment, result, or outcome.

- Ha'át'íida binahjí' áhodooníílgíí dóó bee la' hodooníí.

Feasibility Study (FS): Analysis of the practicability, strength and weaknesses of a proposed action.

(NOTE: A description and analysis of potential cleanup alternatives for a site such as one on the National Priorities List. The feasibility study usually recommends selection of a cost-effective alternative. It usually starts as soon as the remedial investigation is underway; together, they are commonly referred to as the "RI/FS".)

- Bik'ehgo áhodooníílgíí bohónéedzáago naanish ádooníílgíí néél'íí' dóó naaskaá'.

Field sampling plan: A detailed plan that outlines the approach in field sampling and measurements to be taken.

(NOTE: As defined for Superfund in the Code of Federal Regulations 40 CFR 300.430, a document which describes the number, type, and location of samples and the type of analyses to be performed. It is part of the Sampling and Analysis Plan.)

- Haa'ída hóochxq'ígi bik'ehgo ni'doolkahígíí.

Fieldwork: Research conducted in the natural environment.

- Tł'óo'di haz'áagi na'alkaah dóó na'anish.

Filtered/Unfiltered Flow: Sampled water that is either filtered or unfiltered in a field laboratory.

- Tó nidoolkahígíí baah naal'éél'ée'í doodago doo baah naal'éelda.

Fluctuation: An irregular rising and falling in number or amount; a variation.

- Tó al'áa' ánéeláá' náádleel.

Formation (as in, geologic): A formation is a rock unit that is distinctive enough in appearance.

(NOTE: So that a geologic mapper can tell it apart from the surrounding rock layers.)

- Tsé alk'íditáago al'áa' ádaat'é dóó al'áa' ádanoolnin.

Frequency/Frequency counter: How often, how intense, and how much exposure one receives.

(NOTE: Take ALARA concept to reduce exposure. An instrument used to measure frequency, ie counts per minute or counts per second measured by a scintillometer (Geiger counter).)

- Hait'éego náhodi'naahgo, haa bóodziilgo, dóó haanéelt'e'go ha'át'íi da bééjghááhígíí.

Gamma: The decay (transformation) of an atomic nucleus from a high energy state to a lower energy state, a process called gamma decay, produces gamma radiation. Gamma rays ionize atoms (they are ionizing radiation), and are thus biologically hazardous. Gamma rays are defined by their energy.

- Atom t'áálá'í si'ánígíí nél'íígo biyi'di ałnii'gi bijéi nahalingo si'á dóó bitsinilt'ish ayóó' ábóodziilgo yee hadít'é.
- Atom biziil, energy wolyéhígíí, bits'áziilgo bits'áshígish yileehígíí éi gamma rays dełní. Nikishígishgo níláhgóó atoms hadaalt'é yéé biyi'di doo ahídaholneel'áada ádeile'go yihodiyiilt'ééh yileeh.

Gamma radiation: A stream of high energy radiation giving off by an atomic nucleus undergoing radioactive decay.

(NOTE: Gamma (γ) rays are weightless packets of energy called photons and are pure energy, unlike alpha and beta particles, which have both energy and mass.)

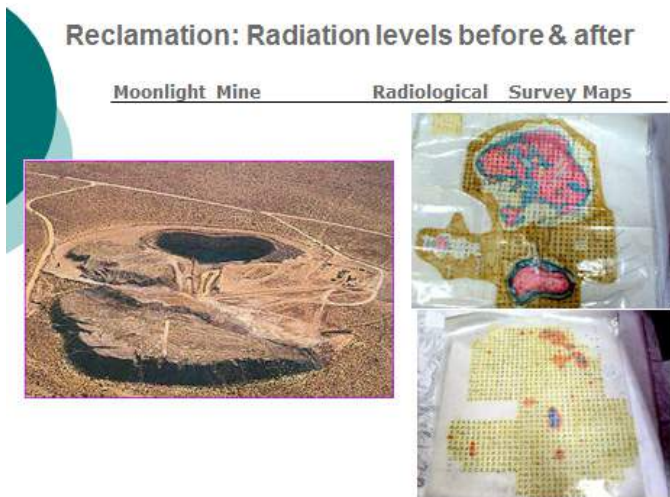
- Łeetso bideezla' biníí'dóó bee biinéi dóó yee bidziilii al'ąą ání'doolníłgo bits'áshígish.
- T'áá ha'át'íshíł t'áadoole'é yee hadít'éhígíi biníí'di yéego dit'ingo bijéi si'ąągo bits'áshígishii bił dah sikaad.

Generator: A facility or responsible party that emits pollutants into the air or releases hazardous waste into water or soil.

- Naanishda bił haz'ąądóó éi doodago bá nida'azhnishígíi bits'ąądóó báadahadzidii níłch'i dóó tó dóó łeezh yee nidayiłchxqohígíi.

Grid: A pattern of regularly spaced horizontal and vertical forming squares in an area used for locating points of contamination.

- Kéyah bikáa'gi ahidiníłnáago nahwiisdzogo báadahadzidii bééhózinígo bee íshjáán ályaa.

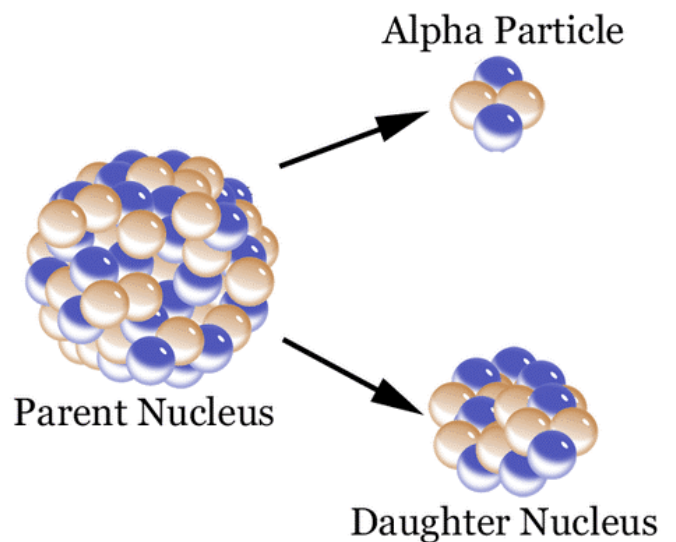


Grid Survey of a mined area, before and after

Half-life: The time it takes for radioactivity of a specific element to fall to half of it's original state or value.

(NOTE: The time it takes for a radioactive nuclei to be converted into nuclei of a different element. In a time equal to one half-life, the amount of the radioactive substance present is cut in half.)

- Haashíł nízahjí' łeetso bits'áziil ánóolnin dóó bidziilígíi al'ąą ání'doolnił.



Hazard Index/Quotients: Is the sum of hazard quotients for substances that affect the same target organ or organs that cause similar health effects. (

(NOTE: Q/QL, where Q is a measure of exposure, such as an organ's burden of a pollutant from all environmental pathways, and QL is a corresponding limit that should not be exceeded because of health risk to human beings.)

- Báadahádzidii haashíł néelt'e'go hats'ís bii' siléi yąą dahwiidooł'aal.

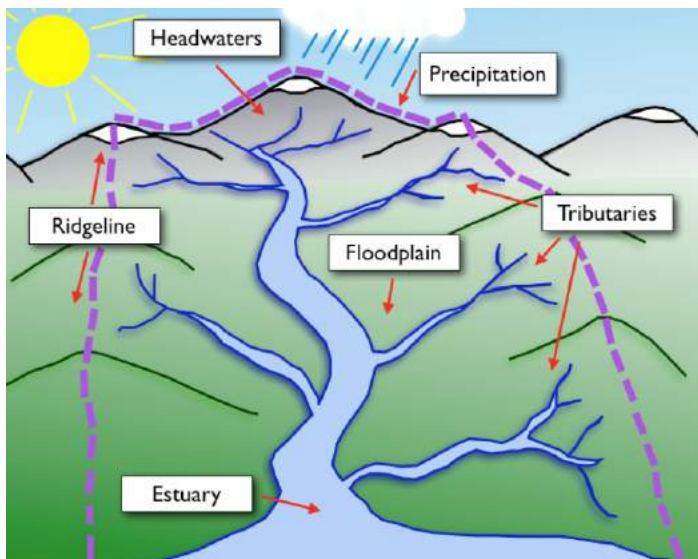
Hazardous substance: 1: Any material that poses a threat to human health and/or the environment.

(NOTE: Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.)

- T'áa ha'át'íshíí bíla'ashdla'ii bits'íis dóo nahasdzáan bikáá' siláii yihodidoolt'ih dóo yidoolchxool.

Headwater: The origin of streams that leads into the confluence of a river.

- Tó dah hideezlǫ́dóo tooh biih hílǫ́jǫ́'.



Herbivore: An animal that feeds on plants.

- Naaldlooshii ch'il yilchozhígíí.

Hotspot: A small place of significant contamination that poses environmental and public health risk.

- Haa'ida t'áa álts'íisigo haz'áago t'áa ákwe'é t'éi bááhádzidígíí hóló.

Hypothesis/Model: An idea or explanation (theory) of an environmental condition that you then test through study and experimentation.

- Ha'át'íida hanaagóo áhoot'éhígíí baa tsíhodeeskééz éi doodago baa yáti'go áádóo hazhó'ó naalkaah.

Imminent and substantial endangerment: A high probability that exposure is occurring that will likely result in unreasonable adverse effects on humans or the environment.

- Báádahádzidii yéego nawólníí dóo doo sha'shingóo bíla'ashdla'ii éi doodago binaagóo áhoot'éhígíí yihodidoolt'ih.

Impacted area: Areas with a reasonable possibility of containing residual radioactivity in excess of natural background.

- Nihookáa' haz'áagi bááhádzidii ba'át'e' bits'áziil baah hólógo béehoozin dóo binahjí' bíł hahoodzo.

Impaired: Weakened or damaged.

- Doo bidziilda silíí'; doo niłdzilda silíí'; doo dina'da silíí'.

Implement: Put something into effect; put into practice;

- Binahast'ánígíí dóo naanish hasht'eelyaaígíí bee adoonish.

Implementability: Capable of being used.

- Ha'át'íida choidoo'íłgo bíghah.

Independent assessment: An assessment performed by a qualified individual, group, or organization that is not part of the organization directly performing and accountable for the work being assessed.

- Naanish naaskáa'ígíí t'áa háida t'óo'déé'go ninéidoolkahgo baah nináánalyééhígíí.

Indicative: Serving as a sign or indication of something.

- Ha'át'íshíí yaa halne'go.

Infiltration rate: The process by which water on the ground surface enters the soil.

- Haashíí yit'éego ni' bikáá'góó tó hólónígíí łeeh daats'ą'ígíí.

Infrared: Invisible radiant energy, electromagnetic radiation that has longer wave length than those of visible light.

- Ha'át'íida bits'áshígish doo yit'ínígíí dóó nızaadgóó dóó nineezgo ítt'i'go.

Inspection: A careful examination of a potential problem or a completed project to document success or problems.

(NOTE: An activity such as measuring, examining, testing, or gauging one or more characteristics of an entity and comparing the results with specified requirements in order to establish whether conformance is achieved for each characteristic.)

- Haa'ída t'ááyó hóochxq' naawólníigo hazhó'ó néel'íí'go doodaii' naanish ályaagi hazhó'ó hanáalzidgo yá'át'ééh daats'í éí doodago náhóochxq' daats'í.

Instrument: A tool or implement, especially one for delicate or scientific work to measure radiation exposure.

- Bee na'anishí ádaat'éii éí doodago bee nida'alkaahgo ádaalyaii bee łeetso ba'át'e' bééjyáhígíí bída'neel'ąąh.

Interim Remedy: Enforcing temporary restrictions or compensating a loss, damage or injury before actual clean-up is initiated.



- Hasht'éé hodoólnííł bítséedi t'óó hóníghánjji' hóochxq'gi doo na'adáada ál'íjh éí doodago ha'át'ííshíí yíchxq'ígíí binahjji' hach'í' niná'doolyéél.

Intermittent: Occurring at irregular intervals; not continuous or steady.

- Łáháda ánát'íjh; bita' náhoot'aahgo.

International System of Units

Tera: one trillion, 10 ¹²	t'áálá'í dimíil táa'di nánitsaago dimíiltso naakits'áadi ahááh náníilyaago
Giga: one billion, 10 ⁹	t'áálá'í dimíil naakidi nánitsaago dimíiltso náhást'éiidi ahááh náníilyaago
Mega: one million, 10 ⁶	t'áálá'í dimíiltso hastáądi ahááh náníilyaago
Kilo: one thousand, 10 ³	t'áálá'í dimíilyázhí táa'di ahááh náníilyaago
Hector: one hundred, 10 ²	t'ááláhádi neeznádiin naakidi ahááh náníilyaago
Deca: ten, 10 ¹	neeznáá

- Dego náasjigo ooltah. Kodóó nábąą, ádindóó yaago wólta'ígíí éí ádaats'ísi dóó yéego ádaaltsíisigo doo daat'íjjiigo ooltah éí doodago ádinjigo ooltah.

Deci: one tenth, 10 ⁻¹	neeznáadi alts'áádzogo
Centi: one hundredth, 10 ⁻²	neeznádiin naakidi alts'ánáádzogo
Milli: one thousandth, 10 ⁻³	t'áálá'í dimíilyázhí táadi alts'ánáádzogo
Micro: one millionth, 10 ⁻⁶	t'áálá'í dimíiltso hastáądi alts'ánáádzogo
Nano: one billionth, 10 ⁻⁹	t'áálá'í dimíil naakidi nánitsaago dimíiltso náhást'éidi alts'ánáádzogo
Pico: one trillionth, 10 ⁻¹²	t'áálá'í dimíil táa'di nánitsaago dimíiltso naakits'áadahdi alts'ánáádzogo

Kojigo éi t'íhdiigo hólqo doo áko bááhádzidii t'íhdiigo haah yileehgo hohodiikt'ih.

Metric prefixes						
Prefix	Symbol	1000 ^m	10 ⁿ	Decimal	Short scale	Long scale
yotta	Y	1000 ⁶	10 ²⁴	1000000000000000000000000	septillion	quadrillion
zetta	Z	1000 ⁵	10 ²¹	1000000000000000000000000	sextillion	trilliard
exa	E	1000 ⁴	10 ¹⁸	1000000000000000000000000	quintillion	trillion
peta	P	1000 ³	10 ¹⁵	1000000000000000000000000	quadrillion	billiard
tera	T	1000 ²	10 ¹²	1000000000000000000000000	trillion	billion
giga	G	1000 ¹	10 ⁹	1000000000000000000000000	billion	milliard
mega	M	1000 ⁰	10 ⁶	1000000000000000000000000	million	
kilo	k	1000 ⁻¹	10 ³	1000	thousand	
hecto	h	1000 ^{-2/3}	10 ²	100	hundred	
deca	da	1000 ^{-1/3}	10 ¹	10	ten	
		1000 ⁰	10 ⁰	1	one	
deci	d	1000 ^{-1/3}	10 ⁻¹	0.1	tenth	
centi	c	1000 ^{-2/3}	10 ⁻²	0.01	hundredth	
milli	m	1000 ⁻¹	10 ⁻³	0.001	thousandth	
micro	µ	1000 ⁻²	10 ⁻⁶	0.000001	millionth	
nano	n	1000 ⁻³	10 ⁻⁹	0.000000001	billionth	milliardth
pico	p	1000 ⁻⁴	10 ⁻¹²	0.000000000001	trillionth	billionth
femto	f	1000 ⁻⁵	10 ⁻¹⁵	0.000000000000001	quadrillionth	billiardth
atto	a	1000 ⁻⁶	10 ⁻¹⁸	0.000000000000000001	quintillionth	trillionth
zepto	z	1000 ⁻⁷	10 ⁻²¹	0.00000000000000000001	sextillionth	trilliardth
yocto	y	1000 ⁻⁸	10 ⁻²⁴	0.000000000000000000000001	septillionth	quadrillionth

Inventory: A complete list of items and materials that can be used for a specific purpose.

(NOTE: Inventory of chemicals produced pursuant to Section 8 (b) of the Toxic Substances Control Act i.e. total residual quantity of formerly licensed radioactive material at a site.)

- Ha'át'íshíí choo'íh dóo binida'doonishígíí wóltah dóo naaltsoos bee niit'ááh.

Laboratory: A room or building equipped for scientific research on soil, water, and air to detect possible contamination.

- Kin si'áago biyi'di tó dóo leezh dóo nítch'i naalkaah yá hadít'éego bit haz'á.

Lesions (as in, kidney lesions): A region in an organ or tissue that has suffered damage through injury or disease.

(NOTE: Such as a wound, ulcer, abscess tumor, injury, bruise, abrasion, contusion.)

- Atsá siléi éi dóo ats'íís da tídílyaago éi doodago baah dah hoo'a'.

Level (as in, the level of a contaminant or analyte): To evaluate or study the amount and quantity of something i.e. water, soil, air and contaminate.

- T'áa ha'át'íshíí hazhó'ó naaskaá'go ánéelt'e' dóo ábóodziilgo bééhoozíh.

License: To grant a license and to permit the use of something or to allow an activity to take place.

- Bee haz'áanii bik'ehgo t'áa ha'át'íshíí choizhdoo'íí dóo naanish ázhdoolíilgo há bee hoo'aah.

Licensee: The holder of a license.

- Bee haz'áanii bik'ehgo naanish bijiyoolwołgo bee há haz'áago naaltsoos hwee hóló.

License termination: Discontinuation of a license, the eventual conclusion to decommissioning.

- Bee há haz'áago naaltsoos hwee hólónée hats'áá' ni' niiltsoos éi doodago bááhádzidgo haz'áagi da'ínísh yéé ni' kól'íh.

Limited: Something that is restricted in use, in size, or in amount i.e., land, water, soil.

- T'áa ha'át'íshíí chonéidoot'íí dóo ánéelt'e' ígíí chonéidoo'íígo baa hasti'.

Liter: A metric unit of capacity that measures air and liquid.

(NOTE: As in water, formerly defined as the volume of 1 kilogram of water under standard conditions, now equal to 1,000 cubic centimeters (about 1.75 pints); 4.22675 cups.)

- Níłch'i dóó tó bee bí'neel'ąąh liter bee wójjiigo.
- i.e. binahjį' ééhózingo, liter éi baąh ha'íizhahí tó dįį' dóó bi'aan bee haakąągo.



One liter of water equals 4.22 cups.

A person breathes 12 to 20 times a minute. One liter of air for a person is 50.6 to 84.4 cups of air per minute.

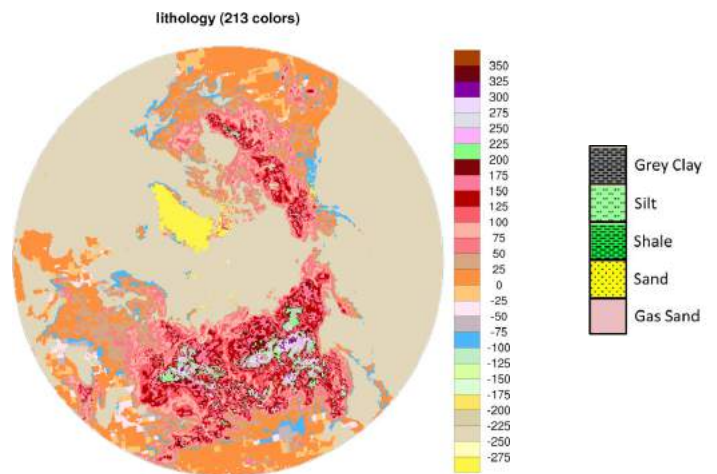
Literature: Leaflets and other printed matter used to provide public information and facts on certain subjects.

- Hane' naaltsos bikáá' ádaalyaaígíí binahjį' éédahózin.

Lithology: The study of the general physical characteristics of rocks, color, grain size, and composition.

(NOTE: The general physical characteristics of a rock or the rocks in a particular area.)

- Tsé ánóolninígíí, áníłtsooígíí dóó áłtah áát'éełgo naashch'ąą'ígíí t'áa át'ée nít'ée' naalkaah.



Long-term effectiveness/Permanence: To determine the durability and effectiveness of a cleanup project.

(NOTE: Final disposal and effectiveness of a site that contains radioactive waste.)

- Haa'ishjį' hóochxq' yéegi nizaadgóó didoonał dóó t'áadoo át'éhégóó chonáanéidot'įįgo hasht'ée hoolyaa.

Low/High (as in, risk): Environmental, ecological (animals and plants), or public health risk that are either low or high.

- Nihinaagóó áhoot'éhígíí, nihinaagóó bii' hólónígíí (naaldlooshii dóó nanise') dóó bíla'ashdla'ii bits'íis yidahodidoot'ihii, hóyahgo doodaii' hódahgo ba'át'e' nida'atkidígíí bééhoozįįh.

Lower limit of detection: Is the lowest level and quantity of a substance that can be measured.

- Ha'át'íida naalkaahgo ts'ídá ayáhágo hadeel'íí' dóo bééhozin.

Mass: A coherent, typically large body of matter with no definite shape.

(NOTE: The mass of an object is a measurement of the number of atoms in it.)

- Ha'át'íida nitsaago t'áá ła' bizhi'go hazlí'go dóo doo ts'ídá ánóolnínígí doo bééhózin da.

Maximum contaminant level: The legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act.

- Safe Drinking Water Act bíla'ashdla'ii bito' deidlánígí baa áháyáago bee haz'ánii ályaaígí binahjí' ha'át'íida doo yá'áshóonii doo yee has'ánígí silí'go.

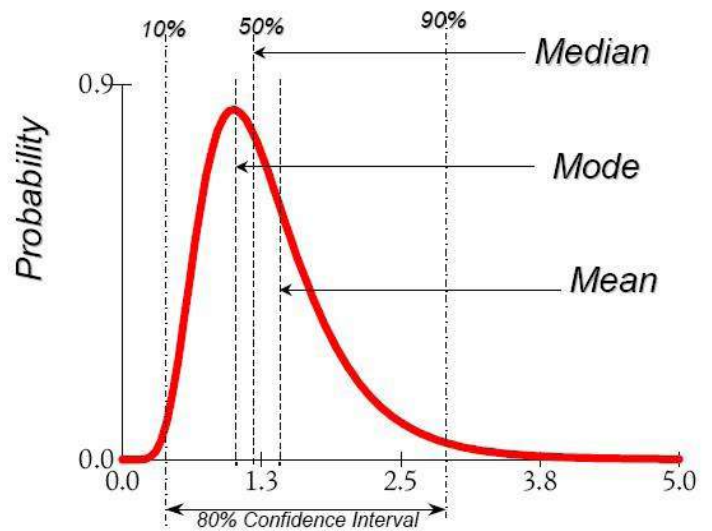
May (as in, may pose a risk): Expressing a possibility.

- Ha'át'íida ihodidoolt'ihii ádooníłgo da át'é.

Mean (as in, statistics): Collection or a set of results in research or experiment and the average results of these research and experiment.

(NOTE: In probability and statistics, population mean and expected value are used synonymously to refer to one measure of the central tendency either of a probability distribution or of the random variable characterized by that distribution.)

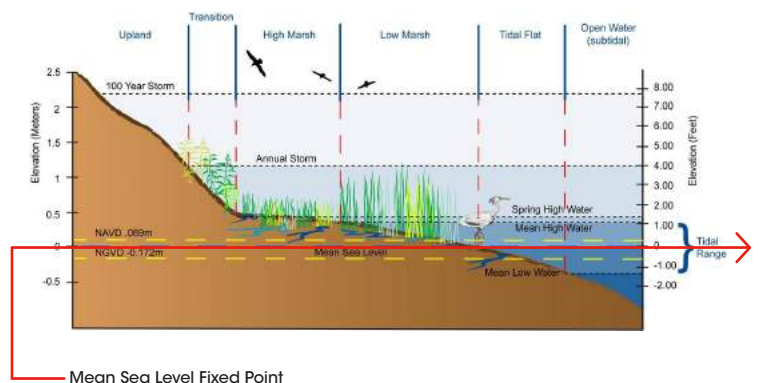
- T'áadoole'é naaskáa'go ádanéelt'e' dawólta' dóo ał'aa át'éego naadzogo ha'át'íida íiyisíí ałnii'gi aláahgo ánéelt'e' hádéesst'íí'ígíí.



Mean sea level: Is the average level of the calm surface of one or more of Earth's oceans from which heights (such as elevations) may be measured.

(NOTE: The term above sea level generally refers to above mean sea level (AMSL); the sea level halfway between the mean levels of high and low water.)

- Tó niteel áhodéeszée'go binahjí' í'neel'aaħ.
- Haashíí nízáadi hódahdi t'áadoole'é hólónígí binahjí' bí'neel'aaħ.



Measure: Size or quantity found by measuring; a system or unit of measuring.

- Ha'át'íida bí'neel'áadgo ánéelt'e' bééhoozingo;

Measuring hardware/Equipment/Instruments: Bee ída'neel'áahí.

Ammeter: Electronic measuring device an instrument for measuring electric current in amperes.

- Bee ída'neel'áahí bee atsinilt'ish ánéelt'e' nílínígíí bee bí'neel'áah. Amperes éí doodago amps wolyéego yí'neel'áah.

Measurement: Using a detector to determine the level or quantity of contamination on a surface or in water.

- Bááhádzidii ba'át'e' bits'áziil ha'át'íida bikáa'gi dóó tó biyi' silíí'ígíí bí'neel'áah.

Medium/Media (as in, soil, water, sediment, etc.):

A major environmental category that surrounds or contacts humans, animals, plants, and other organisms (e.g. surface water, ground water, soil or air) and through which chemicals or pollutants move.

- Łeezh dóó tó dóó nílch'i ba'át'e' bii' silíí'ígíí t'áa ałtso dahináanii yénáyáago bihodidoolt'ih.

Metals of concern: Béesh ał'aa ádaat'éhígíí íyisíí i'diil'áhígíí.

Aluminum	(Al)	Béesh łibáhá
Americium	(Am)	Béesh ditódii disqsi
Argon	(Ar)	Nílch'i doo naha'náanii
Arsenic	(As)	Béesh łibáhá
Barium	(Ba)	Béesh dík'ózhí
Bismuth	(Bi)	Béesh dinilch'i
Cadmium	(Cd)	Béesh tózis bee yiilchłhí
Calcium	(Ca)	Béesh łeeyáni
Chlorine	(Cl)	Nílch'i doot'izhí
Chromium	(Cr)	Béesh disxqsii
Cobalt	(Co)	Béesh doot'izhí
Copper	(Cu)	Béesh łichí'ii
Flourine	(F)	Nílch'i
Helium	(He)	Nílch'i ászólí
Hydrogen	(H)	Nílch'i łikoní/łikonii
Iron	(Fe)	Béesh
Lead	(Pb)	Béesh dilyłhí
Manganese	(Mn)	Béeshłibáhá disxqsí
Mercury	(Hg)	Béesh tóhí/tóonii
Molybdenum	(Mo)	Béesh bee iináni
Nickel	(Ni)	Béesh choo'íní
Oxygen	(O)	Nílch'i yá'át'éełhii
Palladium	(Pd)	Béesh naat'oodii
Polonium	(Po)	Łeetso bits'áádéé' béesh
Potassium	(K)	Béesh bich'ł' anit'áni
Radium	(Ra)	Béesh bits'á'dinílíídí
Radon	(Rn)	Łeetso binílch'i
Rhodium	(Rh)	Béesh nitł'izí
Sodium	(Na)	Béesh áshłhí
Strontium	(Sr)	Béesh bee ats'in dits'id
Sulfur	(S)	Tózis łitsooí
Thallium	(Tl)	Béesh dinooltł'izhí
Thorium	(Th)	Béesh diłhii
Titanium	(Ti)	Béesh dina'ii
Uranium	(U)	Łeetso
Vanadium	(V)	Béesh doo níđiniichxíihii
Zinc	(Zn)	Béesh nitł'izí

Meter/Meter: The fundamental unit of length in the metric system, equal to 100 centimeters or approximately 39.37 inches.

- Táá' dóó bi'aan ké silá biláhago (39.37 inches) bee ída'neel'aaahí ályaaígíí éí meter wolyé.

Microgram/Milligram/Gram/Kilogram: The International System of Units (Système international d'unités or SI) is the current international standard metric system and is also the system most widely used around the world. Its base units are the metre, kilogram, second, ampere, kelvin, candela and mole.

- Ída'neel'aaah adahwiis'áagóó choo'ínígíí International System of Units wolyéego bee ída'neel'aaah. Éidí ha'át'íida ádaníldáásígíí bí'neel'aaahgo kilogram bíighahgo ánéelt'e' dóó áníldáásígíí binahjí' gram, milligram, dóó microgram bee ééhózin.



Microwave: Radio waves of short wavelength, from about 10 centimeters to one millimeter; microwaves can penetrate into materials and deposit their energy below the surface. This effect Microwaves are the main wavelengths used in radar, and are used for satellite communication, and wireless networking technologies such as Wifi, although this is at intensity levels unable to cause thermal heating.

- Atsinilt'ish dóó nahasdzaán yee óchíidii t'áa altsoní bii' siláhígíí magnetism ahił naalnishgo bits'áádóó bits'áziil radiation hóló. Éí bits'áziilígíí at'aa át'éego bits'ádashigish. Ła' éí radio waves deitni éidí éí ła' microwaves ádaat'éego ayóó' ábóodziilgo nidaalnish. Éí bee níłch'i halne' lá dóó bee ná'niildóhó dóó béesh bee hane'í nidaajaahígíí nidaalnish.

Migrate/Mobility (as in, waste migrating): Natural processes that cause hazardous substances to move through air, soil, or water.

- Níłch'i, łeezh, dóó tó biníkáá góne' báadahadziidii bił dahidiyóól, bił dahidi'eeł, dóó łeeshtah nidahaleeh.

Minimum: The least or smallest amount or quantity possible.

- Ts'ída a'ohdi ánéelt'e' shóozt'e'ígíí.

Minimum detectable concentration (MDC): The smallest concentration of radioactivity in a sample that can be detected with a 5% probability of not detecting radioactivity that may still be present.

(NOTE: The minimum detectable concentration (MDC) is the a priori activity level that a specific instrument and technique can be expected to detect 95% of the time. When stating the detection capability of an instrument, this value should be used. The MDC is the detection limit, LD, multiplied by an appropriate conversion factor to give units of activity.)

- Łeetso naaskáa' dóó ts'ída ayáhago ashdlá' lichíí' bíighahgo t'áa bił nawólní.

Mining waste rock: Material resulting from the extraction of uranium ore from the earth that may still contain small amounts of radioactivity.

- Łeetso hadahaasgeedgóó tsé dabíí'oh dóó łeetso bideezla' álch'íí'dígo t'áá bii' dahóló.

Multimeter: An instrument designed to measure electric current, voltage, and usually resistance, typically over several ranges of value.

- Atsinilt'ish ánéelt'e' daníl, haashíí bódziilgo daníl, dóó béesh bii' danílnígíí atsinilt'ish bee bí'neel'ąąh.

No Further Action: A no-action letter is a letter is written by the oversight agencies that requests no cleanup action be taken.

- Kéyah hasht'ée hálnéehgi Wáashindoon ak'i déez'íí'ígíí naaltsoos haidiilaago doo hasht'ée hodoolníílda yee nihodoo'ááł.

Non-impacted area: Areas where there is no reasonable possibility (extremely low probability) of residual contamination existing.

(NOTE: Non-impacted areas are typically located off-site and may be used as background reference areas.)

- Kéyah łahgo haz'ąągi báadahadzidígíí dóó ba'át'e' doo nawólníida.

No-Observed Adverse Effect Level (NOEL): No significant and widespread adverse effect, which may reasonably be anticipated exist in an area.

- Łah kéyah haz'ąągi doo hóochxq'da.
- Nihookáá' dóó táyi' dahináanii dóó nanise' dóó hináanii baa dahóchj'ii doo atíidoolíílda.

NORM (Natural Occurring Radioactive Materials): Includes all radioactive elements naturally found and occurring in the environment.

(NOTE: Long-lived radioactive elements such as uranium, thorium and potassium and any of their decay products, such as radium and radon are examples of NORM.)

- Łeetso bideezla' bits'áziil nihinaagóó hólónígíí. Díí t'áadoo naasgeeda.
- NORM éi béesh báadahadzidii ba'át'e' bits'áziil nízaadgóó dahólónígíí łeetso dóó thorium dóó potassium ádaat'ėii dóó áadi łahgo áni'doolníilgo bits'ąądóó báahádzidii nídahoodleel.

Objective: A thing aimed at or sought; a goal.

- Bíká áhát'ínígíí; binahat'áhígíí.

Observation: The action or process of observing something or someone carefully or in order to gain information.

- Biniyéii hólóqgo ha'át'fi da éi doodago hái da hajisíidgo.

Obsolete: No longer produced or used; out of date; no longer used or needed.

- Ha'át'ida doo choo'íí'góó biniinaa doo ádaal'íída silíí'.

Ohmmeter: That an instrument for measuring electrical resistance. Electrical resistance, the measure of the degree to which a conductor opposes an electric current through conductor.

- Béesh atsinilt'ish bii' nílínígíí yik'ijj naalnishígíí bee bí'neel'ąąh.

Operable Unit (OU): During cleanup of a contaminated site, separate activities that are undertaken as part of the cleanup.

(NOTE: A cleanup site can be divided into a number of distinct areas depending on its complexity. These areas, called operable units (OUs), may address geographic areas, specific problems, or areas where a specific action is required.)

- Kéyah hóochxq’go hasht’ée hálnéehgi naanish ał’ąa át’éego dóo alkéé honí’ąągo binida’anish yileeh.
- Operable units bee dawójtigo naanish alkéé’ nii’nił.

Operation and Maintenance (O&M): After cleanup the site is continuously monitored to make sure there is no release of contaminants.

- Kéyah hóochxq’go hasht’ée hoolyaa bikée’déé’ nánél’ijh dóo baa áháya.

Operator: Person or company that engages in or runs a business or enterprise; a person who operates equipment or a machine.

- T’áa háida binaanish neilt’i’go éi doodago naanish bił dah oonéłgo t’áadoole’é bida’ínishgo. Háida chidí naa’na’í da, bee na’anishí da yiyoołwołgo naalnishígíí.

Order of magnitude: The powers and approximate measure of numbers determined in powers of tens (10).

- Ha’át’iida haada néelt’e’ shijaa’go ádaníłtsooígíí da, ádanéelt’e’ígíí da, dóo ádaat’éhígíí bik’ehgo alkéé’ dah naazhjaa’go.

Ore: A naturally occurring solid material from which a metal or valuable mineral can be profitably extracted.

- Tsé nahasdzaán bii’ haakąągo bits’ąádóo béesh choo’ínígíí éi doodago hadaat’e’ da’ílnígíí nishóhoot’eeh.

Organization: A company, corporation, firm, government unit, enterprise, facility, or institution, or part thereof, whether incorporated or not, public or private, that has its own functions and administration.

- Naat’áanii bá da’ínishgo haz’ąągo, naanish nitsaago bił haz’ąągo, t’áa áhoolts’íísigo naanish éi doodago na’iini’ da bił haz’ąągo.

Outcrop: A rock formation that is visible on the surface.

- Tsé hadaazt’i’ígíí.

Owner: Person or organization that owns something; one who has the legal or rightful title to something; one to whom property belongs. business/property owners.

- T’áa łashdilt’éhégo da éi doodago nitsaago naanish bił dah oonéłgo ha’át’ii da bígo.

Parameter: The range of values used in monitoring and sampling water or air quality standards, i.e. pH level, alkalinity, salinity, turbidity, suspended particulates, mercury, etc.

- Tó dóo níłch’i t’áadoole’é dabitahígíí naalkaahgo haashíł níłtsogo nida’alکیدgo wólta’ éi bee haz’áanii standards bił ahąąh naa’nił.

Peer review: Is the evaluation of creative work or performance by other people in the same field in order to maintain or enhance the quality of the work or performance in that field¹. It is based on the concept that a larger and more diverse group of people will usually find more weaknesses and errors.

- Hanaanish bee t’áadoole’é ájil’ínígíí náasdi

Performance evaluation: A type of audit in which the quantitative work performance review and evaluation is discussed and documented.

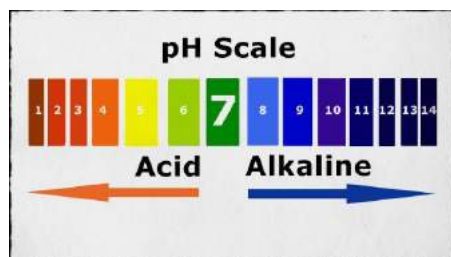
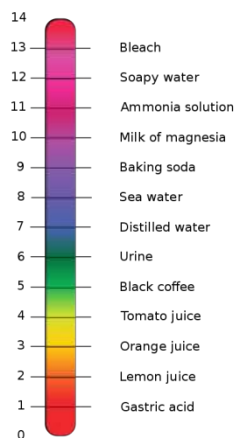
- Da'íniishgi naanish ninádaalkaahgo naanish ádaalyaaígíí nidanél'íigo bee ahił hane' dóo naaltsos bikáá' ádaalne'.

Perennial: Something in nature lasting or existing for a long or apparently infinite time, i.e. stream, plants.

- Ha'át'íida t'áá hólóní hóló. Doo niit'éehda.
- Ha'át'íida doo deeghánigi hólóqogo hoolzhishgo.
- Ha'át'íida náhoodleel.

pH: pH (potential of hydrogen) measuring the acidity or alkalinity of a liquid solution, i.e. water. The pH scale is from 0 to 14.

- T'áadoole'é ádaalne'tó nahalingo nidaago' éi ła' da'dilid dóo ła' dadík'óqzh. Áádóó tó danílinígíí ha'át'íida bitah nidahaleeh éi adilidii dóo dík'óqzhígíí dabitah. Bídí'nóol'aałgo át'é. Da'dilidígíí éi pH na'ałkidígíí hóyahjigo néitkid dóo dadík'óqzhígíí éi pH dego díí' ts'áadahjigo na'ałkid. Ha'át'íida doo adilid da dóo doo dík'óqzhgóó éi tsosts'idgi na'ałkid leh.



Plasma: One of the four basic states of matter. The other three are solid, liquid, and gas. Subjecting it to the electromagnetic field causes it to have properties unlike the three states. It becomes plasma.

- T'áá hólóqshíí díí' al'aa ádaat'é. ła' táa'go éi danitł'iz solid, tó liquid, dóo nılch'i gas. Adinidíin doo yit'íinii dóo łeetso bideezla' danitł'izígíí, éi doodago tó, éi doodago nılch'i bitah yileehgo łahgo á'diil'íih éi plasma wolyé.

Plateau: An area of relatively level high ground; a state of little or no change following a period of activity or progress.

- Haa'íida hódahgi haz'áqgo ákwe'é hodilkqohgo.
- T'ááłáhigi ádahooníł dóo nahat'á náas yit'ih nít'éé' hodiyeelgo dóo ha'át'íida doo łahgo ánéehgóó ch'ihoolzhiizhgo.

Pollutant or contaminant: A pollutant is a substance or energy introduced into the environment that has undesired effects, or adversely affects the usefulness of a resource. However, the degradation products substances may pollute or contaminate the environment.

- Ha'át'íida ba'át'e' bits'áádóó hólónígíí tó da, łeezh da bitah yileehgo at'ál'íi doo éi doodago tó dóo łeezh yılchqoh. Ch'il dóo ch'osh bee yigáni nıláhgóó t'áá altsóni baał yileehgo łahgo át'íih dóo ba'át'e' haleeh.

Potential: Having or showing the capacity to become or develop into something in the future; the quantity determining the energy of mass in a gravitational field or of charge in an electric field.

- Ha'át'íi da át'éedi nél'íigo t'áá íishjání náasdi ha'át'íi da bihónéedzánígíí nídoodleelgo haz'á.
- Atsinilt'ish éi doodago nahasdzáán yee óchidígíí gravitation biyi'ji' t'áadoole'é ábóodziilígíí bee bééhózinígíí.

Potentially responsible party: Potentially Responsible Parties are individuals, companies, or any other parties that are potentially liable for payment of Superfund cleanup costs. ... EPA attempts to identify PRPs early to achieve a PRP-lead cleanup rather than EPA performing a Superfund (Fund-lead) cleanup.

- Bááhádzidii ba'át'e bee hóochxq'go bąąh siláhígíí dóó yik'é niná'doodlééł. Bini'doonish dóó yik'é asłáadooígíí éi ła' da, nitsaago naanish yił tádadinééhígíí, dóó t'áá háishíł bídéét'i'ígíí bąąh siláa doo. Super Fundjí éi doo t'áá iyisíí bąąh siláa da.

Precision: The quality, condition, or fact of being exact and accurate.

- Ts'idá doo haa'í da yidzíí'góó nizhónigo ályaago.

Predator: An animal that naturally preys on others; a person or group that ruthlessly exploits others.

- Naaldlooshii nidaalzheehígíí; Bíla'ashdla'ii ła' da éi doodago díkwii da yilt'éego níláhgóó t'áá hái da yigha dahwiit'aahígíí.

Primary human contact: Communication or relationship that is established between a proposed project undertaken and the impacted community people.

- Diné kééhat'íigi bááhádzidii ba'át'e' bee anáhóót'i'go naanish binahat'áago k'é hodiindzingo dóó alk'i'diit'íhgo t'áá ałtso ahił íshjáán óolzin dóó ahiists'ąą'go diné bił na'anish.

Principal Threat Waste: Low-level wastes that pose a long-term threat or where treatment is impracticable, i.e. NORM, inaccessible mine sites.

- Hada'géedgi łetso da dadizéigo t'áá ákqó nidadeeztaądígíí doo deeghánigi ba'át'e' bik'ee hóyé'go éi doodago bąąh í'doolníł doo bihónéedząą'góó.

Prioritization: To arrange (items to be attended to) in order of their relative importance.

- T'áadoole'é iyisíí ilíídóó yaago ahoor'áago áłkéé' sinilgo ájilééh.

Process: A series of actions or steps taken in order to achieve a particular end.

- Ha'át'ida ádoolníłgo áłkéé' honí'ąago bina'anishígíí.

Production: The action of mining or processing raw ore.

- Ha'agéedgo éi doodago tsé haagéedígíí yikéé'dóó bąąh haal'eeł.

Professional judgement: Applying knowledge, skills and experience, in a way that is informed by professional standards, laws and ethical principles, to develop an opinion or decision about what should be done to best serve clients.

- T'áadoole'é yéego bíhoo'ąą'ii, í'ool'íłł nibééda'diistáanii éi bee haz'áanii bik'ehgo bee na'anishígíí choo'íigo binahjí' diné bá í'doolníłii baa yájíłti' éi doodago bá baa nitsídziikees.

Proposed Plan: A suggested method of cleanup to be considered and accepted.

- Bee hasht'éé hodoolníłígíí nibik'íyáti', binahat'á, baa nitsáhaskééz dóó nídiilyáago.

Protective of Human Health and Environment: In a proposed plan, methods and strategies to be used to protect human health and the environment from contaminate exposure.

- Diné kééhat'íinii bá nahat'á naaltsoos bikáá' ályaago biyi'di á'doolníł dóó náásgóó bik'eh áhoolyaaígíí bikáa'go bee bíla'ashdla'ii

dóo nihinaagóó áhoot'éhígíí bááhádzidii ba'át'e' bee bihodidoot'ihígíí bich'ááh ni'doonish.

Proximity: Nearness in space, time, or relationship.

- T'áá áhánígóó éí doodago t'áá fiġhahgóó dah hooldo, doo hodina'góó, t'áá áhánigo bééhojísín.

Qualified data: Any data that have been modified or adjusted as part of statistical or mathematical evaluation, data validation, or data verification operations.

- Na'alcaahgo ida'néel'ąadígíí, dayéelta'ígíí, dóo bee éédahózinígíí data wolyéhígíí hazhó'ó nídaneél'íí'go hasht'e' daalyaaígíí.

Quality: The degree of meeting environmental standards in assessment, cleanup, human and environmental protection.

- Bááhádzidii ba'át'e' hóólchxq'go naalkaah, hasht'ée hálnéehgo, dóo bíla'ashdla'ii dóo binaagóó haz'ánígíí baa áháyá bina'anishgo nihinaagóó haz'ánígíí bibee haz'ánii bik'ehgo na'anishígíí ááh yílní.

Quality Assurance (QA): Maintaining a desired level of service activities involving planning, implementation, assessment, reporting, and quality improvement.

- Naanish bee áká anída'alwo'ii baa áháyáągo, yá'át' éehgo choo'íidoo biniiyé hasht'e wólzínígíí éí hazhó'ó binahat'á, bee adiínísh, naanish ninálkaah, naanish baa náháne', dóo naanish t'áá álahjì' hasht'e wólzín.

Quality Assurance Project Plan (QAPP): A formal document describing in comprehensive detail the scope of work in sampling, assessment, data maintenance, reporting requirements and data analysis.

(NOTE: QA, QC, and other technical activities that must be implemented to ensure that the results of the work performed will satisfy the stated performance criteria. As defined for Superfund in the Code of Federal Regulations 40 CFR 300.430, the Quality Assurance Project Plan describes policy, organization, and functional activities and the Data Quality Objectives and measures necessary to achieve adequate data for use in selecting the appropriate remedy. The QAPP is a plan that provides a process for obtaining data of sufficient quality and quantity to satisfy data needs. It is a part of the Sampling and Analysis Plan.)

- Naaltsoos (naanishgi aláajì' sizínígíí áyíil'íih) bíhólníihii nábinázláago baa hwiínít'íihgo biyi'jì' naanish dooleelígíí t'áá át'é daasdzoh, hóóchxó'gi na'alcaah, ida'néel'ąadgo béédahoozinií hasht'e wólzín, naanish ályaii baa náháne' dóo nida'askáa'go dóo ida'néel'ąadígíí t'áálá'í ní'ánigo naalkaah.

Quality Control (QC): The overall system of maintaining technical standards that measures the attributes and performance of a project against work specifications.

- Bik'ehgo naanish ádaal'ínígíí dóo bee haz'ánii ádaalyaii bee naanish bihónéedząago ó'oolníłgo naanish bí'neel'ąah.

Quantitative limit: The lowest amount of elements to be sampled which can be quantified with applicable standards, precision, and accuracy.

(NOTE: In radiation and associated terms (e.g. analyte are: gamma, alpha, beta, isotope, gross alpha, adjusted gross alpha. Precision and accuracy are: picocurie, counts per minute, etc.).)

- Ha'át'íida nidoolkahígíí sample ts'ídá a'oh ánéelt'e'go shóozt'e'go níláhdéé' bik'ehgo ida'neel'ąah dóo bee haz'ánii binahjì' ihodidoot'ih bee bééhózinígíí.

Radiation survey: The process of measuring and mapping out the amount of radiation in an area or location.

- Bááhádzidii ba'át'e' bits'áziil łahgo haz'ągi haashíí néelt'e' hólónígíí bí'neel'ąh dóó áhoníłtsogóó hólónígíí bináhádzoh.

Radioactive decay: Most atoms that make up elements like carbon for example, are stable. Some atoms that are in elements such as Uranium are unstable and spontaneously change into different types of atoms by emitting radiation. This process is called radioactive decay.

- Nihinaagóó dahólónígíí t'áa altso bee ádaalyaa, atom, wolyéhígíí éi alááh anéeląą' ayóo daniłdzilgo doo haada daanéehda.

Radio: Radio waves are used in almost all forms of wireless communication.

- Atsiníłt'ish dóó nahasdzáán yee óchídí ahił naalnishgo bits'ąđđéé' nidahaadeełii bee níłch'i halne'í, béesh bee hane'í dóó na'alkid bá yada'niilt'ónígíí nidaalnish.

Radiowaves, Ultraviolet waves, Wavelength

- Łeetso bideezla' bits'ąđdóó adinídíín doo yit'finii dóó shánídíín bits'ąđdóó bideezla' áádóó haashíí nízáágóó hiníłáá dóó ábóodziil. Díí naalkaahgo yá'át'éehgo choo'í éi doodago ba'át'e' ihodidoołt'ih.

Radioactivity: The emission of ionizing particles or radiation from radioactive decay.

- Ha'át'íida bááhádzidii ba'át'e' bits'áziilgo [bits'áshígishÓ.

Radiological survey: The evaluation of radiation hazards which usually involves a physical site survey and measurement of the types and amounts of radiation at the site.

- Béesh báadahádzidígíí ba'át'e' bits'áziil dahólónígíí naalkaahgo éi haz'ánigi t'áa altso nél'įh dóó béesh bááhádzidii ba'át'e' danilínígíí dóó ádanéelt'e' dahólónígíí bída'neel'ąh.

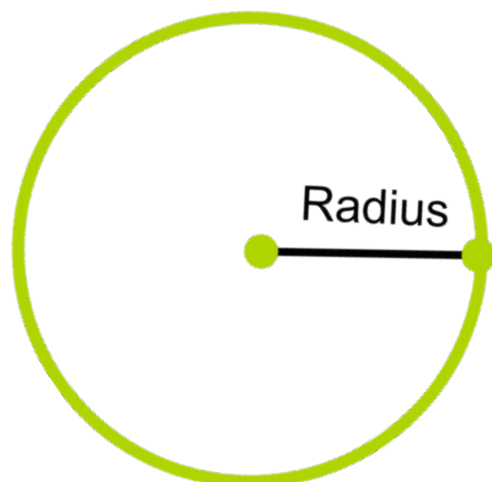
Radium 226: A chemical element from the uranium decay series also known alkaline earth metal.

(NOTE: All radium is radioactive. It is naturally occurring in most natural waters in minute quantities. Radium 226 is the most stable (decays the slowest) and decays into Radon 222 gas. It is found in nature due to continuous decaying Uranium 238.)

- T'áadoole'é chemical wolyéhígíí łeetso łahgo ání'doolníłgo bits'ąđđéé' nihwiileehígíí. Béesh łeeyáán dah yikahígíí atah.

Radius: A straight line from the center to the circumference of a circle or sphere.

- Názbąsgo ná'ąsdzogo ałnii'dóó bibąąhji' t'áa k'éházdón ídzogo éi óolyé radius. Názbąsgo ná'ąsdzogo ałnii'dóó bibąąhji' ánízahígíí.



Radmeter: An instrument for detecting or measuring the intensity or force of radiation.

(NOTE: RAD (Radiation Absorbed Dose) is a basic unit of absorbed radiation dose. It is a measure of the amount of energy absorbed by the body. The rad is the traditional unit of absorbed dose. The name of the instrument is being changed.)

- Bááhádzidii ba'át'e' bits'áziil ábóodziilígíí bee bí'neel'qahí.
- *(NOTE: RAD (Radiation Absorbed Dose) wolyéego t'áadoole'é biziil energy haashíí ábóodziilgo ats'íis baa ahishinigéeshígíí bee bí'neel'qahí. Díí bee í'neel'qahí bizhi' lahgo ánálnééh.)*

Range: The Range is the difference between the lowest and highest values.

- Ha'át'iida yéelta'go ts'ídá a'ohdi ánéelt'e'ígíí áádóo náásjigo atisdi ánéelt'e'j'í' bita'gi haashíí néelt'e'ígíí éí range deílní.

Ranking: A position in a scale of achievement or status; a classification.

- Háágóne'shíí hoł haz'ánígíí. Ha'át'iida háágóne'shíí bił haz'ánígíí.

Ratemeter: An instrument that indicates the counting rate of an electronic counter when measuring radioactivity.

- T'áadoole'é atsinilt'ish yee naalnishgo ha'át'iida bááhádzidii ba'át'e' bits'áziil yólta'go naalnishígíí bee bééhózinígíí.

Rationale: A set of reasons or a logical basis for a course of action or a particular belief.

- Ha'át'iida ádooníilgo éí doodago woodlâá doo biniiyé nizhónígo baa nitsáháskééz.

Reach (as in, a water body reach): A continuous extent of land or water, especially a stretch of river between two bends, or the part of a canal between locks.

- Tó da éí doodago kéyah da haashíí nízahj'í' nineel'áago.

Reasonable: As much as is appropriate or fair; moderate.

- Ts'ídá t'áale'nílt'e'ígo, t'áá beelt'éhígo, t'áá bee aa hojoosba'go; t'áá ákogo

Reasonably Anticipated Future Land Use: An official document that states the remedy achieved in cleanup that allows the entire site to be available for the reasonably anticipated future land use based on risk assessments.

- Naaltsoos bíhólníihii ályaago kót'éego bikáá'doo. Hasht'éé hoolyaagi íiyisíí bee na'azhnishígíí remedy éí k'ad binahj'í' t'áá haz'áá nít'éé' náásgóo chonáádajood'íí doogo baa nitsáhákees éí ihodidoot'ih nawólnínígíí naaskáa'go binahj'í'.

Reasonably maximally exposed individual (RME): People who meet certain conditions and may continue to live in contaminated environment.

(NOTE: The reasonably maximally exposed individual is a hypothetical person who meets the following criteria: (a) Lives in the accessible environment above the highest concentration of radionuclides in the plume of contamination; (b) Has a diet and living style representative of the people who now reside on Navajo lands impacted by AUM sites. The federal agency must use projections based upon surveys of the people residing on the

Navajo reservation, to determine their current diets and living styles and use the mean values of these factors in the assessments conducted for §§197.20 and 197.25; and (c) Drinks 2 liters of water per day from wells drilled into the ground water at the location specified in paragraph (a) of this section, (b) is an adult with metabolic and physiological considerations consistent with the present knowledge of adults.)

- Bíla'ashdla'ii ts'idá hait'éegoshíí hinánígíí éí bááhádzidii ba'át'e' bee hóochxq'go haz'áagi t'áa ákóq kééhat'íí doo

Receptor: Any biological living species that reacts to changes and stimuli and responds in a particular way.

- T'áa ha'át'íishíí hináanii lahgo áhoot'ííhgo yiniih dóo bik'ehgo dah diighááh.

Recommendation: A suggestion or proposal as to the best course of action.

- Yá'át'éehgo' doolníílgóó binahat'áago.

Reconnaissance: Preliminary survey to gain information by visual observation or detection/survey methods.

- Aláaji' ha'alzídgo éí doodago bee nida'alcaahígíí choo'íigo t'áadoole'é bee éedahózinii nishóhoot'eehgo.

Record Of Decision (ROD): A public document that explains the remediation plan for the cleanup of a contaminated site.

- Hóochxq'gi ts'idá haashíí yit'éego hasht'éé hodoolnííł naaltsoos yaa halne'go dóo diné kééhat'ínígíí bíł íishjání ál'ííh.

Reduction of mobility, toxicity and volume: To reduce contaminate pathways, level and quantity.

- Bááhádzidii ba'át'e' naanishoogishígíí, haanízahdishíí na'alkidígíí, dóo ánéelt'e' ígíí t'áa' áálnííłgo.

Reference: To obtain and use sources of information in order to gain more knowledge.

- Ha'át'íida t'áa náásída hoł bééhózin doo biniiyé naaltsoos bee hane' hadít'éhígíí chojool'íigo.

Release (of a hazardous substance): To allow mobility, toxicity and amount of contamination to continue.

- Ha'át'íida bááhádzidgo ba'át'e' dóo bideezla' haashíí néelt'e'go t'óo nidashigizhgo ájósín.

Regulation: Rules, laws, policies, and standards from state, tribal, and government agencies.

- Bik'ehgo nida'anishígíí, bee haz'áanii dóo bik'ehgo nida'alcaahii nitsaa hahoodzodéé', bitsi' yishtłizhii binanit'a'í dóo naat'áanii bíł nahaz'áádéé' bee nidahodiist'áanii.

Remedial Action (RA): Actions taken to cleanup and restore environmental quality.

- Nihinaagóo haz'ánígíí hasht'éé hálnéehgo bee yá'át'éehgo náhwíidoot'aał.

Remedial Design (RD): The phase before the remedial action process in which technology and site-specific cleanup designs are developed, designed and public input is received.

- Díí éí hóochxq'gi t'ahdoo hasht'éé hálnéehgóó áhoot'éhígíí bik'ehgo bee hasht'éé hodoolnííłgíí binahat'áago, nidaach'ah dóo kééhat'íinii bíł baa niyáti'go hadadil'ííh.

Remedial Investigation (RI): When the site is evaluated to determine the nature of the site-specific waste, the amount of waste, assess the risk to human health from the waste, and identify and test the treatment technologies and associated cost to clean up the waste.

- Bááhádzidii ba'át'e' bee hóochxq'gi atso naalkahgo haz'ánigi t'áadoole'é ba'át'e' ha'át'íí át'é éi bééhooziijh, haanéelt'e' hóló, bíla'ashdla'ii hait'éego yihodidooh't'ihígíí naalkah, dóo bee hasht'éé hodoolníílgíí nibíhonitah dóo béeso bááh adooléelígíí bééhooziijh.

Remediation: Reversing or stopping environmental damage through cleanup.

- Haa'ída haz'áago hóochxq'go hasht'éé doolnííł éi doodago hodoochxqółígíí ni' ádoolnííł kót'éego hasht'éé hodoolnííł.

Removal: The cleanup or removal of released hazardous substances, or pollutants or contaminants which may present an imminent and substantial danger.

(NOTE: Such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment; such actions as may be necessary to monitor, assess, and evaluate the threat of release of hazardous substances; the removal and disposal of material, or the taking of other such actions as may be necessary to prevent, minimize or mitigate damage to the public health or welfare or the environment.)

- Báádahádzidii ba'át'e' yee atí'da'al'íinii nikishiiigizhígíí, dóo t'áadoole'é yi'niilchxq'ígíí nahgóo adooogéel dóo hasht'éé hodoolnííł.
- T'áadoole'é ba'át'e' yee atí'ál'íinii nihookáá'góo hodoolchxqółígíí bini'doonish.
- T'áadoole'é ba'át'e' yee atí'ál'íinii haalzííd doo,

ba'át'e' dóo bideezla' nikidiigishgo bááhádzidígíí nidoolkah.

- Bááhádzidii ba'át'e' nahgóo kódoolnííł éi doodago nahgóo kólyaago

Removal Site Evaluation (RSE): A preliminary assessment of releases from hazardous waste that includes collection of samples and review of data.

(NOTE: These include site management practices, information from generators, photographs, analysis of historical photographs, literature searches, and personal interviews conducted, as appropriate.)

- Bááhádzidii ba'át'e' t'áadoo bá ház'áagi hazlíí'go éi t'áa atsoni báah éi doodago bitah daazlíí'ígíí hahakaahgo dóo ádaalne'go áłtsé nidoolkah dóo bída'néel'áadgo nida'al'kidígíí nídanél'íijh.

Replicate/Duplicate: A repeated analysis of the same sample or repeated measurement at the same location.

- Na'alcaahgo tó naakigo t'áálá'í haz'ánidóo ályaago éi doodago łeezh t'áálá'í haz'ánigi haakáago.

Reporting limit: The smallest concentration (or amount) of analyte, that can be reported by a laboratory.

- Ha'át'íida nídiilkáá'ígíí analyte ts'ída a'ohdi ánéelt'e'go nida'alcaahdégé' laboratory baa hane' bee nihoot'ánígíí.

Representative measurement: A measurement that is selected using a procedure in such a way that it, in combination with other representative measurements, will give an accurate representation of the phenomenon being studied.

- T'áadoole'é naalkaah dóo nél'íigo bee bí'neel'áahgo t'áadoo nídi'íishjáán ádoolníílgíí bits'át'áago dóo bee ída'neel'áahí náadaa łahdégé' bíł al'hiih daasya'go choo'íigo.

Residual radioactivity: Low level radioactivity remaining in structures, materials, soils, groundwater, and other media at a site resulting from activities.

(NOTE: This includes radioactivity from all sources used by the cognizant organization, but excludes background radioactivity as specified by the applicable regulation or standard. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR Part 20.)

- Bááhádzidii ba'át'e' bits'áziil kin naaznilígíí, t'áadoole'é chodaa'ínígíí, łeezh, tó łeeyi'di dahólónígíí, dóo naalyéhé ádaat'éei naanish bits'áádóo baah daazlí'ígíí, naanish bee bídahólníhígíí t'áa bíł bééhózin nidi bááhádzidii ba'át'e' dahólónígíí yee naashnishgo bee anáhóót'i' silí'go.
- Áko ndi t'áadoole'é ba'át'e' bits'áziil bída'néel'aaqgo bee haz'áanii biyi'ji' ádaalyaaígíí, t'áa alk'idáá' dahólónígíí, éi doo bik'iji wólta'da.

Response Action: Actions taken in response to actual or potential health-threatening environmental events such as spills, sudden releases, and contaminants abatement/management problems.

- Haa'ída haz'aaqi t'áadoole'é bááhádzidii atí'ál'ínígíí yaniikaadgo, déégizhgo áádóo nikishiigizhgo baa hwiinít'íigo bina'anish dóo bááhádzidii nahgóo kólnééhígíí.

Restoration: Returning a cleaned up area to a usable and former condition following decontamination.

- Haa'ída haz'aaqi bááhádzidii ba'át'e' bee hóochxq' nít'ée'go hasht'e nályaa dóo niléidéé' choo'ínéegi át'éego análnééh.

Restricted use: Restricted use of an area that requires radiological controls.

- Hasht'ée hoolyaa dóo bik'iji' bááhádzidii ba'át'e' bits'áziil t'áa bik'i adéest'í'go dóo baa áháya' ályaaqo.

Result: A consequence, effect, or outcome of something.

- Ha'át'íi da ályaaqo da dóo ha'át'íida bits'áá' hazlí'go da.

Risk: A situation involving exposure to environmental and public health risk.

- Ha'át'íida yéego atíhoolííhígíí asja'ósín.

Risk Assessment: The calculation of environmental and public health risks associated with a particular situation such as an unplanned contaminate release.

(NOTE: First, it is necessary to determine the probabilities of the various releases of contaminate resulting from the unplanned release. Second, consequences to the public from this release must be evaluated. Finally, the release probabilities and their consequences are combined to obtain the overall risk.)

- T'áadoo kót'é ílní bááhádzidii bits'áziil dahólónígíí nikishiigizhgodaa, bits'áádóo idahodidoot'ihii naalkaah doo.
- Áłtsé éi kót'éego t'áadoo kót'é ílní bááhádzidii bits'áziil nikidashiigéesh nawólnínígíí íishjáan ál'íih.
- Naaki góne' éi bíla'ashdla'ii kééhat'íinii haidoolíí naalkah.
- Akée'di éi bááhádzidii bits'áziil nikishiigéeshígíí haanítsoqo nawólnínígíí dóo bits'áádóo dahodínóot'ahígíí ahíiltso'go bits'áádóo t'áa át'ée nít'ée' atí'doolííhígíí bééhooziih.

Risk Management Area (RMA): A strategic process of administering, identifying, assessing and prioritizing risk of a particular area.

- Haa'í da haz'áagi atí'doolííhii nidawólnínígíí bich'í' hasht'e' á'dólzín náasjì' nízaadgóó binahat'á niilyééh éí biyi'jì' bee adinish, atí'doolííhii íishjáán ál'ííh, átí'doolííhii naalkaah, dóó naanish dooleelii álkéé' nii'nił.

Risk Reference Dose (RFD): An estimate of daily exposure to human population with or without risks of non-cancerous effects during a lifetime.

- Bááhádzidii ba'át'e' bíla'ashdla'ii t'áá dah yikah nít'éé' haashíí néelt'e' sá beinílkáágóó t'áá ákwííjì yénáskai nidi ats'íís bitł'óól dah díníisééh dóó ba'át'e' hóló yileehígíí yee atí'á'í doo bidahodidooh'ih da nawólní naalkaah dóó bik'eh áhool'ííh.

Sampling: The taking of a sample or samples.

- Łeezh da, tó da hajikáahgo naalkaah. Bitahdi dahólónígíí bééhózin yileeh.

Sampling and Analysis Plan (SAP): A plan that provides a process for obtaining data of sufficient quality and quantity to satisfy data needs.

(NOTE: As defined for Superfund in the Code of Federal Regulations 40 CFR 300.430, the sampling and analysis plans consists of two parts: 1) the Field Sampling Plan, which describes the number, type, and location of samples and the type of analyses.)

- Nahat'á naaltsoos bikáá' ályaago bik'ehgo ha'át'íida nidaalkaahgo dayéelta', bída'néel'ąad, dóó nidaaská'ígíí bíts'ąádóó béedahoozinii ts'ídá

haashíí néelt'e'go bídih hóyéé'ígíí dóó binahjì' hazhó'ó ééhodoozìíhígíí shóídoot'eel binahat'áago ál'ííh.

Sandstone: A sedimentary rock composed of sand-size grains of mineral, rock, or organic material.

(NOTE: It also contains a cementing material that binds the sand grains together and may contain a matrix of silt- or clay-size particles that occupy the spaces between the sand grains.)

- Séí dóó łeezh bíł nihoní'éél nít'éé'go éí doodago bíł nihwiiyolígíí yítł'is dóó tsé násdlíí'ígíí.
- Tsé kódaat'éhígíí ahídadiiljée' łeh áádóó diz dóó hasht'ish bitát'ahdi hólóq łeh.

Scan/Scanning: An evaluation technique performed by moving a detection device over a surface at a specified speed and distance above the surface to detect radiation.

- Na'alkaahgo ats'áziil bí'neel'ąahgo bee í'neel'ąahí t'áadoole'é haashíí nízahdi bikáa'gi dóó bee na'neestąą'gi át'éego bik'i naat'áago bee bááhádzidii ba'át'e' bits'áziil bee bééhózin.

Scenario: Based on verbal and visual observation to determine sequence of events, or situation, based on certain assumptions and factors (variables).

(NOTE: Scenarios are used in estimating the probable effects of one or more variables, and are an integral part of situation analysis and long-range planning.)

- Haada hoot'éego, haada hooníłgo, haada hoodzaago beelt'éego béé'ályaago nél'íí dóó yíits'ąą' biniiyé ályaaígíí.

Scoping survey: A type of preliminary survey that is conducted to identify contaminants and general levels and extent of contaminants.

- Ha'át'íida haalzíid dóo nél'íigo bee kódaat'éhígíí bééhodooziłł: Bááhádzidii ba'át'e' t'áa altsogóo hóólchxq'ígíí áhoníłtsogóo dóo ánízahji'.

Screening level: The soil screening and decision tool to help standardize the evaluation and cleanup of contaminated soils at sites where future land use is anticipated.

- Kéyah bikáa'gi hasht'éé hoolyaa dóo náasgóo t'áa chonáajooł'ł bihónéedzággi bááhádzidii ba'át'e' łeezh bitah silíł'yéé dóo łeezh naalkaahígíí binahji' łeezh naalkaah dóo bik'ehgo á'doolníłii standards wolyé.

Secondary human contact: Exposure to humans to a contaminant that has indirectly polluted an environmental media, such as exposure to livestock that have fed on contaminated lands”

- Ha'át'íida bááhádzidii haa'í da t'áa altsóni yiyíłchxq'go ákwe'é naaldlooshii da yénaskaigo éi áadóo náána łah di haz'áadi bíla'ashdla'ii choyoos'íidgo yee yénaskaigo éi doodago bááhádzidii hóólchxó'déé' tó nihegeehgo bíla'ashdla'ii yee bááhádzidii yénakahígíí.

Self-assessment: Assessments of work conducted by individuals, groups, or organizations directly responsible for overseeing and/or performing the work.

- Naalnishí, nidaalnishígíí, éi doodago naanish ádeił'íigo yee da'áhóta'ígíí binaanish nídeinél'ł dóo yínida'neel'ąah.

Sievert (radiation equivalent mean): This is a measure of how much biological damage can be expected from a particular type and amount (dose) of radiation – can also be measured in Sieverts.

- Bááhádzidii ba'át'e' bits'áziil haashíłł níłtsogo t'áadoole'é atíidoolíłł éi bí'neel'ąahgo nawółnínígíí

ál'íihgo díi saad choo'ł, Sieverts wolyéego bik'ehgo bí'neel'ąah.

Sievert (Sv): This is a measure of how much biological damage can be expected from a particular type and amount (dose) of radiation – can also be measured in REM.

- Bááhádzidii ba'át'e' hait'éeshíłł bits'áziil haashíłł néelt'e'go dóo haashíłł níłtsogo t'áadoole'é atíidoolíłł nawółnínígíí yíneel'ąah.

Significant/Significantly: Sufficiently great or important to be worthy of attention; noteworthy; having a particular meaning; indicative of something.

- Atisdi áníłtsogo baa nitsáhákees; baa hodzódlí; ááh yił nínígíí bihónéedzą.

Site: A separate parcel of land, or any building or structure that is being considered for survey, investigation, and cleanup.

- Kin bii' nida'anishgo si'ąągo, bee na'anishí sinilgo, éi doodago kin sinilgo, kéyah si'ąągo dínóol'íłł dóo nidoolkah binahat'áago.

Site reconnaissance: A visit to the site to gather sufficient information to support a site decision regarding the need for further action, or to verify existing site data.

(NOTE: Site reconnaissance is not a study of the full extent of contamination at a facility or site, or a risk assessment.)

- Kéyah bikáa' haz'ánigi bááhádzidii ba'át'e' bits' áziil hóólchxq'gi baa nahoneestąą'go t'áa altsó danéel'íłł dóo baa náhát'íigo binahji' náas oonishdooígíí bééhózin éi doodago nidaaskaa'go álah ádaalyaaígíí nídanél'ł. Kót'éego áhoot'éhígi nánél'ínígíí éi doo t'áa yíní át'éeji' hóóchxq'gi naalkaahígíí át'éeda.

Soil: The top layer of the earth's surface, consisting of rock and mineral particles mixed with organic matter. A particular kind of earth or ground—e.g., sandy soil.

- Nahasdzaán bikáá' gónaa bee hahodít'éhígíí, tsé dóó hadaat'e' dibahgo dóó dizéigo nanise', dóó tsin dóó hináanii bits'áádéé' leezh bitah nídaasdlíí'ígíí bił ałtaanásdziiid silíí'ígíí. Nihookáá' hólónígíí séi dóó leezh ał'ąą ádaat'éhígíí.

Soil activity (soil concentration): The level of radioactivity present in soil and expressed in units of activity per soil mass.

(NOTE: Typically expressed as tiny numerical units, i.e. Bq/kg or pCi/l.)

- Leezh bitahdi t'áadoole'é ba'át'e' bits'áziil haada néelt'e' hólónígíí na'áłkid wólta'ígíí éi leezh ánéelt'e' haakáągo naalkaahígíí bik'ehgo bí'neel'ąąh.

Source material: Uranium and/or Thorium other than that classified as special nuclear material.

- Béesh ba'át'e' dóó bideezla' hólónígíí, Leezso dóó béesh Thorium wolyéhígíí t'ahdoo ba'át'e' bee ha'át'íida ádoonííł biniyé hasht'eelnééhígíí.

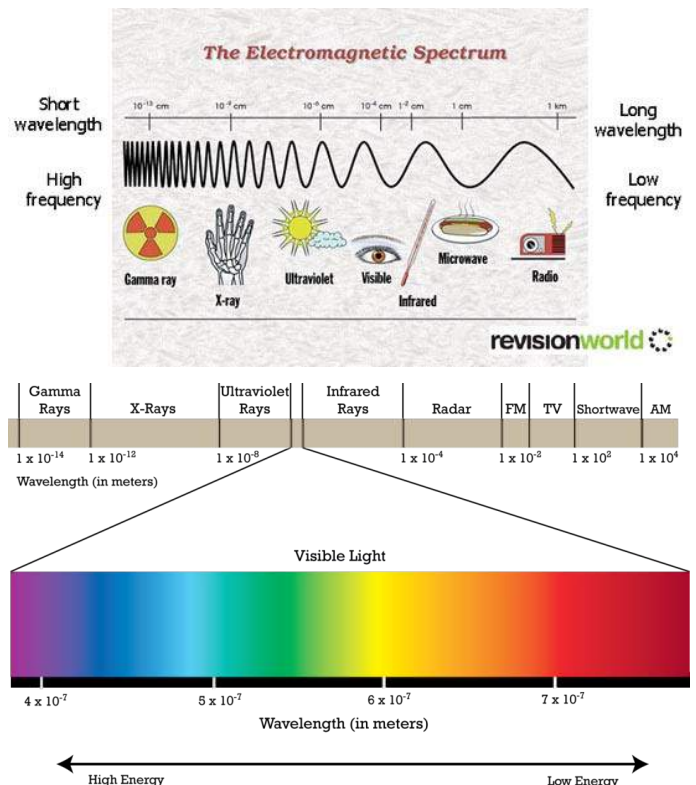
Species: A group of living organisms consisting of similar individuals capable of exchanging genes or interbreeding.

- Dahináanii t'áá ahedaat'éego dah yikahgo éi t'áálá'í nítínigo bik'ehgo náas ahooldhííłígíí ahidiníłnaago yee ahooldhííł éi doodago ałháná'oolchííł yilééhígíí.

Spectrum of light: The electromagnetic spectrum is the entire range and scope (spectrum) of frequencies of electromagnetic radiation and their respective wavelengths and photon energies.

(NOTE: In physics, electromagnetic radiation (EM radiation or EMR) refers to the waves (or their quanta, photons) of the electromagnetic field, propagating (radiating) through space-time, carrying electromagnetic radiant energy.[1] It includes radio waves, microwaves, infrared, (visible) light, ultraviolet, X-rays, and gamma rays.[2])

- Adinídíin éi jóhonaa'éí bits'áádéé' t'áá ałtso yik'i'diíłdíin dóó yighádi'níłdíin. Bee ááhoo'nííł dóó anooséł.
- Tó biyi'ji' éi doodago tózis biníkáaji' dootł'izh dóó lichii'ji' nihool'áago adinídíin yit'íı leh. T'áá át'é ałhii'ji' yileehgo ligoigo dóó disqsgo adinídíin leh. Tózhool bii'didla'go náats'íilid yit'íı leh.
- Yee bidziilii waves of electromagnetic field deilní éi bits'áádóo nahaadeełgo t'áá ałtso nayiíłná. Nihí éi Shá/Jóhonaa'éí bináhaazléi dóó Shánídíin dóó shábitł'óól bidii'ní.

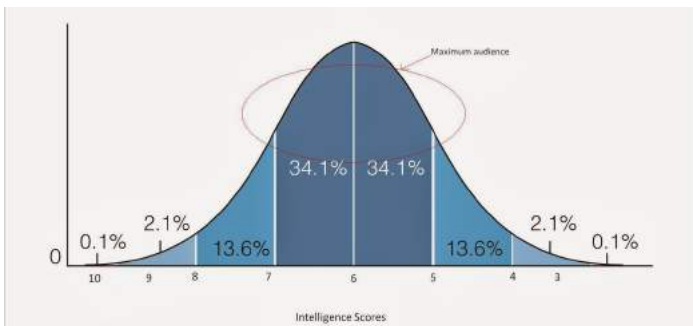


Split: A sample that has been mixed and divided into two or more parts for subsequent analysis.

- Nidoolkah biniiyé bąh haajaa', éi doodago bąh haaká dóo éi naakigo alts'áajaa'/alts'áakáago naalkaah biniiyé.

Standard deviation: A measurement of how spread out numbers are as a whole is a measure that is used to quantify the amount of variation or dispersion of a set of data values.

- T'áa ha'át'íishíí dayéelta'go da, bída'néel'ąadgo da, námbooígíí al'ąa ánizahdi daníjaa' dóo dadinitąadígíí éi bee t'áa la' dah shijaa'ígíí haanítsoo al'ąa ádaat'é bee bééhoozih.



Standard Operating Procedure (SOP): A written document that details the method for an operation, analysis, or action with thoroughly prescribed techniques and steps.

(NOTE: This document is officially approved as the method for performing certain routine or repetitive tasks.)

- Naaltsoos hadilyaa dóo bee lá azlíí'go bik'ehgo nida'doonish, naanish bik'i adéest'íí'go, éi doodago naanish ádoolníílgíí bił ni'deetáalgo bikáa' ályaa.

Statistical control: A method of quality control which uses only common causes of variation.

(NOTE: The condition describing processes from which all special causes have been removed, evidenced on control

chart by the absence of points beyond the control limits and by the absence of non-random patterns or trends within the control limits. A special cause is a source of variation that is intermittent, unpredictable, or unstable.)

- Ha'át'íi da yá'át'éehgo dóo bee haz'áanii bik'ehgo álnéehgo bik'i adéest'íí' quality control wolyéego íiyisíi biniinaa al'ąa ánáhoo'níílgíí t'éi yólta'.

Stratification: The arrangements or classification of the environment into different groups.

(NOTE: The act or result of separating an area into two or more sub-areas so as each sub-area has relatively homogeneous characteristics such as contamination level, topology, surface soil type, vegetation cover, etc.)

- Nihinaagóo haz'ánígíí environment biyi'di áhoot'éhígíí al'ąa át'éego dah naazhjaa'go bééhózingo ádaalne'.

Subset: A smaller part of a larger group of related things.

- Ha'át'íi da bił haz'ąago éi biyi'di náána lahgo náahást'ąago éi t'áa álah biyi'di t'áa ahehoot'é.

Substantive: Having a firm basis in reality and therefore important, meaningful, or considerable; having a separate and independent existence;

- T'áa doonídí doo t'óo áhoolníílgóo hólq éi biniinaa t'áa íiyisíi ílq, dóo beekt'éé góne' yeinit'q;
- T'áa sahdii át'éego hólq.

Subsurface soil sample: A soil sample that represents the top six inches (15 cm).

(NOTE: Reflects the modeling assumptions used to develop the DCGI for surface soil activity. An example would be

soil taken from the first 15 cm of surface soil to support surveys performed to demonstrate compliance with 40 CFR 192.)

- Łeezh bikáá'dóo yaago hastáá dah'alzhindéé' (6 inches, 15 cm) nidoolkah biniiyé haakaahígíí.

Superfund Law: The program operated under the legislative authority of CERCLA and SARA laws that funds and carries out EPA emergency and long-term removal and remedial activities of contaminates.

(NOTE: Super fund's goals are to: Protect human health and the environment by cleaning up polluted sites; Make responsible parties pay for cleanup work; Involve communities in the Superfund process; and Return Superfund sites to productive use.)

- Díí éí Wáashindoondi bee haz'áanii ályaa, CERCLA dóo SARA bee wójíigo háadida báadahadziidii ba'át'e' bee hóochxq'go hasht'ée doolnííł, nahgóó kódoolnííł, dóo t'áa ałtso choo'íigo ánidoolnííł bina'anishígíí béeso yá niidii'aah.

Surface contamination: Residual radioactivity found on buildings, equipment surfaces and direct human contact.

(NOTE: Expressed in units of activity per surface area (Bq/m² or dpm/100 cm²).

- Bááhádzidii bá'át'e' bits'áziil kin da si'áago, bee na'anishída sinilgo éí doodago t'áa ha'át'íida baahgóó silí'ígíí dóo bíla'ashdla'ii

Surface soil sample: A soil sample taken from the upper 5 to 8 inches of the top soil to be analyzed for possible contaminates.

(NOTE: The first 15 cm of surface soil support soil surveys performed and is usually the portion of the farm soil that is tilled.)

- Bááhádzidii ba'át'e' bits'áziil łeezh bitahdi hólónígíí naalkaahgo ni'dóo yaago ashdla' dóo tseebíí dah alzhinjí' haakáago t'áadoole'é ba'át'e' bits'áshígishígíí łeezh bitah silí'ígíí naalkaah.

Surveillance (quality): Continual or frequent monitoring and verification of a contaminated site and/or decontaminated cleanup site to monitor stability and mobility.

(NOTE: The status of a site and the analysis of records to ensure that specified requirements are being maintained.)

- Ha'át'íida bina'anishígíí t'áa ahááh nánel'íłhgo hoolzhish dóo ákwe'é haz'ánígíí t'áa doonídigo ninálkah dóo nida'azhnishígíí binaaltsoos nídanél'íłh éí bee níláhdéé' bee haz'áanii bik'ehgo é'élyaaígíí binahjí' hanaanish nél'í.

Survey: A systematic evaluation and documentation of radiological measurements with a correctly calibrated instrument or instruments that meet the sensitivity required by the objective of the evaluation.

- Bee ída'neel'áahí hazhó'ó hasht'e' nidaasgizígíí bee bááhádzidii ba'át'e' bits'áziil bída'neel'áahgo dóo níláahdi bikáá' ádaalne'ígo bee nida'anish éí naanish bik'i adéest'íí'.

Survey plan: A plan for determining the radiological characteristics of a site.

- Haa'ída haz'áagi bááhádzidii ba'át'e' bits'áziil hólónígíí bini'doonishgo t'áa át'é nidoolkahgo bee bééhodooziłhígíí binahat'á.

Survey unit: A geographical area consisting of structures or land areas of specified size and shape at a remediated site for which a separate decision will be made whether the unit attains the site-specific reference-based cleanup standard for the designated pollution parameter.

(NOTE: Survey units are generally formed by grouping contiguous site areas with a similar use history and the same classification of contamination potential. Survey units are established to facilitate the survey process and the statistical analysis of survey data.)

- Hasht'ée hálnéehgi haz'áago t'áadoole'é hólóogo kin da dóo kéyah da si'áago ákwe'é t'áa sahdii bá nihodoot'áa.
- Ákwe'é daats'í bik'ehgo hasht'ée hál'í bee haz'áanii chooz'iid dóo bááhádzidii ba'át'e' haashíí yit'éeshíí t'áa át'é naaskáa'go binahjí' biní'diinishígíí bééhoozjih.
- Hasht'ée hodoolnííł bił haz'ánigíí nídiilkahgo éi t'áa ahedahoot'éhígíí

Systematic (as in, a systematic method): Done or acting according to a fixed methodical plan.

- T'áadoole'é ádaal'í dóo ha'át'íida bina'anish binahast'ánigíí éi doodago ałkéé' yi'niłgo ályaaígíí bik'eh na'azhnish.

Systematic error: An error that is not by chance but is done by the inaccuracy of the system.

- Ha'át'íida bina'anish binahast'ánigíí náásgóo bee oonishgo naanish haa'íshíí oodzí'go doo t'óo bini'dii áhóót'íida.

Tailings: It is the waste by-product of mining and milling processes that still contains residual radioactivity.

(NOTE: In uranium mining, raw uranium ore (comprised of various elements including uranium) is brought to the surface and crushed into fine sand. The sand goes through a chemical process to separate out the uranium. This process creates radiological sludge called uranium tailings.)

- Łeetso haagéedgo bits'áádóo nihwiileeh. Łeetso hadahagéédígíí éi tsé ał'ąa ádaat'éego bił hadahagééd áádóo yik'áhago dibahgo séi yileeh. T'áadoole'é da'diłidii bee łeetso séi baąh haal'ol. Séi éi hasht'ish nahalingo łeetso ba'át'e' bits'áziil baąhgo ch'éhégeeh dóo yanáa'áago ádaalne'.

Technical review: An in-depth analysis of documents, tasks, materials, and data that can be verified or validated for correctness, completeness, and assurance that requirements are satisfied.

- Naanish ályaaígíí t'áa át'é nél'íigo naaltsoos bee hadil'jih.
- Naanish ályaaígíí t'áa kóhonishéjji' bii' adéest'í'go naaltsoos, binida'azhnishígíí, t'áadoole'é chodaaz'íidígíí, doo oodzí'góo ályaa,

Temperature: The degree or intensity of heat present on the body, in the air, or in substance.

(NOTE: Temperature is a measure of the average kinetic energy of the particles in an object. When temperature increases, the motion of these particles also increases.)

- Ha'át'íida sido éi doodago sik'azgo éi biyi'di t'áa át'éé nít'éé' nidaha'ná yileeh éi doodago ádahodéeszée' yileeh. Biyi'di yee hadít'éhígíí, particles yił nínigíí, tsxíłgo nidaha'ná yileehgo, ahídadizhashgo yee niidoh hónáásdóo niigah. Éi doodago biyi'di doo nidaha'náada yileehgo éi niik'as.

Temporal: Relating to time.

- Hoolzhishígíí dóo óolkiłígíí.

TENORM (Technologically Enhanced Naturally Occurring Radioactive Materials): Ore that has been concentrated or exposed to the accessible environment as a result of human activities such as part of the milling process.

- Bíla'ashdla'ii yinaha'áago tsé tsetso bitahígíí haagééd dóo bąąh haal'éełgo t'áa bikáa'góo siljį'go.

Technology and technological: Is the branch of science and knowledge that deals with invention of useful things to solve problems.

(NOTE: Industrial arts, engineering, geology, applied sciences (math, etc) and pure science. Technological is the application of science.)

- Anáhóót'i'gi bee hasht'e doolníłgo ádaalyaaígíí bee t'áa áltsoní nihinaagóo hólónígíí dóo neilyéhígíí baa áhwiilyá.
- T'áadoole'é ba'át'e' bits'áziil t'áa alk'idáá' akóó bee hadahodít'éhígíí bíla'ashdla'ii choyool'jįgo yee nidaalnishgo t'áa láchjį' áłah daazłjį' dóo niláhgóo nidashigizhgo béé'áldah.

Terrestrial: Relating to the earth.

- Nahasdzáan yikáa' hinánígíí.

Threat: Something likely to cause damage or danger.

- Ha'át'iida atí'doolíłhii éí doodago bik'ee hóyée'dooígíí.

Threatened/Endangered: Species seriously at risk of extinction, i.e. animals, plants.

- Hináanii t'áa dah yikah nít'ée' áltso ábi'niidjįdgo.

Threshold: The magnitude or intensity that must be exceeded for a certain reaction or condition.

- Ha'át'iida haa níłtsodishjį éí doodago haa bóodziildishjį bilááhgóo é'élyaago áádóo haadooníłhígíí, haa hoot'ée dooígíí, éí doodago ha'át'íi nídooleeł.

Threshold criteria: Maximum limit allowed or accepted by a standard.

- Ha'át'ii da aláahdi neel'ąago éí doodago ánéelt'e'go bee haz'áanii yee has'ánígíí.

Total maximum daily load: Maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

- Tó haada néelt'e'go ha'át'ii da doo yá'át'éehii aláahdi ánéelt'e' bitah yileeh áko ndi t'ahdii tó yá'át'éehii niljįgo na'alkid.

Total metals: The total metals in nature.

- Béesh al'ąą ádaat'ėii t'áa áltso nihinaagóo hólónígíí.

Toxicity Values: The quality, relative degree or specific degree of metal toxicity or poisonous to humans.

- Bááhádzidii ba'át'e' dóo bideezla' haashjį bóodziilgo na'alkidgo bíla'ashdla'ii atí'doolíłhígíí.

Relative: To compare in portion to something else.

- Alch'jį siláago; aąąh naalyé; t'áa ha'át'íishjį bíł ałhąh nii'nil. Sha'shin.

Degree: The amount to which something happens or is present.

- Ha'at'íishjį haa néeląą'go hólóó dóo haa nízahjį' ádzaa.

Specific: A clearly defined or identified

- Bééhózinígo íishjání ályaa

Transect: A cut across transverse section

- Naaniigo k'éházdón ídzogo booshk'iizhgóo ha'át'íi da hólónígíí jóltah.



Transport: (as in, of contaminants): To introduce contaminants to the environment through specific pathways, i.e wind, water, soil.

- Bááhádzidii bá'át'e' níyol da, tó da, leezh da yee naanishoogishgo nihinaagóo haz'ánígíí baah niheleeh.

Transporter: Something (wind, water) that transports or moves contaminates.

- Ha'át'íida (níyol da, tó da) bááhádzidii ba'át'e' yee yiyoolnaal.

Trend: A general direction in which something is developing or changing.

- Ha'át'íi da háajigoshíí hadinééh éí doodago lahgo áániigo hoolzhish.

Tribal Acceptance: An action or document that is supported or approved by a Native American tribe.

- Naaltsoos da, ha'át'íida álnéehgo da Bitsi' Yishtlzhii Áłtsé Kééhat'íinii yee lá asłí'go dóo yee akéé' naazínígíí.

Tributary: A stream or creek flowing into a larger river or lake.

- Tó niłts'íli da, cháshk'ehgóo tó danílinígíí tooh éí doodago tó dzís'áají', tó dah dahidéyínígíí biih yílinígíí.

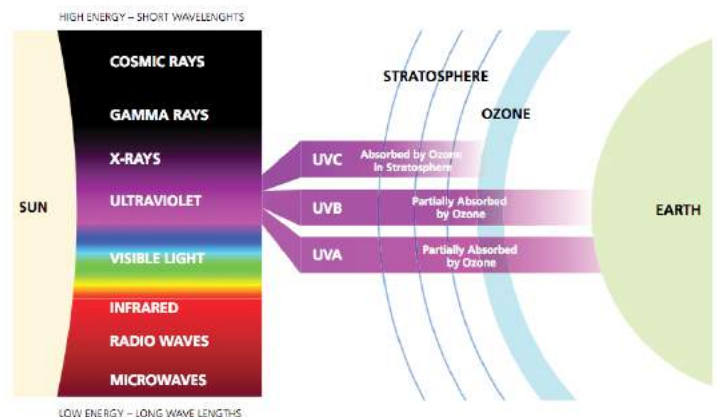
Turbidity: The state of water that has cloudiness or haziness caused by large amounts of particles.

- Tó t'áadoole'é lá bitahgo bee táachxáa'ígíí.

Typical: Something that has similar qualities or characteristics.

- Ha'át'íida láágóo t'áadoole'é yíł ahedanoolningo dóo yíł ahedaalt'éego.

Ultraviolet radiation: That portion of the electromagnetic spectrum extending from the violet, or short-wavelength, end of the visible light range to the X-ray region. Ultraviolet (UV) radiation is undetectable by the human eye, although, when it falls on certain materials, it may cause them to fluoresce—i.e., emit electromagnetic radiation of lower energy, such as visible light.



Invisible ultraviolet light is described as three wavelengths. UVC is absorbed by the ozone layer of Earth's atmosphere. UVB is partially absorbed by the ozone layer. UVA penetrates the atmosphere and reaches the earth.

- Shánííín bitah dootł'izhgo anáá' doo bee yit'ínígí nidi t'áá ha'át'íida yi'díldla'go yit'í yileeh.

Ultraviolet: Ultraviolet is an electromagnetic radiation shorter than that of visible light but longer than X-rays. UV radiation is present in sunlight.

- Shánííín bitahdi dootł'izhgo adíldgo nahaadeelígíí.

Uncertain/Uncertainty: State of being in doubt; undetermined and unpredictable.

- Ha'át'éeegi da ha'át'íi da hazhó'ó yidoodlqał doo bééhózin dago; ha'át'éeegi da doo ééhózin dago.

Uncontaminated: Not containing hazardous items or materials.

- Bááhádzidii ádaat'éhígíí doo biyi'di hólóq da.

Unilateral Administrative Order (UAO): A contract change order or modification that is issued by a government agency without requiring the consent or signature of the contractor.

- Ałha'deet'áago naaltsoos ályaaígíí łahgo ályaii Wááshindoondi da'íníshdée' hadeiz'ahgo Wááshindoon

Unreclaimed/Reclaimed: A site that is left as is after mining. A site that is cleaned up from contaminates.

- Ha'agéed nít'ée'gi doo haa da yilyaagóo bik'i' adeesde'ígíí.
- Ha'agéed nít'ée'gi bááhádzidii nahgóo hólýaa dóo hasht'ée hoolyaago.

Upper Prediction Limit (UPL): An estimate of an interval where a certain probability has already been observed or reached.

- Ha'át'íida nawólníni góne' silí'ígíí t'áá ídąą' néel'í'í' éi doodago bééhóziní góne' ha'át'íida nawólniigo bee bik'eh áhálnééh.

Uptake: Absorption of a substance, good and bad, by a living organism or bodily organs.

- Hináanii dóo bits'ásiléi ha'át'íida, yá'át'éeéh dóo doo yá'át'éeehii, bitahdi binishiigéeshígíí.

Validation: Checking or proving the accuracy of something.

- Haa'í da doo oodzii' dago é'élyaaígíí bik'i nízhdéest'í'í'.

Variation: Differences in condition, amount, or level. Note: especially in relationship to UPL and UTL.

- Ha'át'íida ał'ąą ádaat'éeego, ał'ąą ádanéeląą'go, éi doodago ał'ąą ádanéelt'e' nídaadleelgo.

Velocity: The speed of something.

- Ha'át'íida dilwo'ígíí.

Verification: Establishing the accuracy or facts in sampling, data management, or lab analysis.

- Łeezh da, tó da nida'askaa'go bída'néel'ąadgo béédahoozinígíí data t'áá doonídi át'éhígíí bee hasht'e daalne'.

Volume: Is the quantity of three-dimensional space enclosed by a closed surface; the space that a substance (solid, liquid, gas, or plasma) or shape occupies or contains.[1] "the measure applied to the content of a vessel, and to liquids, grain, or the like, which take the shape of that which holds them".

- Tó dóó níłch'i dóó łeezhda haada néelt'e' hadookáál bee naakáhá biyi'di
- Tó bee naakáhá éi doodago tó bee naat'áhá

Warranted: A course of action that is justified or deemed necessary.

- Ha'át'íi da bina'azhnishgo biniinaanii dóó biniyéii baa hóone' dóó ts'ída t'áa ákót'éego t'éi yá'át'ééh hodoo'niidgo.

Watershed: Land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

- Nihookáa' haz'áagi cháshk'eh t'áa lácháji' ahidadíníłzhee'go tó t'áała' bizhi'go ch'íníł tó nihelíłhji', tó dzís'áaji', éi doodago tó niteelji'.

Wetland: An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, as swamps, bogs, fens, marshes, and estuaries.

- Tábaahgi éi doodago tó łeyi'déé' ha'néés'aađgi

tó siyíigo teel dóó ch'il deiyíl'á dóó hináanii kéédahat'íigi óolyé. Kót'éego nahaz'ánigíi swamp, bog, fen, marsh, dóó estuary deilnigo dayózhí.

Working level: A unit of measure for documenting exposure to radon decay products.

(NOTE: These are referred to as "radon daughters or radon progenies." One working level is equal to approximately 200 picocuries per liter of radon daughters.)

- Leetso ba'át'e' biníłch'i haashíi néelt'e' bééjígahááhigíi bee bíneel'aaáhigíi .

Worst case: The worst of possible circumstances.

- Yéego doo ákóhoot'éeda silíi'.
- Doo yá'át'ééh náhodle' áhoodzaago.

X-ray: Electromagnetic radiation caused by deflection of electrons from their original paths, or inner orbital electrons that change their orbital levels around the atomic nucleus. X-rays, like gamma rays can travel long distances through air and most other materials. Like gamma rays, x-rays require more shielding to reduce their intensity than do beta or alpha particles. X-rays and gamma rays differ primarily in their origin: x-rays originate in the electron shell; gamma rays originate in the nucleus. *See also neutron.*

- Béesh doo hółdzilee hólónigíi biyi'déé' ba'át'e' bits'áshígishgo bee ágháda'dildlaadígíi.

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Diné College with USEPA 2018

